The influence of risk and resilience factors on the life satisfaction of adolescents

by

Anja Botha

The influence of risk and resilience factors on the life satisfaction of adolescents

by

Anja Botha

Thesis submitted in accordance with the requirements for the degree Philosophiae Doctor in the Faculty of Humanities, Department of Psychology at the University of the Free State

January 2014

Promotor: Dr. H. S. van den Berg

I declare that the thesis hereby handed in for the qualification Philosophiae Doctor at the University of the Free State is my own independent work and that I have not previously submitted the same work for a qualification at/in another university/faculty. In addition, I concede copyright to the University of the Free State.

_____

Anja Botha January 2014

Acknowledgements

I would like to thank the following:

* Soli Deo Gloria! All honour to my Heavenly Father for his grace, provision, and guidance. He bows down to make us great.
* My best friend and biggest fan – my husband, Pieter, for his unfailing love and support. He gives me the freedom to pursue my dreams.
* My parents for investing in my education, love for reading, and character. They always believed in me.
* Dr. Henriëtte van den Berg. Not only for her outstanding supervision, but also for being an inspiring mentor and example of female leadership.
* Resilience rests on relationships. Thank you to my family and in-laws for their encouragement, and friends for coffee dates and sms'es that kept me sane. Thank you Stefan, Bertus and Corlea, Hein and Madeleen, Mariesa and Ryan, Jaco and Tamari, Angie, Retha, and Sandri for being truly interested in my work.
* Dr. Melody Mentz for the statistical analysis and enthusiasm for my career. Thank you for helping me conquer SEM!
* Elmarie Viljoen for the excellent language and technical editing.
* The research team committed to the project on Risk and Resilience in Adolescence.
* The participants – I wish you raised resilience in the years to come.

Resilience is a paradox:

it is in embracing your vulnerability as a strength

that negative experiences are transformed*.*

Resilience will give you the strength to stand up for your values and beliefs,
enabling you to realise the vision you have for yourself
even in the face of adversity and challenge.

– Paul Mooney

The most authentic thing about us is our capacity
to create, to overcome, to endure, to transform, to love,
and to be greater than our suffering.

– Ben Okri

Table of contents

Page

Chapter 1: Introduction

Chapter 2: Conceptualisation

Chapter 4: The process of developing resilience in adolescents exposed to trauma

Chapter 5: Methodology

Chapter 6: Results and discussion

List of tables

List of figures

Abstract

The current South African adolescent cohort grew up in a decade of sociopolitical transformation, a period which has been accompanied by inevitable and continuous instability in the economic, education and health system especially. In general, South Africans are confronted with high levels of trauma exposure due to crime and violence, family dissolution, domestic abuse, accidents, illness and injury. Young adolescents, however, are further confronted with developmental changes in every area of functioning. In fact, early adolescence is often indicated as a critical life stage for interventions that are aimed at increasing well-being. Research has shown that many adolescents achieve positive outcomes, such as life satisfaction, despite the risks they are exposed to. These adolescents could be seen as resilient. Protective factors, such as strengths and coping, are considered important contributors to resilience. Continued research is needed to understand the process of resilience, especially for developing, multicultural countries such as South Africa. Thus, the aim of this study is to clarify the interrelationship between trauma exposure, strengths, coping, resilience and life satisfaction in South African adolescents. A non-experimental, correlational design was used for this purpose.

A random sample of 1 073 Grade 8 learners from 10 Free State schools in both urban and rural areas was included in the study. The data were collected with standardised psychometric tests that were administered during school days under the supervision of registered psychologists. The measuring instruments, provided in English, Afrikaans and Sesotho, were a biographical questionnaire; a shortened version of the *Stressful Live Events Screening Questionnaire* (Goodman, Corcoran, Turner, Yuan, & Green, 1998); the *Behavioural and Emotional Rating Scale* (Epstein & Sharma, 1998); the *Coping Schemas Inventory* (Wong, Reker, & Peacock, 2006); the *Resiliency Scales for Children and Adolescents* (Prince-Embury, 2006); and the *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985). The relations between the different variables were examined by means of Structural Equation Modelling (SEM).

The results indicate that trauma exposure is prevalent among South African adolescents, with black adolescents being exposed more than white adolescents. Also, exposure to multiple traumatic events is common. The findings show that adolescents' levels of resilience and life satisfaction are average, whereas black adolescents' level of resilience was proven to be significantly lower than that of white adolescents. Significant correlations were found between most of the variables included in the study. This provides evidence for the interrelated nature

of the variables, and confirms the complexity of the interaction between risk and protective factors in the resilience process. The model that hypothesises the direction of the relationships between the variables was a good fit for the group of black adolescents and a reasonable fit for the total group of participants. Trauma exposure decreases life satisfaction, resilience and strengths, while it increases emotional reactivity. The results highlight the vital role of strengths in the context of trauma exposure because all of the strengths measured in this study increased resilience and decreased emotional reactivity. Coping strategies were also shown to increase resilience. Increased resilience predicts increased life satisfaction and provides evidence that developing resilience in adolescents might contribute positively to their subjective well-being. Intervention is indicated especially for black adolescents because the results point to their being less resilient than white adolescents.

The findings could be used to inform intervention programmes that are aimed at enhancing well-being in adolescents. In this regard, the findings indicate that a strength-based approach be followed and that adolescents' range of coping skills be increased. Also, the need for psycho-education for adolescents is highlighted. Parents, schools and government institutions should not only be made aware of the significance of investing in adolescents, but should also be assisted to develop the skills needed to serve as role models and sources of support in developing adolescents' resilience.

KEY WORDS: Resilience, trauma exposure, strengths, coping, life satisfaction, adolescents, South Africa

Opsomming

Die huidige Suid-Afrikaanse adolessent-kohort het in 'n dekade van sosiopolitieke transformasie grootgeword. Hierdie tydperk het met onvermydelike en voortdurende onstabiliteit gepaardgegaan, veral in die ekonomiese, onderwys- en gesondheidstelsel. Suid-Afrikaners in die algemeen kom teen hoë vlakke van traumablootstelling te staan weens misdaad en geweld, gesinsontbinding, huishoudelike geweld, ongelukke, siekte en besering. Jong adolessente het egter nog met ontwikkelingsveranderinge in elke gebied van funksionering te kampe. Trouens, vroeë adolessensie word dikwels aangedui as 'n kritieke lewensfase vir intervensie wat op die verhoging van welstand gemik is. Navorsing toon dat baie adolessente wel positiewe uitkomste soos lewenstevredenheid bereik ten spyte van die risiko's waaraan hulle blootgestel word. Hierdie adolessente kan as veerkragtig gesien word. Beskermende faktore, soos sterkpunte en coping, word as belangrike bydraers tot veerkragtigheid beskou. Volgehoue navorsing is egter nodig om die proses van veerkragtigheid te verstaan, veral in ontwikkelende, multikulturele lande soos Suid-Afrika. Daarom is die doel van hierdie studie om die onderlinge verwantskap tussen traumablootstelling, sterkpunte, coping, veerkragtigheid en lewenstevredenheid in Suid-Afrikaanse adolessente uit te klaar. 'n Nie-eksperimentele, korrelasionele ontwerp is vir dié doel gebruik.

'n Ewekansige steekproef van 1 073 graad 8-leerders van 10 Vrystaatse skole in stedelike sowel as landelike gebiede is in die studie ingesluit. Die data is versamel met behulp van gestandaardiseerde psigometriese toetse wat gedurende skooldae onder toesig van geregistreerde sielkundiges afgeneem is. Die meetinstrumente is in Engels, Afrikaans en Sesotho beskikbaar gestel en was die volgende: 'n biografiese vraelys; 'n verkorte weergawe van die *Stressful Live Events Screening Questionnaire* (Goodman, Corcoran, Turner, Yuan, & Green, 1998); die *Behavioural and Emotional Rating Scale* (Epstein & Sharma, 1998); die *Coping Schemas Inventory* (Wong, Reker, & Peacock, 2006); die *Resiliency Scales for Children and Adolescents* (Prince-Embury, 2006); en die *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985). Die verhoudings tussen die verskillende veranderlikes is deur middel van strukturele vergelykingsmodellering (SVM) ondersoek.

Die resultate toon dat traumablootstelling algemeen onder Suid-Afrikaanse adolessente voorkom, met swart adolessente wat meer as wit adolessente blootgestel word. Blootstelling aan veelvoudige traumatiese gebeure is ook algemeen. Adolessente se vlakke van veerkragtigheid en lewenstevredenheid is gemiddeld, waar swart adolessente se vlak van

veerkragtigheid beduidend laer as dié van wit adolessente toon. Beduidende korrelasies is tussen die meeste van die veranderlikes in die studie gevind. Dit lewer bewys van die onderling verwante aard van die veranderlikes en bevestig die kompleksiteit van die interaksie tussen risiko- en beskermende faktore in die veerkragtigheidsproses. Die model wat gebruik is om hipoteses oor die rigting van die verwantskappe tussen die veranderlikes te stel, is 'n goeie passing vir die groep swart adolessente, en 'n redelike passing vir die totale groep deelnemers. Traumablootstelling verlaag lewenstevredenheid, veerkragtigheid en sterkpunte, terwyl dit emosionele reaktiwiteit verhoog. Die belangrike rol van sterkpunte in die konteks van traumablootstelling is beklemtoon, aangesien al die sterkpunte wat in die studie gemeet is veerkragtigheid verhoog en emosionele reaktiwiteit verlaag. Coping-strategieë verhoog ook veerkragtigheid, volgens die resultate. Verhoogde veerkragtigheid voorspel verhoogde lewenstevredenheid, wat bewys dat die ontwikkeling van veerkragtigheid in adolessente positief tot hulle subjektiewe welstand kan bydra. Intervensie word aangedui veral vir swart adolessente, aangesien die bevindinge toon dat hulle minder veerkragtig as wit adolessente is.

Die bevindinge kan aangewend word as basis vir intervensieprogramme wat op die bevordering van welstand in adolessente gemik is. 'n Benadering wat op sterkpunte gegrond is en adolessente se reeks coping-vaardighede uitbrei, is ook aangedui. Die bevindinge wys verder op die behoefte aan psigo-opvoeding vir adolessente. Ouers, skole en staatsinstansies moet nie slegs bewus gemaak word van die belangrikheid om in adolessente te belê nie, maar moet ook bygestaan word om vaardighede te ontwikkel ten einde as rolmodelle en ondersteuningsbronne in die ontwikkeling van adolessente se veerkragtigheid te dien.

SLEUTELWOORDE: Veerkragtigheid, traumablootstelling, sterkpunte, coping, lewenstevredenheid, adolessente, Suid-Afrika

1. INTRODUCTION

> *There can be no keener revelation of a society's soul than the way in which it treats its children* (Nelson Mandela).

Recently, we mourned the death and celebrated the life of the father of our nation, Nelson Mandela, who advocated – among other issues – for the safety and well-being of children.. The current adolescent cohort is the first South African generation to be born during Mandela's government after the fall of apartheid. This group of adolescents grew up in a decade of transformation and, although change was desperately needed in our country, the period of transformation was inevitably accompanied by instability. It remains to be seen whether the conditions of trauma, poverty and violence to which our children are exposed will be affected positively by this socio-political transformation.

Adolescents throughout the world have to contend with increasing economic instability, the effects of global warming, the disintegration of families, and a lack of role models and leaders. Protecting children from these multiple adversities seems impossible. It is no wonder that one of the leading authors in the field of resilience, Ann Masten (Masten & Coatsworth, 1998), states unequivocally that the future of any society will depend increasingly on the capacity of its children to be resilient. Resilient children often bounce back from adversity and grow up to become the competent adults that our society needs to continue the fight against these adversities. Thus, the successful society of tomorrow will have to invest in the children of today. Not all risks can be reduced, but all children can be helped to develop the skills to be resilient. In fact, resilience develops when challenges are faced, not when challenges are avoided.

This thesis aims to contribute to the current body of research on resilience in South Africa. As we expand our understanding of the process of resilience in South African children, we should foster in them the strength and potential to bounce back from hardship.

This chapter will first explain the rationale of the thesis. Secondly, the research question, aim and goals will be stated. Thirdly, the research method will be introduced, after which the key concepts will be defined. Finally, an exposition will be given for the rest of the chapters.

1.1 The rationale of the study

South African adolescents are exposed to many risks, including trauma (Suliman, Kaminer, Seedat, & Stein, 2005), financial (Barbarin, 2003), family (Statistics South Africa, 2009), and health risks (Richter, Foster, & Sherr, 2006). The concept of risk refers to any variable that increases the probability of a negative outcome for the individual (Wright & Masten, 2006). Over and above situational risks, a child's adjustment can also be influenced negatively by expected developmental life transitions (Luthar & Zigler, 1991), such as the onset of adolescence. Indeed, the fact that multiple transitions in all areas of development occur during adolescence makes it an important life stage for studying the process of resilience and well-being. The significant increase in adolescent depression, substance abuse, self-harm and conduct-related disorders in Western societies is well documented (Vostanis, 2007). It is, therefore, not surprising that Wright and Masten (2006) view the transition to adolescence, and its accompanying challenges, as a critical turning point in the lifespan that will have an impact on future adaptation. However, most adolescent studies are conducted in First-World countries (APA 2002) and it is questionable whether these findings can be generalised to the South African context. Since the majority of the world adolescent population reside in developing countries (Anthony, 2011), research conducted in these contexts could expand our understanding of the experiences of adolescents.

Considering both the developmental needs and the risks that South African adolescents are exposed to, it is not surprising that promoting the well-being of children is a national priority (Lake, Berry, Dawes, Biersteker, & Smith, 2013). South Africans have experienced various forms of transformation in the past two decades, including rapid urbanisation and the transfer of political power to the black majority. Many of the ecological contexts which characterise post-apartheid South Africa – such as the education and health systems, and the culture of violent crime – contain an element of risk for young adolescents. Moreover, South Africa has a high prevalence rate of exposure to trauma when compared to many other countries in the world. According to Kaminer and Eagle (2010), South Africa's history of political violence, the currently high rates of violent crime, sexual and domestic violence, as well as road traffic injuries, create multiple opportunities for researching trauma exposure.

Recent studies, such as those of Suliman *et al*. (2009) and Peltzer (2008), reported incidence rates of trauma exposure and post-traumatic stress disorder (PTSD) among

South African adolescents. However, there is a paucity of research examining the incidence of trauma exposure in conjunction with resilience and well-being in South Africa (Fincham, Altes, Stein, & Seedat, 2009). In particular, subjective indicators of well-being are seldom studied in the context of trauma exposure (Anke & Fugl-Meyer, 2003). In this regard, life satisfaction, which is the subjective assessment of the quality of one's life (Shin & Johnson, 1978), is preferred by many researchers as the key indicator of subjective well-being. Life satisfaction both includes and transcends mood states, and influences behaviour (Gilman & Heubner, 2003). Thus, the question is not only how prevalent trauma exposure is among South African adolescents, but also how prevalent resilience and life satisfaction are, given the high rates of traumatic events in this country.

Because the current adolescent cohort is the first generation born after the fall of apartheid, it would be particularly important to understand the impact that the transformations mentioned above are having on this cohort's well-being. Do the socio-political changes increase or decrease South African adolescents' well-being? Are South African youth more or less resilient as a result of the multiple challenges they face? Theron and Theron (2010) emphasised the need for multi-variable and systemic research studies in South Africa with a focus on "what is local" about resilience. Although the past decade has been characterised by an increase in resilience programmes, there is still much work to be done in order to understand the underlying processes that account for resilience in children (Wright & Masten, 2006). Ecological and developmental models are mostly used in resilience research (Masten, 2006) to explain the influence of multiple variables in the resilience process. For this reason, Condly (2006), and Kumpfer and Summerhayes (2006), recommend sophisticated statistical analyses, such as Structural Equation Modelling (SEM), to examine the relationships between the multiple contributors to resilience.

Both risk and protective factors need to be considered. A protective factor mediates the effect of trauma to increase the chances of a positive outcome, such as well-being (Luthar, Sawyer, & Brown, 2006). Protective factors are found on three levels: individual characteristics such as interpersonal strengths (Werner, 2006); family qualities, for example, family involvement (Black & Lobo, 2008); and factors in the external environment, such as school success (Masten & Coatsworth, 1998).

Another protective factor that is considered vital for an individual's survival and growth is effective coping (Brooks, 1994; Wong, Reker, & Peacock, 2006). Coping refers to the individual's cognitive and behavioural efforts to deal with situational demands that are seen as exceeding their resources (Folkman, 1984). Coping can, consequently, moderate stressful life events (Berman, Kurtines, Silverman, & Serafini, 1996). The development of characteristic coping schemas in childhood and adolescence might place individuals on a developmental trajectory that can either be more or less adaptive (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001); to a great extent, coping in early adolescence seems to be critical to future adjustment (Hampel & Petermann, 2006). To date, few South African studies have investigated the role of youth coping strategies in determining positive outcomes such as life satisfaction (Schexnaildre, 2011). Yet, the ability to cope might be particularly important in South Africa because it allows adolescents to deal with negative environments from which they cannot always escape. Thus, in order to understand the impact of trauma exposure on well-being, it is necessary to determine whether certain protective factors and/or coping strategies increase resilience and life satisfaction in South African adolescents.

Demographic variables, such as race (Wright & Masten, 2006), have also been found to play a role in adolescent well-being. Although racial differences are prominent in the South African context, these are mainly due to racial disparity with regard to conditions such as poverty and access to resources. As both individualistic and collectivistic cultures are represented in South Africa, there is ample opportunity to investigate differences between these two cultures with regard to their well-being – something which has not been addressed adequately in existing research (Huebner, Suldo, & Gilman, 2006). It is still unclear, for example, which factors contribute to life satisfaction in collectivistic cultures. Thus, there is a need to better understand contextual and cultural factors that could play a role in resilience, as it cannot be assumed that factors found to be important in Western cultures would be equally important in a culturally diverse country such as South Africa. Khumalo's (2011) study on general psychological well-being among adult Setswana speakers is an example of a study of a South African collectivistic group. Yet, there remains a lack of studies that adequately represent the diverse populations of our country (Theron & Theron, 2010).

1.2 Research question, aim and goals

This thesis will attempt to establish *how resilience enables South African adolescents exposed to trauma to achieve well-being*. The aim of this study is to clarify the interrelationship between risk and resilience factors, and life satisfaction in South African adolescents. Such an understanding might better equip our society for the vital task of promoting adolescent well-being, given the importance of resilience for the future of any society (Masten & Coatsworth, 1998). The following three specific goals will be addressed in this regard:

a. The incidence of trauma exposure, resilience and life satisfaction will be determined for the group of participants.

b. The relationship between trauma exposure, strengths, coping, and resilience and life satisfaction will be investigated.

c. The goodness-of-fit of a model compiled by the researcher for explaining the pathways between trauma exposure and life satisfaction will be determined. This model will be investigated for the total group of participants, as well as for the various race groups.

The method which will be followed to address these goals will be discussed next.

1.3 Research method

A non-experimental, correlational design was used.

1.3.1 Participants

A data set was gathered by a research team which included the researcher. A random sample of 1 073 Grade 8 learners from 10 Free State schools in both urban and rural areas was included in the study. The majority of these learners were probably 13 to 15 years old, which correlates with the life stage of early adolescence.

1.3.2 Data gathering and measuring instruments

The data were collected with standardised psychometric tests that were administered during school days under the supervision of registered psychometrists and psychologists. In doing so, the questionnaires were completed under controlled conditions. The learners were given the opportunity to ask questions and get immediate feedback. Also, regular breaks were provided to prevent fatigue. Questionnaires were made available in English, Afrikaans and Sesotho because these language groups represent the majority of the Free State population. The questionnaires were translated by accredited translators by means of the back translation method.

- A biographical questionnaire was administered to gather information regarding gender, race, socio-economic status, living arrangements, parents' educational level and marital status.

- A shortened version of the *Stressful Live Events Screening Questionnaire* (Goodman, Corcoran, Turner, Yuan, & Green, 1998) was used to determine whether learners had been exposed to trauma or not. No South African studies that had used this questionnaire could be found (according to a search done on Nexus, 20 November, 2013). The questionnaire was developed as a screening instrument for use in non-treatment-seeking populations and was initially developed for studies among young adults (Goodman *et al.*, 1998). It provides a general account of exposure (Goodman *et al*., 1998). The questionnaire was deemed appropriate for the current study because the sample of adolescents were not seeking treatment and were required to give a general account of their exposure to traumatic events.

- The *Behavioural and Emotional Rating Scale* (Epstein & Sharma, 1998) assesses interpersonal, intrapersonal and affective strengths, family involvement, and school functioning. This questionnaire was used in earlier South African studies among children and adolescents (e.g. De Villiers, 2009; Smit, 2003; Van der Merwe, 2004).

- The *Coping Schemas Inventory* (Wong *et al.*, 2006) determines adolescents' preference for different coping strategies. This measure covers nine coping subscales, namely situational coping, self-restructuring, active emotional coping, passive emotional coping, meaning, acceptance, religious coping, social support, and tension reduction. No South African studies that had used this questionnaire could be found (according to a search done on Nexus, 6 January, 2014). This questionnaire was deemed appropriate for the current study because it includes indicators of existential and spiritual coping, in addition to problem-focused and emotion-focused coping. Also, it considers the influence of culture on coping and was, therefore, considered applicable in a multi-cultural context.

- The *Resiliency Scales for Children and Adolescents* (Prince-Embury, 2006) determines the participants' resilience by means of three subscales: sense of mastery, sense of relatedness, and emotional reactivity. The instrument was used in an earlier South African study on resilience in children (De Villiers, 2009).

- The *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985) assesses the participants' cognitive assessment of their subjective well-being. This questionnaire was used in earlier research among South African adolescents (Basson, 2008; Henn, 2005; Hill, 2003).

The alpha coefficients for each of the above-mentioned instruments were calculated to determine the internal consistency of the data yielded by all the subscales for the current sample.

1.3.3 Statistical analysis

The relations between the different predictor and criterion variables were examined by means of SEM (Streiner, 2006). Structural Equation Modelling allows for the analysis of many variables with complex interactions (Streiner, 2006) and is widely used for testing for mediated relationships among variables, especially when multiple items have been measured (Iacobucci, Saldanha, & Deng, 2007).

1.3.4 Ethical considerations

Permission to conduct this survey was obtained from the Department of Education and school principals. Participation was voluntary and the informed assent and consent of learners and their parents were obtained prior to participation. The field workers debriefed learners after the administration of the questionnaires to address any distress that might have resulted from their involvement in the research process.

1.4 Definitions of key concepts

A coherent conceptualisation of the variables will be provided by means of an organising model and a process model for resilience. Although these models will be discussed in depth in the next chapter, the following figure describes the process of resilience that will be investigated in the current study.

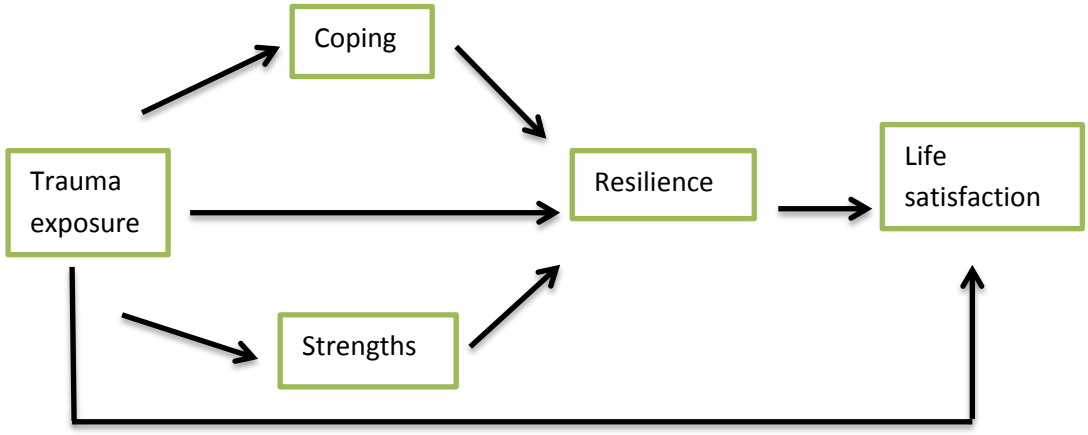

Figure 1.1: The conceptualised model of resilience for the current study

The following key variables and concepts are included in this thesis:

Adolescent	Child in the life stage between puberty and age 19.
Risk factor	A measurable characteristic of a certain group of individuals. It predicts negative outcomes for them (Wright & Masten, 2006).

Protective factor	A characteristic that increases the chances of a positive outcome by mediating the effect of risk or adversity specifically (Luthar, Sawyer, & Brown, 2006).
Trauma exposure	Exposure to an event which involves actual or threatened death or injury, or a threat to physical integrity that occurred to the individual or someone they are close to (Goodman *et al*., 1998).
Exposure to crime and violence	Exposure to acts of violence outside of the home environment.
Exposure to family-related trauma	Exposure to domestic abuse or the loss of a parent.
Exposure to other types of trauma	Exposure to chronic illness, injuries, accidents, or natural disasters.
Strengths	Elements (experiences, relationships, skills, values) which facilitate optimal development (Sesma, Mannes, & Scales, 2006).
Intrapersonal strength	The individual's perception of their abilities, successes and competence (Rhee, Furlong, Turner, & Harari, 2001; Trout, Ryan, La Vigne, & Epstein, 2003).
Affective strength	The ability to express feelings to, and accept feelings from others (Rhee *et al.*, 2001).
Interpersonal strength	The ability to control one's own emotions and behaviours in social settings (Rhee *et al.*, 2001).
Family involvement	The degree of participation and relationship with one's family (Rhee *et al.*, 2001).

School functioning	Educational abilities and competence in school tasks, and classroom behaviour (Rhee *et al.*, 2001).
Coping	The individual's cognitive and behavioural efforts to deal with situational demands that are perceived as exceeding their resources (Folkman, 1984).
Problem-focused coping	Efforts directed toward resolving the stressful relationship between self and environment (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001), including situational coping which involves direct actions to solve a problem; self-restructuring which includes changing one's cognitions and behaviours; and practical social support to change the situation (Wong *et al.*, 2006).
Emotion-focused coping	Efforts directed towards alleviating negative emotions (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001), including tension-reduction strategies, active emotional coping such as processing emotions, and passive emotional coping such as wishful thinking (Wong *et al.*, 2006).
Existential coping	Efforts aimed at the acceptance of situations that cannot be changed, discovering the purpose of one's existence, and finding meaning in difficulty (Wong *et al.*, 2006).
Spiritual coping	Efforts focused on the spiritual dimension, such as religious practice and belief in a divine being (Peacock, Wong, & Reker, 1993).

Resilience	The potential to adjust successfully in the midst of challenging circumstances (Masten, Best, & Garmezy, 1990).
Sense of mastery	A component of resilience. Optimism about oneself and the environment, a belief in one's ability to overcome problems and to adapt to challenges or ask for help (Prince-Embury & Courville, 2008a).
Sense of relatedness	A component of resilience. Social support, comfort with others, and tolerance of differences (Prince-Embury & Courville, 2008a).
Emotional reactivity	A component of resilience. Sensitivity, slow recovery from an emotional reaction, and impairment caused by emotional arousal (Prince-Embury & Courville, 2008a).
Subjective well-being	The experience of many pleasant and few unpleasant emotions, engagement in interesting activities, and satisfaction with life (Diener, 2000).
Satisfaction with life	An indicator of subjective well-being. A person's subjective global assessment of quality of life (Shin & Johnson, 1978).

The theoretical grounding of each of these concepts will be explored in depth in the literature survey.

1.5 Exposition of chapters

This thesis consists of the following seven chapters.

- **Chapter 1: Introduction**

  The aim and rationale of this thesis are introduced together with the research goals and method. The key concepts are defined, and the focus for each of the chapters is given.

- **Chapter 2: Conceptualisation**

  This chapter describes the conceptualisation model, Developmental Psychopathology (DP), with regard to its origin, definition, underlying principles, applicability to risk and resilience studies, and its contributions to research and practice. The DP model will be used as an organising model for the study as it includes the influence of multiple systems on development. However, to understand the dynamics underlying positive adjustment better, this chapter also provides a process model to explain resilience. The resilience model complements DP and clarifies the various contributors and points of interaction in the resilience process. The chapter concludes by indicating the gaps that have been identified in the current resilience research.

- **Chapter 3: A developmental psychopathology perspective on early adolescence**

  The life stage of adolescence is an ideal period for studying the interaction of different developmental systems. The scope of this chapter is, therefore, quite broad: first, the life stage of early adolescence is defined; second, the rationale for investing in adolescents is argued; third, the normal developmental processes during early adolescence are explored; and, finally, some important systems in the South African context are discussed. In correspondence with the systemic approach of DP, the ecological systems of Bronfenbrenner (1979) are used to structure the discussion.

- **Chapter 4: The process of developing resilience**

  This chapter provides an overview of the process of resilience. Resilience is understood as a transactional process as explained by the ecological model of

Kumpfer (1999). In this chapter Kumpfer's model is applied to the variables included in the current study: the stressor, the trauma exposure; the outcome, life satisfaction; and the transactional point, coping. Finally, some demographic factors which might act as moderators in the resilience process will be examined.

- **Chapter 5: Methodology**

  This chapter explains the methodology used by the researcher to address the research objectives. The research design and statistical analysis are explained and the research goals and hypotheses are stated. The method and measuring instruments used to obtain the data for testing the hypotheses, as well as the characteristics of the participants, are discussed. The steps which were followed during the statistical analysis are also presented. Lastly, the chapter will explain the ethical considerations that were addressed during the study.

- **Chapter 6: Results and discussion**

  This chapter explores the descriptive statistics obtained for the current sample. Second, the resilience model proposed by the researcher is tested using SEM to determine whether it fits the data sampled. The results of the SEM are presented and compared for three groups: the total group, the group of black adolescents, and the group of white adolescents. Finally, the results are discussed and interpreted in the contexts of both the theoretical model and the literature included in earlier chapters.

- **Chapter 7: Conclusion**

  This chapter explains how the knowledge gained from the current study could be of practical benefit to young South African adolescents. This chapter first evaluates the contribution of this study, both with regard to its literature review and its findings. The limitations of the study also are elaborated as these not only promote prudence in interpreting the findings, but also indicate the direction for future studies. Recommendations are made for future studies, and for the implementation of the results in practice. Lastly, the researcher concludes with a personal reflection on the research process.

The next chapter will present the conceptualisation model – Developmental Psychopathology – as well as a discussion of the most important concepts included in this thesis.

2. CONCEPTUALISATION

2.1 Introduction

The process of adjustment is best understood by means of a developmental and ecological framework (Masten, 2006). This implies that adjustment should be studied not only in context of the individual's developmental trajectory, but also in the context of their environment in order to gain a clear understanding of the multiple factors that play a role in adjustment. Hence, developmental psychopathology (DP) has been chosen as the guiding theoretical model for the current study.

This chapter will, firstly, describe this model with regard to its origin, definition, underlying principles, applicability to risk and resilience studies, and contributions to research and practice. The DP model will be used as an organising model for the study, as it includes the influence of multiple systems on development. However, one of the aims of research in resilience is to better understand the dynamics underlying positive adjustment (Masten, 2001). Therefore, this chapter will also provide a conceptualisation model to explain resilience. The resilience model complements DP and clarifies the various contributors and points of interaction in the resilience process. The chapter will conclude by indicating the gaps that has been identified in the current resilience research.

2.2 The developmental psychopathology model

2.2.1 Origins and definition

Developmental psychopathology arose from recognising the value of combining clinical and developmental perspectives in the study of behaviour and adaptation (Rutter & Sroufe, 2000). The search for aetiologies and interventions for mental health disorders prompted this merge of psychopathology and development as researchers began to embark on longitudinal studies on children in the 1970s (Masten, 2006). Developmental psychopathology has been defined by most

developmental psychopathologists as an integrative framework, or a macroparadigm (Masten, 2006), as it encompasses pathology and normal behaviour, individual and environmental factors, and incorporates past, present and future aspects of the life span. Sameroff (2000) notes that, initially, this field was concerned with cause and effect, but it soon evolved into an appreciation of the probabilistic interchanges between dynamic individuals and dynamic environments.

Garmezy, Gottesman, Rutter, Sameroff, Sroufe and Zigler, and their students including Achenbach and Cicchetti (Masten, 2006) were among the scholars who provided the initial impetus for the development of this framework. The publication of the text *Developmental Psychology* by Achenbach in 1974, the special issue in 1984 on DP in the journal *Child Development*, Cicchetti's initiation of the Rochester Symposia on DP in 1987, and the founding of the journal *Developmental Psychopathology*, which was first published in 1989, are cited as some of the main events in providing momentum for this new approach (Masten, 2006; Van Eys & Dodge, 1999). Researchers started to acknowledge that the course of pathology and normal development is equally important in the understanding of DP and, in recent years, Masten (2006) highlighted the incorporation of a positive approach in DP to include the full spectrum of behavioural health.

In addition, DP explains how the individual and the environment interact to bring forth adaptive or maladaptive patterns of functioning (Sameroff, 2000). Developmental psychopathology is, therefore, regarded as an ecological model, allowing for the contribution of multiple environmental variables to multiple domains of development. Anything from economics to the family can add to a positive or negative developmental trajectory in these domains (Sameroff, 2000). Furthermore, these interactions are studied over time to link past, present and future adaptation (Sameroff, 2000). A life-span approach to DP is crucial to make provision for age-indexed variations in vulnerability and the onset and course of pathology and/or positive outcomes (Rutter & Sroufe, 2000).

Researchers such as Van Eys and Dodge (1999) and Masten (2006) argue that DP is not only an intellectual pursuit, but should be aimed at promoting positive development and informing mental health care policy. In a nutshell, DP offers an ecological, life-span perspective on normal and abnormal development which includes the biological, psychological and socio-contextual aspects of human functioning (Cicchetti, 2000). The interactive nature of normal and abnormal development is central to DP, but neither of these is simple to operationalise or study.

2.2.2 Normal development and psychopathology

Normal development is considered a dynamic process, as it arises from complex interactions among genes, internal systems and contexts at multiple levels (Masten, 2006), and depends on the meanings individuals attribute to their experiences (Rutter & Sroufe, 2000). Therefore, the individual patterns of adaptation are as unique as the individual's intrapsychic life (Sroufe, 1990). Development in childhood in general becomes increasingly adaptive, and is characterised by increased complexity and differentiation (Masten, 2006). Sroufe and Rutter (1984) add that individuals develop not only towards increasing flexibility, but also towards increasing organisation. The end result of development is maturity which is characterised by establishing coherent functioning in thoughts, behaviour and emotion (Rutter & Sroufe, 2000). Sameroff (2000) is of the opinion that, in the mentally healthy individual, one would nonetheless find extreme behaviour that resembles pathology; while in the mentally ill individual, it is not difficult to find areas of competence that resembles health.

In the context of development, psychopathology may result from three different processes. First, pathology can arise from deviations in development, such as failure to acquire adequate social skills (Masten, 2006). Second, psychopathology results from the pursuit of deviant behaviours by individuals who otherwise develop normally, such as risky experimentation that leads to substance dependency (Masten, 2006). Third, pathology resembles distortions of the developmental process, as is seen in the pervasive developmental disorders (Sroufe & Rutter, 1984). As earlier forms of behaviour become integrated into more complex hierarchies of behaviour (Werner, 1957), a disordered pattern of adaptation may be latent – and therefore not noticed – until it is activated by a specific set of circumstances or increased stress (Sroufe & Rutter, 1984). Sameroff (2000) cautions that a developmental perspective on pathology obliges one to also understand pathology as an adaptational process between individuals and their life experiences. Deviancy is, therefore, not inherent in the individual, but rather a product of the dynamic interaction between individual, context and development (Sameroff, 2000).

The complexity of normal and abnormal development is demonstrated by the principles of multifinality and equifinality. ***Multifinality*** is evident when individuals who were exposed to similar circumstances attain diverse outcomes. Even though children might be exposed to the same risk experience, only some will succumb to disorder, while others continue to function normally

(Rutter & Sroufe, 2000). In fact, no single influence is sufficient or necessary to bring forth a disorder (Sameroff, 2000). Early physical abuse, for example, can lead to conduct disorder or depression (Van Eys & Dodge, 1999), or no significant maladaptive behaviour. ***Equifinality*** describes a process where individuals with differing circumstances ultimately attain similar outcomes. Conduct disorder, for instance, may result from early physical abuse or a difficult temperament (Van Eys & Dodge, 1999). Understandably, multi- and equifinality complicate the study of cause and effect, as complex mechanisms underlie causation. Studying causal processes from a DP perspective brings unavoidable tension between the need for simplification required by good scientific practice and the need to note complexity in developmental processes (Rutter & Sroufe, 2000).

A model of multi- and equifinality illustrates the significance of jointly considering normal and abnormal development (Sroufe, 1990). Development, according to Sroufe (1990), can be fully understood only by studying both the normal and abnormal outcomes of a given trajectory as well as the strengths and weaknesses in patterns of adaptation characterising that trajectory. The multiple pathways between normal and abnormal also present a type of chicken-and-egg dilemma: on the one hand, one cannot demarcate deviations without defining critical normal developmental issues; on the other hand, it is difficult to proof the critical importance of developmental issues before studying the consequences of pathological adaptation in negotiating those issues (Sroufe, 1990). Therefore, normal and abnormal behaviours inform one another reciprocally (Sroufe, 1990).

2.2.3 An organising conceptualisation model

Mash and Wolfe (2002) adopted the DP perspective as an organising framework in order to describe dynamic and multidimensional processes in studying developmental outcomes. This framework depicts DP as a macroparadigm that coordinates various microparadigms and highlights the connections among variables or phenomena (Mash & Wolfe, 2002). The following figure illustrates Mash and Wolfe's (2002) organising framework.

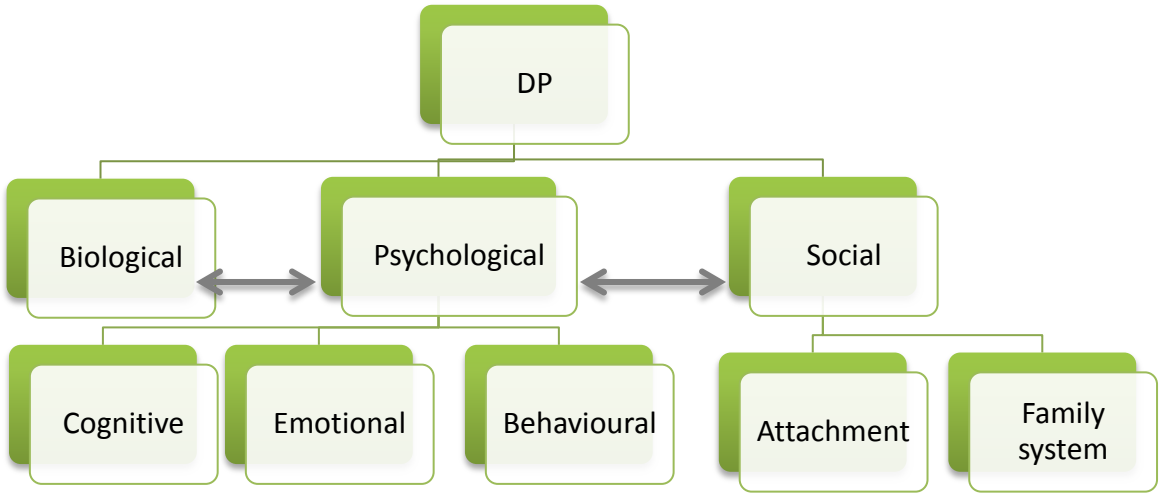

Figure 2.1: The microparadigms of the DP model (Mash & Wolfe, 2002, p. 24)

This figure demonstrates how various disciplines complement one another in describing developmental processes (Mash & Wolfe, 2002). Each of the microparadigms can be considered a tool to expand the researcher's knowledge on a specific developmental outcome. Each of these microparadigms will be discussed next.

2.2.3.1 Biological perspectives

Biological perspectives consider brain and nervous system functions such as the brain structure, neuroplasticity, regulatory systems and genetic contributions (Mash & Wolfe, 2002). The brain's anatomical differentiation depends on the environment providing the experiences necessary to select the most adaptive network of connections (Cicchetti & Cannon, 1999). This neural plasticity is evident throughout the course of development (Reiss & Neiderhiser, 2000). The areas of the brain are highly influenced by the availability of neurohormones and biochemicals which interact to affect an individual's psychological experiences (Mash & Wolfe, 2002). Both the endocrine system and neurotransmitters are, therefore, seen as regulatory systems important to integrated functioning and can play a role in developmental outcomes or pathology (Mash & Wolfe, 2002). Developmental outcomes are also determined in part by genetic influences. However, the expression of genetic influences is responsive to the social environment (Reiss & Neiderhiser,

2000). In fact, almost all neurobiological processes depend on environmental factors for direction (Mash & Wolfe, 2002).

2.2.3.2 Psychological perspectives

Psychological perspectives, including cognition, emotions and behaviour, also explain processes of normal development and pathology.

a) Cognitive influences

Children's ongoing cognitive development, such as reasoning and problem solving, helps them understand who they are and how to relate to their environment (Mash & Wolfe, 2002). There are various cognitive mediators that influence behaviour. Social cognition or self-appraisals, for example, can be based on faulty beliefs or attribution biases (Mash & Wolfe, 2002) and, therefore, distort perception. Thus, subjective interpretation plays a role in behaviour and developmental outcomes.

b) Emotional influences

Emotions are core elements of the human psychological experience (Mash & Wolfe, 2002). Emotions are central to regulation (Sroufe, 1997) in determining which stimuli a person will approach or avoid. This regulatory function is supported by stress-regulating hormones and, thus, critical to healthy adaptation (Mash & Wolfe, 2002). There are two components to emotional processes: emotional reactivity, which refers to the individual's threshold and sensitivity to emotional experiences, and emotional regulation, or the control of emotional arousal (Mash & Wolfe, 2002). An individual's early style of regulation is known as their temperament, which becomes the basis for later personality development.

c) Behavioural influences

The behavioural influences emphasises the principles of learning in shaping the individual's behaviour (Mash & Wolfe, 2002). Usually a combination of reinforcement and conditioning is used to explain acquired behaviour (Mash & Wolfe, 2002). Therefore, antecedents and consequences of

behaviour, as well as paired associations between stimuli, are studied to explain behavioural patterns.

2.2.3.3 Social perspectives

Social perspectives refer to the reciprocal connections the child has with their environment and include events and systems that are proximal and distal (Mash & Wolfe, 2002). Although Mash and Wolfe (2002) refer in short to both attachment and the family system, they also are of the opinion that Bronfenbrenner's (1977) ecological model better encapsulates the richness and depth of the individual's ecology.

a) Attachment

To develop a theory of attachment, Bowlby (1973) integrated aspects of evolutionary biology with the value that the psychodynamic perspectives attach to early experiences. The process of establishing an emotional bond with the primary caregiver is an ongoing process and provides children with a secure base from which to explore their worlds (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Attachment is important for all areas of development. It teaches children to regulate emotions and behaviour, to develop an internal working model, and to organise behaviour through feedback into a goal-oriented system (Mash & Wolfe, 2002).

b) The family system

Family systems theorists argue that one cannot sufficiently understand the individual in isolation from other family members (Wagner & Reiss, 1995). In studying developmental outcomes, one needs to consider family processes and the impact these processes have on development (Mash & Wolfe, 2002). Also, the way in which a family deals with stresses or trauma plays a vital role in the children's adjustment and adaptation (Mash & Wolfe, 2002).

Because of the ecological nature of DP, the model is often supplemented with the theory of Bronfenbrenner (1979) that conceptualised human development from a systemic perspective.

2.2.3.4 Bronfenbrenner's ecological model

Urie Bronfenbrenner, a developmental psychologist, introduced a new theoretical perspective on human development in the 1970s. He conceptualised human development from a systemic perspective and challenged the more reductionist models that only emphasised the individual. The relationship the individual has with their environment has systemic qualities and its own momentum and dynamics (Bronfenbrenner, 1977).

According to this theory, the individual is part of a system of nested structures that comprises the individual's environments. These nested structures start with proximal environments which influence the individual directly, such as the family, and end with distal environments which influence the individual indirectly, such as government policies. Bronfenbrenner (1979) stated that the interrelationships between these environments are just as influential in individual development as any discrete event occurring in one environment. Bronfenbrenner (1979) conceptualised five nested structures, namely the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem.

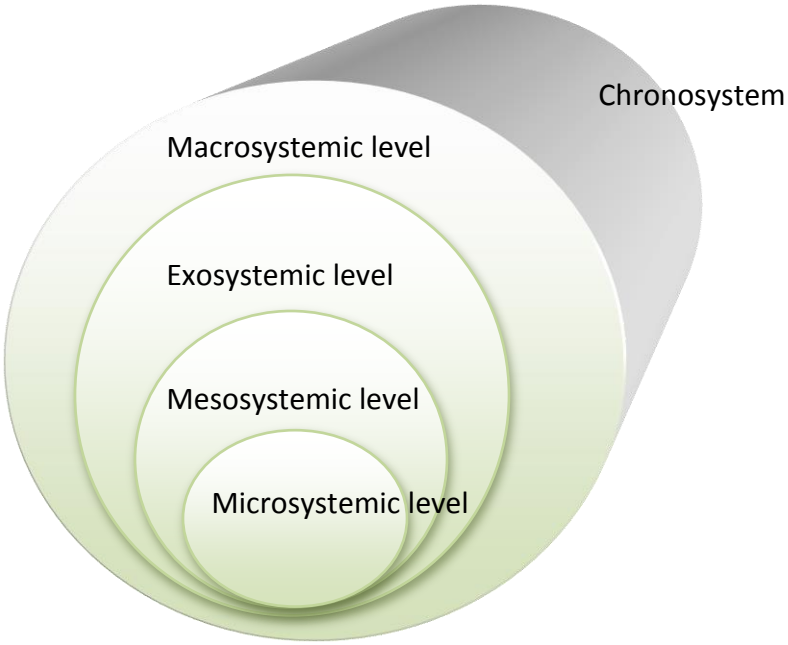

Figure 2.2: A visual organisation of the ecological environment (compiled by the author)

According to Bronfenbrenner (1979), development occurs because the individual's understanding of their environment, as well as their interaction with the environment, is changing constantly. He also supported the principle of agency in his belief that individuals play an active role in their development and have the capacity to discover, maintain, restructure and change their environments. Because this model emphasises reciprocity (Hook, 2009), positive developmental outcomes depend on the interactions individuals have with multiple supporting ecologies.

a) The microsystem

The microsystem is the immediate situation in which the individual finds themselves, the relationships the individual has with other people present in that situation, and the influence these people and relationships have on the developing individual. An example of a microsystem is the family where each family member and their relationships influence the developing child. A child's microsystem usually includes caregivers, parents, siblings, friends, peers, and teachers (Hook, 2009).

There are three components to the microsystem: the activities that have meaning or purpose to the individual; the interpersonal relationships that are meaningful to two individuals, even when they are not together physically; and the roles and expectations individuals are required to meet in a specific position (Bronfenbrenner, 1979). Bronfenbrenner (1979) further attaches great value to the phenomenological environment and emphasises subjective experience, and not objective reality. The child's perception of their activities, relationships and roles are, therefore, more important than any other participant's views.

b) The mesosystem

The mesosystem consists of the connections and reciprocal influences between various microsystems. A mesosystem usually evolves when the developing individual enters a new context. Bronfenbrenner (1979) considered it important for development to be exposed to alternative contexts where the individual can participate in goal-directed activities and continue the developmental trajectories that were formed in their home environment. The most significant interactions occur between the family, school environment and peer group (Bronfenbrenner, 1979). If the child, for example, experiences domestic violence, it may impact negatively on the

child's scholastic performance which, in turn, might trigger further incidents of violence at home. Thus, the different contexts the child is exposed to influence each other reciprocally.

c) The exosystem

The exosystem is defined as the micro- and mesosystems in which the individual does not participate actively, but still influences their immediate environment. It is, therefore, a relationship between an external situation and a process in the microsystem. The exosystem further includes power contexts, such as health systems or school boards, where certain participants can control the allocation of resources or influence various systems with the decisions they make (Bronfenbrenner, 1979).

d) The macrosystem

This level includes the ideologies and organisations of the social institutions that characterise a specific culture or subculture. It refers to the laws, values and traditions of a society and the overarching economic and political systems and popular discourses that determine the meaning individuals attach to their roles and activities (Hook, 2009). Thus, the individual's development cannot be understood apart from their unique sociopolitical, historical and ideological circumstances. Any micro-, meso- or exosystem is a manifestation of the macrosystem, and obvious similarities occur in the systems of any given culture.

e) The chronosystem

Time is considered to be another system that influences individual development. The chronosystem includes the sociohistorical context, the pattern of environmental events, as well as life-span transitions. Over time certain ecological transitions take place, with the individual's ecological position changing due to changes in their immediate situation and roles (Hook, 2009), for example, the transition to a secondary school during early adolescence. These ecological transitions often are accompanied by biological changes (such as puberty), changes in roles (increasing interaction with the peer group, for example), and self-perception (Hook, 2009). Bronfenbrenner (1979) argues that such a transition can be both a trigger and a consequence of developmental processes. Lorion (2000) is of the opinion that these transitions would motivate a

child to develop in order to regain homeostasis in their new position. Transitions can therefore play a role in understanding resilience in developmental processes.

2.2.4 Core principles of developmental psychopathology

The DP model is based on seven core principles. These will be discussed next.

2.2.4.1 The developmental principle

A developmental perspective on both psychopathology and normal processes is necessary as the individual in whom these processes occur, develops continually. The developmental principle requires the researcher to study both the life span and developmental stages of the individual, as well as their developing pattern of adaptation. In fact, Sroufe and Rutter (1984) are of the opinion that the complex links between early adaptation and later disorder can be conceptualised only if one understands the nature of normal development. The periods of rapid transformation in the life span, such as the transition to adolescence, are characterised by marked growth, increased vulnerability and the opportunity for turning points in the direction of adaptive development (Masten, 2006).

2.2.4.2 The normative principle

Abnormal behaviour is defined in the context of what is deemed as normal in a given period and society for an individual of a particular gender or age (Masten, 2006). Developmental tasks are the standards for normal development that serves as milestones for behaviour across the life span (Masten, 2006). They reflect broad domains of competence in the environment and the developmental progression within each domain (Masten & Coatsworth, 1998). These tasks continuously change in salience depending on life stage, culture and context (Masten, 2006). Sroufe, Egeland, Carlson and Collins (2005) caution that these developmental tasks should not be seen as something that can be passed or failed, but instead as reflecting the central challenges for development, the dominant concerns of the child, the capacities that should be acquired to enhance subsequent development, and the main avenues for environmental engagement. Therefore, all children negotiate every developmental issue, whether they do so successfully or not. However,

subsequent development and adaptation depend on the way in which earlier developmental tasks have been addressed and resolved (Sroufe *et al*., 2005).

2.2.4.3 The systems principle

Humans are living systems in continuous interaction with their environments (Masten, 2006). The systems or environments that influence behaviour become increasingly complex and distal as the child ages. Systems are assumed to be self-regulatory and have to maintain their own functioning while adapting to the demands of the context in which they exist (Masten & Coatsworth, 1995). This process remains reciprocal so that child and environment are mutually transforming (Sroufe *et al*., 2005). On the one hand, individuals' functioning is being shaped by their experiences, implying that patterns of adaptation can be changed by environmental changes. On the other hand, environmental features have different meanings and influences for different individuals due to their unique characteristics, and their reaction to these experiences will, therefore, be unique (Rutter & Sroufe, 2000; Sroufe *et al*., 2005). What we notice, ignore, seek out or bring about in our environments can accumulate to our advantage or disadvantage (Sroufe *et al*., 2005).

2.2.4.4 The multilevel principle

Developmental psychology supports the proposition of holism underlying a developmental perspective, namely that the meaning of behaviour can be determined only within the total biopsychosocial context (Sroufe & Rutter, 1984). Since genetic influences are seen as probabilistic and not deterministic, genetic and environmental factors carry, broadly speaking, equal importance with regard to DP (Plomin & Rutter, 1998). Therefore, only multiple disciplines can capture the dynamic interaction of various systems at the core of developmental processes (Masten, 2006). Research indeed reflects the multidisciplinary approach to development, and Cicchetti and Toth's (1998) list of the influences that are considered and studied in this regard includes the ontogenetic, genetic, biochemical, biological, physiological, societal, cultural, environmental, familial, cognitive, social-cognitive, linguistic, representational and socio-emotional predictors of behaviour.

2.2.4.5 The agency principle

Individuals are seen as playing an active role in their own development. Agency increases throughout childhood and adolescence due to brain and physical development, learning and psychosocial opportunities (Masten, 2006). Individuals' choices regarding their experiences, behaviour and contexts can play a critical role in the course of their development. Individuals selectively perceive, respond to and create new experiences based on previous experience; therefore, later experiences are not random influences in development (Sroufe & Rutter, 1984). Consequently, humans are continuously discovering who they are and what they are capable of in different contexts (Little, Snyder & Wehmeyer, 2006). According to Kumpfer and Summerhays (2006), agency implies that children are capable of changing negative developmental trajectories by changing their environments through active decision making. If a young adolescent, for example, are exposed to substances through a high-risk peer group, they might actively decide to change to another friendship circle to avoid high-risk situations.

2.2.4.6 The mutually informative principle

Studies on pathology and well-being, abnormal and normal behaviour, risk and resilience, inform one another mutually. It is important to understand all variations in adaptive behaviour – both the positive and the negative (Masten, 2006). The factors that both pull individuals away from and push them towards increased risk at different life stages should be appreciated (Sroufe & Rutter, 1984). The understanding of normative and non-normative development is further essential for informed prevention (Masten, 2006).

2.2.4.7 The longitudinal principle

The fact that development tends to be coherent implies that its course can be predicted (Masten, 2006). Coherence is demonstrated by the fact that disorders – even those with adult onset – usually can be connected to the success with which earlier developmental tasks were resolved (Sroufe & Rutter, 1984). As such, coherence embraces both continuity and change (Sroufe & Rutter, 1984; Rutter & Sroufe, 2000).

Longitudinal research underlies the other DP principles, as it assists in understanding pathways, processes and turning points related to various developmental outcomes (Masten, 2006). Recently, researchers in this field (Bornstein, Hahn, & Haynes, 2010; Masten & Cicchetti, 2010; Obradovic & Hipwell, 2010) have elaborated on the longitudinal influences in adaptation with the concept of developmental cascades (Masten & Cicchetti, 2010):

> Developmental cascades refer to the cumulative consequences for development of the many interactions and transactions occurring in developing systems that result in spreading effects across levels, among domains at the same level, and across different systems or generations … developmental cascades alter the course of development (p. 491).

Functioning in one area of adaptation can indeed influence the longitudinal change in a different domain of adaptation (Obradovic & Hipwell, 2010). The accumulation of normal and abnormal behaviour over time, and also the implications it has for all areas of functioning – present and future – is, therefore, important.

2.2.4.8 Summary of the principles of development psychology

Developmental psychology is an integrative model and the principles contained in this model can promote the understanding of adjustment and assist in designing comprehensive research studies. The developmental principle emphasises the importance of a life-span perspective, as an understanding of developmental processes might help to link earlier and later adaptation. The normative principle proposes the use of normal developmental tasks for different age groups as the context for defining normal or abnormal adjustment. The systems principle focuses on the reciprocal influence between individual and environmental systems, implying that, in order to understand human functioning, one would have to include various contexts in research studies. The multilevel principle encourages a multidisciplinary approach, as both biological and psychological systems, and both individual and environmental factors are studied. According to the agency principle, individuals are seen as active participants with regard to the behaviour or outcomes of interest for any given study. The mutually informative principle states that the areas of pathology and well-being define each other and an understanding of both the factors that increase risk and those that enhance resilience are vital. The longitudinal principle encourages the study of

individuals over time to better understand the processes underlying adaptation, as well as the cumulative effect of normal and abnormal adaptation.

The implication of these principles is that the researcher would, ideally, study any given population longitudinally within a developmental and ecological context. Also, the investigation of trajectories between multiple variables would be preferred above simplistic bivariate correlational designs. Although such studies may be methodologically complex, DP has been proven suitable to test and refine theories that relate to understanding positive and negative outcomes in diverse populations.

2.2.5 Risk and resilience in the context of developmental psychology

The DP model makes provision for the fact that many children at risk still achieve positive developmental outcomes, such as well-being (Rutter & Sroufe, 2000), due to the possibility of multiple developmental pathways diverging from any specific starting point. To understand risk and resilience from a DP perspective, the relevant variables and key processes must be appreciated (Goldstein & Brooks, 2006). Resilience has been studied in different contexts throughout the world and, even though some controversies regarding terminology still remain, consensus has been reached among researchers on key concepts (Wright & Masten, 2006). The concepts that will be used for the current study are defined in the following table.

Table 2.1 Definitions of concepts used in studying risk and resilience according to the DP model

Concept	*Definition*	*Example*
Resilience	The potential to successfully adjust in the midst of challenging circumstances (Masten, Best, & Garmezy, 1990).	A well-behaved, well-liked and high-achieving adolescent who has experienced domestic violence.
Risk	An increased probability of an undesirable outcome (Wright & Masten, 2006).	The chances of developing depression are higher for adolescents exposed to stressful life events such as violence.
Risk factor	A measurable characteristic of a certain group of individuals that predict negative outcomes for them (Wright & Masten, 2006).	Violence may predict the onset of depression.
Proximal risk	Risk factors experienced directly (Elias, Parker, & Rosenblatt, 2006).	The adolescent experienced parental divorce.
Distal risk	Risk factors found in the ecological context (Elias, Parker, & Rosenblatt, 2006).	Competition among neighbours for resources.
Risky behaviour	Potentially harmful behaviour that adolescents may engage in (Coleman & Hagell, 2007b).	Behaviour such as substance abuse or unsafe sex.
Asset, strength or resource	Elements (experiences, relationships, skills, values) which facilitate optimal development (Sesma, Mannes, & Scales, 2006).	The adolescent has hope for their future.

Concept	*Definition*	*Example*
Protective factor	A characteristic that increases the chances of a positive outcome by mediating the effect of risk or adversity specifically (Luthar, Sawyer & Brown, 2006).	Trauma-debriefing services available at schools.
Competence	The adaptive use of resources to accomplish age-appropriate developmental tasks (Wright & Masten, 2006).	Using goal setting to achieve scholastic success.
Positive outcomes	Any combination of the following: the absence of pathology, the mastery of age-appropriate developmental tasks, competence and subjective well-being (Wright & Masten, 2006).	For adolescents this would include no diagnoses, completing a milestone such as identity achievement, and subjective feelings of well-being.

In correspondence with the mutually defining nature of normal and abnormal behaviour, the study of resilience emerged from studying children predisposed to the development of pathology (Luthar, Cicchetti, & Becker, 2000). It was discovered that some of these children achieved positive outcomes despite the risks they were exposed to, which sparked an interest in well-being, resilience and protective factors.

The importance of the environment is supported by various studies on resilience. Sameroff (2000) explains that a combination of factors within individuals and their environment are interactive over time to bring forth good outcomes. A systemic viewpoint is also evident in Goldstein and Brooks' (2006) work. These authors assert that, prompted by genetic factors, individuals consistently move towards homeostasis.

According to Goldstein and Brooks (2006), a number of large-scale longitudinal studies have been undertaken to better understand resilience processes as they unfold longitudinally. One of the

best known studies in this regard is the Kauai longitudinal study that Werner and colleagues undertook (Werner & Smith, 1992). In the South African context the Birth-to-twenty study that started just after former president Nelson Mandela's inauguration (Barbarin & Richter, 1999) also yielded valuable results in this field. Although the importance of resilience is acknowledged globally, different countries may approach the study of resilience differently, depending on local risk contexts.

2.2.5.1 Risk and resilience studies in South Africa

In South Africa the study of risk and resilience has been framed within a public health discourse (Macleod, 2009b). This implies that factors which increase children's risk for developing particular problems are studied primarily with the aim of prevention (Macleod, 2009b). In a critical review of South African studies on youth resilience, Theron and Theron (2010) urge professionals working with youth to commit themselves to the promotion of resilience – a responsibility which they consider especially relevant in the context of the country's Children's Act. This Act will be discussed in a later chapter.

Resilience has indeed gained credibility in South Africa, especially due to the poor socio-economic conditions and exposure to violence that characterises South African children's lives (Macleod, 2009b). Theron and Theron's review (2010) indicated that, since 1990, resilience has been explored in risk contexts such as violence, sexual abuse, poverty, and AIDS. However, a too narrow focus on vulnerability is not helpful, as it obscures the strengths that help individuals cope with difficulty (Henderson, 2006). A greater focus on resilience allowed researchers to study the positive aspects of these children's environments, as well as their agency in coping with adversity (Macleod, 2009b). South Africa's children, therefore, do not have to be seen as victims. Duncan (1997) warns, however, that the support for resilience should not lead to complacency in those who have the power to effect changes that will improve the conditions for these children. Theron and Theron (2010) agree that professional collaboration to enhance well-being in general is needed to compensate for inadequate access to health resources in South Africa.

2.2.5.2 How developmental psychopathology frames the current study

The current study will investigate the pathways from risk to well-being in a South African sample of young adolescents. The interaction between risk, resilience and protective factors will be examined in the context of normal adolescent development. The DP model allows for the inclusion of both risk factors and positive outcomes, as well as a pathway methodology in determining cause and effect. The current study will support various principles of DP, including the influence of normal development in this process, the interaction between multiple variables (e.g. specific risk and protective factors), the inclusion of ecological contexts (e.g. the family and school environments), and an emphasis on adolescent agency (e.g. coping strategies). Because both the South African context, and the transition to adolescence is marked by transformation as will be explained later on, the intersection between the two might provide fruitful ground for examining vulnerability and adaptation. By making use of a macroparadigm, a better understanding of the process of resilience in adolescents can be attained. In line with the South African resilience agenda, this improved understanding will, in turn, inform intervention strategies aimed at promoting adolescent health.

2.2.5.3 Summary of risk and resilience in the context of developmental psychopathology

Children at risk can still achieve positive outcomes – a phenomenon that has become known as resilience and is probably best explained by the fact that multiple pathways emerge during the course of development. Any individual trajectory would consist of various interacting variables, such as risk and protective factors, as well as a reciprocal relationship between individual and environment. The DP model proposes that risk and resilience goes hand in hand to eventually lead to developmental outcomes. This process of resilience will be further explained in the next section. In South Africa the focus of research on resilience has been on preventative efforts in an attempt to help children cope despite challenging circumstances. The current study will not only explore the depth of recent research available in this area, but also attempt to use the DP model to increase our comprehension of the trajectories of risk, resilience and well-being in early adolescents in the South African context.

The DP model not only guides the study of risk and resilience, but also widely influenced the field of psychology in general.

2.2.6 Contributions and challenges of the developmental psychopathology perspective

Developmental psychopathology has increasingly permeated research, theory and practice on behavioural health and disorder over the past 30 years (Masten, 2006). In fact, according to Rutter and Sroufe (2000), the DP approach has become mainstream in psychiatry and developmental psychology. Its usability stems, firstly, from the fact that it includes a biological perspective, embracing both medicine and behaviour (Rutter & Sroufe, 2000) and, secondly, from its organising principles of development and systems theory that bring together different fields of inquiry (Masten, 2006).

Professionals trained in DP are enabled to tackle the multifaceted mental health issues characteristic of our times (Van Eys & Dodge, 1999), and South Africa specifically. The primary objective of DP remains the prevention or reduction of psychopathology and the promotion of health (Masten, 2006), and this model contributes especially to understanding the best interventions at the most efficacious stages in the life span (Van Eys & Dodge, 1999). The life-span perspective of the model emphasises the importance of the entire developmental spectrum and transcends the traditional adult-focused training with a child tag-on, or child training that views the adult as a parent only (Van Eys & Dodge, 1999).

The differentiation and growth of DP theory requires collaboration between multiple investigators in order to study development across developmental domains (Masten, 2006) and combine efforts to solve complex problems (Van Eys & Dodge, 1999). Therefore, DP is labour intensive and might require training aimed at enabling professionals to become conversant in the languages of partner disciplines (Masten, 2006). Owing to its complexity, the model's practical application might be complicated. It suggests, for example, that almost any environmental factor can influence developmental outcomes – a theoretical viewpoint that might overwhelm the researcher or entangle them in many details. Hook (2009) suggests that the researcher identifies a limited number of systems and information to be included in a research study.

Methodologically the complexity of the DP model provide challenges to researchers. The understanding of multidisciplinary developmental questions in DP requires complex, costly and taxing longitudinal studies – yet, these are considered justified in light of the information it may yield for guiding intervention (Sroufe & Rutter, 1984). The availability of longitudinal data sets and representative samples combined with sophisticated statistical methods, such as structural equation modelling (SEM), enable a description of human functioning that incorporates DP principles (Masten, 2006). Fortunately these statistical methods are increasingly accessible. Furthermore, some progress has been made in methods to analyse the influence of larger systems, such as culture, though progress is still limited due to the conceptual and methodological complexity of such studies (Little, Snyder, & Wehmeyer, 2006; Masten, 2006). Especially in South Africa a contextual approach to developmental psychology research is popular, as a result of the unique social and political environment encountered in this country (Macleod, 2009b).

Experts who study and understand a clinical phenomenon from the DP perspective contributes to research and practice, and also has the knowledge to influence policy (Van Eys & Dodge, 1999). As such the DP model does not discriminate between researcher and practitioner, and instead creates a synergy between research and application.

2.2.7 Summary of developmental psychopathology

Developmental psychopathology provides an integrative model for studying the mutually defining nature of normal and abnormal behaviour over time in the developing individual. It offers an ecological, life-span perspective to understand the processes, continuities and changes underlying specific developmental outcomes. The individual is studied in the context of multiple systems as an active partner in their own development. These principles are also extensively used in studies on risk and resilience; DP is, therefore, deemed an appropriate model for the current study. Developmental psychopathology is, furthermore, widely recognised in developmental psychological and psychiatric research and has the potential to inform best intervention practices in these fields.

2.3 Resilience

2.3.1 The ability to bounce back

Resilience – or the ability to bounce back from adversity – received increased attention in theory and research in the past two decades (Walsh, 2002). Resilience theory focuses on strengths, and not deficits, to better understand healthy development despite risk exposure (Fergus & Zimmerman, 2005). Sullivan, Nguyen, Allen, Bybee, and Juras (2001), for example, report that, in a sample of 80 children exposed to domestic violence, up to 83% were functioning well with no serious behavioural symptoms. According to Olsson, Bond, Burns, Vella-Brodrick, and Sawyer (2003), a considerable number of adolescent studies indicate that adolescents who cope well with stressors still experience higher subjective stress levels than their peers who do not cope well. These studies confirm that resilience can be seen in its strongest form in the concurrent presence of both distress and competence (Windle, 2011). Theron (2004) states that resilience results in durability, and not invincibility: resilient individuals do experience suffering, pain or discomfort, but manage to cope with adversity despite these experiences.

Although beyond the scope of this thesis, it should be noted that both the fields of developmental psychology and resilience are increasingly informed by neurobiological studies. The brain is considered the primary organ allowing for adaptation to changing environments (Karatsoreos & McEwen, 2011). The neurobiological perspective on resilience emphasises that it is a dynamic process influenced by psychological and neural self-organisation. The neurobiological factors researched in relation to resilience include plasticity, the allostatic response, and the early caregiving environment (Karatsoreos & McEwen, 2011; Windle, 2011).

It is with a sense of urgency that resilience research has accelerated, as both the number of youth facing adversity and the number of adversities they face are increasing (Goldstein & Brooks, 2006). Wright and Masten's (2006) description of the three waves of resilience research is quite well known. Initially, resilience studies focused on describing resilience phenomena, concepts and methodologies as they pertain to the individual. These studies significantly expanded our understanding of risk and protective factors (Wright & Masten, 2006). The second wave consists of studies providing a dynamic account of resilience and adopting a developmental-systemic approach

in understanding the transactions between individuals and systems. This approach integrated the factors identified during the first wave to understand the "how" – or the underlying process – of resilience. The second wave accompanied the emergence of DP (Wright & Masten, 2006). The current wave of resilience research focus on interventions aimed at enhancing resilience (Wright & Masten, 2006). It is perhaps the differing findings that emerged from these three waves of inquiry that brought about the variety of definitions of the concept "resilience".

2.3.1.1 A trait or a process?

Defining resilience remains complex and this field still reflects a plurality of perspectives due to its emerging nature (Liebenberg & Ungar, 2008; Windle, 2011). Resilience has been conceptualised by some researchers as a trait that moderates the negative effects of stress (Tarter & Vanyukov, 1999; Wagnild & Young, 1993), while others define it as a dynamic process (Luthar *et al*., 2000) which involves the interaction of the individual with their environment.

Researchers using the trait approach focused on identifying the physical and psychological characteristics that allow individuals to rise above challenging circumstances (Jacelon, 1997). With time the findings from these studies suggested a constellation of characteristics that constitute resilience (Jacelon, 1997), and Garmezy (1993) identified a widely used triad of protective factors that contribute to resilience. These included personal characteristics, family characteristics and external support.

The trait approach to resilience has received several criticisms. First, it might imply that individuals who do not succeed in overcoming adversity are to blame (Fergus & Zimmerman, 2005). On the other hand, individuals who do possess the trait of resilience would be expected to be resilient in all contexts for all outcomes – which is simply not the case (Rutter, 2007). Second, it ignores the contextual factors such as resources that play a role in resilience (Fergus & Zimmerman, 2005). Third, it nullifies the usefulness of programmes seeking to enhance resilience (Fergus & Zimmerman, 2005), as static traits cannot be changed. The translational agenda of resilience researchers aimed at preventative work is, therefore, not informed by a trait approach to resilience (Masten, 2011; Tarter & Vanyukov, 1999). Fourth, it provides a mere piecemeal exploration of a complex construct (Theron & Theron, 2010). According to Fergus and Zimmerman (2005), the fact that individual qualities such as self-efficacy play a role in the resilience process does not

automatically imply that resilience lies primarily in the individual. Luthar and Zelazo (2003) and Masten (1994) agree that resilience cannot be used as an adjective to describe a person, but rather to explain the trajectory a person follows in a certain context.

Those researchers who view the development of resilience as a process specifically focus on the underlying mechanisms that enable individuals to achieve positive adaptation within the context of adversity (Luthar *et al.*, 2000; Wright & Masten, 2006). The World Health Organisation supports this view and highlights that protective factors moderate risk factors, reduce the probability of risk outcomes, and increase the chances of positive outcomes (Friedli, 2009). In accordance, the APA (2009) defines resilience as the process of adjusting well in the face of trauma, adversity, tragedy, threats or significant stress. Individuals are not seen as resilient if they have not yet overcome adversity (Goldstein & Brooks, 2006).

In fact, three conditions should be met for a person to be resilient. First, the person had to have been exposed to a significant threat or challenge. Second, their current or future adjustment must be satisfactory despite the presence of adversity (Wright & Masten, 2006). It should be noted that both competent and resilient children demonstrate positive adjustment, but competent children have not been exposed to adversity yet, whereas resilient children have experienced at least one significant threat. However, Masten *et al*. (1999) report few differences in the characteristics and resources of competent and resilient children. Third, protective factors should be present in the individual's life, as these were determined to be crucial in the resilience process (Windle, 2011). Windle (2011) highlights the role of protective factors in his definition of resilience:

> … the process of effectively negotiating, adapting to, or managing significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and bouncing back in the face of adversity. Across the life course, the experience of resilience will vary (p. 163).

Some studies in this field (Condly, 2006; Theron, 2004) seem to consider the inclusion of the triad of protective factors as equal to describing the process of resilience. Various authors incorporate both the trait and process approaches in their studies on resilience (Coleman & Hagell, 2007b; Jacelon, 1997; Kumpfer, 1999). In support of a combination of trait and process approaches, Egeland, Carlson, and Sroufe (1993) define resilience as a capacity which develops over time

through the integration of individual and experiential factors in the context of a supportive environment.

2.3.1.2 Resilience and developmental psychology

The majority of both trait- and process-focused studies are framed from a developmental psychology perspective – possibly because of the pioneering work of Garmezy on stress-resistant children (Windle, 2011). Initially, children predisposed to developing pathology were being studied (Luthar *et al*., 2000) and those children who reached positive outcomes, despite the risk factors they were exposed to, were seen as extraordinary. With time, it became evident that resilient children are not extraordinary, but simply functioning "normally" and that resilience is not an exotic characteristic. According to Masten (2001), resilience actually is a common phenomenon that results from ordinary adaptation skills. She refers to resilience as the "ordinary magic" of normal human resources. However, the fact that normative processes account for resilience, does not negate those cases in which extraordinary talents or prosperity contribute to positive development (Masten, 2001).

According to this view, fundamental systems such as attachment and mastery motivation contribute to resilience (Prince-Embury, 2006). Thus, during the process of normal development the achievement of developmental milestones might contribute to the individual's resilience. A developmental approach to studying resilience might be seen as bridging the divide between trait and process perspectives. Proponents of the developmental approach, such as Prince-Embury (2006), acknowledges the critical importance of environmental factors in developing resilience, but also argues that the personal attributes individuals bring to their environments are highly influential for their well-being. Resilience is defined in terms of normal developmental traits but, because a normal developmental process is implied, it is possible for anyone to be resilient, and for resilience to be developed as normal development is facilitated. Furthermore, the developmental approach might highlight the importance of individual agency in being resilient, i.e. the individual can *do* something about their own resilience, without viewing discrete attributes as conditional for resilience.

Resilient children, thus, do not possess mysterious or unique qualities, but simply succeeded in retaining basic resources (Masten & Coatsworth, 1998). South African research on resilience

confirms this viewpoint in that the determinants identified in several studies are mostly every-day resources common to individuals (Theron & Theron, 2010). From a developmental perspective it is not risk factors that carry the greatest threat to well-being, but anything that interferes with normal adaptation systems instead (Masten, 2001). Richardson (2002) is of the opinion that these basic self-righting forces within the individual needs to be acknowledged and explored in promoting resilience.

2.3.1.3 Identifying resilience

It is important to understand how resilience is conceptualised, as it has implications for both measurement and intervention. Theorists supporting the trait approach prefer the use of self-report forms in resilience studies to target personal attributes and argue that more objective instruments should be used to study aspects of the environment (Prince-Embury, 2006). Rutter (1999), who firmly support the notion that resilience is a process, advises to identify resilience by examining the presence of a range of psychological outcomes, and to not only measure an unusually positive outcome. Resilience would then be seen as an empirical referent where the presence of resilience is demonstrated by the existence of actual phenomena: risk or adversity, protective factors, and a better-than-expected outcome (Windle, 2011). Fergus and Zimmerman (2005) agree that measuring resilience through self-report is not consistent with the conceptualisation of resilience as a process and that the relationships between various factors should be examined.

Because positive adaptation may not be evident across all areas of life, resilience is probably best measured in its related context (Windle, 2011). Global resilience is rare and researchers should be more specific about relating the concept of resilience to a relevant domain outcome (Vanderbilt-Adriance & Shaw, 2008). Fergus and Zimmerman (2005) explain that resilience is content- and context-specific, which should be reflected in research design and measurement. One cannot simply generate a list of universal promotive factors and assume they would apply in the same manner to all groups, contexts or outcomes (Fergus & Zimmerman, 2005). Different conceptualisations will also have implications for what is considered the appropriate target for intervention: strengthening individual resilience, improving resources in the immediate environment, support through greater community services, or the interaction of these (Windle, 2011).

2.3.1.4 Summary of the ability to bounce back

Resilience refers to continued healthy development despite risk, distress and suffering. Resilience studies emerged in three waves, starting with studying factors important to resilience, moving to understanding the underlying mechanisms in the resilience process, and culminating in the translation of research into intervention. There has been some controversy in defining resilience, as it is sometimes conceptualised as an individual trait, and sometimes as a process. Nonetheless, both enhanced our understanding of the construct, and some researchers aim to incorporate both in their models. Resilience has mostly been framed from a normal developmental perspective with the achievement of developmental milestones beneficial for the development of resilience.

Despite various perspectives on resilience, the one aspect that all definitions of resilience have in common is the notion that it helps the individual to bounce back from adversity. In fact, resilience credits individuals with the strength and the ability to recover (Wolin & Wolin, 2007). However, it is still debated whether resilience can be measured at all with self-report, and there seems to be a preference for considering it as an empirical referent. Resilience should, furthermore, be measured in a specific context. It is because resilience reflects the interaction between various factors that developmental, ecological and multi-causal models are applied to explain resilience processes (Masten & Coatsworth, 1998).

2.3.2 Kumpfer's resilience model

Although the past decade has been characterised by an increase in resilience programmes, there is still much work to be done to understand the underlying processes that account for successful adaptation in children (Wright & Masten, 2006). Because resilience is understood as a transactional process, Bronfenbrenner and Crouter (1983) suggested using an ecological model to study the resilience process and the relationship between risk and protective factors. Kumpfer (1999) later developed a model of resilience based on Bronfenbrenner's ecological model which includes both processes and outcomes predictive of resilience.

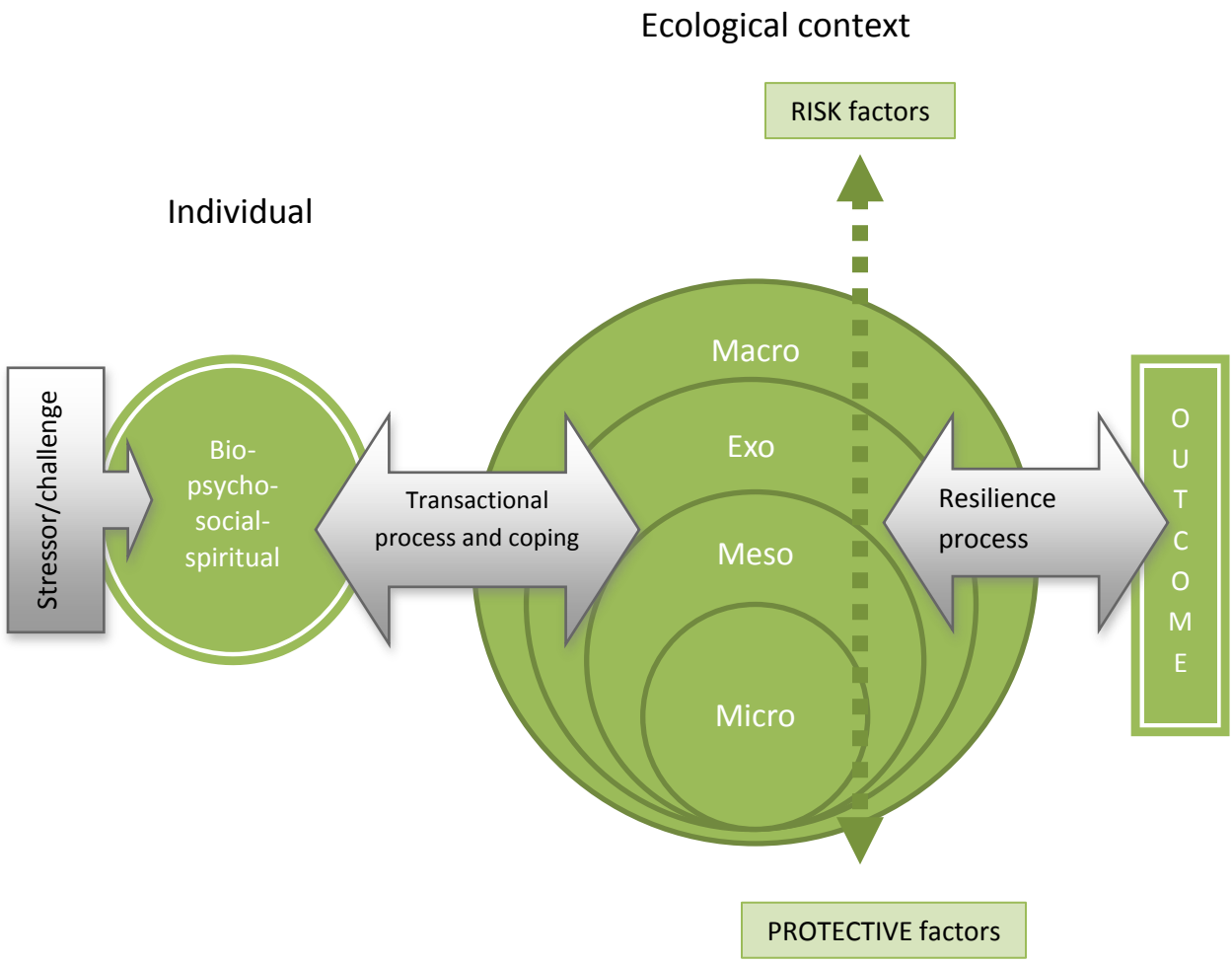

Figure 2.3: Kumpfer's resilience model (Kumpfer, 1999, p. 183)

This model identifies four domains of influence, namely the stressor or challenge, individual characteristics, the environmental context, and the outcome; and two transactional points between these domains (Kumpfer, 1999). Because this model builds on the theory of Bronfenbrenner and, therefore, would also complement DP, it will be used to conceptualise the process of resilience for the current study. Kumpfer (1999) sees the resilience process as dynamic and describes resilience both as a process and an outcome predicted by prior positive adaptation. The domains of influence and transactional points will be further explained in the following section.

2.3.2.1 Stressors and challenges

One of the prerequisites for identifying resilience is the presence of a threat to development or adaptation (Wright & Masten, 2006). Stress occurs when the demands of a situation exceed the individual's available resources and are, thus, perceived as threatening (Lazarus & Folkman, 1984).

a) Stressors

Stressors are stimuli that create disequilibrium in the individual or any system and initiate the resilience process (Richardson, 2002; Kumpfer, 1999). Individuals usually respond with emotional distress which varies in intensity depending on their perception and appraisal of the stressor (Kumpfer, 1999). Hobfoll (1989) emphasised that cultural values influence individual perception and, in this way, indirectly determine what is considered as threatening. Stressors have an impact on both individual and ecological level. On individual level it not only causes emotional tension, but also disrupts daily activities, and often requires behavioural change from the individual (Thoits, 1995). On family level, chronic stressors might overwhelm the family's ability to cope (Patterson, 2002), while chronic neighbourhood stressors can have an impact on a whole community (Dubow, Edwards, & Ippolito, 1997).

Stressors are differentiated from risk factors. Stressors create distress in normative populations, while risk factors are present only in certain risk populations (Masten & Wright, 1998). Stressors initiate the resilience process in populations with many or no additional risk factors, while the presence of risk factors may decrease the individual's capacity for resilience.

Stressors can be anticipated, such as the decision to try out for a soccer team, or unanticipated, such as being involved in an accident (Kumpfer, 1999). It is possible to cope effectively with both types of stressors and to learn valuable lessons even from difficulty that was unexpected (Kumpfer, 1999). An unanticipated stressor, namely trauma exposure, will be studied as the initiator of the resilience process in the current study.

b) Traumatic events

Traumatic events should be distinguished from stressful events. Temporary hassles that prompt a brief negative mood, acute stresses and life transitions are all considered to be stressful events (Lent, 2004). In addition, certain positive events, such as marriage, can also be classified as stressful. Studies such as that of Suliman *et al*. (2009) distinguish between negative and positive stressful life events. Stressful events are not considered life-threatening (Suliman *et al*., 2009) even if these events might increase the risk for negative outcomes, such as depression.

In contrast to stressful events, traumatic events are always serious and life-threatening (Suliman *et al*., 2009). A traumatic event usually involves actual or threatened death or injury, or a threat to physical integrity that occurred to the individual or someone they are close to (Goodman, Corcoran, Turner, Yuan & Green, 1998). Some of the traumatic events included in the current study, such as domestic violence, crime and exposure to a life-threatening illness, are common to the South African context. Other events, including accidents and injury, are especially salient during the adolescent life stage due to increased risk behaviour as will be discussed in the next chapter. Usually for general community examples rare traumatic events such as torture, incarceration as a prisoner of war and terrorist attacks are not included in research studies (Goodman *et al*., 1998). In general, studies on traumatic events draw from the criteria for post-traumatic stress disorder (PSTD) contained in the Diagnostic and Statistical Manual of Mental Disorders (Taylor & Weems, 2009) and most of these, consequently, not only study exposure to trauma, but also signs of PTSD.

Any threat to development or adjustment can trigger the resilience process. These threats include both stressors and traumatic events. Stressful events are not necessarily traumatic, but a traumatic event can be considered a stressor, as it disturbs the homeostasis in various systems.

2.3.2.2 Individual characteristics

Kumpfer (1999) support the DP perspective in emphasising that the individual's internal strengths and competencies necessary for successful adaptation are found on various levels: biological, cognitive, emotional, behavioural, social, and spiritual factors can contribute to resilience. What is valued as strengths will depend on the child's normal developmental tasks, culture and personal environment (Kumpfer, 1999). There has been a growing interest in using

strength-based assessment to inform intervention for children exposed to trauma (Epstein, Ryser & Pearson, 2002), and specific protective factors have been identified to include in studies in this regard. Both the normal developmental tasks relevant to early adolescents and protective factors important in the context of trauma exposure will be discussed in depth in the following chapters.

Even studies emphasising the ecological and dynamic nature of resilience still demonstrate respect for what children bring to the fight against adversity. Most of these demonstrate, though, that, without supportive environments, these children cannot make themselves enduringly resilient in the face of continued onslaughts (Luthar & Zelazo, 2003).

2.3.2.3 Transactional processes

The individual is in constant interaction with their environment and caring others (Kumpfer, 1999). Benard (2007) agrees that resilience in adolescence is developed on a deep, systemic level as relationships, beliefs, empowerment and opportunity for participation and success all transpire in the ecological environment. The transactional processes important to resilience include the individual's or system's attempts to interpret and overcome stressors, challenges or difficult environments, and to establish protective environments (Kumpfer, 1999). This transactional view of resilience emphasises the flexible nature of this construct (Theron & Theron, 2010).

For many children it is not possible to leave or even modify a negative environment (Kumpfer, 1999). In these circumstances resilient children would be those who have the coping skills that enable them to minimise stress, maintain their self-esteem, and gain access to opportunities (Kumpfer, 1999).

a) Coping

Coping has become a key concept in psychology, because the ability to cope is essential to survival and thriving in a rapidly changing world (Wong, Reker, & Peacock, 2006). Given its importance for thriving, the role of coping in resilience seems obvious. Research on coping evolved from stress research and introduced a focus on the individual's ability to deal with circumstances instead of focusing on their deficits (Frydenberg, 2008). Coping refers to the individual's cognitive and behavioural efforts to deal with situational demands that are seen as exceeding their resources

(Folkman, 1984), and can, therefore, moderate stressful life events (Berman, Kurtines, Silverman, & Serafini, 1996). Usually, exposure to a traumatic event would cause some emotional distress to the individual, and coping strategies emerge in an attempt to alleviate this distress (Schexnaildre, 2007). According to Frydenberg (2008), coping can be construed as a continuum that extends from the management of stress to achieving success in the pursuit of goals. The upper end of this continuum, which is characterised by accomplishment and thriving, implies that events can be seen as opportunities or challenges rather than problems (Frydenberg, 2008).

Wong, *et al.* (2006) confirm that successful coping yields both short- and long-term benefits including removing stress and restoring balance, and enhancing well-being. Coping, therefore, has several functions of which the management of stress is only one (Greenglass, 2002).

b) Resilience and coping

In resilient individuals a number of stable psychosocial factors (such as mastery and optimism) foster adaptive coping strategies (Alim *et al*., 2008). The normal developmental components of reactivity and emotional regulation associated with resilience also relate to coping. Reactivity influences the individual's initial response to stress and might either constrain or facilitate certain coping responses (Compas, 1987). Emotional regulation skills provide children with an important set of resources when attempting to cope with stress (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Coping, in turn, promote mastery and control which, in part, constitutes resilience (Seery, Holman, & Silver, 2010).

However, coping and resilience cannot be used interchangeably, as they reflect distinct aspects of adaptation (Compas *et al*., 2001). Coping is seen as one component of a broader set of responses to stress (Compas, Connor, Saltzman, Thomsen, & Wadsworth, 1999) or a micro-component of the resilience process (Leipold & Greve, 2009). A good range of coping skills is deemed important in promoting resilience (Frydenberg, 2008). It refers to the efforts individuals make to mobilise personal resources, while resilience occurs only if these actions lead to successful outcomes (Compas, *et al*., 2001). According to Rutter (2007), the mediating mechanisms giving rise to resilience lie in personal agency, or rather the coping strategies that move individuals to action when they face challenges. Even though resilience always entails a coping component, not all coping efforts will lead to resilience, as some coping efforts fail (Compas *et al*., 2001). Nonetheless,

the importance of coping strategies became clear when neither individual characteristics nor enduring environmental features could provide a sufficient explanation of the process of resilience (Rutter, 2007). Like resilience, coping is a continuing dynamic process that changes in response to the changing demands of a stressful event (Compas *et al*., 2001).

2.3.2.4 The environmental context

Brooks (2006) emphasises that resilience is an ecological phenomenon that develops in interaction with the environment – families, schools and the greater community. Various researchers conclude that the transactions between individuals and their environments best explain resilience and that characteristics of both the individual and their context should, therefore, be considered. Grotberg (1995), for example, is of the opinion that inner strengths, skills and external resources together contribute to resilience.

a) Domains of influence

The external environment includes the critical domains of influence, such as the family and peer group, which can buffer against or exacerbate stressors (Kumpfer, 1999). Whereas the immediate family is the most prominent environmental influence in infancy, by adolescence, various systems and the interaction between these play a role in the adolescent's well-being (Bronfenbrenner, 1977). Bronfenbrenner (1979) explained that proximal forces occur in the social and physical environments children inhabit, such as the home environment, whereas distal forces occur in settings removed from the child's immediate environment, such as the parent's place of work. A study by Kim, Kamphaus, Orpinas and Kelder (2011) on the development of aggression in early adolescence also defined proximal and distal factors in terms of the ecological environments that influence behaviour. These authors found family factors, or proximal factors, the greatest contributor to variance in aggression, although distal factors also made significant and unique contributions in predicting variability in aggression (Kim *et al*., 2011). Since both proximal and distal environments seem to be important for adolescents, Kim *et al*. (2011) recommend examining different developmental contexts to understand adolescent behaviour.

According to Gilligan (2001), the degree of resilience exhibited by children relates to the extent to which their context has elements that nurture their resilience. Resilience, therefore, also entails

the normal functioning of children's ordinary social systems, including the ability of families, schools, and peer groups to carry out their ordinary tasks (Masten, 2001). This would imply that, for those children whose families or communities are under stress, resilience would simply mean that these children make the most of the limited resources available to them (Ungar, 2008). In other words, resilience is a function of both the children's capacity to find health-sustaining resources and the capacity of their families and communities to provide these resources (Ungar, 2008). For the proponents of this point of view, structural and social policy changes are vital in enhancing resilience, and Seccombe's (2002) assertion that changing the odds is preferable to helping children beat the odds is well known in this field. The importance of resources for resilience places it in an ecological context and provides further evidence that resilience is not a static individual trait (Fergus & Zimmerman, 2005).

The external environment not only includes the domains of influence, but also the interaction of risk and protective factors (Kumpfer, 1999).

b) Risk factors

Risk factors are variables that increase the possibility of negative outcomes for the individual (Wright & Masten, 2006). Brook, Rubenstone, Zhang, Morojele and Brook (2011), for example, found that the environmental stressors in the South African context correlate with low well-being among adolescents. In studying risk factors, it is important to not confound results by predicting maladjustment with maladjustment (Kumpfer, 1999). Therefore, the researcher needs to distinguish between factors within the control of the individual, such as failing at school despite adequate scholastic competence, and risk factors outside the individual's control, such as the death of a parent (Kumpfer, 1999). High-risk environments are often determined by demographic variables, which mostly relates to family circumstances, resulting in high-risk children living in high-risk environments (Kumpfer, 1999).

Adolescents are seldom exposed to single risk factors (Wright & Masten, 2006), and risk increases exponentially when more than two risk factors are present (Kumpfer, 1999; Masten & Wright, 1998). Divorce, for example, is never a temporary risk factor, but a lengthy process of continuous changes in the adolescent's life (Wright & Masten, 2006) that can accumulate with time to increase risk (Naglieri & LeBuffe, 2006). Risk status is indeed calculated based on multiple risk

indicators to ensure greater predictive validity (Garmezy & Masten, 1994). Moreover, the impact of these multiple factors vary from individual to individual (Goldstein & Brooks, 2006), and individual outcomes cannot be predicted simply by investigating risk factors. The concept of "risk" is, thus, used to explain that certain individuals within a population exposed to a risk factor probably will experience problems with adaptation in one or more areas (Wright & Masten, 2006).

Usually interventions with children do not focus on risk factors, as it may stigmatise children and leave adults blind to their strengths (Constantine, Benard, & Diaz, 1999). Instead, resilience is developed by building on protective factors and strengths (Finkelstein *et al*., 2005). Theokas *et al*. (2005) argue that, instead of trying to fix problems, the strengths and competencies of youth should be considered and aligned with environmental resources to maximise healthy development.

c) Protective factors

The characteristics of individuals that predict positive outcomes are known as assets, strengths or resources (Wright & Masten, 2006). When strengths or assets predict positive outcomes in the midst of adversity or risk, they become protective (Wright & Masten, 2006). Dubow *et al*. (1997), for instance, studied 315 children from high-risk neighbourhoods and found that family support protects these children against antisocial behaviour. Wright and Masten (2006) advise using the term "protective factors" inclusively to also refer to strengths, as most correlates of good adaptation serve multiple functions in any case. The current study, therefore, conceptualise strengths as protective factors.

Protective factors are usually defined from a systemic perspective and, therefore, identified on three levels: factors found in the individual, in the family, and in the community (Goldstein & Brooks, 2006). Folkard (2005) studied resilience in children in the Kwazulu-Natal province and identified the following protective factors: a stable home environment, religious practice, good neighbours, loving parents and grandparents, a good school with supportive teachers, and security services. Various adolescent studies confirm the importance of both individual strengths and ecological assets for well-being (Lerner, Von Eye, Lerner, Levin-Bizan, & Bowers, 2010; Oberle, Schonert-Reichl, & Zumbo, 2011).

Strengths and resources create a sense of accomplishment, contribute to satisfying relationships, enhance one's ability to deal with adversity, and promote development (Epstein & Sharma, 1998). By endorsing a strengths perspective, adolescents can be empowered to take responsibility for their own life experiences (Rhee, Furlong, Turner, & Harari, 2001). It is, therefore, vital to consider protective factors in studying children and adolescents, as these factors provide a more comprehensive understanding of how agency and resilience manifest in their lives (Rhee *et al*., 2001).

d) Identifying risk and protection

Protective factors are not simply the opposites of risk factors (Luthar *et al*., 2006). Abuse is an example of a risk factor that does not translate into a strength if it is absent from the home environment; similarly, talent can be a protective factor, but the absence of significant talent does not imply any risk (Masten & Coatsworth, 1998). Risk and protection are, therefore, identified in terms of their functional meaning for the adaptation of the individual (Masten & Wright, 1998). This implies that the same variable can be a risk or a protective factor, and assumptions regarding risk and protection should be avoided (Luthar *et al*., 2006). Even though affluence, for example, may appear to be a protective factor in a family's life, its pursuit can also increase the risk for low family well-being when adults prefer to spend time and resources on work and not family (Promislo, Deckop, Giacalone, & Jurkiewicz, 2010).

Masten and Coatsworth (1998) propose examining the criteria, the context, and/or the developmental stage before determining whether a certain factor carries risk or protection. Disability, for example, is a criterion which may or may not increase risk for children. However, during a traumatic event, such as a tsunami, children with disability may be particularly threatened due to their functional difficulties (Masten & Osofsky, 2010). An example of how context would determine risk or protection is found in close friendships. In general, there tend to be a correlation between close friendships and social and scholastic competence (Deater-Deckard, Ivy & Smith, 2006). However, in the context of antisocial peer groups, those adolescents with less intimate friendships are the ones protected against later behaviour problems (Bender & Lösel, 1997). One example of a risk factor that is associated with a specific developmental stage is the increased parent–child conflict in early adolescence. Even though conflicting family environments can increase risk for children, conflict also is one of the avenues by which the adolescents negotiate

their increasing autonomy and practise their cognitive skills (Morojele, Parry, & Brook, 2009). Conflict, therefore, facilitates a process of normal adolescent adaptation and might increase both independence and a sense of mastery which, in turn, promotes resilience.

Ungar (2008) supports the notion that the context of the child determines the influence that a specific aspect of resilience has on the child's life. He also drew attention to the fact that the cultural context specifically will determine risk and protection. Thus, different aspects of resilience can actively or passively contribute to resilience, or even threaten resilience when they are in conflict with the child's values (Ungar, 2008). Ungar's (2008) study on an Indian adolescent girl whose family immigrated to Canada, is a case in point. She coped with prejudice by adhering strongly to her traditional values and finding pride in her ethnic identity. Would this girl have pursued independence and social equality (which in Western contexts are considered important to resilience), the conflict it created with her value system would probably have hindered her adaptation. Many of the individual characteristics associated with resilience are common across cultures, whereas the patterns of finding and negotiating for resources mostly are culture specific (Ungar, 2008). With regard to South African research, Theron and Theron (2010, p. 6) highlighted the need for a keener focus on the cultural and contextual roots of resilience in order to understand "what is local about resilience".

e) Models of risk and protection

Various models have been proposed to explain how protective factors function to influence the potential effects of risk factors.

A ***compensatory factor*** does not interact with the risk factor, but has a direct and independent effect on the outcome (Fergus & Zimmerman, 2005). Youth exposed to poverty, for instance, are at higher risk for violent behaviour (Fergus & Zimmerman, 2005). However, adult monitoring is a compensatory factor which reduces these negative effects of poverty (Fergus & Zimmerman, 2005). Resources with direct effects can be beneficial in condition of both high and low risk (Windle, 2011).

The ***challenge model*** proposes that moderate levels of stress or risk provide the individual with a challenge which leads to increased competence when it is mastered (Zolkoski & Bullock, 2012).

These models are usually represented by a curve where moderate levels of stress correlate with good functioning, while stressors that are too taxing, reduce competence. Barbarin and Richter (1999) describe a phenomenon similar to a normal curve in their article on community violence in children from Johannesburg and Soweto: the best psychosocial outcomes were found for children living in moderate levels of safety. Both the children in very safe neighbourhoods and those in the areas that were very unsafe performed poorer socially and academically. In the challenge model, the risk and protective factors are usually the same variable, but represent different levels of exposure (Windle, 2011).

Initially, evidence from animal models supported the notion of an ***inoculation effect*** in that repeated brief stress experiences decreased vulnerability (Rutter, 2012). These earlier stress experiences are not pleasurable, but protect against later maladjustment due to exposure to adverse events (Rutter, 1995). Protective factors are, therefore, defined in terms of their effects and not according to their hedonic qualities, as protection does not necessarily constitute a pleasurable experience (Rutter, 1985). More recently, it also became evident that, in human behaviour, resilience stems from successes leading to self-efficacy and not from overcoming minor stresses in itself (Rutter, 2012). Obradovic (2012), therefore, highlights the need for more prospective studies with standardised measures of adversity exposure to examine the mechanisms of a steeling or inoculation effect.

The ***protective-stabilising model*** refers to protective factors which nullify the relationship between the risk factor and a negative outcome (Zolkoski & Bullock, 2012). For example, inadequate parental support is correlated with delinquent behaviour in adolescents (Fergus & Zimmerman, 2005). However, when another adult mentor is present, there is no relationship between a lack of parental support and delinquent behaviour (Fergus & Zimmerman, 2005).

In the case of a ***protective-reactive model***, the protective factors do not completely remove the association between the risk factor and the negative outcome, but at least it weakens the correlation (Zolkoski & Bullock, 2012). For instance, comprehensive sex education may weaken the correlation between drug abuse and risky sexual behaviour in adolescents (Fergus & Zimmerman, 2005). Windle (2011) explains that the influence of the protective factor is furthermore weakened by high risks.

In ***protective-protective models***, a protective factor can increase the effects of another protective factor (Brook, Whiteman, Gordon, & Cohen, 1989). Fergus and Zimmerman (2005) explain that parental support, for example, can strengthen the positive effect of academic proficiency and create more positive academic outcomes than for either protective factor alone.

According to Fergus and Zimmerman (2005), these models are best tested with longitudinal data. Benzies and Mychasiuk (2009) suggest that resilience will be optimised when protective factors are enhanced at all the possible systemic levels.

2.3.2.5 The resilience process

The resilience process is learned by the individual through gradual exposure to challenges and can be either short or long-term processes (Kumpfer, 1999). It is a continual process of meeting challenges, resolving them, and then meeting new challenges (Baldwin *et al*., 1993). Resilience enables the individual to use each challenge for psychosocial growth, provided that the challenges are not too severe (Baldwin *et al*., 1993).

Resilience is dynamic in nature and can be conceptualised as a developmental process with new strengths and weaknesses that emerge over time with changing circumstances (Luthar *et al*., 2000). For example, in a study of juvenile delinquents, Van der Put, Van der Laan, Stams, Dekovic, and Hoeve (2011) found a greater prevalence of strengths in older adolescents than in younger adolescents which they hypothesise to be due to brain maturation and the accompanying mastery of skills in later adolescence. An adolescent can demonstrate resilience at one stage of development, but not at other stages; in one context, but not in all contexts; and in one area of life, but not in all areas (Wright & Masten, 2006). It is for this reason that resilience is not seen as an observed trait (Rutter, 2007), but rather a hypothetical construct that must be inferred from the manifestation of competent functioning (Slone & Shoshani, 2008).

Prince-Embury (2006) identified three normal developmental qualities indicative of competent functioning that correlates with resilience: a sense of mastery, a sense of relatedness, and emotional reactivity.

a) A sense of mastery

The development of a sense of mastery is a core system identified in both developmental research and resilience research (Prince-Embury & Courville, 2008a) and can be seen in children from infancy onward (White, 1959). It provides children the opportunity to interact with the environment, experience competence and enjoy having an effect on the environment (White, 1959). Mastery is driven by curiosity that is intrinsically rewarding and results in problem-solving skills (White, 1959). In order to achieve mastery, adolescents would have to be optimistic about themselves and the environment, believe in their abilities to overcome problems, and be able to adapt to challenges or ask for help (Prince-Embury & Courville, 2008a). Because adaptability includes seeking help from others, it also has been found to correlate with a sense of relatedness (Prince-Embury & Courville, 2008a). Although mastery in itself is considered a developmental task related to middle childhood, the adolescent would further build on this area of normal development. Self-efficacy and adaptability continue to develop as a result of the multiple changes adolescents encounter as well as their increasing autonomy.

b) A sense of relatedness

Resilience is also enhanced by a sense of relatedness (Prince-Embury & Courville, 2008a). It seems that social relatedness boosts resilience in two ways: it provides support in specific situations, and the cumulative experience of previous support acts to shield the child from the negative impact of adversity (Prince-Embury & Courville, 2008a). Usually, the first relationship in children's lives is the attachment bond they have with their parents in infancy (Shaffer & Kipp, 2002). Because of these first attachment relationships, children learn to trust others – to receive and accept what is given (Erikson, 1963) – which facilitates subsequent socio-emotional development. A sense of relatedness is also enhanced by access to social support, comfort with others (which is an aspect of temperament), and tolerance of differences (Prince-Embury & Courville, 2008a). Age differences have been found for comfort with others, with it being the most important aspect of relatedness for children, while adolescents experience comfort with others as a competency (Prince-Embury & Courville, 2008b). Participation in meaningful relationships in different contexts is deemed a normal developmental task in adolescence. The aspects mentioned here are, therefore, developed in interaction with family members, peers and other significant adults in the adolescent's life.

c) Emotional reactivity

A child's emotional reactivity and ability to regulate emotions have been linked with whether the child develops pathology in times of difficulty (Prince-Embury & Courville, 2008a). Emotional regulation is defined as the internal and external factors by which emotional arousal is controlled, redirected or modified in order to enable healthy functioning in challenging circumstances (Cicchetti, Ganiban, & Barnett, 1991). Regulation strategies already emerge in the first year of life and continue to develop throughout childhood (Shaffer & Kipp, 2002). Strong emotional reactivity and difficulty with self-regulation correlates with behaviour problems and vulnerability to pathology (Prince-Embury & Courville, 2008a). Emotional reactivity is, thus, a risk aspect of resilience (Prince-Embury & Courville, 2008a). Good emotional regulation would require of adolescents to not be overly sensitive, to recover well from an emotional reaction, and to minimise the impairment caused by emotional arousal (Prince-Embury & Courville, 2008a). Greater individual variance in recovery has been found with increased age in adolescents (Prince-Embury & Courville, 2008b). Self-regulation is indeed seen as a salient normal developmental task in adolescence and emotional regulation is expected to increase with age.

The individual's internal strength and competence contributes to their resilience. The current study supports a normal developmental approach to identifying the factors which contribute to resilience. Mastery and a sense of relatedness will be considered specifically as factors enhancing resilience, whereas emotional reactivity is considered a vulnerability factor which may decrease resilience.

2.3.2.6 The outcome of the resilience process

Luthar *et al*. (2000) identified three types of resilient individuals. The first group perform above expectation despite belonging to a high-risk group. Especially children vulnerable due to economic hardship, parental illness, substance abuse, child abuse, adolescent motherhood, and perinatal complications have been studied in this regard (Werner, 2000). These individuals overcome the negative effects associated with risk exposure or avoid the trajectories associated with risk (Fergus & Zimmerman, 2005). They, thus, develop better than expected (Windle, 2011). The second group of individuals demonstrate positive adjustment in the face of a stressful event. The research in this area focused on common stressors such as divorce and child-care stressors and its influence on

adjustment and long-term outcomes for children (Werner, 2000). These children can be seen as stress resistant or coping well (Windle, 2011). The third type consists of individuals who cope successfully and recuperate well after being exposed to trauma such as war and violence, or severe deprivation (Fergus & Zimmerman, 2005; Werner, 2000). They can be described as the ones who bounce back (Windle, 2011). In summary, the outcome of the resilience should be at least normal – or, in some cases, better than expected – functioning or development (Windle, 2011). Superior functioning is not studied in the resilience framework (Windle, 2011).

Because this is a dynamic model, a positive outcome will be predictive of later resilience when new stressors are encountered (Kumpfer, 1999). A positive outcome or successful adaptation in the current life stage will be supportive of later developmental tasks and culminate in a greater likelihood that the individual will be seen as resilient (Kumpfer, 1999). Wright and Masten (2006) proposed four criteria that can be used alone or in combination to determine satisfactory adaptation despite adversity: the absence of pathology, the mastery of age-appropriate developmental tasks, competence, and subjective well-being. Kumpfer (1999) warns, however, that the definition of a successful outcome will inevitably be value-laden and culturally relative. Liebenberg and Ungar (2008) confirm that labels such as "successful" and "resilient" are socially constructed and researchers should attend to *who* says *what* about positive outcomes in individual's lives. This can be challenging especially for researchers who are not from the same context as research participants (Liebenberg & Ungar, 2008).

There is indeed conceptual difficulty regarding the criteria researchers choose to demonstrate a good outcome or adaptation (Windle, 2011). In child and adolescent research the achievement of salient developmental tasks are often considered as indicative of resilience (Windle, 2011). However, Windle (2011) advises that the ideal research design would incorporate both objective and subjective outcome measures, as the meaning of a stressful event or situation may amplify the individual's experience of it. Liebenberg and Ungar (2008) agree that the participants' reality should not be overshadowed by society's conceptions of factors important to study with regard to resilience. Furthermore, if the range of outcomes considered is too narrow, dependent on one data source, or measured only at one point in time, resilience may be artefactual (Windle, 2011).

For the purposes of the current study, life satisfaction will indicate positive adjustment. Luthar *et al.* (2006) explain that few studies on resilience have explored subjective indicators of well-

being, as positive outcomes for children are determined mostly by parent or teacher reports. These researchers suggest that subjective indicators, such as life satisfaction, can contribute to a more in-depth exploration of resilience in childhood and adolescence. Fergus and Zimmerman (2005) agree that simply because a factor is objectively or normatively considered to be positive or negative, it does not automatically imply it is experienced as such. It would, therefore, be important to also consider how youth experiences different events in their lives (Fergus & Zimmerman, 2005).

2.3.2.7 Evaluation of Kumpfer's resilience model

The resilience model is a starting point for organising processes and factors predictive of positive outcomes in children (Kumpfer, 1999). It attempts to accommodate the various operational definitions found in resilience research and can adequately capture the findings of cross-sectional and longitudinal studies (Kumpfer, 1999). The model, furthermore, builds on transactional and integrated models to create a metatheory of factors that have an impact on resilience (Kumpfer & Summerhays, 2006). In correspondence with the DP model, for example, the resilience model recognises that individuals are able to change their developmental trajectories by active choices and changing their environments. The model also has a holistic approach to describing resilience by encompassing all areas of development in the individual – something that is deemed important to studying resilience (Liebenberg & Ungar, 2008). It should, however, be seen as a preliminary model (Kumpfer, 1999) and, to date, there does not seem to be sufficient evidence of its validity.

2.3.2.8 Summary of Kumpfer's model

Kumpfer developed an ecological model to describe the four domains of influence and the transactional processes important to resilience. The first domain is the stressor or challenge which triggers the resilience process. The second domain refers to the individual characteristics necessary for adaptation. However, no child can be expected to be enduringly resilient by themselves in the absence of environmental support. The third domain is the environment, including proximal and distal systems, as well as its accompanying risk and protective factors. For children to be resilient, their environments – such as the family and community – should also function normally and be able to provide the resources the children need. The last domain is the

outcome. Resilience theory does not consider superior functioning, but rather the return to normal – or better than expected – functioning after experiencing adversity.

The first transactional point is the individual's interaction with their environment and the process of coping to deal of environmental demands. Coping is essential to resilience in an ever-changing world, as it moderates stressful events and restore balance to individuals and systems. The second transactional point is the process of resilience that comes to the fore due to the interaction of the above-mentioned domains. Resilience is a continual process of encountering and overcoming stressful events.

The value of the model for the current study especially lies in the fact that various contributing factors are organised in a coherent holistic conceptualisation. Moreover, resilience is conceptualised as both a process and an outcome – which allows room for the dynamic nature of the resilience process. The following diagram adapted from Kumpfer's (1999) model demonstrates the specific variables which will be included in the current study.

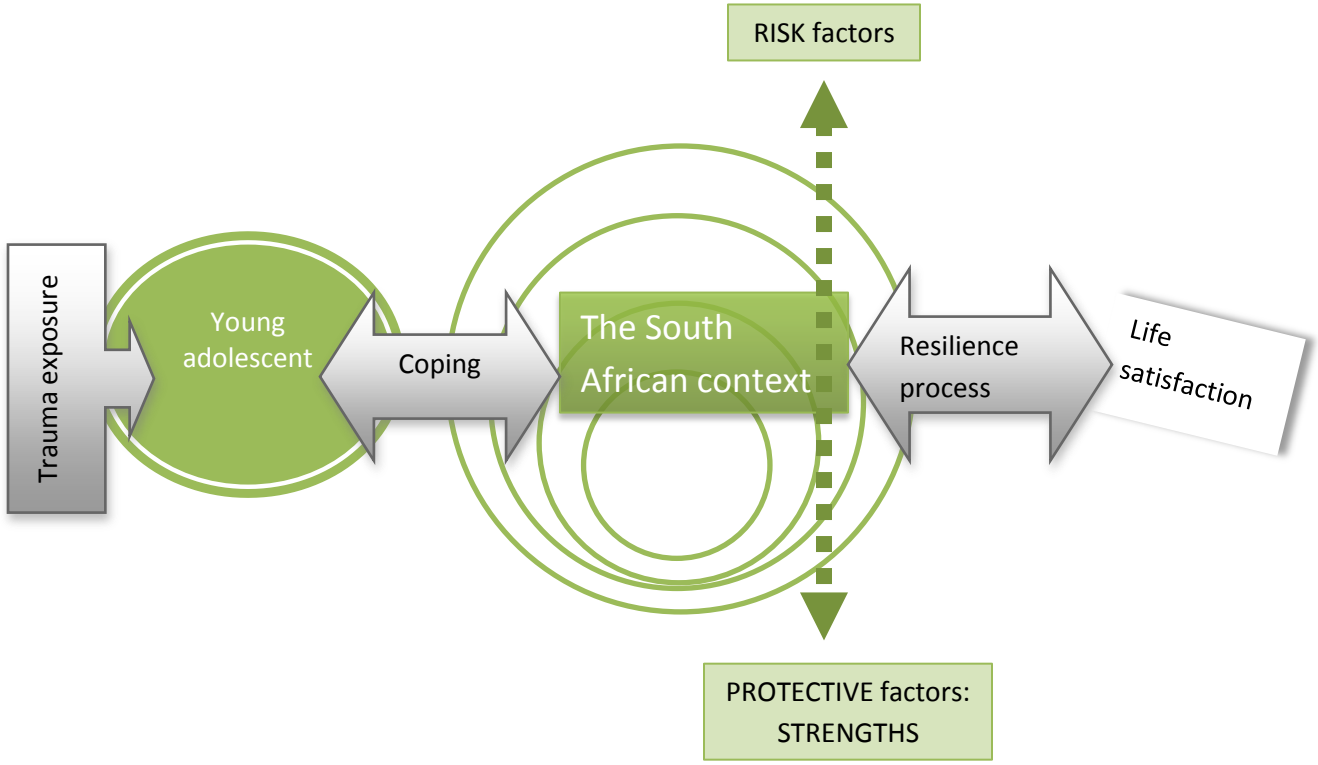

Figure 2.4: The resilience model (adapted from Kumpfer, 1999)

The domains of influence included for the current study are as follows: Trauma exposure will be studied as an unanticipated stressful event which creates disequilibrium and is perceived as life-threatening. Trauma exposure is not conceptualised as a risk factor, as it initiates the resilience response in both normative and at-risk populations. For the individual and environmental domains the life stage of early adolescence and the South African context will be studied. Specific strengths relating to trauma exposure, and relevant to both the individual and environmental domains, will also be included in the current study. Life satisfaction as a subjective indicator of well-being will be the outcome variable, as subjective outcomes are studied less than objective indicators in children and adolescents. It should be noted that life satisfaction may still be a construct not relevant to all contexts or cultures and results should be interpreted sensitively.

Regarding the two transactional processes, the coping strategies used by young adolescents and three domains of normal development indicative of resilience (sense of mastery, sense of relatedness, and emotional regulation) will also be determined. The model further proposes that the outcome variable, life satisfaction, will become predictive of future resilience.

Given the above discussion, resilience will be defined in the current study as a capacity which develops through the interaction of various individual and environmental factors, including risk and protective factors, in the context of adversity. Resilience results in positive adjustment and, consequently, future resilience. Also, it is informed and enhanced by the process of normal development.

2.3.3 A brief overview of resilience research

Recently, Masten (2011) identified a translational gap in resilience research: there seems to be a gap between gains in knowledge and applying this knowledge to benefit families on the one hand, and a delay in practical experiences in the field informing theory on the other hand. Masten (2011) suggests that progress regarding resilience can be accelerated by theory-informative change research, such as implementing a safety plan in communities living in hurricane zones. Instead of trying to only "understand resilience well enough to promote it", researchers can start to "promote resilience well enough to understand it" (Masten, 2011, p. 503). This would also require resilience researchers to be pro-active in applying resilience theory to emergent situations, such as investigating a community during/after a specific disaster. In addition, these researchers will have

to advocate for the discrepancies in research findings and public policy by educating policy makers on the importance of preventative programmes (Wright & Masten, 2006).

Luthar *et al*. (2006) suggest that research prioritises risk factors salient for a particular life stage, factors that are amenable to change, and potential protective factors that are generative of additional assets. These criteria provide a strong argument for continued research and intervention in the field of family relationships, as the family is a significant and proximal system that is relatively open to change and can have an enduring positive influence in the child's life (Luthar *et al*., 2006). In addition, care should be taken to choose protective factors and outcomes conceptually relevant to a specific risk condition and the developmental period (Luthar & Zelazo, 2003).

Masten (2011) emphasises the need for measures that are contextually appropriate, reliable and valid. Theron and Theron (2010) suggest that the transactional nature of resilience can be better understood by using hybrid designs, such as mixed-method designs. Researchers such as Condly (2006), and Kumpfer and Summerhayes (2006) are excited about new statistical techniques, such as Structural Equation Modelling or meta-analyses, which allow researchers to study variables in both interactional and causal fashion to obtain a clearer idea of the direct and indirect effects in the process of resilience. Windle (2011) advises that thorough methodological assessment and a robust scientific approach can increase the clarity in this field and sharpen the concepts used in resilience theory.

In the South African context there is a paucity of large-scale longitudinal studies that represent both the racial diversity in the country and the long-term dynamics underlying sustained resilience (Theron & Theron, 2010). Specifically, the cultural and contextual roots of resilience need to be unearthed by investigating cultural values that promote resilience, as well as cultural differences in perspectives on resilience (Theron & Theron, 2010). According to Theron and Theron (2010):

> Resilience is seldom conceptualised as a youth-context transaction, in which youth actively navigate towards resilience-promoting resources and in which ecologies keenly affirm youth effort to 'bounce back' in contextually and culturally relevant ways (p. 7).

Luthar and Zelazo (2003), and later Liebenberg and Ungar (2008), also identified a need to study cross-cultural variations in the resilience process and highlights the lack of international perspectives in this field – North American and Western-European research still dominates our knowledge of resilience.

2.3.4 Summary of the discussion on resilience

Resilience refers to positive adjustment despite adversity, and is an ordinary, common phenomenon. Resilience depends on the individual's context and the extent to which family, community and culture nurture and value qualities of resilience. The debate regarding the definition of resilience highlighted the need for resilience to be studied in a specified context, and for included risk and protective factors to be conceptually relevant to this context. Because of the complex nature of risk and protective factors, and the interaction between these, multiple paths can lead to resilience, and research designs should not be too simplistic. There is, thus, no ideal way to resilience (Moe, Johnson & Wade, 2007).

Kumpfer's model was chosen to describe the resilience process for the current study, as it accommodates the complexity of the construct and reflect the dynamic nature of resilience. The current study will measure three domains of influence: trauma exposure as a stressful event, specific protective factors (on individual and ecological level), and life satisfaction as an outcome variable. In addition, the two transactional points, coping and resilience, will also be measured – the latter by the presence of three normal developmental factors. Although risk factors will not be measured directly, various risk factors specific to the South African context will be discussed in the next chapter.

There is still much that needs to be done research-wise to better understand resilience. Multiple risk and protective factors ought to be studied longitudinally, measurement and design issues should be addressed to obtain more clarity in this field, context-specific and qualitative studies should still examine cultural differences in depth, and the gap between research results and practical intervention (especially in terms of policy development) should be bridged. Windle (2011) concludes his concept analysis of resilience by stating that acknowledgement of the complexity of the process of resilience is vital to studying it.

2.4 Conclusion

Developmental psychopathology has emerged as a mainstream model for research and training in the fields of psychology and psychiatry. The model integrates normal development and pathology and its multiple pathways in the course of development. Because it is an integrative, ecological model with a life-span approach to development, the model provides the appropriate theoretical framework for investigating issues related to risk, resilience processes and well-being. Using the model might shed light on how the individual and environment work together to bring forth outcomes of well-being. Developmental psychopathology might further provide a framework for understanding risk and resilience in a South African context where health issues are defined by multiple facets.

Resilience cannot be defined by risk or protective factors, or the presence of adversity or positive outcomes alone. Instead, it is the interaction of all of these factors which is known as resilience. It may indeed seem like magic, as its presence is only recognised with the outcome of a process of adjustment, even though it would have been present from the start. It is, therefore, understandable that resilience is seen as relative, and not absolute; a variable and not a constant (Ungar, 2008; Zimmerman & Arunkumar, 1994).

A clinical psychology of resilience needs to include an understanding of normal development (Goldstein & Brooks, 2006), as human development is, in part, driven by the need to adapt, to cope, and to achieve a healthy homeostasis (Lorion, 2000). Masten *et al*. (1999) advise that studies of resilience should clearly identify a threat to positive development, the criteria by which adaptation will be judged, and the features of the individual and environment which might help explain resilience. The current study seeks to understand the processes of resilience that enable South African adolescents to maintain a sense of life satisfaction (positive adaptation) despite having been exposed to trauma (threat to development). In studying the role of resilience in traumatic events, a positive psychology approach focuses on outcomes that indicate health and well-being, rather than mental disease or the lack thereof (Ebersohn, 2007).

According to Goldstein and Brooks (2006), there is a need for developing resilience in all children and not only in those exposed to trauma or risk. Walsh (1998) expands on the enriching nature of resilience:

[Resilience] is an active process of endurance, self-righting and growth in response to crisis and challenge ... Resilience entails more than merely surviving, getting through or escaping a harrowing ordeal. In contrast, the qualities of resilience enable people to heal from painful wounds, take charge of their lives, and go on to live fully and love well (p. 4).

3. A DEVELOPMENTAL PSYCHOPATHOLOGY PERSPECTIVE ON EARLY ADOLESCENCE

3.1 Introduction

> [Young adolescents] feel awkward about themselves and their bodies, worry about being normal, realise their parents are not perfect, … become increasingly influenced by the peer group, have a raised desire for independence, return to childish behaviour when stressed, are prone to mood swings, test rules and limits, become more private, and have a growing interest in sex (Sawyer *et al*., 2012, p. 1632).

The physical and psychosocial changes that accompany adolescence, as well as the multiple transitions in all areas of development during this life stage, conspire to make it an ideal period for studying the interaction of different developmental systems (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). The scope of this chapter is, therefore, quite broad: first, the life stage of early adolescence will be defined; second, the rationale for investing in adolescents will be stated; third, the individual – the young adolescent – will be examined in the context of normal development; and finally, the ecological environment – the South African context in this case – will be studied. In correspondence with the systemic approach of DP, the ecological systems of Bronfenbrenner (1979) will be used to structure the discussion. Smetana, Campione-Barr and Metzger (2006) confirm that ecological approaches to human development are preferred in the majority of adolescent development studies.

3.2 Early adolescence

This section will first demarcate the life stage of adolescence to conceptualise early adolescence for the current study. Differing points of view on this life stage will be considered to provide a balanced perspective for the remainder of the chapter. Next, various arguments will be discussed as a rationale for investing in this life stage. Finally, the most salient developmental tasks of early

adolescence will create a background for the subsequent discussion of normal development during early adolescence.

3.2.1 Demarcating adolescence

Adolescence was only recognised as a distinct life phase in the 20th century when the Industrial Revolution forced immigrants to take jobs previously filled by children, and schooling became compulsory (Shaffer & Kipp, 2002). Since World War II this life stage broadened as many adolescents postponed marriage and career to pursue further education (Shaffer & Kipp, 2002). Currently, many young people do not enter the adult world until their mid-twenties due to an increased life span which allows for longer periods of exploration, and the increased emphasis on further education by society (Shaffer & Kipp, 2002). Adolescence has, therefore, become a relatively long life stage which is not as much defined by age as by biological and psychosocial factors.

3.2.1.1 Defining adolescence

Louw, Louw and Ferns (2007) propose that adolescence start with puberty and ends when the individual can meet society's expectations of adulthood, such as independence. By implication, adolescence would start between the ages of 11 and 13 and end between the ages of 17 and 21 (Louw *et al.*, 2007). However, even puberty can become a hazy boundary for adolescence because of great individual variation in the onset of puberty and the fact that children as young as eight can experience pubertal changes (Anthony, 2011). Also, the age of onset of puberty for both genders has declined with three years in the past two centuries (Anthony, 2011).

In light of the above, it is not surprising that different organisations demarcate adolescence differently. The World Health Organisation (2011) regards adolescents as individuals between the ages of 10 and 19. The United Nations distinguishes between adolescents as aged 10 to 19, young people aged 10 to 24, and youth aged 15 to 24 (Bearinger, Sieving, Ferguson, & Sharma, 2007). According to the South African National Youth Commission (1997), youth includes everyone between the ages of 14 and 35 as individuals from these age groups require sociopolitical support to achieve their potential. Childhood, specifically, is defined by the South African constitution as the first 18 years of life (Louw *et al.*, 2007). However, as will be discussed later in this chapter, under

the South African Child Act children as young as 12 may make health decisions independent of their parents. Because the term "child" is often used inclusively, the current study will also use "children" at times to refer to all individuals younger than 18 years, and "adolescents" to refer to individuals between puberty and age 19. The 2010 estimates indicate that the South African population consists of 50 million people, of which 18.5 million (37% of the population) is 18 years and younger (Meintjies & Hall, 2012). According to Meintjies and Hall (2010), the spread of age groups and gender is relatively equal in the population of children with just over one million children for every year of life under 18, and 51% boys and 49% girls.

The focus of the current study will be on early adolescence. The APA (2002) considers young adolescents as those children already in the stage of puberty, but younger than 14 years. Similarly, UNICEF defines early adolescence as children between the ages of 10 and 14 (Anthony, 2011). The current study included Grade 8 learners aged 13 to 15 years which correspond with other studies on early adolescents, which typically obtain data from 13- or 14-year-olds (see Bornstein, Hahn, & Haynes, 2010; Sroufe, Egeland, Carlson, & Collins, 2005).

Longer periods of education and training, as well as the manifestation of mature sexual behaviour at increasingly younger ages, complicate the task of determining the rights and responsibilities of adolescents (Coleman & Hagell, 2007a). Further, adolescents' increasing agency and involvement in more systems account for great variation in individual experiences of this life stage. It also seems as if adults' views on adolescents depend greatly on their roles and understanding of the normal, albeit challenging, changes during this stage.

3.2.1.2 Perspectives on adolescence

The transition to adolescence is volatile, as it is associated with rapid maturational changes, changing societal demands, the exploration of new roles, and the initiation of new relationships (Donnellan, Trzesniewski, & Robins, 2006). Coleman and Hagell (2007a) agree that the degree of change during adolescence should not be underestimated, as it requires considerable adjustment on the part of the adolescent. Louw *et al*. (2007) explain that, because adolescence is such a vulnerable phase, it is not surprising that stress and turmoil increase in this life stage. Furthermore, a significant increase in mental health problems in Western societies has been

documented, as manifested by increases in adolescent depression, substance abuse, self-harm and conduct problems (Vostanis, 2007).

In challenging a Westernised approach to child development, Brendtro, Brokenleg and Van Bockern (1990) state that parents and professionals too easily use unfriendly labels, such as "unmotivated" and "aggressive" in describing adolescents. Adults label adolescents while neglecting to admit to the impact that stressed parents, impersonal schools and disorganised communities have on making adolescents feel alienated (Brendtro *et al*., 1990). Both professionals and the media seem to focus on the vulnerabilities of adolescence, describing it as a stormy life phase, characterised by conflict, moodiness and an increase in risk behaviour (APA, 2002; Louw *et al*., 2007). Therefore, adolescence is often depicted as a phase that must be survived or endured (Arnett, 1999).

A more balanced perspective on adolescence is to see it as a normal developmental stage that involves many changes with the aim of preparing children for adult life (Louw *et al*., 2007). The majority of adolescents do not experience significant turmoil, and even less so for adolescents from traditional cultures (Louw *et al*., 2007). In fact, most adolescents emerge from this life stage without having experienced serious problems (APA, 2002). In addition, today's adolescents seem to be better informed, more idealistic, honest and tolerant than earlier generations (Louw *et al*., 2007).

Whether this life stage is experienced as mildly upsetting or intensely stressful by the individual, an attempt should be made to understand the entirety of the adolescent's experiences. The APA (2002) warns that much of the developmental research on adolescents has focused on white, middle-class American samples and, therefore, results should be interpreted with care. A report by UNICEF (Anthony, 2011) indeed indicates that the majority of the world's adolescent population live in developing countries and face challenges distinct from those experienced in America. In truth, there are still societies that expect young adolescents to assume roles characteristic of adulthood, such as warfare, labour and childhood marriages (Anthony, 2011). Even though care should be taken to acknowledge the difficulties and risks many adolescents are exposed to, it should not be done at the expense of hope. A too pessimistic viewpoint can overlook the opportunities contained in this life stage:

> Adolescence is an age of opportunity for children, and a pivotal time for us to build on their development in the first decade of life, to help them navigate risks and vulnerabilities, and to set them on the path to fulfilling their potential (Anthony, 2011, p. 2).

In the current thesis adolescence is defined as a normal life stage with unique challenges. Especially the early adolescent years may be characterised by some instability. A better understanding of the adolescent years is vital given that many of the events occurring at this life stage, as well as the choices exercised by adolescents, may have long-term influences on development. Research on adolescent development seems justified regardless of one's perspective on this life stage: to inform attempts to reduce risk, to navigate challenges, to maximise opportunity, or even to do all of the above.

3.2.1.3 Summary of demarcating adolescence

Adolescence is a relatively long period in the life span demarcated by biological and social variables. Early adolescence usually refers to children aged 12 to 15 as the majority of the peer group at this stage enters puberty. Adolescence is seen by some as a stage of instability and change which might increase children's vulnerability, but the majority of adolescents seem to cope well with normative changes and emerge from this stage prepared for adult life. However, because the events of this stage might have long-term implications for adjustment, it would be important to gain a holistic understanding of adolescents' experiences. This study will contribute to addressing the paucity of research on adolescents in developing countries and attempt to highlight some of the unique challenges faced by these adolescents. Given that more than a third of the total South African population is younger than 18, a better understanding of this age group may contribute considerably to increased well-being in our country in general.

3.2.2 Rationale for investing in adolescents

Today's adolescents have lived most of their lives under the Millennium Declaration – an unprecedented global initiative that seeks better lives for all (Anthony, 2011). During a summit of the majority of world leaders at the United Nations in 2000, eight Millennium Development Goals (MDGs) were agreed upon as indicators of socio-economic progress for developing countries

(Easterly, 2009). The MDGs aim to reduce poverty, starvation, disease, illiteracy, environmental deterioration, and discrimination against women by 2015 (Sanders, Bradshaw, & Ngongo, 2010). Sanders *et al*. (2010) highlighted these goals as a step of historical significance to help ensure the child's right to survive, to be healthy and to develop their full potential.

The recent emphasis on early childhood development contributed to achieving aims such as reducing the under-five mortality rate and improving access to primary schooling (Anthony, 2011). However, continued efforts are necessary to complement the investment in early childhood development with sustained attention and resources in the adolescent years (Anthony, 2011). A recent example of the global emphasis on investing in adolescence is the international Year of Youth that spanned August 2010 to August 2011 "… to ensure that all our youth become skilled, healthy and productive members of society" (UN Dialogue and Mutual Understanding, 2010, p. 1). This initiative was embraced by all the heads of the UN entities with the aim of collaborating with youth in promoting their well-being more effectively (UN Dialogue and Mutual Understanding, 2010).

Also in South Africa there is a sense that the welfare of youth is a national priority emphasised by the South African constitution (Barbarin, 2003). In fact, South Africa is experiencing a "youth bulge": an extraordinary large youth population brought about by better child survival and declining fertility rates, resulting in fewer, but healthier children (Panday & Richter, 2007). By 2007 the youth population was the best educated youth cohort in South Africa's history (Panday & Richter, 2007), positioning them to play a vital role in shaping the future of the country. However, in order to reap the social and economic benefits of such a youth population, the country must be ready to invest in their development. Fortunately, numerous good-faith efforts by government, non-governmental organisations and private citizens to create favourable conditions for child development, have been documented (Barbarin, 2003).

The global and local initiatives also align with the urgency identified in the field of risk and resilience research. This urgency is due to the realisation that both the number of youth facing risks and the risks they face, are increasing (Goldstein & Brooks, 2006). Especially adolescents are at increased risk of poor health outcomes resulting from a confluence of factors such as modern societal shifts and unique developmental vulnerabilities (Bearinger *et al*., 2007). Adults often portray adolescents as the future generation, but overlook the fact that adolescents face challenges *now* for which they need resources and support (Anthony, 2011; Brendtro *et al*., 1990).

Anthony (2011) suggests a life-span approach to child development which includes the empowerment and protection of adolescents as the best approach to break cycles of intergenerational transmission of high-risk environments. For example, adolescence is considered to be the pivotal decade in which poverty and inequity is passed on to the next generation (Anthony, 2011). This is due to almost half of the world's adolescents' not pursuing secondary schooling; and adolescent girls from poor families marrying early and giving birth to impoverished children (Anthony, 2011). Bearinger *et al*. (2007) add that adolescents are the greatest hope for turning the tide against HIV, sexually transmitted diseases and unwanted pregnancy, as a few countries have already successfully addressed these issues by focusing on sexual behaviour in adolescence. Aside from the risks of poverty and HIV, there is also an urgent need to confront more recent challenges with which today's adolescents will need to contend in future: economic turmoil, climate change, explosive migration, and ageing societies (Anthony, 2011). Ironically, adolescents are disproportionally represented in countries where these challenges are most pressing and they will need skills and capacity to deal with these (Anthony, 2011).

Burt (2002, p. 143) argues that we should not ask "Why invest in adolescents?" but rather "Why *not* invest?" – a pertinent question in light of the arguments above. With continued efforts to empower all adolescents, risks are reduced and positive developmental outcomes promoted for this population in general. Even future goals such as decreasing poverty or fighting ecological deterioration may be attainable if today's healthy adolescents grow up to be tomorrow's competent adults. It is thus clear that a focus on adolescent well-being should include all adolescents and not only those at risk. This perspective is indeed embraced by various sociopolitical and humanitarian organisations – as indicated by a recent UNICEF report on the state of the world's children (Anthony, 2011) – and supported by a systemic approach to human development. Masten and Coatsworth (1998) assert that the future of any society hinges upon the successful promotion of child and adolescent well-being.

3.2.3 The developmental tasks of early adolescence

Developmental tasks represent the benchmarks of adaptation specific to a developmental period and are contextualised by sociocultural expectations (Roisman, Masten, Coatsworth, & Tellegen, 2004). Also, for interventions to be effective, the developmental tasks of any life stage should be taken into account (Gewirtz & Edleson, 2007). Adolescence is a transition period between

childhood and adulthood, and the tasks of this developmental stage, therefore, relates to making this transition (Burt, 2002). Normal individual development in adolescence is determined by establishing the extent to which adolescents engage in and complete the following developmental tasks:

- At physical level adolescents need to adjust to the challenges of puberty, including the acceptance of their appearance (Perkins, 2006b) and the attainment of a degree of body satisfaction. Young adolescents may especially grapple with physical and hormonal changes. Sexual maturation sets the stage for the individual to prepare for marriage and family life later on (Perkins, 2006b).

- At psychological level adolescents need to form a cohesive identity (Masten & Coatsworth, 1998). This would include a career identity, establishing moral, religious and political values, a sexual identity, an ethnic identity, and the answering of more existential questions (Sigelman & Rider, 2006). For young adolescents one would not expect completion of this task at all, but rather engagement in exploratory activities and finding a positive peer group as reference point for identity formation.

- The achievement of self-regulation is another important task on psychological level. The psychological systems that need to become increasingly self-regulated are control of emotions, reactions to failure and disappointment, and most forms of moral and achievement activities (Tobin & Graziano, 2006). In addition, the ability to control thoughts and sexual drives might be important for adolescent well-being. Desiring and attaining socially responsible behaviour (Perkins, 2006b) are further products of self-discipline and control. As young adolescents develop to successfully regulate themselves, there may still be incidences of poor emotional regulation, inappropriate reactions, difficulty controlling sexual desires, and lapses in self-discipline.

- Self-regulation also pertains to cognitive regulation and the development of rational thinking skills, including the ability to make good, independent decisions. In the case of young adolescents, adults would still provide help and guidelines for rational decision making and monitor the consequences of their choices.

- At social level adolescents should achieve emotional independence from parents by redefining sources of personal strength and moving towards self-reliance (Perkins, 2006a). Young adolescents should, however, maintain some proximity with parents, and a level of independence, which increases with time, can be agreed upon in the family (Perkins, 2006a). Initially, they may move between autonomy and dependence, and support from the peer group might help adjusting to greater independence from parents.

- With regard to schooling, adolescents need to build on the competency acquired in middle childhood and continue to focus on academic achievement to acquire the skills required for further education or work (Masten & Coatsworth, 1998). This competence may be especially helpful in making the challenging transition to secondary schooling. Many young adolescents change schools and often have to adapt to a new school system, the demands of secondary education, and forming new friendships simultaneously.

- Another task on social level includes establishing intimate relationships, including same-sex, cross-sex and sexual relationships (Sroufe *et al*., 2005). The adolescent must demonstrate commitment to friendships by means of appropriate self-disclosure, emotional vulnerability and conflict resolution (Sroufe *et al*., 2005). Adolescents are increasingly exposed to different religious and ethnic groups, as well as diverse personalities (Eccles, 1999). Thus, they also need to develop cultural competence and the ability to resist negative peer pressure (Sesma, Mannes, & Scales, 2006). For young adolescents conformity with a specific group is deemed age appropriate, and romantic relationships are casual and not as intimate.

- Finally, adolescents should learn to engage constructively in social activities (Sesma *et al.*, 2006). Young adolescents learn more about the world outside of their family and increasingly participate in community life through religious activities, accessing resources and support, and using communication technology. Involvement in both extracurricular activities (Masten & Coatsworth, 1998) and physical exercise can play a positive role in development. As adolescents venture out of their immediate surroundings, they learn how to respond to challenges and opportunities (Eccles, 1999).

Since adolescence span over a period of at least six years, these developmental tasks are achieved gradually during this period. Moreover, even though development in all these domains is interrelated, each domain develops at a different pace. Consequently, adolescents are sometimes exposed to demands that they are not capable of meeting yet. An adolescent girl, for example, may be biologically mature to engage in sexual activity, but her rational thinking skills might not have developed fully yet. This incompatibility could result in poor decision making and sexual risky behaviour. These incongruities in development might be especially prominent in early adolescence (Craig & Dunn, 2007).

3.2.4 Summary of early adolescence

Early adolescence provides an opportunity for consolidating the skills acquired during middle childhood and enhancing strengths and resilience for future adjustment. Various global and local initiatives focus on decreasing risk and increasing well-being in the current adolescent population. Also in South Africa the well-being of the current youth cohort is considered a priority. The current study can contribute to an understanding of how to decrease risk and increase resilence in early adolesence – a stage characterised particularly by incongruities in development and major adjustment. Furthermore, studies with a focus on adolescent well-being might inform attempts at turning the tide against problems such as poverty, and contribute to building psychosocial resources for the future of our society as a whole.

An understanding of normal developmental challenges is vital in maximising the impact of interventions aimed at promoting adolescents' well-being. Adolescents forge a personal identity, self-concept and an orientation towards increased competence, which will have an impact not only on their success in school, but also in life (Eccles, 1999).

3.3 The individual: the young adolescent

The transition to adolescence is a critical turning point in the life span for future adaptation (Wright & Masten, 2006). An understanding of normal developmental issues and the processes necessary to successfully deal with them, will contribute to a clear conceptualisation of well-being and pathology in this life stage.

Normal development arises from complex interactions among genes, internal systems and contexts at multiple levels (Masten, 2006). It is widely accepted that factors affecting prenatal development and early childhood can accumulate and interfere with the achievement of normal developmental milestones in adolescence (Sawyer *et al*., 2012). However, much less attention has been paid to the biological and social experiences specific to the life stage of adolescence that may influence adolescent health (Sawyer *et al*., 2012). The normal developmental issues considered typical of early adolescence will be discussed for each microparadigm of the DP model.

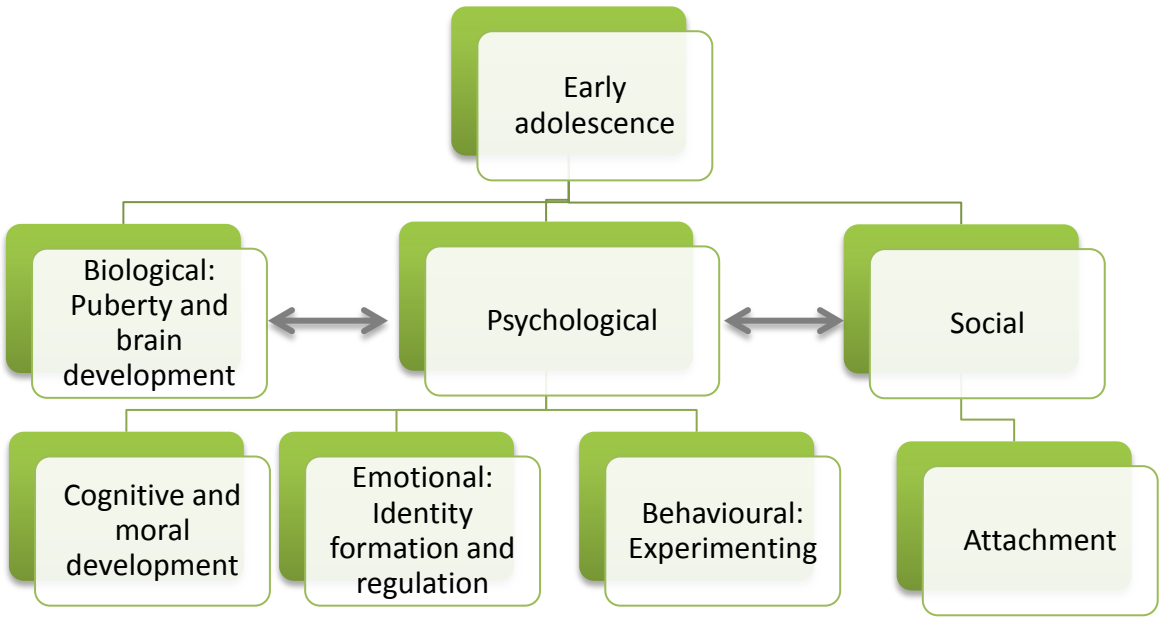

Figure 3.1: Normal development during early adolescence (adapted from Mash & Wolfe, 2002)

The DP model conceptualises three microparadigms important to individual development. During early adolescence the main biological events are puberty and the accompanying changes in brain structure and functioning. On psychological level young adolescents experience extensive changes in thought and moral reasoning. They further have to form an identity and learn to regulate their own emotions. On behavioural level exploratory behaviour is considered normal. On social level, the DP model considers both attachment and family influences, but the latter will be discussed later in the chapter.

3.3.1 The biological level

Puberty is triggered when the hypothalamus stimulates activity in the endocrine system (Sigelman & Rider, 2006). Puberty tends to be considered as insignificant in most Westernised societies, but more traditional cultures celebrate puberty with rituals and initiation ceremonies (Louw *et al*., 2007). The physical changes that introduce puberty, including the growth spurt and signs of sexual maturation, are the most visible indicators of this life stage (APA, 2002).

The level of growth hormones increases and causes rapid skeletal growth, with the peak rate of growth for girls occurring around age 12, and the peak rate for boys at age 13.5 (Sigelman & Rider, 2006). The increased production of gonadal hormones is responsible for more obvious signs of sexual maturity and secondary sex characteristics (Sigelman & Rider, 2006). For most girls sexual maturation starts with the formation of breast buds between ages nine and 11, with full breast development taking three to four years (Pinyerd & Zipf, 2005). The most dramatic event for girls at this stage is the menarche that normally appears between the ages of 11 and 14 (Sigelman & Rider, 2006). Sexual maturation for the boy starts around age 11 with the initial enlargement of the testes and scrotum, followed by the semenarche around age 13, the sprouting of facial hair, and the lowering of the voice (Sigelman & Rider, 2006).

The increase in androgens in both boys and girls causes increases in sex drive (Smith, Guthrie, & Oakley, 2005). Adolescents need to establish their sexual identity and must decide on how to express their sexuality, resulting in experimentation with sexual behaviour (Sigelman & Rider, 2006). Confusion about sexual norms remains as adolescents are exposed to contradicting messages. The media tends to glamorise sexual behaviour and encourage sexual attractiveness, whereas parents often are more conservative and warn against bad reputations or diseases (Sigelman & Rider, 2006).

Puberty is a product of the interaction between biology and the environment. There are numerous factors that predict the onset and progression of puberty, including biological influences, socio-economic status, stressful life events, nutrition and health (APA, 2002). In girls, for example, early puberty can be triggered by family stress, maternal depression or living with an unrelated adult male (Sigelman & Rider, 2006). Early maturing girls and late maturing boys are especially likely to find the adolescent stage troublesome (Sigelman & Rider, 2006). These two groups of

adolescents might face challenges such as being ridiculed by their peers, having lower self-esteem, and struggling with depression, anxiety and risky behaviour (Dorn, Susman, & Ponirakis, 2003; Sigelman & Rider, 2006). In contrast, early maturing boys tend to be popular and late maturing girls high achievers (Sigelman & Rider, 2006). However, the differences created by timing of puberty fade with time (Sigelman & Rider, 2006).

The variability in timing and rate of pubertal changes results in early adolescence being characterised by an assortment of bodies – from those that are childlike to those that are fully developed (Sigelman & Rider, 2006). Therefore, it is not surprising that young adolescents are so self-conscious about their appearance. Physical appearance is of the utmost importance for adolescents and becomes a standard for fitting in with any given group they wish to identify with (APA, 2002). Changes in physical appearance together with sexual maturation influence body and self-image (Shaffer & Kipp, 2002). In this regard, Stice and Whitenton (2002) found that adolescents who feel positive about their appearance are more likely to have a good self-esteem and positive peer relations.

These biological changes are extensive and also include development in brain areas such as the prefrontal cortex and limbic system (Spear, 2000). In fact, pubertal hormones might affect the structure and function of the developing brain (Blakemore, Burnett & Dahl, 2010) to such an extent that researchers now are describing puberty from a neural perspective, instead of an endocrine perspective (Allen & Sheeber, 2009). Although these internal changes are less visible, they are equally profound for this life stage (Anthony, 2011).

Brain regions associated with affective processing, such as the amygdala and hypothalamus, are densely innervated by gonadal steroid receptors (Nelson, Leibenluft, McClure, & Pine, 2005) and these steroids, in turn, regulate neurotransmitter systems associated with affective responsiveness, such as dopamine and serotonin (Allen & Sheeber, 2009). Neuroimaging studies confirm heightened activity in the limbic regions in adolescents, as well as immature prefrontal function in emotional contexts (Hare *et al*., 2008). The enhanced bottom-up emotional processing in subcortical regions in conjunction with restricted top-down regulation from prefrontal regions (Hare *et al*., 2008) explain various phenomena unique to the adolescent phase, such as heightened emotional reactivity and impulsivity. Puberty, therefore, seems to not only increase sexual

motivation, but also emotional reactivity – both of which reflect a reorientation to the social and emotional aspects of the environment (Nelson *et al*., 2005).

Adolescents' feelings about puberty and its end product become an important part of their identity formation (Shaffer & Kipp, 2002). According to Donnellan *et al*. (2006), the belief that pubertal changes are associated with changes in psychological functioning has been proven in contemporary research. Puberty, although a biologically driven process, influences emotional well-being, health and behaviour in complex ways (Sawyer *et al*., 2012).

3.3.2 The psychological level

Three areas of development are studied on psychological level including cognitive, emotional and behavioural influences. These are all internal to the individual.

3.3.2.1 Cognitive influences

An adolescent's cognitive abilities is more advanced than that of a child due to continued maturation of the frontal lobes (Louw *et al*., 2007) and the reorganisation of the neural circuitry of the prefrontal cortex (Stuss, 1992). Cognitive changes include a longer and more selective attention span and increases in the speed of mental processes (Louw *et al*., 2007; Rapoport *et al*., 2001). In addition, cognitive self-regulation improves, and adolescents are better able to monitor, evaluate and change their thoughts (Louw *et al*., 2007). However, the maturation of the prefrontal cortex takes time and the above-mentioned developmental gains may not be evident yet in early adolescence. Further, the fine-tuning of synaptic connections increases plasticity and the brain can be remodelled in response to exposure, such as substance abuse (Sawyer *et al*., 2012).

According to the APA (2002), the changes in adolescent thought can be even more dramatic than physical changes. These changes include building on concrete thinking skills to become abstract thinkers. Adolescents acquire the ability to understand possibility, reason deductively and consider abstract ideas (Shaffer & Kipp, 2002). New cognitive capacities allow adolescents to reason effectively, solve problems, plan for the future, engage in introspection and make mature decisions (APA, 2002).

The abilities of introspection and reflection result in a preoccupation with the self and subsequent egocentrism in early adolescence (Elkind, 1967). Elkind (1967) identified two types of adolescent egocentrism. Firstly, the imaginary audience results from confounding one's own thoughts with those of others. It causes adolescents to incorrectly assume that they are the centre of attention, which increases self-consciousness (Louw *et al*., 2007). Secondly, the personal fable results from overestimating the uniqueness of one's own thoughts. On the one hand, it may cause adolescents to feel that no one understands their unique experience but, on the other hand, it also increases hope when adolescents imagine themselves capable of reaching all their dreams (Louw *et al*., 2007). Because the personal fable fosters beliefs of invincibility, it can also lead to increases in risky behaviour (Louw *et al*., 2007).

In early adolescence there still may be vast individual differences in cognitive development (APA, 2002) as progress towards the mastery of formal operations is slow (Sigelman & Rider, 2006). This transition to more mature reasoning takes time, and adolescents, therefore, need a safe environment in which the skills of formal reasoning can be practised (Irvin, 1996). The extent to which adolescents make good judgements and decisions declines temporarily by middle adolescence and results in risky behaviour mainly due to a fear of potential negative social consequences (APA, 2002). Brain development starts later and takes longer in boys, explaining why impulsivity and poor judgement lasts longer for boys than for girls (Anthony, 2011).

Another consequence of these new cognitive skills is the ability to think of self and others in more complex ways, and detect inconsistencies in behaviour (Sroufe *et al*., 2005). A combination of these cognitive skills and a lack of life experience result in idealism and irrational expectations (Louw *et al*., 2007). Although their new abilities contribute to a richer understanding of others' psychological perspectives, they also lead to increased questioning, confusion and frustration with the flaws they detect in the world (Shaffer & Kipp, 2002). It is, therefore, also a period of moral growth for the individual.

Adolescence involves establishing personal values and ethical behaviour (APA, 2002) which, inevitably, involves questioning existing values (Louw *et al*., 2007). In early adolescence morality tends to be instrumental in nature, and adolescents value approval and receiving a return on their moral behaviour (Sigelman & Rider, 2006). In older adolescents there is a movement towards autonomous moral principles, which are applied apart from the authority of the groups who hold

them (Kohlberg & Gilligan, 1971). Adolescents see a moral person as someone who is caring, fair and honest (Sigelman & Rider, 2006). This developmental phase, thus, provides an opportunity for parents and educators to reinforce the destructive power of prejudice and biases for society (APA, 2002). The process of establishing personal values is a component of identity formation, which is also a salient topic in adolescent development.

3.3.2.2 Emotional influences

As adolescents start to understand themselves better, they are motivated to seek out environments that complement their dispositions, thereby promoting continuity in their personality development (Donnellan *et al*., 2006). However, their new cognitive abilities allow them for the first time in the life span to change their personalities, in which case agency might lead to discontinuity in personality (Donnellan *et al*., 2006). Although dispositional traits are usually considered on emotional level, the scope of this section will be limited to the developmental tasks characteristic of early adolescence: the process of achieving a coherent identity, good self-esteem and emotional control.

a) Identity achievement

One of the central issues of adolescence is establishing an identity. The child now needs to develop a sense of being a unique, differentiated person (Sroufe *et al*., 2005). Identity is defined by Erikson (1974) as the coherence of the individual experiences within the person and a feeling of goodwill towards society. With time a coherent identity will help the adolescent transcend the many changes in their roles (Perkins, 2006b).

Identity includes two related concepts: that of self-concept, or the set of beliefs one has about oneself; and self-esteem, which involves an evaluation of the self-concept (APA, 2002). Adolescents become self-theorists who can reflect on their personality (Shaffer & Kipp, 2002). For young adolescents this self-reflection often results in confusion as they note inconsistencies in their behaviour, and they become concerned with finding the "real me" (Shaffer & Kipp, 2002). However, self-concept tends to become increasingly integrated and complex from early to middle adolescence as adolescents become more tolerant of ambiguities in their personality (Louw *et al*., 2007).

According to Donnellan *et al*. (2006), research has proven a significant and robust decline in self-esteem throughout adolescence which replicates across gender and ethnic groups. It is accounted for by the fact that discrepancies between the adolescents' ideal and actual self become prominent due to their newly acquired cognitive skills (Donnellan *et al*., 2006). However, there are individual variations in the way children experience the transition to adolescence, and some adolescents even report gains in self-esteem (Trzesniewski, Donnellan, & Robins, 2003). The cumulative effect of life events is demonstrated for declines in self-esteem: such declines are more prevalent in children experiencing multiple stressors on entering adolescence, such as concurrent transitioning to a secondary school or family transitions (Gray-Little & Hafdahl, 2000). Robins, Trzesniewski, Tracey, Gosling and Potter (2002) found gender differences in self-esteem, with adolescent girls experiencing a greater decline than boys. With girls maturing earlier than boys, it is more likely that their pubertal changes coincide with starting secondary schooling (Shaffer & Kipp, 2002). These changes, together with the fact that girls tend to be less satisfied with their physical appearance, contribute to lower self-esteem in girls (Stice & Bearman, 2001).

Identity achievement promotes healthy adaptation, but adolescents who become stuck in confusion tend to be apathetic, passive, hopeless about their future, and at risk for behaviour problems (Chandler, Lalonde, Sokol, & Hallett, 2003). Some adolescents might find it especially challenging to establish a positive identity. For example, adolescents from ethnic minority groups or adolescents who are homosexual and exposed to negative stereotypes might find it difficult to be proud of certain aspects of their identity (APA, 2002).

Role confusion, experimentation and conflict do not occur in all adolescents. Western societies seem to be more tolerant of adolescent exploration, while adolescents in non-industrialised societies simply adopt the adult roles they are expected to adhere to (Shaffer & Kipp, 2002). This type of foreclosure is, therefore, seen as more adaptive for many cultures in the world (Shaffer & Kipp, 2002). Foreclosure also seems to benefit adolescents exposed to extreme stressors such as terminal illness, because adherence to parental values might protect them against the increased stress that normal adolescent exploration and conflict might cause (Louw *et al*., 2007). However, foreclosure might also cause adolescents to be dogmatic, inflexible and intolerant of others (Louw *et al*., 2007).

In general, though, identity formation takes quite long and it is mostly only by late adolescence or even early adulthood that the individual achieve a sense of identity in all areas of functioning (Kroger, 2000). In fact, according to the APA (2002), it is commonly accepted in recent times that identify formation does not start or end with adolescence. At any rate, adolescence is the first life stage where individuals have the cognitive capacity to reflect on their unique qualities (APA, 2002). In the same way that trust mobilises infants to engage in new experiences, identity allows adolescents to engage in good decisions and commit themselves to these decisions (Maier, 1978).

b) Emotional regulation

The dramatic changes in adolescence create an opportunity for psychological growth but, at the same time, it can be a period of crisis and conflict for the individual (Sroufe *et al*., 2005). The physical, cognitive and personality changes lead to changes in emotions, with adolescents reporting more negative emotions than children, especially feelings of self-consciousness, embarrassment, incompetence, loneliness, anxiety and rejection (Louw *et al*., 2007). Girls experience more feelings of anger and depression, whereas boys report increases in both positive (energy and focus) and negative (aggression and irritability) emotions (Louw *et al*., 2007).

Emotional regulation refers to the extrinsic and intrinsic processes aimed at monitoring, evaluating and modifying emotional reactions to accomplish one's goals (Thompson, 1994). It includes regulating both positive and negative emotions (Gresham & Gullone, 2012). Emotional regulation enables adolescents to maintain autonomy of their intellectual and executive functions as they are able to recover quicker from being upset (Prince-Embury, 2006). It is important for adolescents to learn to manage their emotions in a socially appropriate manner (Morris, Silk, Steinberg, Myers, & Robinson, 2007). This regulatory function is supported by stress-regulating hormones and, therefore, critical to healthy adaptation (Mash & Wolfe, 2002). There are several indicators of greater emotional control in children: emotional expressions become less frequent, intense and exaggerated, and more conventional (Saarni, Campos, & Camras, 2006). These abilities also predict future adjustment (Fox & Calkins, 2003; Mash & Wolfe, 2002).

There are various contributors to an adolescent's emotional regulation capacity. Emotional regulation is part of a greater set of self-regulatory skills which matures gradually during the adolescent years (Allen & Sheeber, 2009). The remodelling of brain regions, which are crucial to

social cognition, response inhibition, and reflective thinking, underlies development in regulation skills (Nelson *et al*., 2005). Initially, there might be an imbalance between emotional processing and control due to immature prefrontal cortex circuitry (Steinberg, 2005) which, in turn, could encourage engagement in rewarding and risky activities (Allen & Sheeber, 2009). The dramatic changes in their social environments and interactions might drive activity in hypersensitive affective systems, which further complicates emotional regulation (Hare *et al*., 2008).

Families play an important role in children's emotional development. During infancy the primary caregiver assists infants in regulating their emotions and teaches them self-regulation strategies (Sigelman & Rider, 2006). In fact, adaptive emotional regulation develops most effectively in the context of a secure attachment with the primary caregiver (Allen & Miga, 2010). In the childhood years, the parents continue to model emotional expression, their reactions encourage or discourage expressiveness, and they can help children to better understand emotions and find acceptable ways of expressing them (Leman, Bremner, Park, & Gauvain, 2012). The increased independence from the primary caregivers in the adolescent years requires greater self-regulation (Hare *et al*., 2008) at a time when adolescents are exposed to increased regulatory demands (Allen & Sheeber, 2009). However, the parent–child relationship remains a context in which intense emotions are elicited and regulated (Collins & Laursen, 2006). The family's culture and religion also shape children's emotional regulation, with some cultures valuing strict emotional control, whereas others encourage emotional expression (Leman *et al.*, 2012). Emotional dysregulation in family conflicts has been associated with both externalising and internalising behaviour in adolescence (Zimmerman, Mohr, & Spangler, 2009).

Emotional instability is considered normal at this stage, but continued emotional dysregulation could prevent successful coping in adolescence (Sigelman & Rider, 2006). Adolescence is one of the peak risk periods for the development of psychopathology (Betts, Gullone, & Allen, 2009), with poor emotional regulation implicated in more than half of axis I and all the axis II disorders (Gross & Levenson, 1993). Moreover, risky behaviour is often used as a coping mechanism to reduce emotional distress (McQueen, Getz, & Bray, 2003) and might have negative implications of its own. Good regulation, thus, remains a challenging task, especially in the early adolescent years (Allen & Miga, 2010).

3.3.2.3 Behavioural influences

On the behavioural level adolescent experimentation seems to be on the foreground (APA, 2002; Craig & Dunn, 2007). The cognitive and emotional changes that adolescents experience invariably lead to experimentation with new behaviour as they prepare for adulthood (APA, 2002). This experimentation, in turn, helps them refine new skills of formal operational thought, identity achievement, and emotional regulation. The process of identity formation involves experimenting particularly with appearance and behaviour (APA, 2002). Michaud (2006) advises to use the term "exploratory behaviour" to describe behaviours common in adolescence that does not necessarily lead to harm, instead of categorising these normal behaviours as risky. The majority of adolescents engaging in risk behaviour indeed do so at a minimal level (Coleman & Hagell, 2007a). Michaud's (2006) examples of exploratory behaviour include moderate alcohol use and smoking, and protected sex with a trusted partner – however, moderation is key. In general, a period of experimentation should be seen as normative and positive, as it indicates that the adolescent is secure enough to explore new territory (APA, 2002).

In general, the extensive cognitive and emotional development characteristic of the adolescent phase inevitably has an impact on adolescent behaviour. The egocentrism and partial progression towards formal reasoning, for example, corresponds with behaviours such as heightened self-consciousness, susceptibility to peer influences, and immature decision making (Craig & Dunn, 2007). The emergence of formal operational thought also allow for a rapid accumulation of knowledge which opens up issues that can both enrich and complicate the adolescent's experience (Craig & Dunn, 2007). As adolescents mature, their ability to plan ahead improves. Emotional outbursts and overly emotional responses are explained by the adolescent's immature emotional regulation and the different pace at which various brain regions develop (Craig & Dunn, 2007).

The social development, increased independence, and experimentation with roles characteristic of this stage also allow the adolescent to actively choose their leisure time activities (Craig & Dunn, 2007). Lent (2004) is of the opinion that participation in valued tasks may be especially beneficial at life-transition points where roles are changing and questions about life are salient – such as adolescence. Leisure time or extramural activities teach the adolescent adult skills, help them practise decision making, and integrate them into a community (Craig & Dunn, 2007). However, not all cultures value these activities as a means of preparing for adulthood, and especially in

cultures where the educational system is highly competitive, adolescents are expected to spend most of their time on schoolwork (Craig & Dunn, 2007).

3.3.2.4 Summary of individual development on psychological level

Psychological development in adolescence includes various cognitive, emotional and behavioural changes. Most of the cognitive changes are related to the maturation of the prefrontal cortex. Changes in abstract thinking skills also influence their moral development as they start to establish their personal values. Personality and emotional development in adolescence involves identity formation and achieving coherence of individual experiences. This developmental task is associated closely with increased integration of the self-concept and a slight decline in self-esteem. The development of autonomous regulation is also vital as adolescents experience an increase in negative emotions, as well as increasing demands for self-regulation. Early adolescence is often characterised by emotional instability. On a behavioural level, the developing systems interact to lead to experimentation as adolescents prepare for adulthood.

These normal development changes, the increased capacity for reflection, and the increased environmental demands adolescents face, create the ideal circumstances for new intimate relationships to develop (Shumaker, Deutsch, & Brenninkmeyer, 2009) – a capacity that develops from the child's first attachment bond.

3.3.3 Attachment

Attachment is the strong emotional bond that a child forms with their primary caregiver in the first two years of life (Leman *et al.*, 2012). Attachment theory is based on the pioneering work of John Bowlby (1969) who argued that humans are driven biologically to pursue relationships that promote security. Throughout our lives the objects of attachment are the special, irreplaceable people with whom we are motivated to maintain proximity and who give us a sense of security (Ainsworth, 1989). Early childhood experiences determine children's perception of how loveable they are and how trustworthy others are, guiding their expectations in subsequent relationships (Bretherton, 1990). Thus, attachment formation is a developmental process that continues far beyond infancy and childhood (Allen, Porter, McFarland, McElhaney, & Marsh, 2007).

During adolescence children's representation of attachment relationships are modified continuously as they develop new intimate relationships (Carlson, Sroufe, & Egeland, 2004). These representations become increasingly complex and intricate (Shumaker *et al.*, 2009). Parents are still utilised for some attachment needs, such as safety (Lippincot & Deutsch, 2005; Nickerson & Nagle, 2005), but the peer group provides intimate long-term relationships that are increasingly relied upon to fulfil the adolescent's need for emotional support (Hazan & Zeifman, 1999; Lippincot & Deutsch, 2005). Crowell *et al*. (2002) suggested that secure adolescents pursue new relationships that combine both autonomy and relatedness and, therefore, serve as secure bases from where they can explore their ever-expanding world. However, there is a paucity of research studies on adolescent attachment compared to research available on attachment in childhood (Allen *et al.*, 2007).

In their longitudinal study of attachment Sroufe *et al*. (2005) found several positive outcomes in the childhood and adolescents years. By early adolescence, securely attached children were more socially competent, more peer oriented, less dependent on adults, and more likely to develop close friendships. By late adolescence these children, compared with those who formed insecure attachments, were more likely to have close family relationships, long-term friendships, sustained romantic relationships, higher self-confidence and greater determination to reach personal goals (Sroufe *et al.*, 2005).

Attachment is not only important for its role in social development (Leman *et al.*, 2012), but also contributes to identity development, and effective emotional regulation (Berman, Weems, Rodriguez, & Zamora, 2006; Mikulincer & Shaver, 2005). Securely attached adolescents possess more advanced emotional skills than their insecurely attached peers, and demonstrate more positive coping skills (Laible, 2007; Seiffge-Krenke & Beyers, 2005). In contrast, insecure attachment is associated with externalising disorders, substance abuse, and poor regulation of negative emotionality, including increased aggression, anxiety and depression (Shumaker *et al.*, 2009; Zimmerman *et al.*, 2009).

3.3.4 A developmental psychopathology perspective on normal and abnormal development in adolescence

Development in childhood and adolescence in general becomes increasingly adaptive (Masten, 2006), with young adolescents adjusting to puberty, developing their abstract thinking skills, forming an identity, gaining control of emotions, choosing healthy behaviour, and establishing close relationships. However, the developmental trajectories of a minority of adolescents might not lead to adjustment, but to dysfunction and abnormality. Three potential negative outcomes associated with the adolescent years will be discussed in this section: eating disorders, mood disorders, and risky behaviour. These negative outcomes will be discussed in short as the focus of this study is on positive outcomes, rather than pathology.

In the following discussion it will be demonstrated how interconnections between the microparadigms of the DP model explain adjustment. Sameroff's (2000) contention that disorder is predicted by multiple influences will be supported. Therefore, although engaging in risky behaviour, and eating and mood disorders are discussed on individual level here, the contributing environmental factors will be included. The development of these potentially negative outcomes also demonstrate multifinality – even though adolescents might be exposed to similar developmental changes and risk experiences, only some will succumb to disorder, while others continue to function normally (Rutter & Sroufe, 2000).

3.3.4.1 Risky behaviour

Although experimentation is considered normal, some adolescents might overestimate their capacity to deal with new situations, resulting in risky behaviour that poses threats to their health (APA, 2002). Risky behaviour in adolescence includes sexual experimentation, drug use, risky motor vehicle use, bullying, truancy, involvement in physical fights, low academic achievement, and unhappiness (Eaton *et al*., 2008; Peltzer, 2008). Reddy *et al*. (2010) recently identified a cluster of South African adolescents at high risk for risky and violent behaviour. This cluster had a higher proportion of coloured, white and male adolescents, adolescents too old for their grade, and adolescents receiving little pocket money compared with lower-risk clusters (Reddy *et al*., 2010).

Many health-related behaviours, which contribute to non-communicable diseases in adulthood, have its onset in adolescence (Sawyer *et al*., 2012). Only two examples will be discussed here: substance abuse and sexual risk behaviour.

a) Substance abuse

Brook, Morojele, Pahl and Brook (2006) report a lifetime frequency of illicit drug use of 11% for a sample of South African adolescents. In the national survey conducted by Reddy *et al*. (2010) 21% of participants reported being current smokers, and 34.9% reported using alcohol in the previous month. The Free State is further one of four provinces with the highest prevalence rates for alcohol use (Reddy *et al*., 2010). Significantly more males than females smoked, used alcohol and engaged in binge drinking (Reddy *et al*., 2010).

The gateway theory suggests that adolescents tend to initiate substance use with alcohol and/or cigarettes (Patrick *et al*., 2009). Patrick *et al*. (2009) investigated substance use onset among South African adolescents and found that the gateway theory holds true for both genders for this population. The majority of this sample initiated substance use with alcohol. For those who started with smoking, the risk for poly-use by Grade 9 was much higher than for the group who initiated with drinking (Patrick *et al*., 2009).

The use of substances is correlated with low well-being in South African adolescents (Brook, Rubenstone, Zhang, Morojele, & Brook, 2011). Alcohol use is associated with a multitude of social problems including accidents, interpersonal violence, school failure, and sexual risk behaviour (Morojele, Parry, & Brook, 2009; Schneider, Norman, Parry, Bradshaw, & Pluddemann, 2007). In South Africa it is related especially to involvement in criminal activity (Morojele *et al.*, 2009). Also, the earlier substance use is initiated, the higher the risk of later substance dependence (Pretorius, Van den Berg, & Louw, 2003). It is, therefore, a cause for concern that South African youth seem to be on an accelerated substance-use trajectory between Grade 8 and 9 compared with American adolescents (Patrick *et al*., 2009).

Various factors contribute to adolescent substance use, including personal attributes such as rebelliousness; low academic aspirations and poor scholastic performance; parental drug taking and an authoritarian parenting style; and environmental stressors such as being exposed to

violence (Brook *et al*., 2006; Brook *et al.*, 2011; Morojele *et al.*, 2009; Pretorius *et al.*, 2003). The availability of legal and illegal drugs in many South African communities is also problematic (Brook *et al*., 2006; Morojele *et al.*, 2009). Adolescents report using substances with peers for recreational purposes, or because of peer pressure (Morojele *et al.*, 2009). The presence of gang-related activity in many South African neighbourhoods seem to encourage deviant behaviour, as gang members are expected to use substances (Brook *et al.*, 2011; Morojele *et al.*, 2009). However, it is not only stressors that play a role in substance abuse, but also the adolescent's ability to cope with these stressors. Pretorius *et al*. (2003) found that adolescents with a low probability to use substances have greater self-confidence, more inner resources to cope with difficulty, and a positive perception of family support.

The use of substances is perceived by adolescents to also lead to sexual risk behaviour as a result of the substances' increasing arousal, decreasing anxiety, and having a disinhibiting effect (Morojele, Brook, Kachienga, 2006). McGrath, Nyirenda, Hosegood, and Newell (2009) speculate that adolescents who smoke and drink regularly are usually risk takers who would be more likely to experiment with sexual activity.

b) Sexual risk behaviour

There seems to be some positive changes in adolescent sexual risk behaviour over the past decade, including noticeable decreases in the number of sexually active adolescents, those who had their first sexual encounter before age 14, those who had two or more partners in their lifetime, and an increase in consistent condom use (Bearinger *et al.*, 2007; Reddy *et al*., 2010). In the national study by Reddy *et al*. (2010) 37.5% of adolescent participants reported that they have had sex before. Significantly more males than females, and more black participants, reported having had sex before (Reddy *et al*., 2010). Peer pressure, bravado and perceived invulnerability are associated with risky sexual behaviour in males (Morojele *et al.*, 2006). Adolescent females, on the other hand, often engage in sexual acts to please their partners and, therefore, report feelings of disempowerment in these situations (Morojele *et al.*, 2006).

Unfortunately, the proportion of sexually active adolescents who report condom use is not yet enough to restrain the spread of STIs or prevent unwanted pregnancy (Bearinger *et al.*, 2007). In South Africa, significantly more black participants have already been pregnant and 8.2% of sexually

active girls have had an abortion (Reddy *et al*., 2010). A review of the literature on adolescent pregnancy by Macleod and Tracey (2010) emphasises coercion and cultural beliefs as contributing factors to adolescent pregnancy, while there seems to be less emphasis on factors such as psychological problems and peer pressure over the last decade.

Pettifor, Rees and Kleinschmidt (2005) found the median age of first sex for a nationally representative sample to be 16 years for men and 17 years for women. Reddy *et al*. (2010) report 12.6% of South African adolescents were younger than 14 years at initiation of sex. Risk factors connected with an early age of first sex include place of residence, with adolescents living in urban areas at greater risk; and the use of alcohol, which usually occurs in an environment that enables sexual activity (McGrath *et al.*, 2009). School attendance seem to be a protective factor in this regard, as it is associated with delayed sexual debut for both genders (McGrath *et al.*, 2009).

Thus, for some adolescents, normal experimentation in combination with a variety of personal characteristics, parenting factors, peer pressure, and environmental stressors result in risky behaviour such as substance abuse and early sexual activity which have a negative impact on their future well-being.

3.3.4.2 Eating disorders

Normal developmental changes during puberty such as changes in physical appearance, sexual maturation, and self-esteem all contribute to adolescents' feeling more negative about their appearance (Eisenberg, Neumark-Sztainer, Story & Perry, 2005; Shaffer & Kipp, 2002). In general, boys' body images tend to be more positive than the girls' (Sigelman & Rider, 2006). In fact, Konstanski, Fischer and Gullone (2004) state that body dissatisfaction is so prevalent among adolescent girls that professionals are beginning to see it as normative in modern Western societies. However, body dissatisfaction has been linked with an increased risk for depression and unhealthy weight control behaviour (Fichter, 2005).

According to the APA (2002), symptoms of eating disorders first appear usually in early adolescence. Also, eating and weight problems are rising among adolescents in diverse adolescent populations (Ricciardelli, McCabe, Williams, & Thompson, 2007; Vostanis, 2007). In a South African study of girls aged 10 to 18, Mould, Grobler, Odendaal, and De Jager (2011) found that black girls

experienced a significant increase in bulimia-related behaviours in early adolescence, while white girls reported a significant increase in all disordered eating attitudes in middle adolescence.

Various factors combine to predict the onset of an eating disorder. Usually a stressful event or concurrent life changes activate the latent genetic predisposition to develop an eating disorder (Sigelman & Rider, 2006). Some of the personal characteristics that correlate with eating disorders include a tendency to internalise stress and negative emotions, obsession, perfectionism, social immaturity, and participation in sports that require thinness (Shaffer & Kipp, 2002; Sigelman & Rider, 2006; Vostanis, 2007). Often these girls have a low self-esteem and a high need for approval which they try to satisfy by using dieting as a means of increasing control over their lives (Wilson, Becker, & Hefferman, 2003).

The family has been found to play a pivotal role in the onset of eating disorders, with a chaotic home environment, family-related loss, high levels of conflict, low levels of emotional expressiveness, a preoccupation with appearance, and feeling rejected by parents as predictors of eating disorders (Shaffer & Kipp, 2002). Finally, pressure from the media and peer group to be thin also contributes to the onset of eating disorders (Vostanis, 2007). Keel and Klump (2003) are of the opinion that society's obsession with thinness as an indicator of physical attractiveness makes it hard for adolescents to form a positive body image.

Thus, for some girls, the onset of puberty is further accompanied by body dissatisfaction, genetic risk factors, certain personality attributes, stressful life events, unhealthy family environments, and a culture obsessed with appearance, which changes their developmental trajectories from adaptation to pathology.

3.3.4.3 Mood disorders

Adolescence is associated with an increase in negative mood states (Larson, Moneta, Richards, & Wilson, 2002). During early adolescence, immature prefrontal activity hinders good decision making in emotional contexts (Hare *et al*., 2008). Pubertal changes also confer certain psycho-social risks, such as peer victimisation which, in turn, predicts depression (Conley, Rudolph, & Bryant, 2012). For girls, the combination of early onset puberty, concurrent life transitions and body dissatisfaction especially increases the risk for depression (Stice & Bearman, 2001).

According to Seiffge-Krenke and Stemmler (2002), these effects are even more prominent in the context of a stressful mother–daughter relationship. Thus, poor emotional regulation or interpersonal difficulties fed by dysphoric affect exacerbates normative affective changes in some adolescents (Larson & Sheeber, 2009).

It is not surprising that adolescence is considered a peak risk period for developing depression, with a mean onset age for males of 15.4 years and for females 14.7 years (Lewinsohn, Joiner, & Rhode, 2001). Adolescents with depression are more reactive to negative events compared to non-depressed peers (Larson & Sheeber, 2009). They also have greater difficulty shifting out of negative affect states (Silk, Steinberg, & Morris, 2003). This difficulty is exacerbated by the fact that depressed adolescents are more likely to respond to negative emotion with disengagement, or involuntary engagement, such as impulsive behaviour (Silk *et al.*, 2003). In the adolescent years, a depressive episode also has adverse effects on neurobiological and cognitive development (Harrison, 2002) which, in turn, increase the risk for subsequent episodes.

Together with the onset of depression, the prevalence of suicidal ideation also increases during adolescence (Sigelman & Rider, 2006). Mashego and Madu (2009) studied suicide-related behaviours in adolescents living in the Free State and found that 21% reported having attempted suicide, with 6% having attempted in the previous two weeks. Stark *et al*. (2010) investigated all suicide cases at the state mortuary in Bloemfontein from 2003 to 2007 and found that children and adolescents accounted for 12.5% of all suicide cases.

Significantly more female than male adolescents consider attempting suicide (Flischer *et al*., 2006:828; Reddy *et al*., 2010). Suicidal behaviour seems to be more common in Asian and white adolescent populations (Peltzer, Cherian, & Cherian, 2000), while Indian adolescents have a significantly lower rate of suicidal attempts compared to other race groups (Reddy *et al*., 2010). The prevalence of suicidal ideation also seem to increase with age, and younger adolescents is, therefore, not so much at risk as adolescents older than 19 (Fine, Alison, Van der Westhuizen, & Kruger, 2012; Reddy *et al*., 2010).

Again, various factors are correlated with suicide attempts, including psychopathology, parental psychopathology, and adverse childhood experiences (Fine *et al.*, 2012). South African studies highlighted specifically the role of the family as a risk factor for suicide attempts. Low levels of

family connection, increased levels of conflict and control in the parent–child relationship (Van Renen & Wild, 2008), the breakdown of family structure (Wasserman, Cheng, & Jiang, 2005) and low parental monitoring (King, Schwab-Stone & Flisher, 2001) have been associated with an increased risk for suicide.

Thus, for some adolescents, the developing emotional regulation system combines with various psychosocial risk factors, interpersonal difficulties, dysphoric affect, poor coping skills and family dysfunction to change their developmental trajectories from adaptation to disorder.

3.3.4.4 Summary of a developmental psychopathology perspective on adolescence

The DP perspective offers an explanation for trajectories of abnormality in adolescence based on an understanding of normal development and accompanying vulnerabilities and risk factors. Risky behaviour, eating and mood disorders are prevalent during the adolescent years, with their onset mostly in early adolescence. Although an in-depth discussion of these disorders are beyond the scope of this chapter, an attempt was made to demonstrate how various factors and the interaction of various systems combine to increase the risk for pathology for certain individuals. Also, at certain times in the life span, normal developmental changes may increase the individual's vulnerability and especially so in the context of high-risk environments.

3.3.5 Summary of the development of the individual: the young adolescent

Adolescence is characterised by radical changes in individual development. The physical and hormonal changes that accompany puberty demarcate the beginning of adolescence. Changes to brain function and structure are extensive and result in cognitive growth. Adolescents start to integrate their roles and establish an identity. The transition to adolescence is also accompanied by emotional instability as adolescents attempt to cope with these developmental changes. The attachment bond established with the primary caregiver guide the adolescent's expectations of current relationships as the adolescent increasingly turn to peers for satisfying their attachment needs.

These normal developmental changes prepare adolescents to become competent adults but, at the same time, might increase their vulnerability temporarily. The prevalence of eating and mood disorders, as well as risky behaviour, in early adolescence provides evidence for the fact that normal developmental changes combine with various individual and systemic factors to increase risk for certain adolescents. However, the transitions in early adolescence also create opportunities for developing resilience. The current study will attempt to clarify the factors contributing to adolescents' resilience despite the challenges they face. Various South African studies demonstrated significant racial, geographical, gender and parenting differences related to increased risk in adolescence. This study will further explore these differences for the Free State province specifically.

Aside from the changes that occur within the adolescent, this life stage is also embedded in certain environmental contexts that might influence development.

3.4 The environment: a systemic perspective on the South African context

In South Africa the modernisation of family life, rapid urbanisation, the demise of apartheid, and the transfer of political power to the black majority have transformed the social landscape over the past two decades (Barbarin, 2003). Sustained efforts are required to better understand adolescents' circumstances in order to enhance this age of opportunity (Anthony, 2011). It is important to keep in mind that, although the contexts discussed in this chapter are relatively common to the South African adolescent population group, they do not necessarily predict individual patterns of adaptation. The South African systems which are significant in adolescent development will be discussed according to each of the systemic levels of Bronfenbrenner's ecological model.

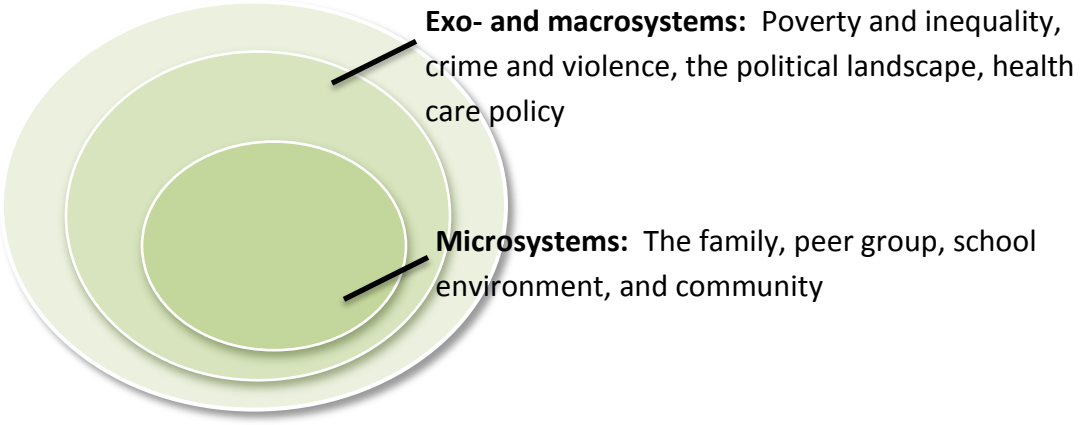

Figure 3.2: The South African environment (compiled by the author)

On microsystemic level the influences of the family, peer group, school environment, and community on the development and functioning of South African adolescents will be discussed. Although the mesosystem is not discussed separately, the reciprocal influences of the various microsystems will be considered in the discussion. On exo- and macrosystemic level the contexts of poverty and inequality, and crime and violence will be investigated, as these are pervasive problems which have an impact on the functioning of a majority of our citizens. Also, the political transformations our country experienced in the past decade and the health care policy implemented by the current government will be addressed. Each of these will be considered with regard to the changes evident in post-apartheid South Africa, i.e. changes over a time span of almost 20 years. Although these exo- and macrosystemic factors might influence child and adolescent development indirectly, their effects are far-reaching.

3.4.1 The microsystem

The systems in which development is embedded allows for the social growth of the adolescent. Family, peers, neighbourhoods and schools can create opportunities for mastery of developmental tasks or, alternatively, pose significant barriers to successful adaptation (Burt, 2002). Especially the nature and quality of adolescents' relationship with their parents continues to be one of the most researched topics in the field of adolescent development (Smetana *et al.*, 2006).

3.4.1.1 The family

a) The family life cycle

Individual development takes place in the context of the family life cycle and families with adolescents find themselves in a distinct family developmental stage (Carter & McGoldrick, 1989). Families are considered to be the crucible for identity formation in adolescence and the basis for the shift from dependent childhood to independent adulthood (O'Brien & Scott, 2007). During this stage the adolescent's role within the family is redefined, and so are the parents' roles in their relationship with their child. Adolescents also enter into a more egalitarian relationship with parents (Sroufe *et al*., 2005). The boundaries in the family are qualitatively different from those of families with younger children and should be more permeable. Flexibility allows adolescents to move out of the family system to experiment with increasing independency when they are ready to, and towards the family if they cannot cope with any given situation.

Achieving autonomy is a key developmental task (Sigelman & Rider, 2006) and adolescents have greater responsibility for making decisions and engaging in self-monitoring (Sroufe *et al*., 2005). The time adolescents spend with their families decreases and may make them feel less close to their family (Collins & Laursen, 2006; O'Brien & Scott, 2007). However, a combination of autonomy and interdependence is desirable, and especially in early adolescence it remains the parents' responsibility to monitor the adolescent's self-monitoring (Sroufe *et al*., 2005). Often adolescents need to negotiate their new status within the family, which places stress on the family system.

The need for autonomy leads to a shift in the balance of power in the parent–child relationship which, in turn, leads to greater conflict (Collins & Laursen, 2006). Conflict particularly increases between daughters and their mothers (APA, 2002). Steinberg (2001) found low-level conflict on minor issues such as homework to be more distressing for the parents than for the adolescent. It could be that parents see conflict as a moral issue in that they have a responsibility for their child, while the adolescent sees it as a matter of asserting personal choices (Smetana & Daddis, 2002). In most cases the conflict is not a reflection of the quality of parenting (Steinberg, 2001), but a means for adolescents to blow off steam and express their individuality (APA, 2002). Adams and Laurson (2001) further found that moderate levels of parent–child conflict are associated with better adjustment in adolescence than both no conflict and frequent conflict.

Moreover, the transition to adolescence often coincides with parents' having to find a new focus in their marriage and careers while considering the care of their elderly parents – all of which may intensify conflict in this stage. However, the majority of parent–adolescent relationships remain close and retain the quality they had in childhood (Collins & Laursen, 2006). In addition, Collins and Laursen (2006) report that the majority of mothers still experience their relationships with their children positively.

b) Changes in the family system

Scholars in the field of family dynamics have noted substantial structural changes in family life globally (Amoateng & Heaton, 2012). However, in South Africa, these shifts are accompanied with various sociopolitical changes. Consequently, the family's vulnerability has increased to such an extent that families' abilities to care for, socialise and protect their children are being questioned (Amoateng & Richter, 2007; Barbarin, 2003). Hall and Posel (2012) report that almost a quarter of South African children do not live with any of their biological parents. These children are not necessarily orphans as 79% of this group have at least one parent alive, but living elsewhere. Amoateng, Heaton and Kalule-Sabiti (2007) report racial differences in living arrangements in that 90% of white children and only 50% of black children live with their parents.

Parental absence is, in most cases, explained by parents living elsewhere due to labour migration (Hall & Posel, 2012). The temporary migration of adults seeking work in the cities has persisted after the apartheid period (Posel & Casale, 2006), resulting in urban children being more likely to live with at least one parent than children in rural areas (Hall & Posel, 2012). Especially female migration has been increasing (Collinson, Kok, & Gareng, 2006) as grandmothers are not only available to take care of children, but also eligible for social pension (Hall & Posel, 2012). Still, more fathers are absent from their children's lives than mothers due to low marriage and cohabitation rates (Hall & Posel, 2012). Again, racial differences are prominent, with only 25% of black women, and more than 60% of white women being married – partly explained by prevailing poverty and men's inability to pay bride wealth (Hall & Posel, 2012). Thus, in practice, social identity, marriage and motherhood are not coupled anymore, resulting in increasing numbers of children growing up without fathers (Bak, 2008).

Divorce also accounts for many children not living with their biological parents. During the previous South African census (Statistics South Africa, 2004), just over half a million persons indicated that they were divorced (this number excludes divorcees that were remarried). In general, divorce rates are higher for older individuals, individuals in urban areas, and communities with low education levels (Kalule-Sabiti, Palamuleni, Makiwane & Amoateng, 2007). It further seems as if divorce does not effect fertility, as South Africans are tolerant towards children born out of wedlock and remarriage, again resulting in many South African children not living with both their biological parents (Kalule-Sabiti *et al.*, 2007).

Another trend noticed in the South African context specifically is for extended families to live together. There seems to be an increase in these types of families among educated and affluent white and Asian South Africans, whereas extended families in the black culture are seen more in poorer areas (Amoateng *et al.*, 2007). Therefore, even though children live with only one of their biological parents – mostly the mother – she seldom can be seen as a single parent, as she often is not the only adult caregiver in the household (Meintjies & Hall, 2012). Also, many children live with neighbours as informal "foster" placements, or with elderly grandparents (Smith, 2006).

South Africa also has a number of child-headed households, with all the members of the household younger than 18 years: about 90 000 children (0.5% of all children) live in 50 000 such households (Meintjies & Hall, 2012). Although this is a small proportion, the extreme conditions in which these children are living are a cause for concern (Meintjies & Hall, 2012). Child-only households are clustered in the poorest quintile of households, and have poor access to services and social grants (Meintjies & Hall, 2012). The majority of children in child-only households are not orphans (Meintjies & Hall, 2012), suggesting that social factors aside from parental death play a role in the formation of these households.

Additional changes in family life include greater equality between husbands and wives, an increase in the number of working mothers, and the growing trend for family relationships to be based on love and not social or economic considerations (Amoateng & Richter, 2007). Especially those women with greater access to education demonstrate a changing pattern regarding marriage and family (Kalule-Sabiti, Palamuleni, Makiwane & Amoateng, 2007), one of which is marrying late (Amoateng & Heaton, 2012). Racial differences have been found regarding female achievement, with Indian and Asian South Africans most supportive of women remaining unmarried to establish

their careers (Amoateng & Heaton, 2012). Black South Africans seem to support traditional roles for women strongly, believing that their roles as mother and wife should have priority over their education and careers (Amoateng & Heaton, 2012). The seemingly conservative attitude of black South Africans actually reflects a positive culture of valuing family life which they are not willing to sacrifice for the sake of modernisation (Amoateng & Heaton, 2012).

In general, the changes in family systems are associated with negative outcomes, such as the absence of a parent, an increase in parental stress levels and, consequently, a decline in quality parent–child interaction (Weissberg, Kumpfer & Seligman, 2003). Although various scholars (Engle, Castle, & Menon, 1996; Hetherington & Kelly, 2002; Walsh, 1999) pointed out that these disruptions may be temporary, and that non-traditional family systems are not worse off than traditional ones, South African families contend with far greater challenges than only structural changes. In these circumstances, the primary caregiver's role in the healthy development of the child becomes increasingly significant (Sheridan, Eagle, & Dowd, 2006) and so does the relational processes within the family (Walsh, 2002).

c) Family relationships

The influence of the family remains so strong throughout childhood that positive experiences outside of the family will have limited benefits in the context of negative family relationships – which in itself then becomes a risk factor (Richter, Foster & Sherr, 2006). According to Engle *et al*. (1996), research repeatedly indicates the importance for a child to be supported by at least one parent. In fact, parental involvement in decision making seems to be advantageous especially during early adolescence (Smetana, Campione-Barr, & Daddis, 2004).

Sibling relationships are also transformed during adolescence to be more egalitarian, as siblings spend less time together (Smetana *et al*., 2006). In general, better relationships with siblings is associated with better adjustment in adolescents (Stocker, Burwell, & Bricks, 2002). Sibling support decreases internalising and externalising problems in younger and older adolescents, and particularly for girls receiving support from older brothers (Branje, Van Lieshout, Van Aken, & Haselager, 2004). However, older siblings' involvement in early sexual activity and substance abuse can also increase the risk for these behaviours in younger siblings (Ardelt & Day, 2002).

An interaction of sibling and parent influences has also been evident in research. Shanahan, McHale, Osgood and Crouter (2005), for example, found that maternal warmth declined and conflict increased for all siblings when the first-born reaches adolescence. Parents' experiences of the first-born's adolescent phase influence their expectations, behaviour and relationship with their later-born children when they reach puberty (Smetana *et al.*, 2006) and they have less conflict and greater knowledge of activities for later-born adolescents (Whiteman, McHale, & Crouter, 2003).

d) Parenting

Parental monitoring as a form of behavioural control is important during adolescence, as it allows parents to keep track of their children's activities and associations, while allowing for greater autonomy (Smetana *et al.*, 2006). The optimal level of parental supervision and monitoring depends on the adolescent's peer and neighbourhood environments (APA, 2002). In communities characterised by danger and problem behaviour, stricter limits are necessary for healthy development (Roth & Brooks-Gunn, 2000). Inadequate monitoring is associated with externalising problems such as substance use and antisocial behaviour (Steinberg & Silk, 2002). Smetana *et al*.'s (2006) review asserts that monitoring seems to be low – therefore, associated with negative outcomes – in both low socio-economic status neighbourhoods and highly affluent communities. Unfortunately, in South Africa, many children are unsupervised after school and for these children the lack of parental supervision has been associated with poor academic performance, erratic school attendance, high school drop out, and exposure to substances (Smith, 2006).

The importance of agency has been demonstrated in this regard, with adolescents' willingness to disclose information to parents being equally important as parents' attempts to monitor behaviour (Kerr & Stattin, 2000). According to Hunter, Barber, Olsen, McNeely and Bose (2011), many studies indicate that adolescents who disclose information to their parents report positive relationships with their parents, and parental acceptance and control. Younger adolescents are more likely to disclose information (Smetana, Villalobos, Tasopoulos-Chan, Gettman, & Campione-Barr, 2008) and specifically to their fathers (Matza, Kupersmidt, & Glen, 2001) about peer-related issues (Smetana, Metzger, Gettman, & Campione-Barr, 2006).

According to Smetana *et al*. (2006), a vast number of studies confirm the importance of authoritative parenting for psychosocial competence in adolescents. Parents who acknowledge the

adolescent's need for autonomy and are willing to gradually shift control to the adolescent promote healthy adjustment in their child (Shaffer & Kipp, 2002). Parents who are either too strict or too permissive can alienate their children and leave them more vulnerable to negative influences (Louw *et al*., 2007). Unfortunately, socio-economic disadvantage have been associated consistently with harsh, unresponsive parenting (Grant *et al*., 2003), increasing the risk for adolescents living in poverty.

The family remains the primary basis from where adolescents define themselves and their world (Perkins, 2006b). However, adolescence is also known for being a period of social expansion (Sroufe *et al*., 2005).

3.4.1.2 The peer group

One of the most noticeable changes in the social system is that the core of the adolescent's social world shifts from the family to the peer group (APA, 2002). Peer-group interaction becomes more complex with an increase in integrated peer groups and the amount of time spent with peers (Shaffer & Kipp, 2002). Young adolescents initially form cliques, usually consisting of a number of same-sex members who share similar preferences and values (Shaffer & Kipp, 2002). These cliques provide contexts for interaction (Smetana *et al.*, 2006). Gender segregation soon breaks down, and male and female cliques begin to interact (Shaffer & Kipp, 2002).

The stronger orientation towards peers facilitates independence from the family and is seen as healthy (APA, 2002:21). The peer culture is often seen as providing a safe passageway for the transition from childhood to adulthood (Louw *et al*., 2007). It does not imply, however, that parents are less important to their children (APA, 2002), as adolescents would still seek their parents' advice on social and moral issues instead of that of their friends (Louw *et al*., 2007). In fact, parents and peers are seen to be influential in different areas of the adolescent's life, with parents more influential in long-term issues and decisions, and peer opinions prominent in matters of taste, style and appearance (Smetana *et al.*, 2006). Parental guidance, furthermore, can effectively influence an adolescent's selection of friends (Mounts, 2004).

Positive peer relations have been associated with good psychosocial adjustment (APA, 2002). Especially in early adolescence the peer group provides a temporary reference point for identity

formation (APA, 2002) as adolescents try out new roles and express their values. The adolescent also develops a greater need for intimacy and disclosure, which is facilitated by friendships (Louw *et al*., 2007). Close relationships help adolescents deal with stress, offer protection against loneliness and isolation, promote healthy self-esteem and enhance empathy (Louw *et al*., 2007). In addition, the maintenance of friendships provides the opportunity to hone social skills (APA, 2002).

For young adolescent girls specifically, these peer friendships may also pose some risks. Rose (2002), for example, found high levels of co-rumination among young adolescent girls. Friends tend to extensively discuss problems, revisit issues, and focus on negative feelings. Co-rumination can, in part, explain why adolescent girls present more with internalising problems even though they have more intimate relationships when compared to boys (Smetana *et al.*, 2006). Also, during early adolescence, the popular girls tend to be relationally aggressive by excluding, ignoring or spreading rumours about other girls in order to control their peers (Rose, Swenson, & Waller, 2004).

In early adolescence involvement with the peer group is most intense, and the central issues are acceptance and conformity (APA, 2002). Those adolescents who are accepted by the peer group tend to be tolerant, sympathetic, flexible, happy, energetic, enthusiastic, intelligent, attractive, self-confident and humorous (Louw *et al*., 2007). However, popularity may also lead to a higher risk of engaging in peer-sanctioned minor deviant behaviour such as experimentation with substances (Allen, Porter, Marsh, McFarland, & McElhaney, 2005). Rejected adolescents, on the other hand, are often aggressive and selfish and lack social skills, while rejection, in turn, adds to their isolation and low confidence (Louw *et al*., 2007). The desire to belong can be so strong that young adolescents engage in risky behaviour they would otherwise choose to avoid (Santrock, 2001). Excessive conformity then has a negative influence on identity formation and autonomy (Louw *et al*., 2007).

The complex and close peer group relations set the stage for romantic involvement, and these relationships become more common as adolescents mature sexually. Early romantic relationships tend to be of short duration, with dating occurring mostly in group context (APA, 2002). These relationships are formed predominantly for the purposes of relaxation and status (Louw *et al*., 2007). Adolescents who are involved in too serious relationships at a young age may impair their social development in that they spend far less time with the peer group (Louw *et al*., 2007). Also, the longer a romantic relationship continues, the greater the expectation of sexual intimacy, which may be difficult for adolescents to negotiate (APA, 2002).

Peers play an increasingly significant role in the lives of adolescents, but the link between peer influence and individual development is probably reciprocal (Donnellan *et al*., 2006). Individual characteristics influence peer group selection and experiences; the group, in turn, influences socialisation and individual behaviour (Donnellan *et al*., 2006). Moreover, the negative influence of peer groups is seen mostly as a myth, as adolescents have been found to form friendships similar to family relationships and choose groups that reinforce parental values (Irvin, 1996). Peer-group relationships are developed primarily in the school environment.

3.4.1.3 The school environment

The school system is an important context for development, because children need to be successful here in order to become competent adults (Brooks, 2006). Especially for girls, secondary education is critical to a number of positive outcomes including reduction of sexual harassment, domestic violence and human trafficking, later marriage, lower fertility rates, improved child nutrition, reduction of poverty, and fostering social empowerment (Anthony, 2011).

However, the transition to a secondary school might add to difficulty in the educational context (Donnellan *et al*., 2006). Declines in academic performance and self-esteem are common following this transition (Boyd & Bee, 2014). These declines are, in part, explained by the fact that young adolescents, especially girls, often experience major physical and psychological changes concurrent with changing schools (Shaffer & Kipp, 2002). Furthermore, the increasingly competitive grading practices and general restrictions on autonomy encountered in the school setting are, at times, a poor fit with the needs of the developing adolescent (Eccles *et al*., 1993). Some of these difficulties might be evident in the current group of participants, as they are all in Grade 8 and have, therefore, just completed the transition to a secondary school. According to Shaffer and Kipp (2002), various research studies have indicated that goodness-of-fit between the school environment and adolescents' developmental needs is crucial in promoting adjustment. Hall (2012) emphatically states that education is a central socio-economic right which provides the foundation for learning and life-long economic opportunities.

a) Education in South Africa

Schooling is compulsory for all children under the South African Schools Act of 1996 (Barbarin, 2003). Progress has been made with early childhood development, and enrolment in Grade R has increased from 15% to 60% over the past decade (Mokate *et al*., 2011). Furthermore, near-universal access to primary schooling has been achieved (Mokate *et al*., 2011). In a South African study, Lam, Ardington and Leibbrandt (2011) report school enrolment rates of 90% for ages 9 to 15. In contrast with global statistics indicating that girls lag behind boys with regard to secondary school enrolment (Anthony, 2011), in South Africa, female enrolment is slightly higher for all racial groups. In a recent report Hall (2012) indicates that school attendance drops significantly after age 15, with 93% of 16-year-olds, 86% of 17-year-olds, and only 71% of 18-year-olds still attending school. The Free State province compares well with the rest of the country with regard to education, as it has the highest percentage of children younger than five exposed to early childhood development programmes (67%), and is on par with the rest of the country with regard to youth who completed primary (94%) and secondary education (40%) (Mokate *et al*., 2011).

Various factors explain drop-out rates among adolescents: a lack of finances and the high cost of education; disability or illness; the perception among learners that education is "useless"; examination failure; and pregnancy, which accounts for a drop-out rate of 8% among girls (Hall, 2012; Mokate *et al*., 2011; Statistics South Africa, 2011). In a longitudinal study, Branson, Lam, and Zuze (2012) found that 84% of learners who dropped out of school in Grade 9 in 2008 were neither working nor enrolled for further education two years later.

The quality of primary schooling is vital for scholastic performance on secondary level (Lam *et al.*, 2011). The extent to which students were already behind when they enrolled for secondary schooling plays a role in poor scholastic performance. Although most white Grade 9 learners are 15 years of age, 25% of black students in Grade 9 are 18 years or older (Lam *et al.*, 2011). Parental education also seems to affect school advancement, with the parents of black youth having four to five years less schooling than the parents of white youth (Lam *et al.*, 2011). The effect of poverty on education is also evident, as children from the poorest households are most likely to repeat their grades (Mokate *et al*., 2011).

Discipline and social behaviour problems in the school environment are on the rise (Condly, 2006), and safety concerns are prevalent in South Africa. According to Reddy *et al*. (2010), up to 27% of learners feel unsafe on the way to and from their school and at school. Threats to safety include peers carrying weapons and the availability of illegal substances on school property (Reddy *et al*., 2010).

b) Inequality in education

Unfortunately, education plays a critical part in promoting inequality in South Africa (Branson & Zuze, 2012). First, the quality of schooling varies by socio-economic status (Branson & Zuze, 2012). Even though the South African government spends more on education than most developing and developed countries (Branson & Zuze, 2012), the allocation of these funds is not linked to the level of need within schools (Equal Education, 2009). Furthermore, school fees vary enormously, even in government schools, and contribute to great inequalities in school resources (Lam *et al.*, 2011). According to Hoadley (2007), a chaotic school environment is created by economic circumstances, which is further exacerbated by crowded classrooms and ineffective administration. In addition, children in poorer schools are confronted with a culture of teacher absenteeism (Hoadley, 2007) and teacher incompetence. Louw, Shisana, Peltzer and Zungu (2009) found a high prevalence of HIV in a nationally representative sample of South African teachers, resulting in long periods of sick leave. Branson and Zuze (2012) confirm that the level of pedagogical knowledge is troubling in poor schools, with teachers having limited understanding of both content and teaching practices. Another socio-economic factor that may hamper school success is the fact that poorer children have limited education support outside of school (Consortium for Research on Educational Access, Transitions and Equity, 2011). These children have less access to reading materials, their parents provide less help with homework, their living conditions make studying difficult, and they often have more household responsibilities than more affluent children (Branson & Zuze, 2012).

Second, there is high variability of educational outcomes, especially for the poor (Branson & Zuze, 2012). In this regard, South Africa is still recovering from the effects of implementing an outcomes-based curriculum without due consideration of practical realities. With the commencement of the outcomes-based curriculum in South Africa, Jansen (1998) predicted the failure of the curriculum, because it was politically driven and undermined the vulnerable learning culture in South Africa. Teachers had a difficult time meeting the continuous assessment goals of

the new curriculum and struggled to effectively evaluate student performance, especially so for large classes and poor schools (Lam *et al.*, 2011). An earlier study by Van der Berg and Shepherd (2008) confirm that the average internal assessment of most schools exceeded their average external matric results. Furthermore, this gap was the greatest for those schools with poorest matric results, which are mostly populated by black students. In Van der Berg and Shepherd's (2008) opinion inaccurate assessment can be ascribed in part to teachers' poor understanding of the demands of the new curriculum.

Third, a poor quality school environment predicts negative outcomes for the learners and, therefore, labour market outcomes differ according to socio-economic status (Branson & Zuze, 2012). Only 18% of black learners pass with exemption and can pursue tertiary education, compared to 23% of coloured and 59% of white students (Lam *et al.*, 2011). Of those children who do complete school, few are equipped with the skills to achieve success in higher education (Branson & Zuze, 2012). Quality schooling, educational outcome, access to higher education, and labour-market outcomes vary by socio-economic status, which perpetuates a cycle of inequality, as the poorest sector of the population does not obtain the education it needs to break the cycle of poverty. Education plays a predominant role in our country in determining who is employed and what earnings they receive (Branson & Zuze, 2012). As very few poor learners manage to eventually enter top-income jobs, the stark differences between the poor and the affluent in South Africa are reinforced (Branson & Zuze, 2012).

Peterson, Swartz, Bhana and Flisher (2010) emphasise that these educational issues need to be addressed especially in poorer communities in order to overcome scholastic problems. Effective schools can promote academic achievement, social skills, positive attitudes towards learning and continuation of education (Shaffer & Kipp, 2002). Not only does the school environment have the ability to strengthen the children's relationships with their parents (Brooks, 2006), but parental involvement in the school system can also improve the child's academic success (Palmer, 2006). Given the above-mentioned discussion, it seems that the current South African education system undermines the potential positive effects that local schools can have in their communities, and that various changes – also on policy level – is necessary to turn around the quality of schooling.

Another protective factor, besides access to quality schools, is participation in religious youth groups and organised sport (Winslow, Sandler, & Wolchik, 2006). Therefore, communities that

develop their resources, such as the availability of extracurricular activities, provide opportunities and support for adolescent development (APA, 2002).

3.4.1.4 The community

The perceived social support in a community is considered a key ecological asset for positive development in children (Oberle, Schonert-Reichl, & Zumbo, 2011). Social support further has a direct influence on emotional recovery after trauma exposure, and bolsters coping appraisal and efficacy (Lent, 2004). Even in poor communities children can be protected against the potentially negative consequences of poverty if these communities provide material resources for families and normalise children's perceptions of their socio-economic conditions (Barbarin & Richter, 1999). Community organisations can, furthermore, enhance interaction with a diverse group of individuals and, consequently, assist adolescents in developing social trust and tolerance, and reduce their stereotypes (Flanagan, Gill, & Gallay, 2005).

The church serves as both a spiritual resource and a source of social support for adolescents (Santrock, 2001). Because adolescents are hungry for meaning they benefit from positive role models and communities in which activities are structured around religious values (APA, 2002). Holder *et al*. (2000) report that more than 90% of adolescents consider religion at least somewhat important in their lives. In this regard, Crawford, Wright and Masten (2006) found that spirituality promotes resilience in youth. Yet, religiosity itself can also be a risk factor. If God is depicted as a judgmental being with high standards, it may create feelings of guilt in adolescents. Furthermore, intolerant religious attitudes often contribute to interpersonal violence (Crawford *et al*., 2006). However, religiosity is associated mostly with decreased involvement in risky behaviour (APA, 2002).

Various community factors increase risky behaviour in adolescents. Neighbourhood instability, as well as increases in unemployment, has been linked with poor outcomes in adolescence, especially with higher rates of substance abuse and adolescent sexual activity (APA, 2002; Leventhal & Brooks-Gunn, 2000). Burt (2002) reports that community norms favourable to substance use and crime, availability of fire-arms, low neighbourhood attachment and community disorganisation are also antecedents to problem behaviour in adolescents. In addition, adolescents living in low socio-economic neighbourhoods are at risk for delinquent and criminal behaviour and

behavioural problems (APA, 2002). These associations were found to be prevalent particularly in early adolescence (APA, 2002) and could be explained by the lack of institutions in poor neighbourhoods that can monitor adolescent activity (Leventhal & Brooks-Gunn, 2000). Unfortunately, many South African neighbourhoods are characterised by crime and violence as will be explained later in this chapter. However, moving from these neighbourhoods to more affluent and stable neighbourhoods, can reverse the negative effects for adolescents (APA, 2002).

An important component of the adolescent's community, which is receiving increasing attention lately, is media and technology (APA, 2002). The ubiquitous nature of social media has changed the speed at which sociocultural norms are affected (Sawyer *et al*., 2012). According to Palfrey, Gasser, Maclay and Beger (2011), engagement with technology is transforming learning, communication and socialisation among youth. However, since the use of technology is not measured for the purposes of the current study, a discussion of communication technology falls beyond the scope of this thesis.

3.4.1.5 Summary of the microsystemic factors influencing development

Normative transformation in the family systems of adolescents involves role changes and shifts in the balance of power to accommodate the adolescent's need for greater autonomy. In light of the substantial changes to family structure, the role of the primary caregiver, as well as relationships within the family, becomes increasingly important for children's well-being. Unfortunately, many South African children do not live with their parents due to labour migration, low marriage rates, divorce, and an increase in female education and achievement. Even though peer group interaction increases, the family system remains the primary source of either support or risk for children.

The adolescent's life is significantly more complex than the child's, as school work, extramural activities and social life needs to be coordinated (Sroufe *et al*., 2005). Secondary schooling is associated mostly with positive outcomes for youth. Unfortunately, the South African educational system is not geared to maximise the potential benefits of the school context for adolescent development. School attendance decreases in children older than 15 years, poor scholastic achievement is prevalent, discipline and behaviour problems are rife, and poor-quality schools perpetuate a cycle of poverty and unemployment in the poorest communities. Neighbourhood

resources can compensate for the negative effects of absent parents and poor education, but South African neighbourhoods tend to be unsafe.

With each life stage the developmental issues and related systems are ever-diversifying. These systems provide the context for prior adaptation to be brought forward and transformed by current experiences (Roisman *et al*., 2004), resulting in either successful or impaired adaptation. South African adolescents grapple with many challenges relating to family life, the education system, high-risk neighbourhoods and a general lack of monitoring. It would, therefore, be important to understand how South African adolescents cope with these challenges – a contribution the current study aims to make.

The form and content of the microsystems are determined to a great extent by greater sociopolitical and cultural systems and these, therefore, influence adolescent functioning indirectly.

3.4.2 The exo- and macrosystems

According to Sanders *et al.* (2010), the basic risk factors that children are exposed to are structural factors found on national and global level, i.e. social, labour, housing, environmental health, farming and economic policies. The exosystem comprises all the microsystems the individual is not part of directly, but which nevertheless influence their immediate environment in some way. The macrosystem consists of the ideologies and structures characteristic of a specific culture or subculture, and includes the laws, values and practices of any given society (Hook, 2009).

3.4.2.1 Poverty and inequality

The South African economy is the largest on the African continent and, since 1994, it has experienced positive real GDP growth, except during the 2009 global economic recession (Mokate *et al*., 2011). In light of inequalities that resulted from apartheid policies, the current democratic government in South Africa prioritised economic transformation which includes the participation of black South Africans in the country's economy and the improvement of social equality and distribution of income (Amoateng & Richter, 2007).

In addition, South Africa remains one of the most unequal countries in the world, with a Gini coefficient of 0.7 (Leibbrandt, Finn, & Woolard, 2014). Further, inequality has been increasing since 1993 (Mokate *et al*., 2011). The poorest 20% of the population earns only 1.8% of the total national household income (Mokate *et al*., 2011). According to Hall and Woolard (2012), the impact of redistributive policies on inequality has been insufficient to offset other contributing factors, such as unequal opportunities. Consequently, there is an enormous gap between children living in poverty and those living in affluence (Mokate *et al*., 2011), which in itself predicts the persistence of inequality in the following generations (Hall & Woolard, 2012). The importance of inequality is demonstrated by a study of Wilkinson and Picket (2009) which indicated a significant correlation between children's well-being and their country's level of income inequality, and not with its average income. In interpreting their findings, Hall and Woolard (2012) suggest that reducing inequality would do more to promote children's well-being than increases in economic growth would.

a) Poverty and South Africa's children

Unfortunately, South African children are disproportionally affected by poverty, with just over two-thirds of all children living in the poorest 40% of households (Meintjies & Hall, 2012). Even though child poverty was reduced between 2004 and 2008, 64% of South African children still live in poverty (Mokate *et al*., 2011). Furthermore, hunger among children increased with 22% between 2007 and 2009 (Mokate *et al*., 2011).

Racial disparity remains strong as is evidenced by the fact that, compared to a white child, a black child is 18 times more likely to live in poverty, 12 times more likely to experience hunger, and two times less likely to complete secondary education (Mokate *et al*., 2011). Hall (2012b) reports that 67% of black children and only 2% of white children live below the poverty line of R575 household income per month. The Department of Social Development (2003) conducted a survey of the prevalence of six basic facilities (a flush toilet, telephone, electricity, garbage removal, running water and owning a vehicle) and found a median of only two of these for black households, four for coloured households, and six for Asian and white households.

Casale and Desmond (2007) argue that access to facilities is still limited significantly by the economic circumstances in South Africa. Although access to formal housing increased in the past

decade or two, the number of informal settlements also increased, for example (Casale & Desmond, 2007). Even though as much as 15% of children have benefited from state-subsidised housing, children from middle-income households appear to have received more benefits than children from the poorest households (Mokate *et al*., 2011). Compared to the national averages, more children in the Free State province are living in poverty and experiencing hunger (Mokate *et al*., 2011). However, children in the Free State province also have greater access to formal housing, piped water on site and adequate sanitation (Mokate *et al*., 2011).

Poverty shape children's life circumstances and has an accumulating effect in all areas of development: access to health care and basic services are restricted (Lake & Reynolds, 2010), recreational facilities are non-existent (Barbarin, 2003), scholastic achievement is compromised (Lake & Reynolds, 2010), risk for exposure to industrial pollution, disease and abuse increases (Barbarin, 2003; Lake & Reynolds, 2010; Unicef, 2008), both their homes and schools are overcrowded (Barbarin, 2003; Lake & Reynolds, 2010), and parents are often absent (Barbarin, 2003) and overworked (Richter, Foster & Sherr, 2006). Barbarin and Richter (1999) report that children from low socio-economic households are less resilient, mature and independent than children from higher socio-economic groups. The ubiquitous stressors and inappropriate responsibilities put on their shoulders weaken these children's sense of autonomy and hinder their capacity for adaptation (Barbarin & Richter, 1999).

b) Factors playing a role in sustained poverty

The current government's expansion in social grants demonstrates some progress to fulfilling children's rights to social security (Mokate *et al*., 2011). In fact, according to Leibbrandt, Woolard, Finn and Argent (2010), social grants have made a significant contribution to reduce income poverty. These grants include pensions for the elderly, the disabled, war veterans, foster care parents and child support pensions. Currently, there are over ten million grant recipients in South Africa (South African Social Security Agency, 2011), and more than half of the income of the poorest 40% of households come from social grants (Budlender & Woolard, 2012). The eligibility age range for the Child Support Grant has been extended to 17 years (Mokate *et al*., 2011), with almost 12 million families accessing these grants in July 2012 (South African Social Security Agency, 2012). However, child grants have had a smaller impact on child poverty rates compared to adult grants,

as the child grants are quite smaller (Hall & Woolard, 2012). Also, up to 30% of families eligible for these grants still do not access them (Hall, 2012b).

Unemployment remains a key constraint to overcoming poverty (Mokate *et al*., 2011) and a predictor of inadequate education, poor health outcomes and crime (Barnard & Lysenko, 2010). The South African unemployment rate is currently 25% which implies that, out of a total labour force of 17 million people, 4.5 million are unemployed (Mokate *et al*., 2011). Consequently, more than a third of all children live in households with no employed household members (Hall, 2012b). The fact that unemployment rates remain much higher for women than for men has significant implications for children, as children are more likely to reside with female caregivers (Hall, 2012b). Inequality is also evident in the labour market: only 10% of adults in the poorest quintile of the population are working, while 71% of adults in the richest quintile are employed (Hall & Woolard, 2012). The average wage in the poorest quintile is further less than 10% of the average age earned by those in the richest quintile (Hall & Woolard, 2012).

Casale and Desmond's (2007) warning that the future prospects of South African households, and specifically African and rural households, are not very optimistic seems justified in light of the facts provided above. A renewed commitment to improving the quality of life among the poor is needed in our country (Casale & Desmond, 2007), as it would be foolish to expect true progress and growth when the majority of citizens contend with conditions of chronic and pervasive poverty. In addition, the conditions of poverty in South Africa is related directly to a higher level of crime and violence (Barbarin, 2003; Van der Merwe & Dawes, 2000).

3.4.2.2 Crime and violence

Crime in general, and violence against women and children specifically, is a risk factor globally (Erasmus & Mans, 2005). Kwast and Laws (2001) report that violence occurs regardless of culture, level of education and socio-economic status of the parents, and include murdering children, mutilation of female genitals, rape, and bullying. Unfortunately, little is known about situations of exploitation in South Africa (Mokate *et al*., 2011), but what we do know, is that the high level of violent crime in South Africa distinguishes our country from other parts of the world where crime is also problematic (Masuku, 2002). Violence is a multilevel phenomenon in South Africa, according to Van der Merwe and Dawes (2000), which has a profound impact on individuals, families and communities.

South African children are exposed to violence as victims, perpetrators and bystanders (Van der Merwe & Dawes, 2000). The findings of Van Niekerk (2003) and Redpath (2003) indicate a decrease in average age of both perpetrators and victims. According to the Centre for Justice and Crime Prevention (2006), 40% of South African children between the ages of 12 and 22 have already been victims of crime or violence. In a more recent report Mokate *et al*. (2011) indicate that 56 500 children were reported victims of violent crime for only the year 2009/10, and many more crimes remain unreported. With regard to child perpetrators, Mokate *et al*. (2011) report that 33 000 children awaited trial during 2008/09.

Reddy *et al*. (2010) report extensively on violence among adolescents. Bullying slightly decreased from 2002 (41%) to 2008 (36.3%). However, the Free State province has a significantly higher prevalence of participants who had been bullied in the previous month (44.4%) compared to the rest of the country (Reddy *et al*., 2010). Of those adolescents who reported carrying a weapon, 8.2% carry guns and 16.4% knifes, with more coloured and white participants carrying weapons than the other race groups (Reddy *et al*., 2010). In an earlier study, Van der Merwe and Dawes (2000) investigated exposure to violence among Grade 7 children in Cape Town. The incidence of direct exposure was the highest for being punched, carrying a gun or knife, being taken away by the police, and being chased by an individual or gang. However, participants report their exposure as occurring mostly outside of the home and school environment (Van der Merwe & Dawes, 2000), indicating the extent to which neighbourhoods are unsafe.

In addition, there is an increase in gang membership among adolescents in South Africa (from 14.3% in 2002 to 19.4% in 2008), with almost a fifth of adolescents considering themselves members of a gang (Reddy *et al*., 2010). As discussed earlier, these gangs are often associated with deviant behaviour, substance abuse and tolerance towards violence and, therefore, pose a threat to neighbourhood and community safety.

It seems as if community violence specifically is a consistent predictor of negative outcomes for South African children (Barbarin, Richter & De Wet, 2001). Childlike innocence and spontaneity is often subdued by pervasive concern for personal safety, and developmental processes are consequently distorted (Barbarin, 2003). Seedat, Van Niekerk, Jewkes, Suffla, and Ratele (2009) report violence-related emotional dysregulation which is hypothesised to hinder the development

of empathy and pro-social behaviour in children. Character formation can be influenced to such an extent that violence is normalised and becomes a feature of personal identity (Barbarin, 2003). Moreover, the effect of vicarious violence is similar to that of direct victimisation, and psychological and academic functioning is affected by vicarious violence in both genders and different socio-economic groups (Barabarin *et al.*, 2001).

According to Barbarin (2003), there is more than enough blame to go around for the persistence of violence in the past 20 years. Seedat *et al*. (2009) are of the opinion that the South African government are not making concerted efforts towards primary prevention of violence. However, government alone will not be able to combat this culture of violence (Barbarin, 2003). Kwast and Laws (2001) report that the support of an adult, for example, can significantly limit the long-term effects of violence for children. Therefore, there are joint initiatives by government and citizens to reinvigorate a sense of community in an effort to reduce crime (Barbarin, 2003). Although these community development programmes might offer some relief, intervention in this regard is far from complete.

3.4.2.3 The political landscape

South Africa's history is characterised by the struggle against oppression, injustice and inequality. The apartheid regime was known for its group-based discrimination and the exclusion of non-white groups from political participation (Currie, 1994). The constitutional negotiations that commenced in the nineties have, therefore, emphasised redressing previous injustices, democracy and nation building (Henrard, 2002). South Africa is a country of diversity, and the rights of cultural, language and religious communities remain important issues (Bentley, 2005).

a) Ethnic identity

Racial membership and culture have been confounded in the South African context and, because of the country's political background, racial membership still defines identity in South Africans (Bentley, 2005). During the apartheid era four so-called ethnic groups were distinguished: black individuals included everyone of African descent, coloured individuals were of mixed-race descent, white persons included all of European descent, and Indian/Asian individuals referred to all the immigrants from India and South-East Asia (Valchev *et al*., 2012). Recently, cultural differences – and not only racial differences – became the focus of research studies, with several studies

confirming a cultural distinction between different groups in South Africa. Black individuals adhere to a collectivistic, Indian and Asian persons to an intermediate, and white individuals to an individualistic culture (Valchev *et al*., 2012).

Individualism refers to the tendency within a culture to focus on the individual, and collectivism to the tendency towards gregariousness and group orientation (Hofstede, 1980). Members of individualistic cultures emphasise the inner, stable and self-determining nature of the self, while members of collectivistic cultures would describe themselves in contextualised ways (Eaton & Louw, 2000). A South African study by Valchev *et al*. (2012) confirmed that the self-concept of white South Africans are more agentic with personal growth being valued, while the self-concept of black South Africans are more communal with social-relational aspects salient in their descriptions.

A study of Steyn, Badenhorst and Kamper (2010) drew attention to the prevailing racial differences pertaining to cultural identity. White Afrikaans-speaking South Africans are in the process of coming to terms with the loss of social, economic and cultural privileges, their majority group status, and job opportunities. The black population, on the other hand, has high expectations of their future in post-apartheid South Africa; they receive more benefits, and experience a sense of connectedness to themselves and the country. Coloured societies still seem to struggle in forming a collective identity and are still a marginalised group in the new political dispensation.

It is not surprising that research findings still point to racial differences in South Africa given the inequalities created during the previous regime and reinforced by the injudicious implementation of current policies (as will be demonstrated in the remainder of the chapter), great racial disparities, deeply rooted differences in the world views of individual/collectivistic cultures, and the difficulty that various groups experience in establishing a collective identity. These differences are highlighted throughout this thesis.

b) Political transformation

The Constitution of the Republic of South Africa, 1996, is seen as one of the most progressive and comprehensive constitutions in the world, especially with regard to addressing human rights (Bentley, 2005). According to Henrard (2002), it is remarkable that a country previously so divided could write a constitution that provides for both individual rights and the rights of minority groups.

Mokate *et al*. (2011) agree that the South African constitution, including the legislation addressing children's needs, is regarded as world class, providing eloquent and explicit guarantees of the rights of children. One of the problems with the ideologies of equality is that South Africa has not yet attained balance in executing these policies, since those groups advantaged by the apartheid era often are alienated now (Henrard, 2002).

In a discussion on post-apartheid South Africa, Gaibie and Davids (2009) refer to three stages in government: the Mandela, the Mbeki and the Zuma eras. The Mandela era emphasised the idea of a rainbow nation, and was a time of reconciliation. According to Henrard (2002), however, racial segregation continues to dominate in the majority of social settings. Racial membership remains a channel for economic inequality, and racial tension manifests especially in the context of limited resources (Bentley, 2005).

With Mbeki's election as president the government focused increasingly on economic policies and service delivery. The implementation of policies, however, remains slow and incomplete (Henrard, 2002). The Mbeki government experienced shortcomings in capacity, and the public expressed their need for improved quality of life with protest marches. A report by Barnard and Lysenko (2010) states that the greatest challenge for the government today remains the improvement of quality of life and that it can be achieved by making better use of the country's resources.

The goals of the present Zuma government are to fight job loss, to encourage early childhood development and to improve the school system. The unfortunate reality is that many South African children's rights are yet to be realised (Mokate *et al*., 2011). The educational system, for example, remains a sensitive topic due to a lack of financial support and limited progress in racial transformation (Henrard, 2002). Deprivation of children's rights is, furthermore, disproportionally concentrated among the poorest populations in South Africa, reflecting that, in the push to achieve the MDGs, the most disadvantaged and vulnerable children are left behind (Aida Girma as quoted in Mokate *et al*., 2011). Especially in poor communities age-inappropriate tasks are assigned to children, whether because of need or cultural practice, and the government struggles to reconcile community practices with the individual rights of children (Bentley, 2005).

Mokate *et al*. (2011) caution that the provision of services to children should never be seen as merely an act of kindness, but rather the delivery of undeniable human rights to children. Peterson *et al*. (2010) suggest that human resource development remain a priority in South Africa in order to secure the skills and capacity to deliver on the promises that macro-level policies hold. Working to realise the rights of children is vital for their development and well-being. One of the policies that directly relate to children's well-being, is that of health and mental health.

3.4.2.4 Health policy in South Africa

Article 24 of the United Nations Convention for the Rights of Children provides for the right of the child to enjoy the highest attainable standard of health (Jamieson, Mahery, & Seyisi-Tom, 2010). The social determinants of health that is important specifically during the adolescent years include policies and environments that support access to education, provide resources for health, and create opportunities to enhance adolescents' autonomy, employment, and human rights (Sawyer *et al*., 2012).

At the moment it seems quite unlikely, though, that any of the MDGs will be met by sub-Saharan Africa by 2015 (Easterly, 2009). Also, in South Africa, the increased efforts to improve the quality of health care services have achieved little with regard to reaching the MDGs. Easterly (2009) wrote a paper criticising the MDGs for turning into performance measures that were unrealistic to Africa in the first place, and which are currently used in global discussions as evidence of Africa's "failure". Even though Easterly (2009) provides a strong and justified case on Africa's behalf, the fact that poverty, disease, illiteracy and inequality are still prevalent in sub-Saharan Africa cannot be denied. Continued efforts are necessary – possibly with the MDGs as tools for advocacy for sustained development – to improve the quality of life of African people.

a) The Child Act of South Africa

The Child Act 38 of 2005 was implemented officially in April 2010 in South Africa (Mahery, Proudlock, & Jamieson, 2010). The main purpose of this Act is to give children the constitutional right to family or alternative care, social services, and protection against abuse and neglect. The Act, furthermore, aims to improve the well-being and development of children, strengthen community organisations caring for children, support children with special needs, and strengthen

families (Govender, 2007). The best interest of the child is prioritised as well as the child's right to participate in any decision made concerning their health. Children are protected by the Act, as professionals and adults in the community are obliged to report physical and sexual abuse, and purposeful neglect (Mahery *et al.*, 2010). The Act also protects children against practices that are detrimental to their well-being such as female circumcision and forced marriage (Mahery *et al.*, 2010).

Age thresholds for reproductive health care were lowered due to the fact that children become sexually active at younger ages (Mahery *et al.*, 2010). From the age of 12 years and onwards children may have unrestricted access to condoms, and other forms of contraception may be made available once they have obtained medical advice in this regard (Mahery *et al.*, 2010). These measures are aimed at enabling access to health care services in situations where children live with adults other than their biological parents (Mahery *et al.*, 2010). The advantage is that the child's health needs can be attended to immediately without parental permission (Jamieson *et al.*, 2010).

However, there are some discrepancies and problems with the practical implementation of these measures. One example is how the Act allows children to make significant decisions regarding their own health and request that these be kept confidential from the age of 12, while psychologists are still required to obtain the parents' permission to proceed with therapy up until the age of 14. Another problem lies in the requirement that professionals assess the child's level of maturity when the Act does not provide any guidelines on how to determine maturity (Jamieson *et al.*, 2010). This may lead to inconsistent treatment by different health care workers.

The Act has the potential to mobilise a variety of child intervention services which can be of value to vulnerable children and families (Lake & Reynolds, 2010), provided that the intent of the Act is realised effectively in practice. With regard to interventions, though, Reddy *et al*. (2010) criticise the attempts made at addressing health-compromising behaviour in South African children for focusing largely on single behaviours as isolated problems. Since problem behaviour tend to cluster together, especially in adolescence, programmes should rather be tailored to reach high-risk groups (Reddy *et al*., 2010). Also, programmes aimed at enhancing life skills in adolescents are criticised for limited success in addressing youth's perceptions of susceptibility to HIV, self-efficacy, and actual behaviour change (Mukoma & Flisher, 2008). Thus, although the Child Act of South

Africa appears to prioritise child well-being, it may still take some time before its good intentions is translated effectively to make a difference in practice.

b) Health care

One of the most evident recent changes in health care is the reorientation of services towards primary health care (Chopra *et al*., 2009). The number and range of health programmes have expanded in primary health care settings, clinics have been built, and the value and type of social grants improved (Chopra *et al*., 2009). Despite these efforts, outcomes remain negative. For instance, the under-five mortality rate – a key social indicator of development – remained unchanged, and maternal mortality has increased with 80% since 1990 (Chopra *et al*., 2009; Mokate *et al*., 2011; Peterson *et al.*, 2010). In South Africa over 270 mothers or children younger than five die every day, mainly due to HIV/Aids and the poor implementation of existing health care packages (Mokate *et al*., 2011).

In South Africa HIV incidence is the highest among adolescents aged 15 to 24 years (Pettifor, Rees, Steffenson, 2004), with a higher incidence for females (15.5%) than for males (4.8%) (Pettifor, Rees, Kleinschmidt, 2005). The HIV prevalence among children from the Free State province is the highest for the country (Mokate *et al*., 2011). The HIV crisis has an impact on the number of children exposed to risk, and triggers the escalation of risk factors for these children (Unicef, 2008). As HIV-related losses are most prevalent in poor households (Amoateng & Richter, 2007), the negative effects of poverty and HIV accumulate for vulnerable children (Richter *et al.*, 2006). Recent developments in government's response to HIV include state provision of treatment for HIV-infected infants, and earlier treatment and care of HIV-positive pregnant women (Mokate *et al*., 2011). Children's access to antiretroviral therapy improved substantially in recent years, and more or less 100 000 children living with HIV are receiving treatment (Mokate *et al*., 2011). Unfortunately, the failure in leadership to address the HIV epidemic (Abdool Karim, Churchyard, Abdool Karim, & Lawn, 2009) has resulted in these efforts being too little too late. One of the consequences is that the tuberculosis epidemic has exacerbated and led to multidrug-resistant tuberculosis and many preventable deaths (Chopra *et al*., 2009).

Another attempt at improving children's health includes sex education programmes. Since 1994 sex education has formed part of a Life Orientation programme that was implemented as an

examinable learning programme in South African schools (Macleod, 2009a). According to Maganani *et al*. (2005), this programme is of some benefit with regard to promoting sexual knowledge and perceived condom self-efficacy. However, these programmes have been implemented unevenly in schools across the country, with adolescents from especially smaller towns reporting that they do not receive any sex education (Macleod & Tracey, 2010). Macleod (2009a) further criticises sex education in schools for neglecting discussions on the positive aspects of sexuality, and ignoring responsibilities in social systems. It has been found, for example, that early reproduction in women living in disadvantaged circumstances offer several benefits such as greater access to familial care-taking networks and a positive life course amid limited work opportunities (Macleod, 2009a).

South Africa's health care system is, therefore, characterised by a paradox with persistently poor health outcomes despite high health expenditure and supportive policies (Chopra *et al*., 2009) – as is demonstrated with the examples discussed above. However, up to 30% of the total public health expenditure is spent on tertiary hospitals based in Johannesburg, Cape Town and Durban, with the vital primary and community care facilities in the rest of the country having to cope with a lack of funding (Chopra *et al*., 2009). Another problem is the reluctance of professional staff to work in rural communities or township areas for reasons of personal safety (Lund, Boyce, Flisher, Kafaar, & Dawes, 2009). The system is further fighting poor administrative management and low morale, resulting in private medicine absorbing disproportionate numbers of skilled nurses and doctors (Chopra *et al*., 2009). The core problem in the health care system seems to be a lack of investment in capacity development and a lack of monitoring the implementation of policies (Chopra *et al*., 2009). Again, the efforts that are being made seem misguided at best, and aggravating the plight of the vulnerable at worst.

These problems are also reflected in mental health services for children and adolescents. It is estimated that 20% of the world's adolescent population have a mental health problem (Anthony, 2011). In addition, a half of lifetime mental disorders have their onset before the age of 14 (Anthony, 2011). Early preventative interventions can, therefore, forestall the progression of mental disorder and limit its severity (Anthony, 2011). Yet, a lack of services provision is evident in the ratio of mental health practitioners to children – the ratio currently ranges from 1 per 5 099 in the best case provinces, to 1 per 103 276 in the Free State province (Lund *et al.*, 2009). According

to Lund *et al*. (2009), the minimum coverage level should be 1 mental health practitioner per 4 544 children.

Anthony (2011) argues for adolescent-friendly health care services in hospitals and clinics as adolescents would more likely seek help if these services were easily accessible and open at convenient times, did not require appointments, offered services for free, and provided necessary referrals. Chopra *et al*. (2009) argue for a multidisciplinary approach in preventing the spread of disease as biomedical efforts will only be effective if issues such as violence, relief of poverty, and solutions to migrant labour and strengthening families are addressed simultaneously.

3.4.2.6 Summary of the exo- and macrosystems

South Africa is a country of diversity – in language, culture, identity and opportunity. The apartheid era has left its mark with regard to great racial disparity but, unfortunately, the current regime – with misguided efforts and poor implementation of policy – is deepening the scars left by apartheid. Most citizens of the country remain vulnerable in the face of pervasive poverty and inequality and limited access to resources.

Systemic interactions are evident in the fact that unemployment, poverty and crime are interrelated. Poverty is, furthermore, associated with a lack of services and access to facilities, poor health outcomes, and poor quality home environments. The attempts from government to increase resources are ineffective due the fact that the implementation of policies is imbalanced, slow and incomplete, resulting in greater inequality and lowered morale. Therefore, even on policy level, research on well-being can make an important contribution to reduce risk and increase resilience in South African adolescents.

3.4.3 Summary of a systemic perspective on the South African context

Examining both the micro- and macrosystems of South African adolescents, one theme seems to be emerging repeatedly: discrepancy. On the one hand, our adolescents live in a country known for embracing human rights and service provision on constitutional level. On the other hand, these potentially empowering policies do not seem to translate on ground level, as many children contend with poverty, crime, and poor-quality educational and health services. Thus, normal

developmental challenges and stressors such as trauma exposure (which will be discussed in the next chapter) have to be negotiated amid multiple risk environments. Although individual differences remain important to psychological study, the demands placed on the South African youth as a group cannot be ignored.

The average South African adolescent – a male for the purposes of this example – lives with a female primary caregiver in a non-traditional family in a poor household. He helps with the household chores and tries to avoid his older brother's gang. He attends an overcrowded school with little resources, a few bullies, and some incompetent teachers. He does not feel safe when walking to school and considers carrying a knife for protection. The average South African adolescent will soon have his first sexual encounter, mainly because his friends are pressuring him to. The sex may not be safe. He has witnessed violence in the neighbourhood, probably in his street, and even in his home. If the average South African adolescent manages to finish matric, chances are slim for further education, while job prospects are very bleak. He wants to talk to someone about these challenges, but no one knows where to find a counsellor.

For this adolescent, factors on family level, in the school and in the greater systemic context combine to determine his current and future adjustment. However, his interaction with his environment is reciprocal, as he also shapes the systems he is part of. One such adolescent grew up to become South Africa's first black president. It is these glimpses of agency, and the many unmentioned initiatives which do support our children, that make the study of resilience in South Africa worthwhile.

3.5 Conclusion

In their extensive study of risk and resilience, Masten and Coatsworth (1998) were reminded that children grow up in multiple contexts and that each context is a potential source of risk or protection. This may still be true for the South African context. Although it may seem as if most of the South African systems are characterised by risk, they are still in a state of transformation. South Africa has seen great political changes over the past two decades, resulting in changes to the constitution, to leadership, to policy, and to various exosystems. If new skills and capacities can be gleaned from this time of change, if we can learn from our mistakes and take hands in building our future, this time of change may yet result in immense resilience in our country.

For adolescents the time of developmental vulnerability and societal shifts may indeed be a period of great difficulty. Yet, at the same time, these changes can provide them with the opportunity to discover their strengths, to build their resources and to embrace their agency. However, their resilience is not their responsibility only. Her Royal Highness Princess Mathilde of Belgium emphasises the importance of taking adolescents and the promotion of their well-being seriously (Anthony, 2011):

> [Adolescence] is a critical time in a person's growth. Let us pay close attention to the particular needs and concerns of adolescents. Let us create opportunities for them to participate in society. Let us allow them freedom and opportunity to mature into healthy adults … every effort must be made to ensure the equal well-being of children worldwide. Their hopes and dreams are still very much alive. It is up to us to enable adolescents to reach their full potential. Let us work together with them to make life a positive adventure (p. 9).

The concepts of "well-being", "risk" and "resilience" will be explored in greater depth in the following chapter.

4. THE PROCESS OF DEVELOPING RESILIENCE IN ADOLESCENTS EXPOSED TO TRAUMA

4.1 Introduction

Risk exposure culminates in many negative outcomes such as mood disturbances, academic underachievement, premature sexuality, substance abuse, and an unstable family life for many South African children (Barbarin, 2003). However, not all children will present with negative outcomes due to increased risk. According to the principle of multifinality, positive outcomes are possible even though risk factors are present in the individual's life. Rutter and Sroufe (2000) confirm that the majority of children at risk will eventually achieve positive developmental outcomes, such as well-being. Studies such as that of Werner and Smith (1992) indicated that up to 70% of children exposed to risk nevertheless develop into competent adults.

This chapter will first provide an overview of the process of resilience. Resilience is understood as a transactional process, as explained by the ecological model of Kumpfer (1999). Two of the domains of influence, namely individual characteristics during the adolescent years and the South African context, have been discussed in chapter 3. In this chapter Kumpfer's model will be further applied to the variables included for the current study. The remaining two domains of influence are considered here: the stressor, trauma exposure; and the outcome, life satisfaction. The transactional point, coping, will also be discussed. Finally, some demographic factors which may act as moderators in the resilience process will be examined.

4.2 The process of developing resilience in adolescence

Resilience is defined in the current study as a capacity which develops through the interaction of various individual and environmental factors, including risk and

protective factors, in the context of adversity. Resilience results in positive adjustment. Also, it is informed and enhanced by the process of normal development.

The study of resilience does not imply that risks be avoided altogether. Because risk and responsibilities are essential to healthy development, overprotective parents deny their children the opportunities to learn important lessons and, consequently, they are not prepared for adult life (Ungar, 2007). While certain problems definitely undermine development, there are challenges that can actually promote development (Masten, 2001). It is, thus, not surprising that positive psychologists emphasise the importance of a life-span perspective of psychological processes. Truly positive psychological adaptation unfolds longitudinally as aptly asserted by Seligman – "call no man happy till he dies" (Seligman & Csikszentmihalyi, 2000, p. 10).

There is still much work to be done to understand the underlying processes that account for successful adaptation in children (Wright & Masten, 2006). For this reason Kumpfer's (1999) proposed model will be applied in the current study to gain understanding of the process of resilience in adolescents exposed to trauma.

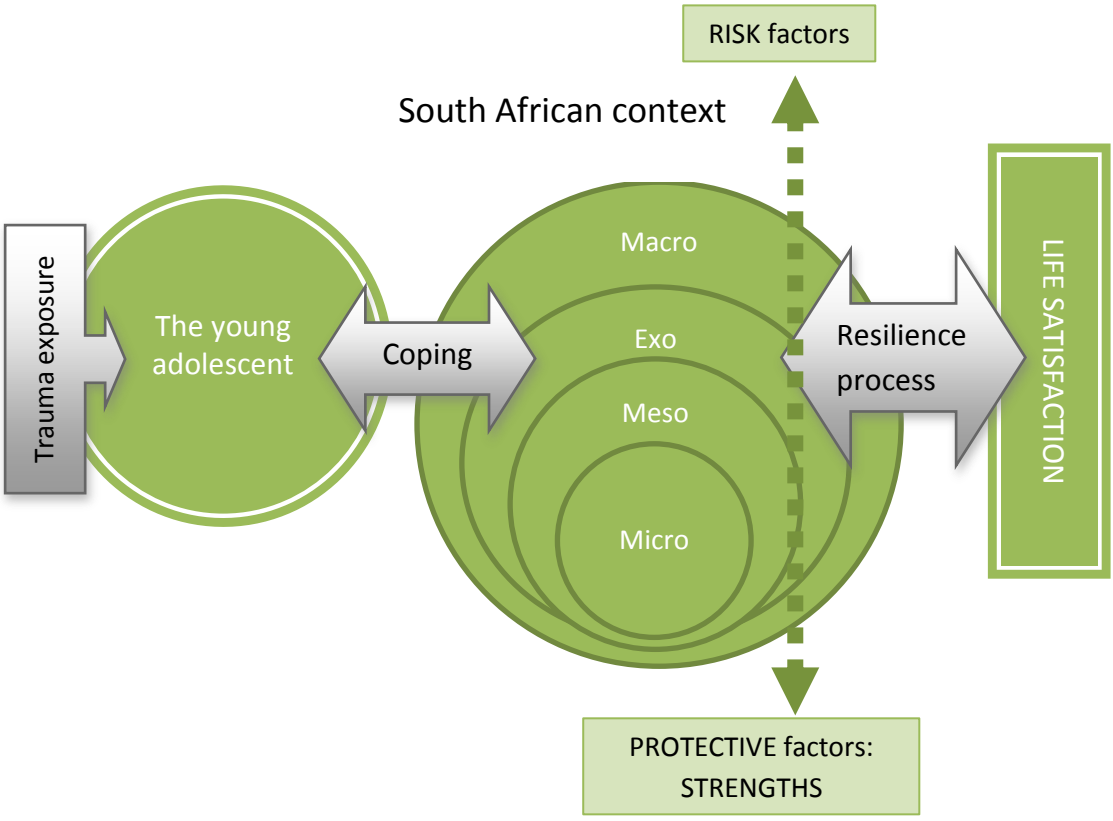

Figure 4.1: Kumpfer's (1999) model applied to the current study

The starting point of the resilience process is when an adolescent is exposed to trauma. This experience will be discussed in this chapter. During the resilience process the adolescent will engage with their external environment through a transactional process, namely coping. Coping will also be investigated in this chapter. The adolescent in interaction with their environment will also possess some strengths; especially strengths important in the context of trauma exposure will be studied here. The interaction of all the above-mentioned factors combine in a process of resilience to ultimately help the adolescent bounce back and achieve a positive outcome, such as life satisfaction. The next section will first focus on the two domains of influence, namely trauma exposure and life satisfaction, before the discussion will turn to transactional processes. Just as adaptation in prior life stages contributes to the mastery of developmental tasks in adolescence, the extent to which these adolescent tasks are negotiated successfully will also predict adaptation throughout adulthood (Donnellan *et al*., 2006). Adolescence is, therefore, considered to be a crucial period for studying the links between individual differences and adaptation (Donnellan *et al*., 2006).

The value of the model for the current study lies especially in the fact that various contributing factors are organised in a coherent holistic conceptualisation. Resilience is, furthermore, conceptualised as both a process and a trait – as explained in chapter 2 – which allows room for the dynamic nature of the resilience process.

4.3 Trauma exposure

Resilience is developed through gradual exposure to challenges (Kumpfer, 1999), with each challenge an opportunity for psychosocial growth, provided that the challenges are not too severe (Baldwin *et al*., 1993). Any threat to development or adjustment can trigger the resilience process. The unanticipated stressor included in the current study is exposure to (a) traumatic event(s).

Various factors determine post-traumatic outcomes, including characteristics of the individual; the severity, type and nature of trauma; the immediate and chronic consequences of trauma exposure; and aspects of the social environment (Kronenberg *et al*., 2010; Qouta, Punamaki, Montgomery, & Sarraj, 2007). Usually a complex interaction of these factors determine the child's adjustment after exposure to a traumatic event (Friedman, Resick, Bryant, & Brewin, 2011). Research findings in this

area are inconsistent, though, and the role of moderating variables and strengths in these trajectories are seldom taken into account (Whitson, Connell, Bernard, & Kaufman, 2010).

4.3.1 Traumatic events

A traumatic event involves actual or threatened death or injury, or a threat to physical integrity that occurred to the individual or someone they are close to (Goodman, Corcoran, Turner, Yuan & Green, 1998). These events are serious and life-threatening. In addition to direct exposure, witnessing such an event, or learning of an event a close relative or friend was exposed to can also be traumatic (Friedman *et al*., 2011). Taylor and Weems (2009) point out that, for youth, events such as neglect or emotional abuse might be traumatising, but that there is a paucity of research on what children and adolescents perceive as being traumatic. It is increasingly recognised that developmental differences exist in the expression of disorders and that developmental considerations should be described more comprehensively in diagnostic criteria (Scheeringa, Zeanah, & Cohen, 2011).

4.3.1.1 Normal and abnormal reactions to traumatic events

When exposed to a traumatic event individuals usually present with several emotional reactions, such as fear, helplessness, horror, anger, guilt, shame, dissociation, and somatic complaints (Briere, Kaltman, & Green, 2008; Grey, Holmes, & Brown, 2001; Hathaway, Boals, & Banks, 2010; Lee, Scragg, & Turner, 2001). Post-traumatic symptoms are common in children and adolescents exposed to trauma and tend to persist longer than for adults (Scheeringa *et al.*, 2011). According to Sadock and Sadock (2003), the majority of children and adolescents may continue to show some symptoms for between one and two years after a traumatic event. These reactions are considered normal, as the stressors that adolescents are exposed to during a traumatic event are usually considered overwhelming enough to affect almost anyone experiencing the event (Sadock & Sadock, 2003).

Aside from these normal reactions to trauma, adolescents might also experience more problematic symptoms, such as re-experiencing the event, avoidance of stimuli associated with the event, numbing of responsiveness or increased arousal (Kerig,

Ludlow, & Wenar, 2012). If significant symptoms affect the adolescents' functioning in important areas of their life, such as peer relationships and school work, a stress disorder could be diagnosed (Sadock & Sadock, 2003). Acute stress disorder is diagnosed if these symptoms appear within the first four weeks after exposure (Sadock & Sadock, 2003). If the symptoms do not remit within four weeks, but persist for longer than that, post-traumatic stress disorder (PTSD) is diagnosed (Kerig *et al.*, 2012). Post-traumatic stress disorder can be chronic if symptoms persist for longer than three months or it can have a delayed onset with symptoms appearing only after more than six months post trauma (Kerig *et al.*, 2012). Symptoms usually fluctuate over time, but are more intense during periods of stress (Sadock & Sadock, 2003).

A review of studies published globally from 2000 to 2011 indicates that PTSD incidence varies from 3% to 57% in adolescents (Nooner, Linares, Batinjane, Kramer, Silva, & Cloitre, 2012). Pine, Costello and Masten (2005) highlighted the influence of the adolescents' pre-event competence on their reaction to trauma, which implies that adolescents with pre-existing mental health problems are at even higher risk for negative outcomes.

4.3.1.2 Single events, multiple events and cumulative effects

As long as twenty years ago it was established that complexity is the norm and not the exception with regard to trauma exposure (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Osofsky (1997) distinguished between two types of trauma: unanticipated single events, and repeated or chronic exposure to multiple traumatising events. A single traumatic event does not necessarily lead to long-term negative consequences for children. Instead, it is persistent challenges and the absence of adult protection that increases vulnerability (Richter, Foster & Sherr, 2006). Greater cumulative exposure to trauma – referring to either multiple traumatic experiences or the severity of the event – correlates with post-traumatic problems (Masten & Osofsky, 2010).

Suliman *et al*. (2009) found that, among South African adolescents exposed to trauma, only 25% were exposed to only one traumatic event. The remaining 75% were exposed twice or more, with 12% exposed to more than six traumatic events (Suliman *et al*., 2009). Adolescents exposed to multiple traumatic events are more likely to experience symptoms of PTSD and depression (Suliman *et al*., 2009). Deters, Novins,

Fickensher, and Beals (2006) further found that signs of avoidance and hyperarousal are more prominent for multiple exposures (six or more) than for single events. It also seems as if the experience of multiple traumas per se plays a role in symptom complexity, and not only the discrete events themselves (Briere *et al.*, 2008; Nooner *et al.*, 2012). This might be ascribed to the fact that earlier events exacerbate the response to more recent events (Suliman *et al*., 2009), resulting in a sensitisation effect. Briere *et al*. (2008) confirmed a relationship between cumulative childhood trauma and symptom complexity.

In a review on mental health outcomes among children exposed to trauma, Pine and Cohen (2002) found that not only frequency of exposure, but also the extent of exposure to traumatic events, consistently predicts risk for later psychiatric symptoms. The persistence of PTSD reactions has also been linked to the degree of severity of the initial trauma (Layne *et al*., 2010). Nonetheless, not all individuals exposed to traumatic events develop symptoms of PTSD (Hoge, Austin, & Pollack, 2007), and many can be seen as resilient. Evidently, some types of trauma can be so disruptive that no child can be resilient before being relocated to a safer environment (Wright & Masten, 2006).

4.3.2 Trauma exposure in South Africa

Rates of trauma exposure among South African youth range from 82% to 100%, with PTSD rates ranging from 6% to 22% (Suliman *et al*., 2009). The reported rates are so high due to the fact that many of these studies investigated both direct and indirect exposure to community violence, with up to all participants indicating indirect exposure. According to Kaminer and Eagle (2010), South Africa's history of political violence, contemporary high rates of violent crime, sexual and domestic violence, as well as road traffic injuries, render the country a natural laboratory for the study of trauma exposure.

Specific types of traumatic events correlate with an increased risk for emotional problems in adolescents (Cuffe *et al*., 1998; Stein *et al*., 2010). Sexual trauma, for example, has a particularly strong correlation with PTSD in adolescents (Nooner *et al.*, 2012), as the stigma surrounding it hampers post-traumatic recovery (Betancourt *et al*., 2010). Sexual trauma also demonstrates that the type of trauma determines the quality of support given to the adolescent: victims are sometimes blamed for having a role in

causing the trauma and, consequently, does not receive adequate support (Nooner *et al.*, 2012). Furthermore, events involving violence towards family members, sensory impressions, one's own physical injury, and threat to life are associated with higher levels of PTSD in children (Quota, Punamaki, Montgomery, & Serraj, 2007).

Four types of traumatic events have been included in the current study as a result of their salience in the adolescent life phase, their prevalence in the South African context or their negative impact on poor communities. These will be discussed next.

4.3.2.1 Illness, injury and accidents

A global study by Patton *et al*. (2009) found the highest mortality rates among young adolescents in Africa (around 22%). The factors contributing to this rate include diseases such as HIV/Aids. In South Africa HIV incidence is the highest among adolescents aged 15 to 24 years (Pettifor, Rees, Steffenson, 2004), with a higher incidence for females (15.5%) than for males (4.8%) (Pettifor, Rees, Kleinscmidt, 2005). Exposure to sexual crimes, being black, living in urban settings, high school drop-out, and having multiple sex partners are all risk factors associated with HIV status (Operario, Pettifor, Cluver, MacPhail, & Reese, 2007). The HIV crisis affects the number of adolescents exposed to risk and triggers the escalation of risk factors for these adolescents (Unicef, 2008). The challenges that children living with HIV are facing were discussed in greater depth in the previous chapter in the context of the South African health system.

Flischer *et al*., (2006) report high rates of adolescent injury-related behaviour in both urban and rural settings in South Africa, with females at higher risk of suicidal behaviour and males at higher risk of other injury-related behaviour. Annual prevalence rates for severe injury in young adolescents specifically were found to be 52% for boys and 33% for girls (Peltzer, 2006). With regard to injury-related risk behaviour, it seems that being bullied is most prevalent for young adolescent boys, and not wearing a seatbelt while sitting in the front seat of a car is most prevalent for young adolescent girls (Flischer *et al*., 2006). In addition, sport-related injuries, deaths from drowning, burns and firearm injuries are also prevalent among South African adolescents (Burrows, Van Niekerk, & Laflamme, 2010; Peltzer, 2008). Another source of injury is road traffic accidents, with a significant number of child and adolescent

pedestrian fatalities in South Africa (Burrows *et al*., 2010; Mabunda, Swart, & Seedat, 2008).

The risk for injury in adolescents increases as the number of risk factors in their lives increases (Peltzer, 2008). This is true especially for high-risk behaviour (such as substance use) which exposes adolescents to greater risk of injury; or poverty which leaves them vulnerable to dangerous environments (Peltzer, 2008). Another cause of injury and trauma in adolescents is domestic violence.

4.3.2.2 Family-related trauma

Social support protects children before and after trauma (Nooner *et al.*, 2012) and, therefore, moderates mental health outcomes for these children (Pine & Cohen, 2002). This would explain why, for children exposed to domestic violence, the disruptions in the parent-child relationship might predict especially high risk for pathology (Pine *et al.*, 2005). Dissel and Ngubeni (2003) states that domestic violence is prevalent in South Africa. Domestic violence includes physical, emotional and sexual violence, neglect, and detrimental traditions such as mutilation of the genitals (Kwast & Laws, 2001). South African data in this regard are scarce (Dissel & Ngubeni, 2003), and statistics on violence against women are conservative and unreliable in general (Unicef, 2000). A recent report of the South African Police Service (SAPS) (2012) indicates a 2.9% decrease in all reported rapes, but a 7.4% increase in all reported sexual assault cases since 2009. Children younger than 18 accounted for 40% of all sexual offense victims in 2012 (SAPS, 2012). The Free State province has a greater proportion of neglected and ill-treated children compared to the national average (Mokate *et al*., 2011), increasing the risk for negative outcomes for these children.

Children exposed to domestic violence experience various psychological problems ranging from insecure attachment in young children to delinquent and suicidal behaviour in adolescents (Kerig *et al.*, 2012). Yates, Dodds, Sroufe and Egeland (2003) found that, even when children were exposed to violence in their preschool years, their risk for maladjustment in adolescence was much higher. These adolescents also engage more in violent dating relationships, replicating the abusive patterns they experienced at home (Kerig, 2010). Also, it is not uncommon for adolescent boys to join their fathers in abusing their mothers as they take on dominating roles in the family (Connolly & Eagle, 2009). Exposure to ongoing trauma causes changes in brain chemistry that result

in a constriction of brain-mediated psychological functions, such as empathy and emotional regulation, and results in impaired relationships and uncontained aggression (Mohr & Fantuzzo, 2000).

Another type of family-related trauma is the loss of a parent. Studies on child trauma pays particular attention to the combined effect of trauma and loss, because children are at risk for losing loved ones through the traumatic events they witness (Pynoos *et al*., 2009). The loss of a parent or sibling is related to increased levels of depression and sexual behaviour, and lower levels of school enrolment and educational achievement among South African adolescents (Bicego, Rutstein, & Johnson, 2003; Suliman *et al*., 2009). More than 25% of the population of 15- to 24-year-old South Africans had experienced parental death (Operario *et al*., 2007). Aside from death, separation also occurs due to divorce (as discussed in the previous chapter) or social institutions' removing children from homes deemed not safe (MacLean, Embry, & Cauce, 1999). The loss of a parent due to abandonment or placement in foster care – although not life-threatening – might be experienced by a child as a threat to their safety and, therefore, traumatic (Scheeringa *et al*., 2011). Although the government has made significant strides in ensuring that children in need of care are appropriately placed in alternative care options (Mokate *et al*., 2011), some children still end up living on the street. The majority of these children are black or coloured males who proceed to make a living from begging and theft (Louw, Richter, Duncan, & Louw, 2007).

Another form of trauma exposure prevalent in the South African context is the high levels of crime and community violence.

4.3.2.3 Exposure to crime and violence

Crime and violence is prevalent in the South African context and has been discussed in the previous chapter as an exosystem with an impact on adolescent development. The high levels of violent crime to which South Africans are exposed increase the probability for children to experience trauma. Aside from experiencing such events directly, children can be traumatised by vicarious exposure. Also, the prevalence of community violence has a negative impact on children's development.

A South African study by Fincham, Altes, Stein and Seedat (2009) emphasised the fact that children perceive community violence to be especially stressful. These researchers

(Fincham *et al*., 2009) found that resilience protected adolescents against the negative consequences of childhood abuse, but not against the effects of exposure to community violence. However, their results could have been influenced by the fact that current exposure to community violence, but past abuse, was examined. Thus, the participants would have had time to process the consequences of childhood trauma, while community violence is a current stressor for them.

South Africa is not regarded as a country at high risk for natural disasters (Disaster Reduction Unit, 2011), but the impact of climate change and flooding on poor communities especially justifies the inclusion of this type of exposure for the current study.

4.3.2.4 The trauma of natural disasters

According to a report by EM-DAT (2011), seven droughts, six earthquakes, two periods of extreme temperature, and 25 floods occurred in South Africa since 1980. With regard to events such as flooding, those in informal settlements are more exposed than those living in formal housing (Joubert, 2011). Thus, the theme evident in the previous chapter is reiterated: the poor are the most vulnerable to the negative influences of these stressors.

The typical disasters experienced by South Africans include the consequences of flooding and temperature changes. Joubert (2011) reports small but significant temperature changes in South Africa, resulting in more warm days, a decline in quality and availability of water, an increased likelihood of fire conditions, and unpredictable weather events. Changing rainfall patterns combined with urbanisation is also causing increased flooding, and the human impact on urban land surfaces and drainage is intensifying (Douglas *et al*., 2008). Large parts of the ground are covered by roofs, roads and drains, which restrict the flow of water and render these types of settlements unable to adjust to changes in frequency of rain in the same way that natural streams do (Douglas *et al*., 2008). Joubert (2011) warns that, when poor communities respond to environmental shocks by migrating, they become dislocated, which further increases their vulnerability.

Unfortunately, for many South African children, the support systems that facilitate recovery have been compromised (Connolly & Eagle, 2009). In fact, Emmet (2003)

asserts that both the inherently traumatic lives that South African children lead and the dissolution of vital family and social structures leave permanent scars on a disproportionately large number of these children. The relative neglect, deprivation and poverty that many South African children experience further exacerbate the long-term negative impact of the trauma (Yule, 2003). Exposure to trauma not only leads to poor mental health, but also affects children's development and future psychological functioning.

4.3.3 Trauma exposure in adolescents

Trauma exposure is a risk factor for various mental conditions in children and adolescents (Steinberg & Avenevoli, 2000). However, there are individual differences in how systems respond to trauma (Pine *et al.*, 2005), as cultural and personal values also contribute to individuals' interpretation of trauma (Goodman *et al.*, 1998). The subjective meaning of the traumatic event for an individual is important, as it might cause reactions which could hamper the individual's adjustment after the event (Sadock & Sadock, 2003). In their study, Taylor and Weems (2009) found that, for adolescents, the perception and interpretation of the traumatic event is a stronger predictor of subsequent emotional difficulty than the type of event. Specifically intense negative emotions experienced at exposure, such as guilt and shame, are associated strongly with symptom severity in adolescents (Deblinger & Runyon, 2005).

4.3.3.1 Normal development and trauma exposure

Aside from subjective experience, the adolescent's experience of trauma is shaped by their developmental stage (Connolly & Eagle, 2009), and development is reciprocally shaped by exposure to trauma. Adolescents may have symptoms of re-experiencing and hyperarousal similar to those of adults after trauma exposure (Connolly & Eagle, 2009). Because the development of independence is paramount during this stage, adolescents might be humiliated by the emotional vulnerability they experience after trauma. This vulnerability leads to an increased sense of attachment to their parents (Maddaleno, Concha-Eastman, & Marques, 2006). However, PTSD also causes a disturbance in the maturation-driven balance between dependence and increasing self-efficacy in the face of danger (Pynoos *et al.*, 2009). Adolescents might, thus, be propelled into greater independence following trauma exposure, and misjudgements about danger can lead to

high-risk behaviour or self-imposed restrictions in pursuing normative developmental opportunities (Pynoos *et al*., 2009).

The neural signature of achieving safety engages the reward centres of the brain associated with substance abuse (Nestler, 2005) and thrill-seeking behaviour (Joseph, Liu, Jiang, Lynam, & Kelly, 2009), which might be a relevant consideration in working with adolescents. Reckless behaviour in adolescents exposed to trauma is often mislabelled as a conduct problem when, in truth, it does not occur due to anger or irritability, but because of the reward of achieving safety afterwards (Pynoos *et al*., 2009). Also, the maturation of the inhibitory startle modulation might be delayed in children and adolescents exposed to trauma, which could mediate future appraisal and response to danger (Pynoos *et al*., 2009).

Furthermore, traumatic events can have a negative effect on identity formation, with foreclosure occurring as a protective measure or, alternatively, the lack of any adaptive identity formation (Maddaleno *et al.*, 2006). Condly (2006) explains that the impact of traumatic events is far greater than the immediate damage – it also compels individuals to re-examine their view of themselves and the world. Because young adolescents might still lack the cognitive skills required to find meaning in difficulty (Condly, 2006), such a reflection could in itself be traumatic.

Another developmental process that might be disturbed by trauma exposure is that of emotional regulation. Adolescents might experience a restricted range of affect, or describe feelings of being different from their peers, and isolate themselves (Pynoos *et al*., 2009). The lack of affect differentiation might restrict their regulation and coping abilities. Socially, they might withdraw or start socialising even more than before (Connolly & Eagle, 2009). Scholastic difficulties could result from concentration and memory problems, skipping classes, and disruptions caused by irritability and aggression (Connolly & Eagle, 2009). Adolescents, furthermore, might have revenge fantasies and become fearful of experiencing another traumatic event (Maddaleno *et al.*, 2006), as they have the mental ability to comprehend the full horror of traumatic events (Pine *et al.*, 2005).

A traumatic event taxes the adolescent's social, emotional and cognitive capacities, and developmental considerations, therefore, determine how well an individual cope with trauma (Nooner *et al.*, 2012). Hence, when compared with adults, adolescents are

at greater risk to develop PTSD (Nooner *et al.*, 2012). Another factor that influences experiences of trauma is gender.

4.3.3.2 Gender differences in experiences of trauma

Several studies confirm gender differences in adolescents' responses to trauma. Adolescent girls have been found to experience more lasting negative views of the world and themselves (Ma *et al*., 2011), which put them at greater risk for developing PTSD (Nooner *et al.*, 2012). Suliman *et al*. (2009) confirm that females present with significantly more PTSD symptoms than males. Internalising responses are usually seen in girls and consist of somatising, sleep disturbances, anxiety, social isolation, and depression (Pepler, Catallo, & Moore, 2000). These responses might negatively affect social and emotional development and self-esteem (Connolly & Eagle, 2009). An externalising response is often seen in boys, which includes impulsivity, aggression towards siblings and peers, rebellious behaviour, substance abuse, delinquency and political activity (Maddaleno *et al.*, 2006). These responses might be detrimental to intellectual and academic development and could also be associated with career failure (Connolly & Eagle, 2009).

Thus, for both genders, trauma exposure might have an impact on later adult functioning (Connolly & Eagle, 2009; Kronenberg *et al*., 2010), as it effects socio-emotional and academic development. Usually the impact of the traumatic event will reduce over time without serious developmental consequences, provided that the child receives sufficient support (Connolly & Eagle, 2009). By adolescence, children are not only able to help themselves in certain difficult situations, but also have more extensive resources outside the family compared to younger children (Pine *et al.*, 2005).

4.3.4 Strengths

Understanding an individual's strengths enhances a holistic conceptualisation of the individual's functioning (Rhee, Furlong, Turner, & Harari, 2001) and can inform the study of trauma exposure and subsequent outcomes. Different strengths might be associated with different risk and outcome combinations (Gutman, Sameroff, & Eccles, 2002); the process of resilience, therefore, is unique for different individuals (Zolkoski & Bullock, 2012). Although the goal of resilience research is not to use isolated strengths

to predict outcomes for a specific child (Hawley & Dehaan, 1996), there has been a growing interest in using strength-based assessment to inform intervention for children exposed to trauma (Epstein, Ryser & Pearson, 2002).

4.3.4.1 Strengths important in the context of trauma exposure

Five specific strengths identified by Epstein *et al*. (2002) have been included in this study for various reasons. First, these strengths were conceptualised by Epstein (1998) to moderate the effect of trauma exposure in children and adolescents specifically. Second, these strengths are deemed relevant to risk and resilience research (Epstein, 1998). Third, strengths on both individual and systemic levels are included, which corresponds with the ecological approach of the current study.

a) Individual level

On individual level intrapersonal strengths are studied with regard to trauma intervention. Intrapersonal strengths include the individual's perception of their abilities, successes and competence (Rhee *et al.*, 2001; Trout, Ryan, La Vigne, & Epstein, 2003). Resilient children believe that their own actions contribute to positive changes in their lives (Werner, 2000). Werner (2007) reports the building of self-esteem and an internal locus of control to be two of the most significant protective factors in adolescence. An internal locus of control allows children to believe that they can control life experiences; consequently, they assume responsibility for dealing with stressors (Van Rensburg & Barnard, 2005). Multiple studies confirm the importance of locus of control for South African adolescents (Theron & Theron, 2010) as they continue to believe that they can determine their ultimate fate regardless of current difficulty (Theron, 2004). According to an overview of literature on resilience by Hoge *et al*. (2007), several studies confirm an association between locus of control and lower levels of PTSD symptoms.

Affective strengths enable children to express feelings to, and accept feelings from others (Rhee *et al.*, 2001). Recent studies indicate that neither positive nor negative emotions in themselves influence resilience, but rather the regulation of whichever emotions the child experiences (Alvord & Grados, 2005). Self-regulation precedes the development of social skills, reciprocity and empathy (Gewirtz & Edleson, 2007). Emotional regulation has been discussed in greater depth in chapters 2 and 3, since

increased regulation should be achieved during normal adolescent development. Individual characteristics such as the expression of feelings and competence evoke certain responses from the environment (Goldstein & Brooks, 2006); these should therefore be considered within a greater systemic framework.

b) Microsystemic level

On microsystemic level interpersonal strengths are enhanced by the child's ability to control emotions and behaviours in social settings (Rhee *et al.*, 2001). Positive interpersonal responses correlate with resilience in stressful conditions (Hoge *et al.*, 2007). Werner (2000) states that resilient youth are socially more mature and perceptive than their peers, and are engaging to other people. According to a review by Theron and Theron (2010), various studies have shown the importance of empathy, self-regulation and socially appropriate behaviour for resilience in South African adolescents. Theron (2004) also found that resilient youth are socially oriented during hardship and are, therefore, able to ask for help or support.

Family involvement – the degree of participation and relationship with one's family (Rhee *et al.*, 2001) – predicts resilience and can be enhanced by family practices (Sheridan *et al*., 2006). This concept has been discussed in greater depth in the previous chapter in the context of the family system. Kronenberg *et al*. (2010) found limited family connectedness to relate to continued negative responses to a traumatic event in young adolescents.

Finally, school functioning is considered a strength to be targeted during trauma intervention. The school system is an important environment for minimising risk factors and promoting protective factors. It provides security and refuge for children living in problematic home environments (Van Rensburg & Barnard, 2005). Success in the school environment is further vital for future competence (Brooks, 2006). Thus, school functioning, which includes educational abilities, competence in school tasks, and class room behaviour, is a strength that can protect children exposed to risk and enable them to overcome adversity (Rhee *et al.*, 2001; Trout *et al.*, 2003; Werner, 2000). Bushway, Krohn, Lizotte, Phillips, and Schmidt (2011) found academic achievement to be a protective factor in adolescents at risk for violence and delinquency. Werner (2000) remarks that children do not have to be unusually gifted to tap into this protective factor – they simply need to put whatever abilities they have to good use. A

review by Theron and Theron (2010) indicate supportive teachers, well-resourced schools, academic excellence, and life-skills curricula to be additional factors enhancing resilience in South African youth.

According to Coleman and Hagell (2007b), most adolescents recover from short-term adversity if protective factors are present, indicating that most adolescents have the capacity to be resilient. However, the more serious and enduring the adversity, the stronger the protective factors need to be to counteract the impact of trauma (Coleman & Hagell, 2007b). The risk for pathology remains high if risk factors outweigh protective factors (Kumpfer & Summerhays, 2006). This may be relevant especially for South African children as most of them are not only exposed to more than one traumatic event, but also experience multiple risk contexts.

4.3.4.2 The role of strengths in post-traumatic outcomes

Up to now little research has been conducted to identify moderating or protective factors with regard to trauma exposure for South African adolescents (Fincham *et al*., 2009). Even though it seems that good resources are less common in children exposed to risk contexts (Masten *et al*., 1999), Benard (2007) reports that protective factors predict positive outcomes for between 50% and 80% of children belonging to high-risk populations. In their study on risk and protective factors in America and China, Jessor, Turbin and Costa (2010, p. 721) conclude that "protection matters more than risk", confirming the promotive property of protective factors. Also, Rosenthal, Wilson, and Futch (2009) found that, when compared to exposure to trauma, protective factors explain more than twice the amount of variance in distress in a sample of older adolescents. Boyd and Eckert (2002) are of the opinion that, even in high-risk contexts, resilience can still be promoted by external intervention.

Govindji and Linley (2007) report that those individuals who use their strengths more often experience greater subjective and psychological well-being. These individuals also experience less stress (Wood, Linley, Maltby, Kashdan, & Hurling, 2011) and are more likely to achieve their goals (Linley, Nielsen, Wood, Gillett, & Biswas-Diener, 2010). However, the timing of an event, the child's temperament, the environmental context and previous coping behaviour together determine the role a protective factor will play in the child's life (Hawley & Dehaan, 1996).

4.3.5 Trauma exposure and life satisfaction

Although most studies on trauma exposure measures health outcomes determined by objective indicators (Anke & Fugl-Meyer, 2003), life satisfaction has been shown to be one of the subjective outcomes influenced by both trauma exposure and stressful events (Lent, 2004). Trauma-exposed individuals have been found to report lower levels of life satisfaction (Rapaport, Clary, Fayyat, & Endicott, 2005), and a negative association has been established between PTSD symptoms resulting from trauma exposure and life satisfaction (Besser & Neria, 2009; Miller, 2011). Besser and Neria (2009) verified that continuous exposure intensifies the negative relationship between trauma and life satisfaction.

According to Gilman and Huebner (2003), both acute and daily events have been found to influence life satisfaction in adolescence, with recent events usually having a greater impact than past events (Diener, Suh, Lucas, & Smith, 1999). However, the cumulative effects of daily experiences, such as fights with friends, were found in some studies to be more important for satisfaction than major life events (Ash & Huebner, 2001; Gilman & Huebner, 2003) and in others to be at least as important as major events (McCullough, Huebner, & Laughlin, 2000). Some studies indicate that positive and negative events equally influence life satisfaction (Gilman & Huebner, 2003), while others report a greater effect for negative events (Ho, Chueng, & Chueng, 2008).

Yet, there are studies that challenge the notion that trauma exposure decreases life satisfaction. In fact, it seems that some lifetime adversity predicted higher life satisfaction than both no adversity and high adversity for an adult population (Seery *et al*., 2010). Luhmann and Eid (2009) confirm an adaptation effect following a specific traumatic event where the impact of later events is weaker than for the first event. In such a case, exposure facilitates the development of coping strategies and resilience. The adaptation effect corresponds to theories of stress inoculation (Rutter, 2006) which posits that mild early life stress induces the development of resilience (Katz *et al*., 2009). Also, for children, stressful experiences that are challenging, but not overwhelming, can promote subsequent coping and resilience (Katz *et al*., 2009).

Since, in some instances, even higher ratings of life satisfaction has been found in trauma-exposed individuals, attempts have been made to identify moderating factors in

this relationship (Rapaport, Clary, Fayyat, & Endicott, 2005). Mostly though, the trajectories of functional outcomes in children exposed to trauma can be quite intricate (Kronenberg *et al*., 2010). The current study also aims to identify some of the variables that might play a role in the relationship between trauma exposure and life satisfaction, and specifically so for resilient individuals.

4.3.6 Summary of trauma exposure

Trauma exposure is a stressful event which might trigger the resilience process in adolescents. The principle of multifinality prevails, as the interaction of multiple factors determine post-traumatic outcomes. In adolescence normal developmental changes might increase adolescents' vulnerability to the negative impact of trauma exposure. Adolescents exposed to trauma seem to function in terms of certain polarities: they can show age-inappropriate attachment to parents, or independence; engage in thrill-seeking behaviour or overly restrict their activities; and prematurely choose an identity, or remain confused about who they are. Also, emotional regulation is influenced by trauma exposure. Especially the internalising responses of girls might predispose them to emotional and social difficulties.

The prevalence of trauma exposure is much higher in South Africa than in many other countries. Young adolescents are frequently exposed to injury, such as bullying and traffic accidents. Domestic violence is prevalent as well and children account for 40% of all sexual assault victims. Up to a quarter of South African children have lost their parents and many live in alternative care settings. Violent crime and community violence is experienced as very stressful, while natural events such as flooding leave poor communities even more vulnerable.

Since the majority of South African adolescents have experienced a traumatic event, with multiple events and PTSD prevalent in this population, it is important to understand the impact of traumatic events on South African youth. Exposure to trauma is a risk factor for decreased life satisfaction, but the relationship between these two variables can be complex. There still is little South African research on positive outcomes such as life satisfaction, and positive moderators such as strengths, in adolescents exposed to trauma. Strengths might moderate the impact of these traumatic events and, therefore, provide a more holistic conceptualisation of trauma exposure in

adolescents. The current study will, therefore, aim to address this gap in the existing literature by examining both life satisfaction and strengths in the context of trauma exposure.

4.4 Life satisfaction

Positive conceptions of health and adjustment have long existed, but the medical model has disproportionally influenced views on well-being for a long time (Lent, 2004). Fortunately, in recent years, Masten (2006) highlighted the incorporation of a positive approach in DP to study the full spectrum of behavioural health. The positive approach studies processes and traits that enhance optimal functioning in individuals, groups and institutions (Gable & Haidt, 2005; McNulty & Fincham, 2011). It was also Wright and Masten (2006) who proposed that subjective well-being might be one of the indicators determining whether an individual is resilient in the face of adversity.

Luthar, Sawyer and Brown (2006) are of the opinion that subjective indicators of well-being, such as life satisfaction, can contribute to a more in-depth exploration of resilience in childhood and adolescence as the majority of studies tend to examine objective indicators. Fergus and Zimmerman (2005) agree that adolescents' subjective experiences – also of objective indicators, such as milestones – are vital components of their well-being. In fact, subjective well-being has increasingly become an area of interest in research on positive outcomes in adolescence (Saha, Huebner, Suldo, & Valois, 2010). Life satisfaction is a component of well-being (as will be explained in this chapter), but it is often studied as an important outcome in and of itself (Gilman & Huebner, 2000).

4.4.1 Two perspectives on well-being

The concept of well-being is complex, but it concerns primarily optimal functioning and experience (Ryan & Deci, 2001). Studies on well-being attempt to contribute to an understanding of the complete human condition, including both human strengths and frailties, and the relationships between these (Gable & Haidt, 2005). Psychological perspectives on well-being have emerged from two differing philosophical approaches (Keyes, Shmotkin, & Ryff, 2002; Ryan & Deci, 2001), resulting in two different conceptualisations of the construct. The following figure provides a graphic

representation of the construct "well-being", and each component will be discussed in the section that follows.

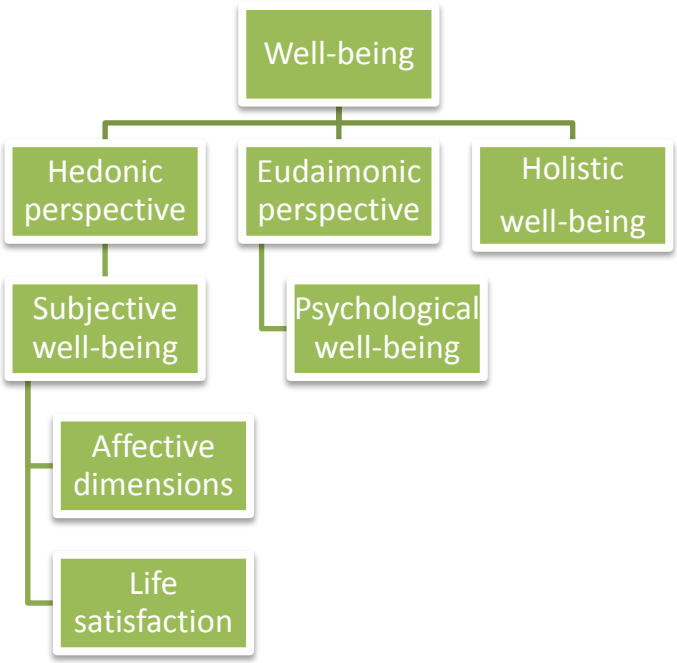

Figure 4.2: A hierarchical representation of the construct "well-being" (compiled by the author)

The first approach to well-being stems from the principle of hedonism. This approach, with its aim to maximise pleasure and minimise pain, was articulated by Aristuppus (435 to 366 BC) and is still endorsed today in hedonic psychology (Kahneman, Diener, & Schwarz, 1999; Peterson, Park, & Seligman, 2005). According to the hedonic view, well-being is pleasure or happiness. Studies on well-being, therefore, focus on the experience of pleasant feelings and satisfaction (Lent, 2004). The second approach, the eudaimonic view, is inspired by Aristotle, who sought to be true to the inner self (Peterson *et al*., 2005). This view defines well-being as the actualisation of human potential with a focus on thought and behaviour, and not emotions (Lent, 2004). These two approaches led respectively to different operational definitions of well-being, namely subjective well-being and psychological well-being (Lent, 2004).

Subjective well-being is referred to in colloquial terms as happiness (Diener, 2000) and includes both the cognitive and affective conclusions that individuals reach when they evaluate their existence (Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002). Diener *et al*. (1999) found that the majority of people report that their subjective

well-being varies from slightly to very satisfied. Subjective well-being seems to be a popular approach with researchers, as both affect and satisfaction can be measured (Lent, 2004).

Ryff (1995) is the key proponent of psychological well-being which she sees as realising one's true potential. Ryff and Keyes (1995) formulated a multifaceted model of well-being with six distinct components that indicate positive functioning, namely self-acceptance; mastery of the environment; quality of interpersonal relationships; continued personal growth; purposeful living; and the capacity for self-determination. There are also alternative operational definitions of eudaimonic well-being and, consequently, disagreement among researchers on how it should be assessed (Lent, 2004).

The importance of the two approaches to well-being have been debated in the literature. Some researchers propose psychological well-being to be an antecedent of life satisfaction rather than an indicator of positive adaptation in itself (Lent, 2004). Others argue that subjective well-being should be a by-product of the pursuit of purpose and growth (Ryff & Keyes, 1995). Ryan and Deci (2001) concluded that well-being is a multidimensional concept, and Lent (2004) stated that happiness and meaning should be seen as necessary, but not sufficient markers of psychological adaptation.

Thus, there have been attempts to unify the two approaches to well-being. Lent (2004) suggests that subjective and psychological well-being reflect two necessary rhythms of human experience: growth and effort should alternate with relaxation and enjoyment. Keyes *et al.* (2002) proposed that subjective and psychological well-being might either complement each other to amplify the experience of well-being or compensate for each other. Wissing and Van Eeden (2002) assert that a holistic perspective on well-being might help researchers discover differing patterns of well-being in different populations. Wissing and Van Eeden (2002) specifically developed the General Psychological Well-being model to assess well-being holistically. This model measures a sense of coherence, satisfaction with life and affect balance to provide an integrated view of well-being (Wissing & Van Eeden, 2002).

It is probably due to these differing perspectives on well-being that it became a well-defined topic in the field of positive psychology (Lent, 2004) resulting in a better

understanding of both the hedonic and eudaimonic contributors to successful adjustment.

4.4.2 Subjective well-being

Diener (2000) states unequivocally that high levels of subjective well-being are beneficial for society. Happy people are more engaged in community organisations, tend to live longer, perform better at work, are less likely to get divorced, and earn higher incomes (Diener, 2000). The results of an international study on well-being indicate that happiness is increasingly necessary (though not sufficient) for a good life, with 69% of respondents rating it as most important and only 1% indicating that they never think of it (Diener, 2000). However, there still is a lack of evidence for causal hypotheses in this field (Diener *et al*., 1999).

Individuals experience subjective well-being when they experience many pleasant and few unpleasant emotions, when they are engaged in interesting activities, and when they are satisfied with their lives (Diener, 2000). It, therefore, reflects both the cognitive and affective aspects of positive adaptation (Lent, 2004). Because it is subjective, it should be distinguished from objective indicators of well-being such as wealth and risk behaviour levels (Saha *et al*., 2010).

4.4.2.1 The affective dimension of subjective well-being

Individuals not only avoid gloom, but also approach positive incentives; thus, researchers in this field study the entire range of emotional experiences from misery to elation (Diener *et al*., 1999). Positive affect is the extent to which an individual expresses emotions such as pleasure and enthusiasm, as well as positive emotional states, such as joy and confidence (Basson, 2008). Yet, happy individuals are not necessarily intensely positive, but report mild to moderate pleasant emotions for most of the time (Diener, 2000). Negative affect refers to subjective distress and dissatisfaction (Basson, 2008). A study of subjective well-being among young adolescents by Morgan *et al*. (2009), for instance, indicated that family variables predict negative affect, while school and friend variables predict positive affect for this age group.

Although momentary pleasant and unpleasant affect may be related, long-term pleasant and unpleasant affective dimensions were found to be independent (Diener *et al*., 1999). Morgan *et al*. (2009) confirmed positive and negative affect to be independent for a sample of young adolescents, indicating that infrequent negative affect does not automatically imply frequent positive affect.

Life satisfaction is preferred by many researchers as the key indicator of well-being as it both includes and transcends mood states and influences behaviour (Gilman & Huebner, 2003). Also, in adolescence, life satisfaction might be a more reliable indicator of well-being. Adolescence is a period characterised by a fluctuation in mood states due to the influence of daily events and the dynamic changes that accompany this life stage (Morgan *et al*., 2009). This fluctuation may render affective indicators of well-being less reliable than cognitive judgements such as satisfaction.

4.4.2.2 Life satisfaction

Life satisfaction is conceptualised as the cognitive judgmental component of subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985). In Kristjansson's (2010) opinion, life satisfaction is superior to affective indicators of happiness as its cognitive orientation supersedes the hedonistic nature of an affective approach.

Shin and Johnson (1978) define life satisfaction as the person's subjective global assessment of quality of life. The assessment of life satisfaction is first based on a long-term view of one's life as opposed to the immediate experiences of pleasant or unpleasant affect (Keyes *et al.*, 2002). Second, this judgement is subjective because the person rates their life according to self-imposed standards or personal criteria. The researcher or practitioner should not externally impose standards of life satisfaction (Diener *et al*., 1985). And third, it is a conscious, cognitive process as it involves a comparison of perceived life circumstances with the chosen standards (Pavot & Diener, 1993).

These standards are determined differently by different individuals. One can match oneself against others or against one's own past life, or assess the ratio between fulfilled desires and total desires (Meadow, Mentzer, Rahtz, & Sirgy, 1992). The degree to which individuals' circumstances match their criteria determines their level of life satisfaction (Pavot & Diener, 1993). Meadow *et al.* (1992) suggest that those individuals with

positive incongruity – i.e. whose experiences exceed their expectations – will report the highest levels of satisfaction, followed by positive congruity, negative congruity and negative incongruity. However, it can also be that individuals who decisively report satisfaction with their lives might lack perspective and ambition (Nussbaum, 2008). One of the criticisms against this approach, therefore, is that life satisfaction could just as well be enhanced by lowering one's expectations (Nussbaum, 2008).

Cummins (1998) analysed the data available on the life satisfaction of various countries and proposed the average level of life satisfaction scores to be 70%. Cummins (1998) further hypothesises that a homeostatic mechanism might operate to control the human sense of satisfaction to remain generally positive. Because many conditions in a person's life might remain stable over time, life satisfaction judgments have some level of consistency (Gilman & Huebner, 2000).

Gilman and Huebner (2000) explain three approaches to conceptualising life satisfaction. The global model assumes that life satisfaction is best determined by indicators that are context free so that the individual can use their own criteria for making a judgment. This model provides one total score as a numeric indicator of life satisfaction. The general model prefers the summation of responses across various life domains, such as satisfaction with school or family. Aside from a total score, this model provides scores for different life domains. The multidimensional model is interested in individual profile scores across life domains, as it yields more differentiated information.

The global approach has been chosen for the current study for several reasons. Firstly, although there might be some agreement on the components important for life satisfaction, such as meaningful relationships, individuals assign different weights to these components (Diener *et al*., 1985). Secondly there might be unique components of satisfaction for certain individuals that outweigh the common benchmarks (Pavot & Diener, 1993). Thirdly, standards for success in important areas may differ from individual to individual (Pavot & Diener, 1993). The global approach has been criticised by Nussbaum (2008), though, for bullying people to aggregate complex experiences into a single whole. Gilman and Huebner (2000) found all three approaches to be appropriate for research purposes with adolescents.

4.4.3 Life satisfaction in adolescence

Initially, life satisfaction has been researched primarily in adult populations and the studies on adolescents are comparatively limited (Oberle, Schonert-Reichl & Zumbo, 2011). However, research on adolescent life satisfaction has flourished over the past decade and yielded many significant findings (Gilman *et al.*, 2008).

4.4.3.1 The prevalence of life satisfaction in adolescents

According to a review by Gilman and Huebner (2003), most adolescents view their overall lives positively, and this finding holds true across various cultures. Also in South African studies the majority of adolescent respondents reported high levels of life satisfaction (Basson, 2008; Visser & Routledge, 2007). Only Koen (2008) found moderate (as opposed to high) levels of life satisfaction in a population of South African adolescents, which she explains by the fact that her particular sample also experienced little coherence in their lives. Although life satisfaction has been shown to be relatively stable (Gilman *et al.*, 2008), research findings indicate that life satisfaction tends to decrease with the onset and progression of adolescence, which again has been found true for various nations (Goldbeck, Schmitz, Besier, Herschbach, & Heinrich, 2007; Proctor, Linley, & Maltby, 2009). Moreover, Leung, McBride-Chang and Lai (2004) found that satisfaction with family, school and self decreases with age, while satisfaction with friends does not change significantly with time.

Diener *et al*. (1999) postulate that life satisfaction probably not only results from the interaction between personal and environmental factors, but also influences subsequent internal and environmental experiences. On a cognitive level, life satisfaction in adolescence might result in advanced cognitive functioning and academic efficacy (Proctor *et al*., 2009). On a psychological level, it is associated with high self-esteem and self-mastery (Gilman, 2001) and less behavioural problems (Proctor *et al*., 2009). On a social level, life satisfaction positively influence satisfaction with school experiences, friends and family life, levels of social support, social self-efficacy and interpersonal functioning (Gilman, 2001; Proctor *et al*., 2009). Life satisfaction not only precedes positive outcomes, but the absence of life satisfaction also predicts the onset of depression or psychological disorder up to two years prior to diagnosis (Proctor *et al*., 2009). Gilman and Huebner (2006) found no psychological symptoms indicative of

clinical disorder in a group of adolescents with high life satisfaction, compared to the 7% of adolescents with average life satisfaction who presented with significant symptoms, and the 42% of adolescents with low life satisfaction who presented with symptoms.

Given the positive impact of life satisfaction on adolescents' lives, it would be important to understand which factors contribute to satisfaction in this population group.

4.4.3.2 Predictors of life satisfaction in adolescents

Even though satisfaction is determined individually, it is embedded in the systems the individual is part of. Therefore, models of well-being need to incorporate both intrapersonal variables and environmental events to account for individual differences (McCullough *et al*., 2000). In this regard, Diener *et al*. (1999) argue that it is somewhat pointless to search for a single cause of happiness, as the complex interplay of culture, personality, cognitions, goals, and resources causes different variables to enhance subjective well-being in different people. Specifically for adolescents, positive social interactions in all developmental contexts play a key role in their satisfaction with life (Oberle *et al*., 2011). Nonetheless, various possible predictors of life satisfaction in adolescents have been identified in the research.

a) Predictors on individual level

The personal characteristics that relate to adolescent life satisfaction are: internal locus of control, extraversion, neuroticism, social interest, social self-efficacy, and optimism (Fogle, Huebner, & Laughlin, 2002; Gilman, 2001; Gilman & Huebner, 2003; Oberle *et al*., 2011). Neuroticism is a stronger predictor of satisfaction than extraversion, and girls report higher levels of neuroticism than boys (Fogle *et al*., 2002). According to Proctor *et al*. (2009), social competence mediates the relationship between temperament variables and happiness. In adolescents, social competence might lead to increased sociability which, in turn, increases life satisfaction (Proctor *et al*., 2009).

Gillham *et al*. (2011) found that character strengths also predict well-being in adolescence. These authors specifically studied young adolescents and reported that life satisfaction is predicted by various intra- and interpersonal strengths, including hope,

meaning, self-regulation, goal-directedness, forgiveness, and kindness (Gillham *et al*., 2011). Hope has been studied in the South African context as well, for instance by Basson (2008), who recognised a significant relationship between life satisfaction and hope in late adolescence.

In addition to personality traits and character strengths, researchers found that self-esteem has an impact on life satisfaction (Gilman & Huebner, 2003). In a study on Turkish adolescents Civitci and Civitci (2009) indicated that self-esteem is a significant predictor of life satisfaction even when the relationship was controlled for gender, age and loneliness. McCullough *et al.* (2000) ascertained that self-concept related significantly to positive affect and life satisfaction, but not to negative affect, which demonstrates its role in predicting positive dimensions of adolescent well-being. However, cultural influences have been found to moderate the relationship between self-concept and life satisfaction, with self-concept more important for satisfaction in individualistic cultures than in collectivistic ones (Gilman & Huebner, 2003).

Lent (2004) argues against overemphasising stable biologically based predictors of well-being, as there are also predictors of well-being over which people can exercise some control. One factor that might increase life satisfaction, regardless of personality traits, is coping. Coping strategies are consistently related to levels of subjective well-being (Diener *et al*., 1999). In fact, self-efficacy beliefs, specifically, are some of the most consistent predictors of life satisfaction in adolescents from different culture groups (Proctor *et al*., 2009). Because coping strategies are considered in the current study as a trajectory from risk to well-being, they will be discussed in more depth in the following section.

b) Predictors on microsystemic level

External social resources such as social support have been found to play an important role in adolescent well-being (Edwards & Lopez, 2006; Ryan & Deci, 2001). The nature and quality of interpersonal relationships are significant predictors of life satisfaction (Ma & Huebner, 2008). Even in adolescence positive family experiences were found to correlate stronger with life satisfaction than peer experiences, especially so for young adolescents (Gilman & Huebner, 2003; Ma & Huebner, 2008; Morgan *et al*., 2009). Saha *et al*. (2010) conclude that the parent–child relationship is the strongest interpersonal relationship predictor of life satisfaction for younger and older

adolescents. In light of the above, it is concerning that many South African children do not live with their parents.

Family structure and parental support are areas that have been studied specifically in relation to satisfaction (Gilman & Huebner, 2003; Oberle *et al*., 2011). Zullig, Valois, Huebner and Drane (2005), for example, assert that various aspects of family structure decrease life satisfaction, including living with guardians (whether they are relatives or not), living with fathers only, and living with the mother with another adult. However, research findings on parental marital status have been mixed (Proctor *et al*., 2009).

More complex familial variables might better predict adolescent life satisfaction. Flouri and Buchanan (2002), for instance, found that the extent of parental involvement correlates with adolescent well-being. According to Proctor *et al*. (2009), various studies show that closeness to and nurturance from the father links with a variety of positive outcomes. It has been mentioned in chapter 3 that, in South Africa, one fifth of black fathers do not live with their families, which might hold negative consequences for their children's well-being. However, there are studies that demonstrate both maternal and paternal support to be equally important for life satisfaction in adolescents (Proctor *et al*., 2009), while Ma and Huebner (2008) found the mother to be the strongest attachment figure for young adolescents. In a longitudinal study, Saha *et al*. (2010) ascertained that parental support did not predict life satisfaction one year later, but that lower levels of life satisfaction predicted lower levels of parental support.

Piko and Hamvai (2010) found gender differences with regard to parental variables, with boys benefiting more from parental support and joint activities, while parental values and paternal education increased satisfaction for girls. Ma and Huebner (2008) confirmed gender differences for early adolescence, with girls reporting that peer attachment mediated the relationship between parental attachment and life satisfaction, indicating quality of attachment generalises from parents to peers for girls. However, attachment to their parents related directly to life satisfaction for boys (Ma & Huebner, 2008). In general, though, positive peer relationships also tend to predict life satisfaction in adolescence (Oberle *et al*., 2011).

Aside from the family, both the school and neighbourhood are positive contexts of support. Oberle *et al*. (2011) studied young Canadian adolescents and found that life satisfaction varies between schools, which suggest a link between the school context

and positive development. School satisfaction is furthermore enhanced by participation in structured extracurricular activities (Gilman, 2001). Another scholastic factor that plays a role in life satisfaction, is engagement. Lewis, Huebner, Malone and Valois (2011) found that cognitive scholastic engagement predicted life satisfaction in a sample of adolescents. Thus, adolescents who are hopeful about the future and believed in the value of education for their future, were more satisfied. Considering the scholastic contributors to life satisfaction, many South African adolescents are likely to be disadvantaged.

Neighbourhood variables such as the availability of parks and libraries and the presence of role models have been correlated with well-being in adolescents (Meyers & Miller, 2004; Morgan *et al*., 2009). Even so, the results of a study done by Morgan *et al*. (2009) indicate that aspects of the more immediate environment, such as family factors, are still more important for adolescent well-being than neighbourhood factors.

4.4.4 Summary of life satisfaction

Life satisfaction is included as the outcome variable for the current study. Two of the leading authors on resilience, Wright and Masten (2006), consider it to be an appropriate indicator of resilience in children exposed to trauma. A subjective indicator of well-being has been chosen, as the majority of adolescents studies focus on objective indicators of health and well-being. Subjective indicators take adolescents' own experiences into account and provide a holistic understanding of adolescent functioning. Besides, life satisfaction seems to decrease in the adolescent years, indicating the relative importance of studying well-being at this life stage.

The global model allows for the capturing of individual differences and experiences of well-being as adolescents can determine the standards for well-being themselves. Also, by using the global model, the assessment of life satisfaction can be relatively free of contextual bias. Finally, the fact that determining life satisfaction is a cognitive – and not emotional – function, renders it a relatively reliable indicator of adolescent well-being. Life satisfaction seems to be important to future adjustment during the adolescent years due to its influence on aspects such as academic performance and self-efficacy.

Multiple variables influence life satisfaction, but the variables important to the current study are strengths and coping. Both have been shown to positively correlate with life satisfaction. Coping will be discussed next as a process that influences both resilience and well-being in adolescents exposed to trauma.

4.5 Coping

Exposure to a traumatic event causes emotional distress to the individual, and coping strategies emerge in an attempt to alleviate this distress (Schexnaildre, 2007). The transactional process of coping is important to resilience and is aimed at interpreting and overcoming stressors and establishing protective environments (Kumpfer, 1999). Rutter (2007) confirms that the mediating effects of personal agency and coping are critical aspects in resilience research. For many children, it is not possible to leave a negative environment, but their coping skills enable them to minimise stress, maintain their self-esteem, and gain access to opportunities (Kumpfer, 1999).

Initially, coping was considered a trait as ego psychoanalytic studies adopted a dispositional approach to conceptualising coping. This approach assumed that relatively stable, personality-based factors determine habitual coping efforts (Moos & Holahan, 2003). It was Lazarus and Folkman's (1984) seminal publication on stress and coping that introduced a new course in coping research with an emphasis on contextual – and not unconscious – factors in the coping process (Folkman & Moskowitz, 2004; Wong, Reker, & Peacock, 2006). Contextual approaches focus on the transitory, situation-based factors that shape individuals' cognitive appraisals and their choice of coping responses (Moos & Holahan, 2003).

4.5.1 A contextual, cognitive perspective on coping

According to Lazarus and Folkman's contextual approach, coping refers to the constantly changing cognitive and behavioural efforts aimed at dealing with situational demands (Folkman, 1984). Coping is, thus, seen as a response to a specific situation deemed significant and stressful by the individual (Folkman & Moskowitz, 2004; Moos & Holahan, 2003) in which the situational demands exceed available resources (Smedema, Catalano, & Ebener, 2010). Coping also fluctuates over time in response to changing

demands and appraisals of the situation (Moos & Holahan, 2003). Livneh and Martz (2007) succinctly explain: "The very essence of coping is an intricate, dynamic and process-like nature." Moos and Schaefer (1984) emphasised that the individual's coping efforts are aimed not only at eliminating stressful situations, but also the associated emotional distress.

The following figure depicts the coping process as seen from a cognitive, contextual perspective. Three aspects of this process will be expanded on in the subsequent discussion: the cognitive appraisals of threats, including the emotions accompanying appraisals; coping efforts, including the modes of coping and the importance of the context in which coping efforts take place; and the coping outcome.

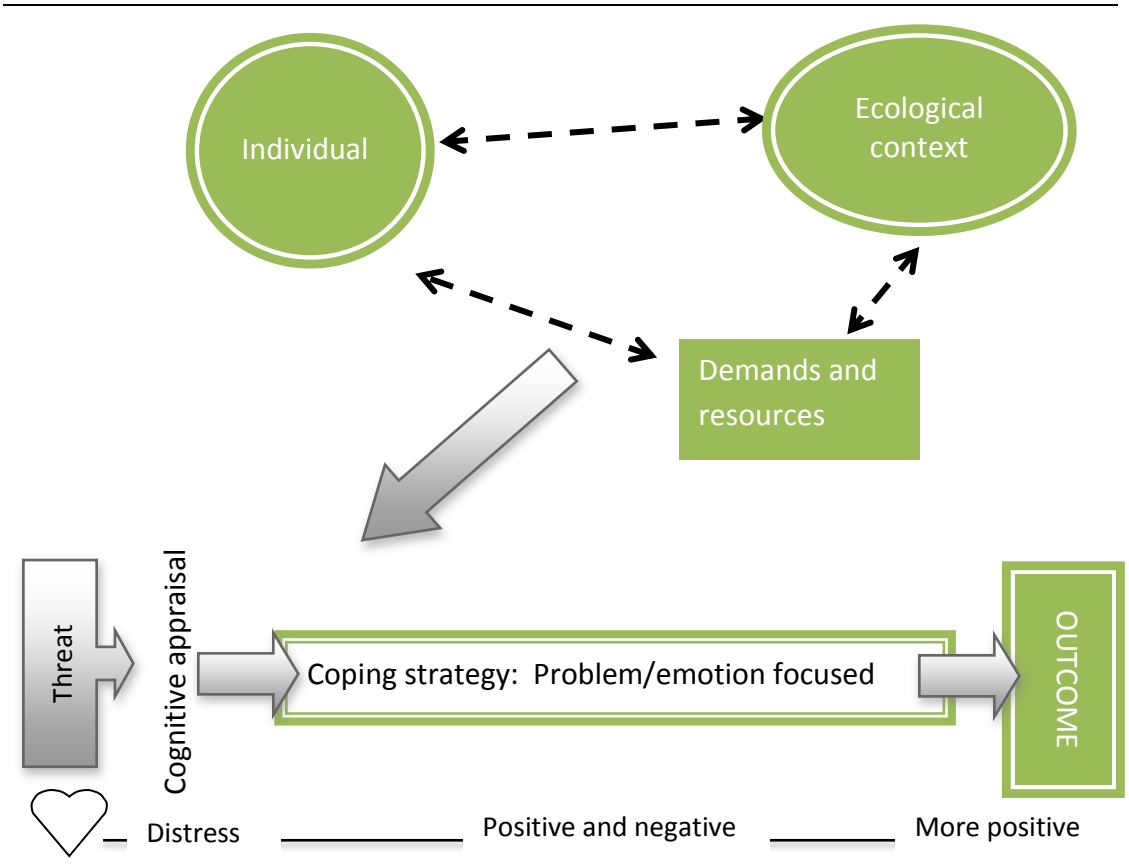

Figure 4.3: The coping process based on the stress and coping theory of Lazarus and Folkman (compiled by the author)

In accordance with the cognitive perspective, but also in line with Kumpfer's model, coping is defined in the current study as the process by which individuals attempt to deal with stressful demands. During this process, the individual's appraisal of the

stressful event, preferred coping responses, and the success of their coping attempts will depend on the context in which coping takes place.

4.5.1.1 Appraisal

The coping process is initiated with the individual's appraisal that their goals have been threatened (Folkman & Moskowitz, 2004). Appraisals are the cognitive judgments made when exposed to stress (Peacock, Wong, & Reker, 1993), but the individual's appraisal also determines the emotions generated during the coping process (Folkman, Lazarus, Pimley, & Novacek, 1987). Both primary and secondary appraisals mediate the coping process (Lazarus & Folkman, 1984).

Primary appraisal refers to judging the relevance of situations with regard to one's well-being (Peacock *et al.*, 1993), whereas secondary appraisal refers to the assessment of available coping options to manage a stressful encounter (Peacock *et al.*, 1993). When exposed to traumatic events specifically, the victim will first appraise the meaning and severity of the trauma before employing coping strategies to deal with it (Quota *et al.*, 2007). Because these cognitive appraisals have explicatory power for the coping process, it is considered a central tenet of Lazarus and Folkman's theory (Frydenberg, 2008).

Folkman and Moskowitz (2004) explain the emotional process occurring during coping. Initially, appraisals are accompanied by negative emotions which have to be regulated to prevent them from interfering with later more instrumental forms of coping. However, during the coping process, positive and negative emotions tend to co-occur. In general, positive emotions will predominate if the end result of the coping process is successful, whereas negative emotions will remain if the outcome is unfavourable (Folkman & Moskowitz, 2004).

Taylor and Weems (2009) established that a significant factor in determining negative emotional outcomes for trauma exposure in adolescence is perception and interpretation of the traumatic event. The extent to which an adolescent considers an event traumatic, therefore, depends on their appraisal of it (Taylor & Weems, 2009). The appraisal of traumatic events is, furthermore, associated with changes in life satisfaction (Lent, 2004). Coping is seen as a goal-directed process that seeks to resolve the source of stress (Lazarus, 1993; Livneh & Martz, 2007). It is important for this

appraisal to mobilise an active response or coping strategy to prevent the individual from simply reacting to the stressor (Rutter, 1985).

4.5.1.2 The coping effort

Coping strategies are usually classified into coping modes which present the method of coping that characterises the individual's typical response to stress (Frydenberg, 2008). These strategies occur in a specific context, which will determine how successful they are in overcoming a threat or stressor.

a) Modes of coping

Lazarus and Folkman (1984) differentiated between two global modes of coping: problem focused and emotion focused. According to these modes, coping is generally directed either towards resolving the stressful relationship between self and environment (problem-focused coping) or towards alleviating negative emotions (emotion-focused coping) (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). An adolescent might, for example, deal with the loss of a friend first with emotion-focused strategies such as rumination and crying, but later employ problem-focused strategies such as initiating new friendships.

Coping has also been described in terms of modes of engagement–disengagement and control. Engagement coping includes strategies oriented towards the source of stress or towards one's emotions, whereas disengagement coping includes strategies oriented away from these (Compas *et al.*, 2001). Weisz (1990) emphasised a sense of control in the coping process: the individual attempts to maintain or alter control of the self and the environment. Primary control refers to coping intended to influence objective events, and secondary control to coping intended to maximise one's fit to the current situation (Weisz, 1990). According to Compas (2009), coping strategies are indeed often matched with the perception of the controllability of stress. The mode of control further seems to correlate with the modes proposed by Lazarus and Folkman: problem-focused strategies are more used for primary control, and emotion-focused strategies for secondary control (Osowiecki & Compas, 1999).

The holistic, paradoxical thinking found in Eastern cultures started to influence Western models of coping to move from dichotomous to dualistic explanations of coping

(Wong, Wong, & Scott, 2006). Dualism argues that identifying with only one polarity of an experience prevents one from leading an integrated life (Wong *et al.*, 2006). Applied to the context of coping, it might imply that both emotion- and problem-focused coping, and both engagement and disengagement, are important to achieve integration. Greenglass (2002) concluded that coping should rather be seen as multidimensional, and not a bipolar construct, as the modes of coping would suggest.

b) The context of coping

The context within which coping takes place is of central importance, and successful psychosocial outcomes are viewed in relative terms (Livneh & Martz, 2007). Coping processes, thus, are not considered to be inherently good or poor, but should be evaluated with regard to how adaptive they are in the context in which they occur (Folkman & Moskowitz, 2004). While distancing, for example, might not be an adaptive coping strategy in preparing for an important examination, it might be helpful when waiting for the results after completion of the exam.

Context is not only considered important from a theoretical viewpoint, but it is also vital in interpreting findings from coping studies. This is especially true for studies conducted in multicultural settings, as contextual factors such as daily activities, future orientation and the values of communities significantly influence adolescent coping (Alsaker & Flammer, 1999).

The cognitive contextual perspective on coping prevailed (Folkman & Moskowitz, 2004), and models distinguishing between different subtypes of coping were developed based on this perspective (Compas *et al.*, 2001). The congruence model of coping is one such a model derived from the theory of Lazarus and Folkman.

4.5.2 The congruence model of coping

Peacock *et al*. (1993) proposed a contextual model of coping that predicts optimal coping if a rational individual with sufficient cultural knowledge achieves congruence during the coping process. This model is based on the central concept of appraisal as defined by Lazarus and Folkman (Peacock *et al.*, 1993). However, it adds another dimension to appraisal which is vital for adaptation, namely congruence. The

congruence between appraisal and coping is an important factor determining the effectiveness of coping (Peacock *et al.*, 1993). First, the individual's appraisal of demands and resources should be congruent with reality and, thus, assessed objectively. Second, the individual's selected coping strategies should be congruent with the nature of the stressor, the cultural context, and personal values and beliefs (Wong *et al.*, 2006).

The congruence model conceptualises the coping process as a cycle. This cycle encompasses three processes (Wong *et al.*, 2006), demonstrated in the figure that follows.

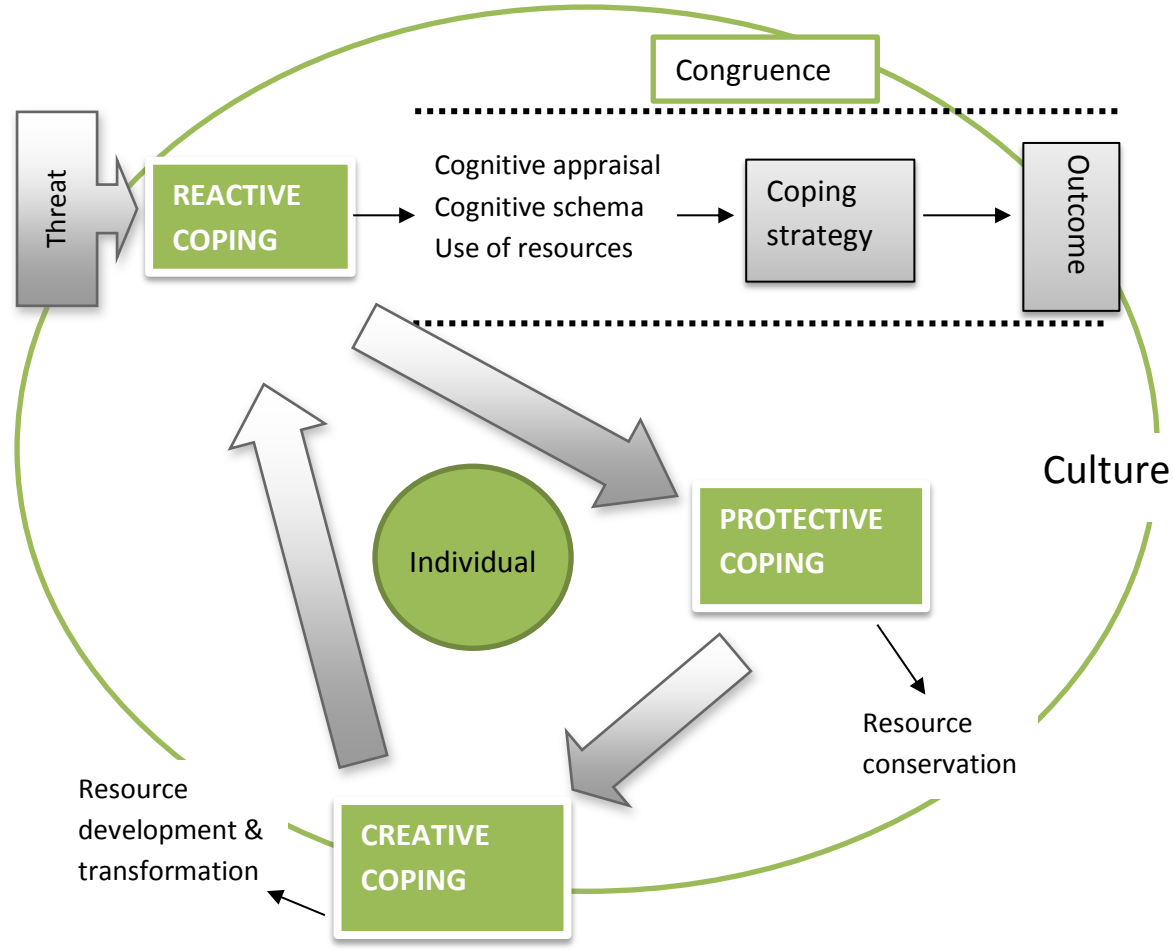

Figure 4.4: The congruence model of coping (compiled by the author)

Creative coping allows the individual to develop a variety of resources to reduce the likelihood of experiencing adverse events. Reactive coping is activated by exposure to stressful events, with adequate resources reducing stress and enhancing well-being.

Protective coping conserves personal resources until the individual is able to engage in creative coping again. According to this model, the individual will, therefore, continually be engaged in a coping process – if not reactive coping, then protective or creative coping. This process remains dependent on context which influences every aspect of the coping cycle, as will be discussed in the next section. The outcome of successful coping, according to this model, is well-being (Kuo, 2010), which matches the outcome for the current study. As the current study focuses on the coping process in adolescents exposed to trauma, more attention will be paid to the stage of reactive coping in this thesis.

The congruence model of coping has been chosen for the current study for a number of reasons. First, the fact that this model is derived from a contextual theory and does not see coping as a trait (Folkman & Moskowitz, 2004) makes it useful for the principles of agency and intervention important to both DP and resilience theory. It also allows for the inclusion of the role of culture in the coping process. Second, the model includes nine coping strategies, supporting the multidimensional character of coping. Third, the model is conceptualised from a normative perspective, acknowledging the role of development in coping. Fourth, the model provides a comprehensive explanation of effective coping. And, finally, the model supports the agency principle in that individuals can optimise their functioning in times of challenges by investing in the development of resources throughout their lives.

The important components of the model – context, coping schemas and the outcome of the coping process – will be discussed in the following section.

4.5.2.1 Context

The context within which coping takes place not only informs the coping process, but also determines the success of the coping outcome. Two aspects of the individual's context are important to this model: culture and resources.

a) Culture

A contextual approach cannot but consider the interaction of coping and culture. Cultural beliefs not only influence appraisals and the perceived appropriateness of coping responses, but cultural factors might even limit the coping options available to

individuals (Kuo, 2011). For instance, if seeking professional help is not condoned by a certain community, or if counselling services are not available, an individual might not consider counselling as an option for coping. With regard to adolescent coping, Frydenberg (2008) states that there are more similarities than differences in coping across cultures and that these differences are usually determined contextually by the community's norms.

The congruence model's emphasis on the role of culture in coping is encouraging given that the majority of stress-coping theories have been characterised by a Western, individualistic perspective (Kuo, 2010). In fact, in his overview on this subject, Kuo (2010) found only four models that explain cultural pathways of coping: the multi-axial model of coping developed by Hobfoll (1998), the transactional model of cultural stress and coping developed by Chun, Moos and Cronkite (2006), the socio-cultural model of stress, coping and adaptation (Aldwin, 2007), and the congruence model discussed here.

All of these models agree that cultural variables influence appraisal, coping responses, availability of resources (be it internal or external), and the values that guide the coping process (Kuo, 2010). The fact that both individual coping responses and the influence of culture are explained by the congruence model further makes the model suitable for the systemic principles incorporated in the DP framework that is used to contextualise the current study. Such a model will also be of particular value in a country such as South Africa with cultures representing both individualistic and collectivistic values.

b) Resources

Sufficient resources and appropriate use of these resources are necessary for coping (Wong *et al.*, 2006). Coping resources are seen as the most potent contributor to effective coping (Wong *et al.*, 2006). Examples of internal coping resources are self-mastery, positive self-esteem, increased energy, and optimism; while external resources refer to social networks, financial resources, and availability of time, for instance (Livneh & Martz, 2007). Both the use of resources and creative coping are important aspects to the congruence model (Wong *et al.*, 2006).

Resources are developed by learning from experience, research, and relationships (Wong *et al.*, 2006). The importance of resource development is evident from the fact

that the more internal and external resources one possesses, the better the chances of coping with stressful events (Wong *et al.*, 2006). Creative coping entails not only resource accumulation, but also skills development (Frydenberg, 2008). This model's focus on resources and growth complements the strengths-based approach of resilience theory and is, therefore, considered fitting for conceptualising coping for the current study.

Coping resources differ from coping strategies in that the former refer to internal or external resources the individual *has* at their disposal, whereas the latter refers to what the individual *does* in using resources to overcome a threat (Pearlin & Schooler, 1978). For example, good family relationships are a resource, but the adolescent's action to seek support is the coping strategy. Thus, coping strategies are efforts aimed at mobilising coping resources (Compas *et al.*, 2001).

Coping strategies are organised into sets of knowledge known as coping schemas. Coping schemas are activated by appraisals and determine appropriate coping responses (Peacock *et al.*, 1993). The schema approach presents a normative view of the coping process (Peacock *et al.*, 1993).

4.5.2.2 Coping schemas

The normative approach underlying the congruence model defines coping as a subset of self-regulation skills. Compas *et al*. (2001) explain that the adolescent's developmental stage both contributes to resources available for coping and limits the type of coping responses available. During early adolescence, for example, the availability of resources might be affected by the changes that occur in hormonal processes, parent–child and peer relationships. Thus, there is a need for conceptualisations of coping to reflect the nature of developmental processes (Compas *et al.*, 2001).

The development of characteristic coping schemas in childhood and adolescence might place individuals on a developmental trajectory that can either be more or less adaptive (Compas *et al.*, 2001); coping in early adolescence especially seems to be critical for future adjustment (Hampel & Petermann, 2006). According to Seiffge-Krenke (2000), the age of 15 is a turning point for the use of more adaptive coping strategies, and the styles of coping that develop in early adolescence determine how the individual

will deal with stressors in later adolescence and early adulthood. Adolescent coping is increasingly self-reliant as cognitive strategies become more effective in guiding behaviour and regulating emotions when faced with challenges (Zimmer-Gembeck & Skinner, 2011). The congruence model identifies various coping schemas which correspond to four broader modes of coping: problem-focused, emotion-focused, existential, and spiritual coping.

a) Problem-focused coping

Problem-focused coping is appropriate for controllable situations (Peacock *et al.*, 1993). The three schemas included here are situational coping, which involves direct actions to solve a problem; self-restructuring, which includes changing one's cognitions and behaviours; and practical social support to change the situation (Wong *et al.*, 2006). Social support has been associated with increased well-being due to various possible influences on the coping process: social support encourages the use of adaptive coping strategies, provides emotional support leading to self-confidence, and provides information and guidance for planning coping responses (Moos & Holahan, 2003). According to Wong *et al*. (2006), problem-focused coping has limited value when situations are chronic, pervasive and overwhelming. Hence, there is increasing interest in transformational coping, as is seen in Buddhist enlightenment, for example (Wong *et al.*, 2006). However, Frydenberg (2008) reports problem-solving and cognitive reappraisal strategies to have the strongest correlation with well-being in adolescence.

According to a review on coping in adolescence by Zimmer-Gembeck and Skinner (2011), planful problem solving is the most common coping strategy adolescents report using. Problem solving has been found to be both functional and dysfunctional. Again, context seems to be key in determining the functionality of a coping strategy. The studies that show correlations between problem-focused coping and internalising and externalising symptoms in adolescents mostly relate to events that are perceived as uncontrollable (Compas *et al.*, 2001). In general, problem-focused strategies such as cognitive restructuring and positive reappraisal are associated with better psychological adjustment in adolescence (Compas *et al.*, 2001).

b) Emotion-focused coping

Emotion-focused coping is used for emotional problems (Peacock*et al.*, 1993). Emotional coping can be active and focused on reducing tension (Wong *et al.*, 2006). Active emotional coping strategies such as processing and expression that is used to approach problems are seen as effective coping methods (Stanton, Parsa, & Austenfeld, 2002). Emotional coping can also be passive, referring to strategies such as wishful thinking, distancing and self-blame (Wong *et al.*, 2006). Piko (2001) is of the opinion that passive coping might also involve risky coping in adolescence that would include behaviours such as drinking, eating, smoking or using other substances to cope with a situation.

Strategies that deal with negative emotions become increasingly sophisticated in adolescence (Zimmer-Gembeck & Skinner, 2011). However, disengagement and emotion-focused coping seem to be related mostly to poorer psychological outcomes in adolescents (Compas *et al.*, 2001). According to a study conducted by Hampel and Petermann (2005), adolescents with existing emotional and behavioural problems tend to prefer emotion-focused coping strategies. However, it is not focusing on emotions per se that is problematic, but the inadequate regulations of emotions that results in disengagement, negative cognitions about the situation or self, and unregulated release of emotion (Compas *et al.*, 2001). Especially in adolescents exposed to trauma, ruminating and exacerbated emotional processing of traumatic memories are related to a higher risk for depressive symptoms (Nolen-Hoeksema, 2002).

Seiffge-Krenke (2000) reports that, in clinical samples, adolescents frequently make use of avoidant coping and withdrawal. In fact, all forms of avoidant coping are linked with more depressive symptoms in adolescence (Seiffge-Krenke, 2000). However, there is also evidence that avoidant coping is functional in helping adolescents adapt to severe stressors, such as imprisonment or parental divorce, and that this type of coping decreases as time passes after the event (Seiffge-Krenke, 2000). Also, some studies suggest that earlier behavioural forms of coping such as contact seeking might actually be more beneficial than sophisticated coping in times of extreme distress (Zimmer-Gembeck & Skinner, 2011).

c) Existential and spiritual coping

Wong *et al*. (2006) note a tendency in recent research to not only consider cognitive coping as described by the appraisal process, but to also study existential coping, which includes acceptance of situations that cannot be changed, and discovering the purpose of one's existence. Existential schema refers to strategies used to make sense of loss, suffering and the conditions of life in order to make life more tolerable (Wong, 1991). Park and Folkman (1997) are of the opinion that the integration of a stressful event in one's existing beliefs is a central task in the coping process. According to Folkman and Moskowitz (2004), various studies show that individuals who experienced severe events often report that something positive resulted from the negative experience, such as closer family ties or a greater appreciation for life. It seems that acceptance, positive re-interpretation, and deliberate, effortful cognitive processing increased the experience of post-traumatic growth (Folkman & Moskowitz, 2004).

Spiritual schema focuses on the spiritual dimension, such as religious practice and a divine being, and is appropriate in situations that are uncontrollable (Peacock *et al.*, 1993). Religion has been found to play a role in the entire coping process from appraisal and coping with the immediate demands of a stressful situation, to finding purpose and meaning in adverse events (Folkman & Moskowitz, 2004). Spiritual and religious coping have been indicated to be prevalent especially in individuals from African and Latino backgrounds (Kuo, 2010).

The religious factors that have been found to correlate significantly with subjective well-being is summarised by Diener *et al*. (1999) as religious certainty, strength of relationship with the divine, prayer experiences, and devotional and participatory aspects of religion. Because religious institutions might facilitate adolescents' quest for meaning, it can have an impact on their life satisfaction (Sabatier, Mayer, Friedlmeier, Lubiewska, & Trommsdorff, 2011). Religiosity could also have an indirect effect on life satisfaction via family harmony and interdependence (Sabatier *et al*., 2011). However, the importance of religion for life satisfaction depends on the value a country attaches to religion and family life (Sabatier *et al*., 2011).

4.5.2.3 The effectiveness of the coping process

The use of both functional and dysfunctional coping styles significantly increases in early adolescence and stabilises after the age of 15 (Seiffge-Krenke, 2000). This demonstrates a dual focus in coping in that adolescents attempt to deal with increased stress by using both problem-focused and emotion-focused strategies (Seiffge-Krenke, 2000). These two modes are indeed seen as complementary and not exclusive (George, 2009). In contrast, Hampel and Petermann (2006) found decreases in adaptive coping strategies and increases in maladaptive strategies in young adolescents compared to children.

Lazarus and Folkman (1984) argued that coping should be confounded with neither the outcomes of the coping efforts nor successful mastery. Instead, they emphasised the coping attempt. Therefore, coping strategies will be differentially adaptive, depending on various factors. The type of stressor and its intensity and duration, for example, will play a role in the coping outcome (Livneh & Martz, 2007). As mentioned earlier, individuals' regulation of their negative emotions during this process might also play a role in the success of their coping efforts.

Adaptive coping is further achieved when the individual's coping efforts match the situational demands and, therefore, depends on the interaction between resources and the requirements of the situation (Moos & Holahan, 2003). Effective coping is achieved through congruence. Individuals should appraise the demands and resources available to them realistically, and should then match their coping efforts to both the nature of the stressor and their values and beliefs. Congruence is seldom achieved by reacting to stress impulsively, habitually or emotionally, whereas intellectualisation is suggested to achieve appropriate matching (Wong *et al.*, 2006). Adolescents' increasing metacognitive skills increase their abilities to achieve congruence between appraisal and coping effort (Compas *et al.*, 2001).

Congruence implies further that adaptive coping requires a flexible and versatile repertoire of coping strategies (Livneh & Martz, 2007) and depends on what is required by the context in which coping takes place. The increased cognitive complexity and social maturity in adolescents enable them to reflect about possible coping strategies and to enhance their abilities to see others' perspectives (Seiffge-Krenke, 2000). The range of coping responses, therefore, becomes more diverse and flexible in adolescence

(Compas *et al.*, 2001). However, Zimmer-Gembeck and Skinner (2011) also report a decrease in flexibility as adolescents age due to their reliance on particular strategies that proved successful in the past.

Effective coping strengthens the individual (Rutter, 1985), and mastery and confidence enhance future coping. Especially in adolescence, the developing sense of self-efficacy and confidence leads to a strong belief that one is able to influence the environment (Werner, 2000). Coping efficacy, in turn, facilitates the use of active and support-seeking coping and encourages persistence in using these strategies (Lent, 2004). This process occurs in a developmental context and early resilience and coping create a chain of indirect links that can foster resilience later in life (Rutter, 1985). Thus, increasingly effective coping is important, as stress levels also increase in early adolescence and are sustained throughout the school years (Seiffge-Krenke, 2000).

4.5.3 Coping, trauma exposure and life satisfaction

According to Fortier *et al*. (2009), various cross-sectional and longitudinal studies have linked avoidant coping strategies with PTSD symptoms in different populations. In a sample of adolescents exposed to terror attacks, Braun-Lewensohn *et al.* (2009) found emotion-focused coping to correlate with increased PTSD symptoms, while problem-focused coping increased well-being for these adolescents. Piko (2001) examined the role of coping strategies in well-being specifically and found that passive and risky coping strategies correlate negatively with well-being, whereas problem-focused and support-seeking strategies are associated positively with well-being. However, an earlier study by Johnsen, Eid, Laberg, and Thyer (2002) has shown both problem-focused and emotion-focused coping to correlate with fewer PTSD symptoms. These conflicting results might, again, indicate the complexity of the resilience process and the importance of context to this process.

Rutter (1985) proposes that, although some strategies are evidently better than others, the existence of a coping process in itself might be more important than the specific method of coping employed by the individual. As many individuals react to trauma with helplessness, the trait that distinguishes resilient individuals is the action they take or their engagement in coping strategies (Rutter, 1985). However, more recent studies provide evidence for the importance of particular coping strategies, and

Schexnaildre (2007) states that these strategies are important predictors of post-trauma outcomes in adolescents. Positive or action-oriented coping styles have been found to lead to better outcomes for traumatised populations (Hoge *et al.*, 2007).

Life satisfaction results in part from the successful coping with stressful events (Anke & Fugl-Meyer, 2003; Lent, 2004). Despite multiple studies that examine coping in adolescents, few of these explore the association between coping and positive outcomes (Frydenberg, 2008; Schexnaildre, 2007); in general, there is much research to be done to enhance our understanding of how coping affects outcomes in various domains of functioning (Folkman & Moskowitz, 2004). This task is complicated by the fact that coping is not a stand-alone variable, but a complex process of interaction between the individual and their environment (Folkman & Moskowitz, 2004).

Vera *et al*. (2011) studied specifically the moderating role of coping in the relationship between stress and subjective well-being in young adolescents. According to their results, only two strategies had a significant role: humour which decreased, and venting which increased the negative correlation between stress and well-being (Vera *et al*., 2011). These researchers explain their results in part by the fact that young adolescents might have a minimal ability to control their environments or might not have effectively learned problem-solving skills yet (Vera *et al*., 2011). Their sample, furthermore, consisted of adolescents from low-income families and, consequently, coping resources might not have been readily available to this sample. Whatever the case may be, this study demonstrates the importance of considering demographic variables such as age and socio-economic status, as these can also provide a protective function (Richter *et al.*, 2006) or moderate some of the relationships of interest in the current study.

4.5.4 Summary of the discussion on coping

In the current thesis, coping is conceptualised as a dynamic transactional process. In a recent systematic review of coping in adolescence, Garcia (2010) found the majority of the 58 studies included in the review to conceptualise coping according to the contextual perspective. This perspective is important as it considers the role of culture in coping and is not based on the predominantly Western perspective which characterises many of the studies in this area. The congruence model, therefore, can

accommodate both the South African context, including availability of resources and cultural differences, and the developmental context of early adolescence which seems to be a turning point for the development of effective coping schemas. In fact, according to Braun-Lewensohn *et al*. (2009), the adolescent period is crucial to the development of coping strategies.

The congruence model incorporates the use of different coping schemas, which is important given the dual focus of coping in early adolescence as adolescents attempt to cope with increased stress. Problem-focused schemas seem to be related to well-being in adolescence. Emotion-focused schemas, on the other hand, have led to negative emotional outcomes in some studies on adolescents exposed to trauma. Existential and spiritual coping are not only prevalent in African cultures, but might also be important for the South African context where many stressful situations cannot be controlled by the adolescent.

Effective coping depends on these schemas, but also on congruence in the coping process, and the availability of resources. The lack of resources in the South African context (as described in the previous chapter) might negatively influence the process of coping in South African adolescents. Yet, the current study specifically included strengths as resources, which is also considered important by the congruence model. Effective coping is vital for persistent coping, and thus for South African children, given the chronically challenging conditions they are exposed to.

Although coping has been researched extensively in adolescent populations, relatively little is known so far about the role of coping in positive outcomes. Also, the importance of specific strategies in the context of trauma exposure will be investigated. The congruence model successfully integrates the coping attempt with the role of resources and culture in a coping cycle where the individual can actively invest in their well-being.

4.6 The role of demographic variables in resilience

Although demographic variables explain some of the variance in subjective well-being, the relationships are relatively complex (Lent, 2004). Also, in adolescent populations, demographic variables contribute only modestly to life satisfaction (Proctor *et al*., 2009). Nonetheless, these variables can change the direction or strength of the correlation between trauma exposure, resilience and life satisfaction. According to Greenberg (2006), the development of resilience depends on moderating variables such as age, gender and ethnicity. Some protective factors also tend to be age, gender and context specific (Werner, 2006). The different findings in studies that include these variables once again underscore the fact that resilience is a complex, dynamic process.

4.6.1 Age

As indicated earlier, life satisfaction tends to decrease with the onset and progression of adolescence (Goldbeck *et al*., 2007; Proctor et al., 2009). Different risk and protective factors emerge at different stages in the child's development (Wright & Masten, 1997). In adolescence specifically, advanced capabilities increase the chances for resilience but, at the same time, adolescents are more vulnerable to experiences of loss and its implications for their future (Masten & Coatsworth, 1998).

Age differences in coping strategies were also noted, with younger adolescents being less inclined to seek help than older adolescents (Zimmer-Gembeck & Skinner, 2011). Younger adolescents also seem to make more use of maladaptive coping strategies when compared with older adolescents. These include cognitive escape, rumination, verbal aggression, and venting (Zimmer-Gembeck & Skinner, 2011). In contrast, Hampel and Petermann (2005) report that both early and late adolescence are characterised by the use of significantly more maladaptive coping strategies, such as rumination and aggression, when compared with late childhood. However, a more recent study found an increase in adaptive strategies with age: social support and problem solving become more sophisticated with advanced cognitive development in older adolescents (Skinner & Zimmer-Gembeck, 2007).

4.6.2 Gender

Piko (2001) indicated that gender differences in well-being are more salient in adolescence due to biological and psychosocial changes. Moreover, Schwarz *et al.* (2011) report gender differences for adolescents, with girls being less satisfied than boys. Koen (2008), on the other hand, did not find significant gender differences in the life satisfaction of South African adolescents, which she explains by referring to the fact that traditional male and female roles are transforming to become more equal.

Werner and Smith (1992) found girls to be more vulnerable in the adolescent years (or at least after puberty). This may be because girls are more affected by stress than boys, as they are more likely to see adversity as threatening and report more stressful events than boys (Coleman & Hagell, 2007b). Also, Byrne (2000) has shown increases in anxiety and fear for girls as they approach adolescence. However, it might be that boys are more likely to underreport symptoms of PTSD and depression, or respond with different symptomatology to trauma (Kronenberg *et al.*, 2010). These findings do not indicate that one gender is at higher risk than the other, but simply that males and females use different coping strategies, and are affected by different protective factors when faced with adversity (Coleman & Hagell, 2007b).

Gender is the most frequently reported moderator of coping (Frydenberg, 2008). Both boys and girls increase their use of emotion-focused coping in early adolescence (Piko, 2001), but they use different strategies for coping with emotions. Boys make more use of emotion-distancing strategies, which have a disengaging effect for them (Piko, 2001) and tend to make more use of denial when faced with difficulty (Coleman & Hagell, 2007b). In addition, boys tend to be confrontational when dealing with interpersonal difficulties (Coleman & Hagell, 2007b).

On the other hand, girls tend to use passive coping and support seeking more than boys (Piko, 2001). The fact that females rely on social support also contribute to their vulnerability for interpersonal problems and for the effects of a lack of support networks (Coleman & Hagell, 2007b). Even though they tend to seek social support more, they are less likely than boys to seek professional advice (Frydenberg, 2008). Hampel and Petermann (2005) found an increased vulnerability for young adolescent girls, as they reported less adaptive coping and more maladaptive strategies than any

other group. In fact, Frydenberg (2008) states that adolescent girls in general report less ability to cope and are more likely to resort to self-blame and worry.

4.6.3 Cultural and racial differences

According to Proctor *et al.* (2009), cultural differences in adolescent life satisfaction is an important area of study and there is a need for research of adolescents across cultures, specifically to determine differences between individualistic and collectivistic cultures (Proctor *et al.*, 2009). Also, much work is needed to determine whether findings for Asian, American and European populations can be generalised to African and South American populations (Huebner, Suldo, & Gilman, 2006).

Certain correlates of subjective well-being, such as self-esteem and congruence, are culture bound and, therefore, more valued in Westernised societies (Diener, 2000). Suh, Diener, Oishi and Triandis' (1998) study emphasises the differences in life satisfaction judgments between individualistic and collectivistic cultures: in individualistic cultures affect is important; thus, frequent pleasant emotions predict life satisfaction, whereas in collectivistic cultures the social norms of family and friends are considered in determining life satisfaction. In a South African study, Schwarz *et al.* (2011) found that adolescents from cultural groups endorsing family values attach less importance to peer group acceptance for life satisfaction. For adolescents the one area not influenced by an individualistic/collectivistic framework is school satisfaction (Gilman *et al.*, 2008), as quality of educational systems is a more salient influence on school satisfaction.

Racial differences do not account for differences between resilient and stress-affected children (Magnus, Cowen, Wyman, Fagen, & Work, 1999). Instead, it is the risk conditions children are exposed to that mostly account for differences observed between racial groups (Prince-Embury, 2009). In South Africa specifically, the racial differences in well-being and risky behaviour might be related to the economic inequality to which adolescents from different racial groups are exposed.

Racial difference in coping is reported in a South African study by George (2009): It seems that black and coloured adolescents use maladaptive coping strategies more compared to white adolescents. George (2009) cites unequal access to resources – which might lead to an increase in avoidance, disengagement and denial coping

strategies – as a possible explanation for these findings. Both George (2009) and Basson (2008) found no differences in the use of problem- and emotion-focused strategies for different racial groups in South Africa. Both problem- and emotion-focused coping correlated with an increase in hope for all South African adolescents (Basson, 2008).

4.6.4 Socio-economic status and education

For individuals who lack basic material resources, income correlates with well-being (Diener, 2000). However, once these basic needs are satisfied, the interaction between wealth and happiness become more complex (Diener *et al.*, 1999).

Family socio-economic status correlates with well-being in adolescence (Piko & Hamvai, 2010), and adolescents from lower-income homes report lower levels of life satisfaction (Ash & Huebner, 2001). Shek (2005) concurs by reporting that adolescents from economically disadvantaged groups tend to perceive parenting characteristics, paternal behavioural control and father–child relationships more negatively than adolescents whose families do not receive social assistance. The fact that two-thirds of South African children are exposed to poverty and that about three million children receive social assistance (see previous chapter) might mean that their life satisfaction would be influenced negatively. However, Schwarz *et al.* (2011) found that, for adolescents from poorer rural areas where traditional family values are adhered to, these values might contribute to higher levels of life satisfaction, despite their low socio-economic status.

Parental education level can either increase risk or protection, depending on the extent to which it is concomitant with other environmental factors (Prince-Embury, 2009). Higher parent education was found to have a significant impact on physical and psychological well-being in children (Von Rueden, Gosch, Rajmil, Bisegger, & Ravens-Sieberer, 2006). This demographic factor is important because it reflects parental competence (Werner, 1996). Parents with formal education often create cognitively stimulating environments that are more verbal and supportive than parents who did not receive formal education (Prince-Embury, 2009).

Aside from its influence on competence, parental education also plays a role in the quality of parent–child interaction (Prince-Embury, 2009). Werner (1996) found

parental educational level to correlate with better health, emotional support and increases in problem-solving, academic and reading skills of children. Prince-Embury (2009), furthermore, reports that children whose parents did not complete secondary schooling obtained a significantly lower score for a sense of relatedness. However, the pathways by which parental education level mediates outcomes are relatively complex and might reflect an uncertain combination of genetic factors, concrete skills acquired by the parents, and personality traits that influence the acquisition of schooling and parental skill (Duncan & Magnuson, 2003).

4.6.5 Summary of demographic variables

In light of the DP model used for the current study, the role of age in resilience is obvious. Resilience is defined in part by outcomes that are age-appropriate and determined by competence with regard to developmental tasks. The life stage of early adolescence, furthermore, seems to correlate with decreased satisfaction and greater use of maladaptive coping strategies. Thus, early adolescence is considered an important life stage for interventions aimed at increasing resilience and well-being. Frydenberg (2008) indeed advocates the early secondary school years as a pivotal time for intervention.

Gender differences in pathology and well-being are evident, especially during adolescence. Adolescent girls are less resilient, as they are more stressed than boys and tend to use more passive coping strategies. The determinants of life satisfaction differ for individualistic and collectivistic cultures – adolescents from both groups will be included in the current study. Even though race is not an important correlate of resilience per se, its association with economic inequality in South Africa might contribute to differing outcomes in the current sample. Parental education should also be considered in studies on child well-being, specifically due to its reflection of parental competence and the quality of parent–child interaction.

Lent (2004) concludes succinctly that no single demographic group has a monopoly on happiness, which bodes well for intervention, as demographic variables reflect mostly personal attributes that cannot be changed in any case.

4.7 Conclusion

The process of adjustment is best understood by means of a developmental and ecological framework (Masten, 2006). Hence, DP has been chosen as the guiding theoretical model for the current study. However, one of the aims of research in resilience is to better understand the dynamics underlying positive adjustment (Masten, 2001); this thesis, therefore, includes a conceptualisation model to explain resilience. The resilience model proposed by Kumpfer (1999) complements DP and clarifies the various contributors and points of interaction in the resilience process.

Resilience is defined in the current study as a capacity which develops through the interaction of various individual and environmental factors, including risk and protective factors, in the context of adversity. Resilience results in positive adjustment and, consequently, in future resilience. Also, it is informed and enhanced by the process of normal development. Kumpfer (1999) proposed four domains of influence and two transaction points in the process of resilience. The domains of influence are: a stressful event, the individual, the environmental context, and the outcome. The two transactional points are coping and resilience.

The current study first provides a DP perspective on two of the domains of influence, the individual (young adolescents) and the environmental context (South Africa). These two domains of influence provide the background to this thesis. Because both the transition to adolescence and the South African context are marked by transformation, the intersection between the two might be a relevant context for studying resilience.

Early adolesence is a stage characterised by incongruities in development and major adjustment. Extensive normal developmental changes occur in biological, cognitive, emotional and social functioning. These developmental changes both increase adolescents' vulnerability temporarily and provide opportunity for resilience and strengths to emerge. Three normal developmental qualities indicative of resilience will be examined in the current participant group: mastery motivation, attachment, and self-regulation. A sense of mastery enables adolescents to be optimistic about themselves and the environment, and believe in their abilities to overcome difficult situations. A sense of relatedness provides the adolescent with access to support. Difficulty with self-regulation would result in emotional reactivity. Adolescents who tend to be reactive

experience impairment due to the arousal of negative emotions and might struggle to recover from these emotions.

The current study also aims to contribute to addressing the paucity of research on adolescents in developing countries and attempt to highlight some of the unique challenges faced by these adolescents. Since both proximal and distal environments are important to adolescent functioning, different developmental contexts – as sources of risk and/or protection – were explored in the previous chapter. The ***South African context*** specifically has been characterised by various challenges to positive adjustment, such as disruption of the family system, chronic and pervasive poverty, and high levels of crime. Instability is prominent, with government systems still trying to find balance in addressing injustices of the past and providing equal opportunities to all South Africans. Thus, normal developmental challenges and stressors (such as trauma exposure) have to be negotiated amid multiple risk environments.

In addition, the attempts from the government to increase resources are ineffective due to poor implementation of policies. It would be important to understand how South African adolescents cope with these challenges – a contribution the current study aims to make. Seccombe's (2002) plea that changing the odds is preferable to beating the odds also motivates more studies on adolescent resilience to contribute to effective policy making in South Africa. Given that more than a third of the total South African population is younger than 18, a better understanding of this age group might contribute considerably to increased well-being in South Africa in general.

In order to achieve this, the current study will, secondly, measure specific variables to investigate a model of resilience. In correspondence with Kumpfer's (1999) first domain of influence, trauma exposure will be investigated as the stressful event. The strengths that moderate post-traumatic outcomes will also be examined. The final domain of influence, or outcome variable, included in the current study is life satisfaction. Kumpfer (1999) proposed coping to be a transaction point in the resilience process, and coping is, therefore, studied here.

Trauma exposure is a stressful event which might trigger the resilience process in adolescents. The prevalence of trauma exposure is much higher in South Africa than for many other countries. Since the majority of South African adolescents have experienced a traumatic event, with multiple events and PTSD prevalent in this population, it would

be important to understand the impact of traumatic events on South African youth. In adolescence normal developmental changes might increase adolescents' vulnerability to the negative impact of trauma exposure. Not only their developmental stage, but also their perception of traumatic events and gender might play a role in their reaction to trauma. There still is little South African research on positive outcomes and positive moderators, such as strengths, in adolescents exposed to trauma. The current study will, therefore, aim to address this gap in the existing literature by examining both strengths and life satisfaction in the context of trauma exposure.

Strengths have been found to moderate the impact of trauma exposure. Two individual strengths (intrapersonal and affective strengths) and three strengths in the microsystem (interpersonal strengths, family involvement and school functioning) inform studies on trauma exposure. Strengths can predict positive outcomes, such as well-being, but should be considered in conjunction with other contributing variables.

A subjective indicator of well-being has been chosen, as the majority of adolescent studies focus on objective indicators of health and well-being. ***Life satisfaction*** is, thus, the chosen outcome variable for the current study. In fact, some of the leading authors on resilience, such as Wright and Masten (2006), consider it to be an appropriate indicator of resilience in children exposed to trauma. Thus, if adolescents exposed to trauma demonstrates sustained or high levels of life satisfaction, they can be considered resilient. The relationship between trauma exposure and life satisfaction might be complex, though. It seems that, although exposure to trauma mostly decreases life satisfaction, there are also instances where moderate exposure increases positive outcomes. The current study, therefore, aims to identify some of the variables that might play a role in the relationship between trauma exposure and life satisfaction, specifically for resilient individuals.

Moreover, life satisfaction is important to future adjustment during the adolescent years due to its influence on aspects such as academic performance and self-efficacy. The factors important to life satisfaction included in the current study are intra- and interpersonal strengths, coping, family interaction, and school engagement. Both strengths and coping have been shown to correlate positively with life satisfaction.

The ability to ***cope*** is essential in a rapidly changing world (Wong, Reker, & Peacock, 2006). The current study takes a contextual perspective on coping in an attempt to

accommodate two contexts. The first is the South African context, which is unique with regard to vast cultural differences among citizens and the availability (or lack) of resources. The second is the developmental context of early adolescence, which seems to be a turning point for the development of effective coping schemas. Although the existence of a coping process in itself might enhance resilience, it is important to better understand how different coping strategies contribute to the well-being of South African adolescents. Coping is researched extensively in adolescent populations, but relatively little is known so far about the role of coping in positive outcomes. Also, the importance of specific strategies in the context of trauma exposure will be investigated.

Thus, the current study seeks to understand the ***processes of resilience*** that enable South African adolescents to maintain a sense of life satisfaction despite having been exposed to trauma. Given the discussion above, a model of resilience in early adolescence has been developed to be analysed statistically. This model is based on Kumpfer's model of resilience, while it also aims to take into account recent findings regarding all the variables of interest.

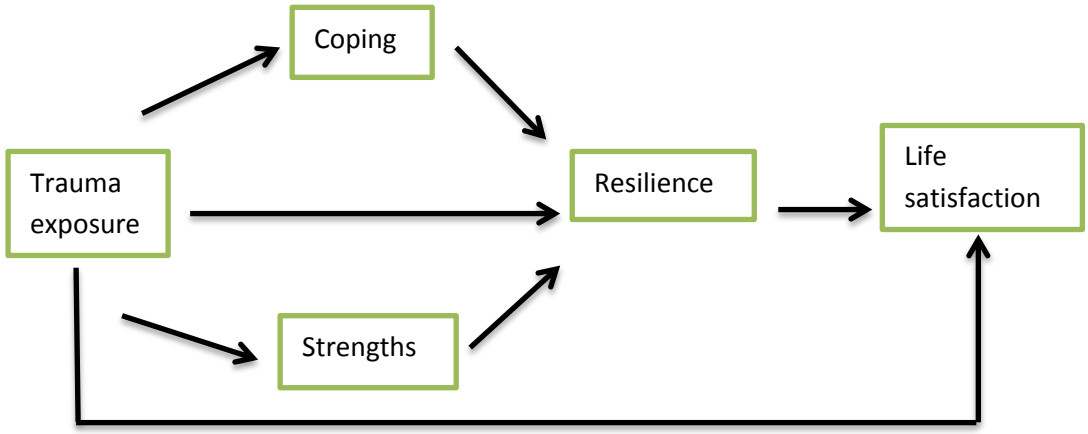

Figure 4.5: The conceptualised model of resilience for the current study

In young adolescents, trauma exposure might overwhelm their regulatory skills in such a way that it decreases their subjective well-being. Alternatively, trauma exposure might trigger a process of resilience which will help the adolescent bounce back and, eventually, either maintain or increase their sense of well-being. Coping strategies might be activated, which can increase resilience; or certain strengths might become more salient because of a traumatic experience, which can increase resilience also. This model will be tested for a population group of young adolescents from different

cultures. The findings will then be interpreted in the context of individual development and the South African systemic factors that might have an impact on adolescent functioning.

5. METHODOLOGY

5.1 Introduction

The methodology used by the researcher to address the research objectives is explained in this chapter. First, the research design and statistical analysis will be described and the research goals and hypotheses will be stated. Also, the method used to obtain the data, the characteristics of the participants and the measuring instruments used for this study will be included in the discussion. The steps which will be followed during the statistical analysis will be provided. Finally, a description will be provided of the ethical considerations relevant to the study.

5.2 Research design

A non-experimental, correlational design was used in this study. Correlational studies are used frequently to describe the association between a set of psychosocial variables and health outcomes (Langdridge & Hagger-Johnson, 2009) or to address theoretical issues (Gravetter & Forzano, 2006). Correlational studies usually involve the administration of measuring instruments to the participants which then yield quantitative data that enable the researcher to determine the statistical relationships between the different variables under study.

In order to draw conclusions regarding causality based on non-experimental data, more complex statistical models comprising several equations are required (Blunch, 2008). In the current study the influences of certain predictor variables (including trauma exposure, resilience, coping and strengths) on the outcome variable (life satisfaction) were determined. For this reason, Structural Equation Modelling (SEM) (Streiner, 2006) is the statistical method of choice for the current study.

The method of SEM allows for the analysis of many variables with complex interactions (Streiner, 2006) and is widely used for testing for mediated relationships among variables especially when multiple items have been measured (Iacobucci, Saldanha & Deng, 2007). Yet, even when using SEM, causal relationships can never be proved, but merely rendered probable, as it is impossible to rule out all the possible alternative predictor variables (Blunch, 2008). Also, the

claimed causal relationship should be substantiated by theoretical arguments (Blunch, 2008). Thus, structural equation models are *based on* causal hypotheses and do not confirm these (Brannick, 1995), although properly identified models do support inferences of causality (Judge & Watanabe, 1993).

Correlational studies usually have lower internal validity due to the possibility that additional variables excluded from the study are influencing the included variables (Gravetter & Forzano, 2006). Therefore, since the current study is based on a correlational design, the results of SEM should not be taken to confirm causal relationships, but rather be seen as supporting (or rejecting) inferences surrounding causality. Because the data is collected in natural circumstances – in this case, in the school environment – external validity is high (Gravetter & Forzano, 2006).

5.3 Research goal and hypotheses

The goal of this study is to clarify the interrelationship between trauma exposure, resilience, strengths, coping, and life satisfaction in South African adolescents.

The primary aim of the researcher is to examine the relations between the different predictor and criterion variables by means of SEM (Streiner, 2006). In order to achieve this aim, the correlations between the variables will be examined first. Then, the goodness-of-fit of the model proposed by the researcher will be tested on a sample of young adolescents.

With SEM, scientific theory can be depicted in a graphical model in which the hypothesised relationships between the concepts of the theory are demonstrated (Ullman, 2006). In contrast to the traditional use of the null and alternative hypotheses for statistical inference, in SEM H_0 states that the model the researcher wants to support is a good fit for the data, while H_1 states that it is not (Blunch, 2008). In order to test this model, the concepts contained in the model should be defined conceptually and operationally. The model proposed for the current study is derived from the literature discussed in the previous chapters and the constructs were defined conceptually. The section on measuring instruments will further explain the operationalisation of these constructs.

Usually the variables of interest in social sciences cannot be measured directly, and is referred to as latent variables (Wilson & Maclean, 2011). Latent variables are, therefore, measured by

indicators – such as questions in a questionnaire – which is referred to as manifest variables (Blunch, 2008). The latent variables predict the measured variables, but not perfectly, as some of the variance in the measured variables cannot be accounted for by the latent variables (Ullman, 2006). In the graphic model latent variables are depicted as circles, and manifest variables as squares. The manifest variables and their interrelations are all that the researcher has to work with to uncover the causal structure among the latent variables (Blunch, 2008).

It is typical for some variables included in the model to appear both as dependent and independent variables when the model is based on non-experimental data (Blunch, 2008). Exogenous variables are those that do not appear as dependent variables anywhere in the model, while all the other variables are known as endogenous variables (Ullman, 2006). Trauma exposure is the only exogenous variable in the model, while life satisfaction, resilience, coping and strengths all are endogenous variables. Although the causal structures can also be depicted with a system of algebraic equations, the graph facilitates clearer communication (Blunch, 2008) and is, therefore, discussed here. The following model depicts the hypotheses which will be investigated for the current study.

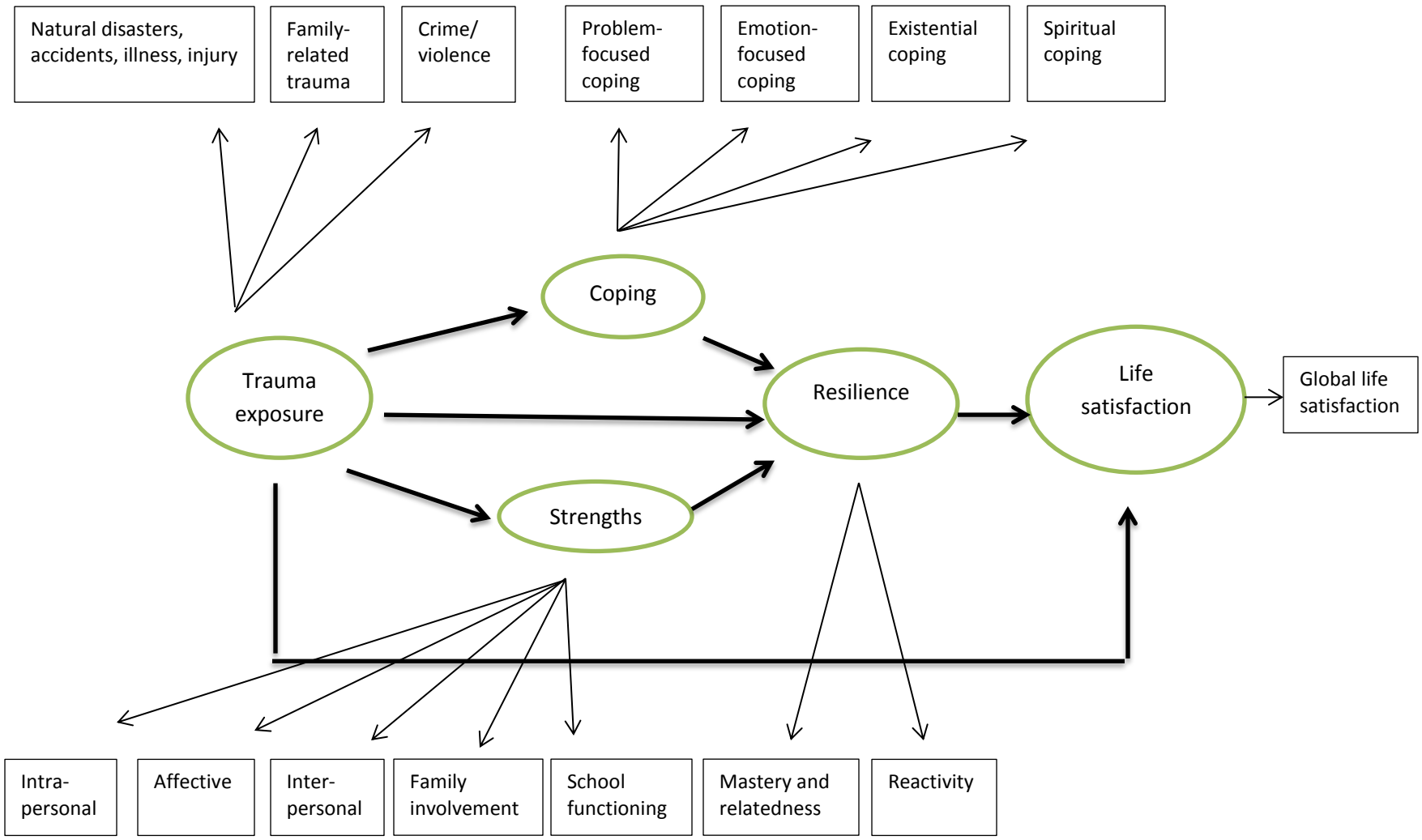

Figure 5.1: The hypothesised model to be tested

The latent exogenous variable, trauma exposure, will be measured by three manifest variables: exposure to natural disasters, accidents, illness and injury; exposure to family-related trauma; and exposure to crime or violence. The latent endogenous variable, strengths, will be measured by five manifest variables: intrapersonal strength, affective strength, interpersonal strength, family involvement, and school functioning. The latent endogenous variable, coping, will be indicated by four manifest variables: problem-focused coping strategies, emotion-focused coping strategies, existential coping strategies, and spiritual coping strategies. The latent endogenous variable, resilience, will be indicated by two manifest variables: sense of mastery and relatedness (which is a combined score), and emotional reactivity. The latent endogenous variable, life satisfaction, will be measured with one manifest variable, global life satisfaction.

Seven hypotheses are indicated in the figure. These hypotheses are only briefly motivated here as they were discussed in depth in the literature chapters.

1. Trauma exposure correlates with satisfaction with life. As indicated in the previous chapter, there is much evidence for the negative effect of trauma exposure on life satisfaction and continuous exposure especially intensifies the negative relationship between exposure and life satisfaction.
2. Trauma exposure correlates with strengths. Strength-based interventions for adolescents exposed to trauma is gaining popularity, but studies identifying the strengths that are important to South African adolescents exposed to trauma, is still scarce.
3. Trauma exposure correlates with coping. Exposure to a traumatic event results in emotional distress, and coping strategies emerge in an attempt to alleviate this distress. Coping strategies, thus, are important predictors of post-traumatic outcomes in adolescents.
4. Trauma exposure correlates with resilience. Resilience is a process of adapting effectively to significant sources of trauma, enabling the adolescent to bounce back from adversity. Thus, as explained in chapter 2, the presence of adversity – such as trauma exposure – is a necessary condition for the identification of resilience.
5. Strengths correlates with resilience. Adolescents who use their strengths more often experience greater subjective and psychological well-being.
6. Coping correlates with resilience. The transactional process of coping is important to resilience and is aimed at interpreting and overcoming stressors. As many adolescents

react to trauma with helplessness, resilient adolescents are distinguished by their coping strategies.

7. Resilience predicts life satisfaction. Subjective well-being is considered an indicator of resilience in an adolescent faced with difficulty.

In order to test the model, data were gathered on each of the variables in a population of young adolescents.

5.4 Participants

A data set gathered by a research team, which included the researcher, was used. A random sample of 1 073 Grade 8 learners from 10 Free State schools in both urban and rural areas were included in the study. The majority of these learners were 13 to 15 years old, which correlates with the life stage of early adolescence. Two schools were randomly drawn from each of the five districts in the Free State. The entire Grade 8 class from each school that was drawn, participated in the study. This sampling strategy is indicated for obtaining larger sample groups, and for group-administered surveys (Gravetter & Forzano, 2006).

The data were collected from the ten schools during the first semester of 2010. Standardised psychometric tests were administered during school days under the supervision of registered psychologists and psychometrists (which ensured competent administration of the survey). The survey was completed within a two hour session during which the learners took regular breaks. Questionnaires were made available in English, Afrikaans and Sesotho. Questionnaires were translated by accredited translators by means of the back-translation method.

The supervision provided by the test administers was aimed at controlling the conditions under which the questionnaires were completed. The administers established rapport with the group of participants and attempted to reduce the novelty effect (Gravetter & Forzano, 2006). The learners were given the opportunity to ask questions and get immediate feedback to avoid misinterpretation of questions. Also, regular breaks were provided to prevent fatigue. Further, all participants were treated in the same way, and given the same set of instructions to decrease experimenter bias (Stangor, 2011). These measures contribute to the increased external validity of the study (Stangor, 2011).

Some of the cases were deleted from the data set for the following reasons:

1. Four cases were deleted for not completing any of the questionnaires.
2. Two cases were deleted due to the learners' indicating that they were in Grade 6 and 9 respectively.
3. Five cases were deleted because the learners were too young (12 years).
4. A number of 44 cases were deleted because the learners were too old (between 16 and 18 years).
5. The number of coloured learners (110) was too small to use in further analysis and their data were, therefore, deleted from the data set. So were the data of the 12 learners who indicated that they were Asian, and the six learners who preferred the category "other" in terms of racial group.

There were 890 valid cases left in the data set. The reliability coefficients for the measuring instruments were calculated for this group of 890 participants. However, the data set contained 233 cases with missing data for the questions on trauma exposure. As exposure to different types of trauma cannot be predicted from exposure to a specific type of event, the values for the missing data was not estimated. Also, there was no significant difference between the participants with missing data and those who completed the questions on trauma exposure for any of the other variables, except for active emotional coping. Therefore, the decision was made to delete the 233 cases with missing data. After these cases were deleted, only five cases were left who had missing data for the other variables. These five cases were also deleted. The model was, therefore, estimated for a sample size of 652 participants. The descriptive statistics and correlations was also calculated for this group of 652 participants.

The mean age of the group was 13.8, with the youngest participant being 13 years old and the oldest being 15. All participants were in Grade 8.

5.4.1 Demographic characteristics

A biographical questionnaire consisting of 25 questions was administered to gather information regarding gender, race, socio-economic status, living arrangements, parental educational level, and marital status. The descriptive statistics yielded by this questionnaire will be discussed in this

section. The question on the race of the participant included the categories: Asian, Black, Coloured, White, and Other, with the option to specify. The responses to this question will also be used in further analysis to compare the findings for black and white participants.

5.4.1.1 Gender, race and language group

Females were overrepresented in the participant group, with 63.2% of the participants being female. Of the 10 schools that were randomly drawn to be included in the sample, nine were co-educational, while one was a girls only school. The inclusion of this school might have influenced the demographic composition of the sample. For this reason the differences between males and females were not analysed in this study. Also, in interpreting the results, it should be kept in mind that almost two-thirds of the group of participants is female.

The sample consisted of more black (55.4%) than white (44.6%) participants. Reddy *et al*. (2003) and Reddy *et al.* (2010) conducted South African national surveys on youth risk behaviour (YRBS) in which representative samples of adolescents participated. These researchers report that the majority of South African adolescents classified themselves as black (78.1%), while 14.2% indicated that they are coloured, 5.7% that they are white, and 1.1% that they are Asian. The Free State province has higher proportions of black (84.3%) and white (10.7%) inhabitants compared to national statistics (Jacobs, Punt, & Phaladi, 2009). Given these numbers, black learners are underrepresented in the current group of participants, and white learners overrepresented. According to Jacobs *et al*. (2009), only 4.5% of individuals living in the Free State are coloured and 0.3% are Indian. Thus, there is a smaller population of coloured and Indian learners living in the Free State compared to the numbers provided for the country.

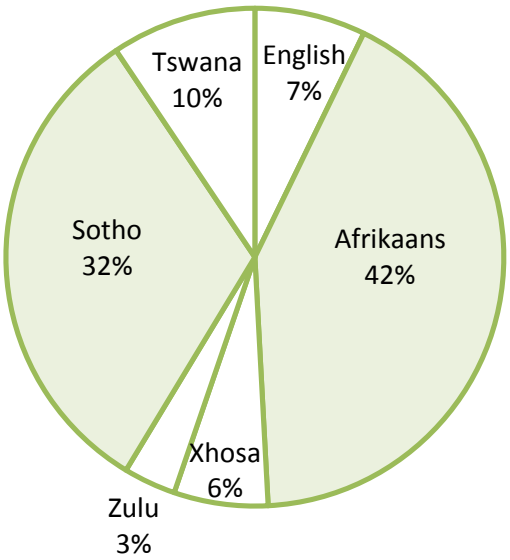

Figure 5.2: Distribution of participants by language

The majority of participants were Afrikaans or Sotho speaking, with the remaining 26% of the participants speaking English, Xhosa, Zulu, Tswana or other languages. The questionnaires were made available in Afrikaans, Sotho and English, while the medium of instruction of all the participating schools were either Afrikaans or English.

5.4.1.2 Living arrangements

The majority of the participants live in urban areas (75.8%). Although schools were drawn from all five districts in the Free State province, of which most are considered rural, a greater number of learners from the schools in Bloemfontein participated, probably due to the classes' being bigger in number in Bloemfontein.

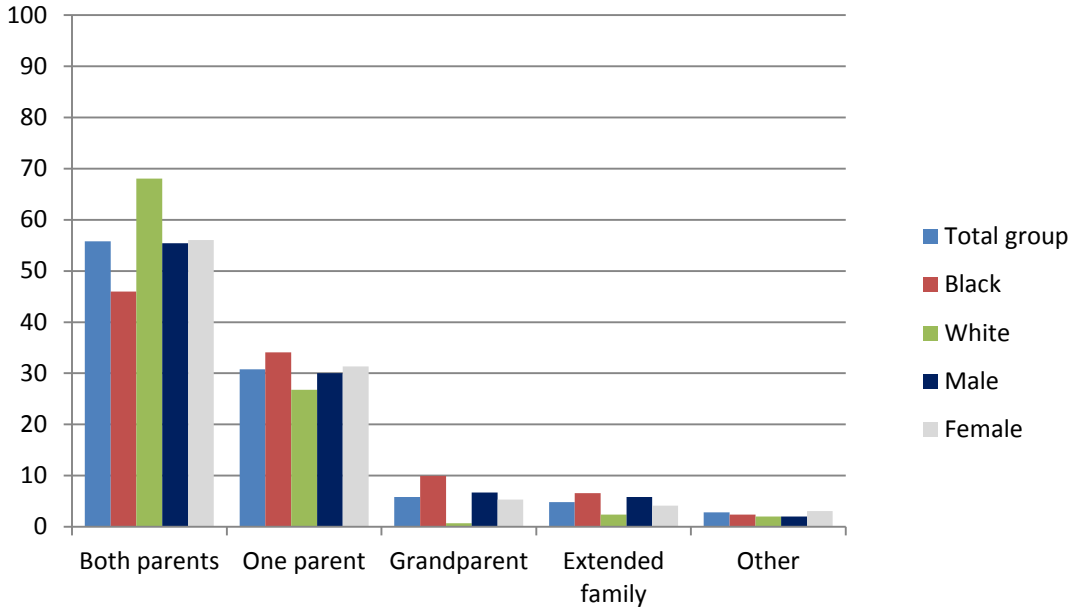

Figure 5.3: Living arrangements of the participants

The majority of the participants (87%) live with at least one of their parents, with 55.8% living with both their parents. Five learners indicated that they live with siblings (it is not clear whether these are child-headed households), two live in children's homes, and 11 indicated the category "other". The group of participants seems to be better off in terms of living arrangements compared to national statistics, which indicate that 75% of children live with at least one of their parents (Hall & Posel, 2012). The higher number of children living with their parents might be due to the overrepresentation of white learners in the sample, as proportionally more white children live with their parents compared to black children (Amoateng, Heaton, & Kalule-Sabiti, 2007). In the current group of participants 68% of white children live with both parents, compared to 46% of black children.

5.4.1.3 Parents

A total of 32 (4.9%) of the learners reported that their mothers are deceased, and 85 (13%) reported that their fathers are deceased. Again these numbers are smaller than those reported for national samples – up to 25% of children in South Africa have lost a parent as indicated in chapter 3.

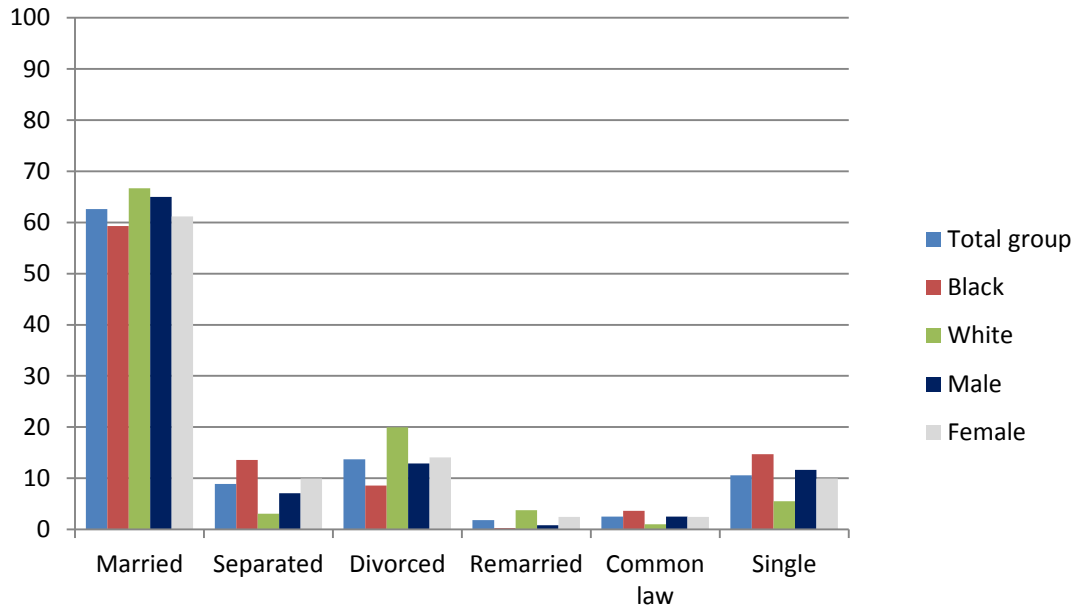

Figure 5.4: Parents' marital status

About two-thirds of the participants' parents are married, remarried, or considered partners under the common law act. As indicated in previous chapters, around 25% of black women and 60% of white women are married, and the statistics provided above, therefore, seems to be in line with national numbers. Of the children whose parents are not married anymore, more white children report their parents are divorced (19.9%), while more black children report that their parents are separated (13.6%) or single (14.7%).

5.4.1.4 Socio-economic status

A number of 16.1 million people received social grants in 2013 (Clark, 2013), which comprises 31% of the South African population. Among the current group of participants 24.1% reported that their families receive social grants – a figure slightly lower than the national statistic. Although the majority of the participants indicated that they always have food to eat, 12 adolescents report going hungry five or more times a week.

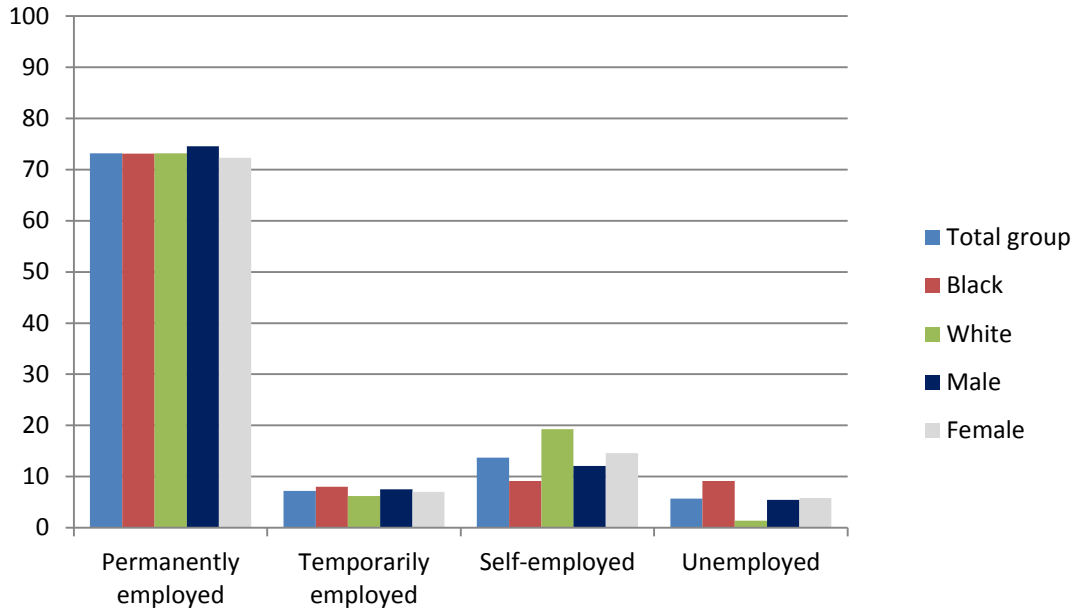

Figure 5.5: Employment status of participants' parents

The unemployment rates for these children's parents were quite low compared to the national prevalence rate of 25% (Mokate *et al*., 2011). Again, the adolescents included in the sample seem to be better off than the general population in South Africa. Unemployment is higher among the black group (9.1%) than the white group (1.4%).

5.4.1.5 Religion

The participants were surveyed with regard to both religious affiliation and frequency of religious practice.

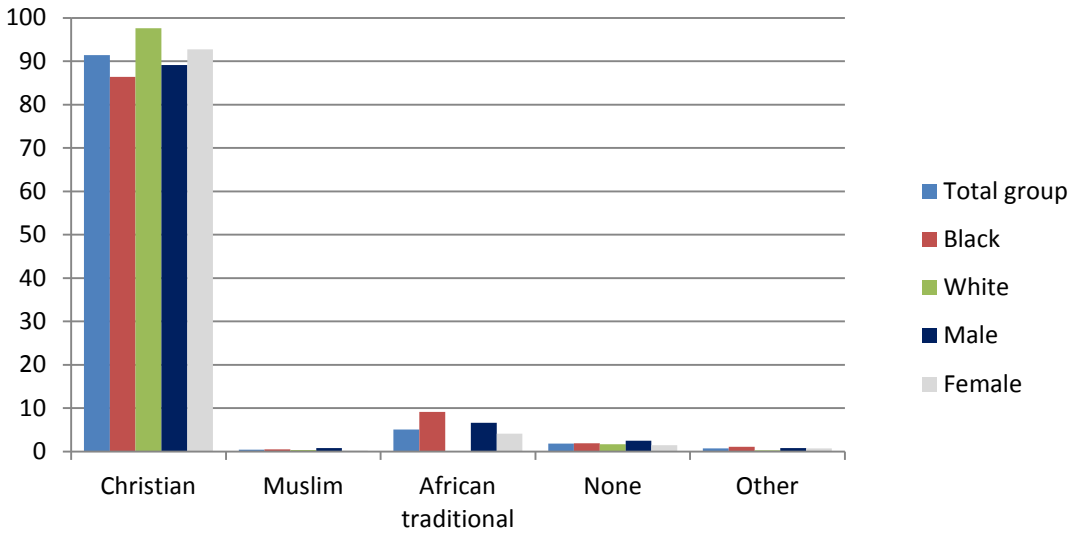

Figure 5.6: Distribution of participants by religious practice

The group of participants is predominantly of the Christian religion. Although the majority of the participants indicated that they are black, only 5% reported practising African traditional religion. A relatively large number of black participants, therefore, consider themselves Christian.

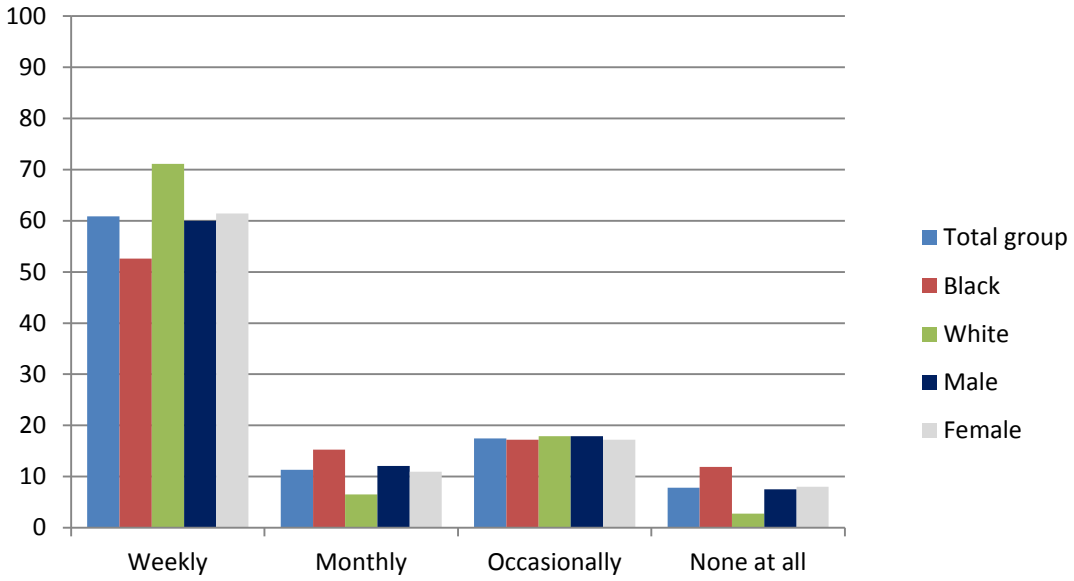

Figure 5.7: Frequency of religious practice

Almost two-thirds of the participants indicated that they attend religious meetings weekly. Religious practice is assessed in this study as a coping strategy. This frequent attendance of meetings can, therefore, contribute to the well-being of this group of participants.

5.4.2 Summary of the demographic characteristics of the participants

A stratified random sample of 1 073 Grade 8 learners from 10 schools in all five districts of the Free State province were obtained for the current study. However, some of the data sets were deleted for various reasons. Thus, the reliability of the measuring instruments was determined for 890 participants, while the model was tested for 652 participants.

The sample was predominantly female, which might skew the results of this study. The sample is further predominantly Christian, and the majority live in urban areas with parents who are still married. Only 34% reported that their parents are divorced, separated or single. More black than white learners participated, but the black participants were still underrepresented in comparison with population proportions. Mostly Sotho- and Afrikaans-speaking learners participated. The participants' living conditions seem to be better than the statistics provided for national samples, as 87% still live with at least one of their parents, only 18% have lost a parent, and only 6% report that their parents are unemployed. A quarter of the participants' families receive social grants.

The data were collected by using standardised psychometric questionnaires which were made available in Sotho and Afrikaans (spoken by 74% of the participants), as well as English, the medium of instruction for many of the participants. The questionnaires used in the survey will be discussed next.

5.5 Measuring instruments

Five measuring instruments have been included in the study to measure the latent variables. The following section will explain the psychometric properties of each. The alpha coefficients for each of the instruments were calculated to determine the internal consistency of the data yielded by all the subscales for the current group of participants. Since these questionnaires do not measure skills, but psychological characteristics that require introspection, alpha values of higher than 0.8

are desirable, while values of 0.7 are also accepted widely (DeVellis, 2003). A total score was calculated for all of the subscales and scales if at least 75% of the items were answered.

5.5.1 The Stressful Live Events Screening Questionnaire

A shortened version of the *Stressful Live Events Screening Questionnaire (SLESQ)* (Goodman, Corcoran, Turner, Yuan, & Green, 1998) was used to determine whether the participants have been exposed to trauma. The questionnaire was developed to assess life-time exposure to traumatic events (Goodman *et al*., 1998). The questionnaire consists of 12 questions which can be categorised in four types of trauma: exposure to natural disasters; exposure to illness, accidents and injury; exposure to family-related trauma; and exposure to crime and violence. Since only one item measures natural disasters, this type of trauma was grouped with accidents and injury for further analysis. For each question the participant had to indicate yes or no; if yes, then the number of times exposed, and the duration since the exposure.

The question determining exposure to natural disasters is: *Have you ever been confronted with a natural disaster that threatened your life and property, or the lives and property of your loved ones?* A question measuring exposure to illness includes: *Have you or any of your loved ones ever been diagnosed with a life-threatening illness?* Exposure to family-related trauma was measured by questions such as: *Have you ever been the victim of domestic violence?* And an example of how exposure to crime and violence was determined is: *Have you ever witnessed someone being violently killed?* A total score is calculated by determining the number of traumatic events participants were exposed to. The total number of traumatic events exposed to ranged from 0 to 12, with a mean of 2.62 (SD = 1.96).

The questionnaire was developed initially as a screening instrument for use in non-treatment-seeking populations, specifically student populations (Goodman *et al*., 1998). Goodman *et al*. (1998) obtained a test-retest reliability of 0.89 for a sample of American students, but warn that the questionnaire might be less useful for populations with reading difficulties. The questionnaire is considered useful in situations where a general account of exposure is needed (Goodman *et al*., 1998). The questionnaire was deemed appropriate for the current study as the sample of adolescents were not seeking treatment and were required to give a general account of their exposure. On a practical level those adolescents with reading difficulties could find the

questionnaire difficult. This was indeed the questionnaire with the most missing data for the current group of participants. No other South African studies that used this questionnaire could be found (according to a search done on Nexus, 20 November 2013).

Given that exposure to each of these events is considered independent from one another, the researcher did not expect the learners' responses to show consistency among items; therefore, it is not relevant to determine reliability. Furthermore, it is not meaningful to determine the characteristics of the distribution, as a normal curve would not necessarily be expected.

5.5.2 The Satisfaction with Life Scale

The *Satisfaction with Life Scale* (Diener, Emmons, Larsen & Griffin, 1985) determines the participants' cognitive assessment of their subjective well-being. Thus, this scale was included to measure the latent variable, life satisfaction. This specific scale is noted as one of the most popular assessment instruments for determining life satisfaction (Oishi, 2006).

The scale consists of five items which was used individually as a manifest variable of life satisfaction. The five items are as follows: *In most ways my life is close to ideal; The conditions of my life are excellent; I am satisfied with my life; So far I have gotten the important things I want in life;* and *If I could live my life over, I would change almost nothing*. For each item the participant had to indicate on a Likert-type scale with seven possible options to what extent they agree or disagree with the statement. Responses ranged from *very strongly agree* to *very strongly disagree*. A total score is calculated by summing the responses to the five items. The scale has a minimum score of 5 and a maximum score of 35.

Pavot and Diener (1993) presented results from six studies in which the alpha coefficients range from 0.79 to 0.89. Neto (1993) investigated the psychometric properties of the scale in a Portuguese adolescent population and reported an average score of 24.1 with a standard deviation of 5.9, and an internal consistency coefficient of 0.87. Neto (1993) asserted that all five items have high factor loadings on a single common factor and, therefore, considered the scale useful in adolescent populations. Evidence of the reliability of the scale in South Africa is presented by previous South African adolescent studies (Basson, 2008; Henn, 2005).

In his review on the reliability of the scale, Vassar (2008) notes that scale reliability increases as the proportion of females in the sample increases, while reliability decreases in adolescent samples compared to adult samples. The reliability of the scale for the current group of participants was calculated.

Table 5.1: Reliability coefficients for the *Satisfaction with Life Scale* (5 items)

	N	***Chronbach's alpha***
Total group	882	0.713
Black	517	0.643
White	365	0.810
Male	231	0.614
Female	561	0.758

An alpha coefficient value of 0.713 was obtained from the data for this sample, which is considered acceptable. However, the reliability is slightly lower for both black and male participants.

5.5.3 The Resiliency Scales for children and adolescents

The *Resiliency Scales for Children and Adolescents (RSCA)* (Prince-Embury, 2006) determines the participants' resilience by means of three subscales: Sense of Mastery, Sense of Relatedness, and Emotional Reactivity. These three constructs are considered developmental constructs central to personal resilience (Prince-Embury, 2006). According to Prince-Embury and Courville (2008a), the selection of these constructs is further consistent with Masten's work on defining resilience as characteristic of normal development. Each of the three subscales has additional subscales associated with them. All of these will be discussed below. The *RSCA* was used to obtain two manifest resilience variables. The scores on mastery and relatedness were combined to obtain a score for resilience as suggested by Prince-Embury (2006). The score on emotional reactivity was used on its own as a variable that might decrease resilience.

The test consists of 64 items. An example of an item measuring mastery is: *I can make good things happen*. Relatedness was determined by items such as: *I can let others help me when I need*

to. Emotional reactivity was measured by items such as: *I strike back when someone upsets me*. Participants had to indicate on a Likert-type scale whether the statement is true. Five options were provided ranging from *never true* to *almost always true*. The scale has a minimum score of zero and a maximum score of 256.

This self-report scale is written at Grade 3 reading level to enable group administration to children and adolescents. Self-report is important for determining resilience, as resilience is mediated through the subjective experience of the individual (Prince-Embury, 2006). Berg-Nielsen, Vika and Dahl (2003), for example, found that adolescents' self-report of internalising problems are more valid than parent reports.

In a South African study by De Villiers (2009) alpha coefficients ranging from 0.9 to 0.93 were calculated for a middle childhood population.

5.5.3.1 The Sense of Mastery scale

This scale consists of 20 items divided as follows: Optimism (seven items), Self-efficacy (10 items), and Adaptability (three items). A total score for each of the three subscales within the scale is calculated by summing the responses to the items at the individual level. A total score for Sense of Mastery was calculated only when all three of the subscales had scores. The reliability of the scale for the current group of participants was calculated.

Table 5.2: Reliability coefficients for the Sense of Mastery scale (20 items)

	N	***Cronbach's alpha***
Total group	824	0.878
Black	518	0.852
White	364	0.912
Male	290	0.885
Female	534	0.875

The reliability is high for the total group and all subgroups, and the results obtained from this scale can be confidently used in further analysis.

5.5.3.2 The Sense of Relatedness scale

This scale consists of 24 items and four subscales: Trust (seven items), Support (six items), Comfort (four items), and Tolerance (seven items). A total score for each of the four subscales within the scale is calculated by summing the responses to the items. A total score for Sense of Relatedness was calculated only when all four of the subscales had scores. The alpha coefficients were calculated for the current group of participants.

Table 5.3: Reliability coefficients for the Sense of Relatedness scale (24 items)

	N	***Cronbach's alpha***
Total group	878	0.899
Black	473	0.863
White	355	0.927
Male	317	0.910
Female	561	0.891

The reliability was high for the total group and for all the subgroups of interest, and results based on this scale can be used with confidence in further analysis.

5.5.3.3 The combined resilience scale

Owing to a high correlation between Sense of Mastery and Relatedness, a combination score was determined. This combination score was one of the manifest variables used to indicate resilience. In general, there seems to be a high correlation between Sense of Mastery and Sense of Relatedness, which Prince-Embury and Courville (2008a) consider consistent with the idea that these two aspects are linked developmentally. A combined score was determined for all learners who had scores for both Sense of Mastery and Relatedness. This combined score resembles the concept of the Resource Index proposed by Prince-Embury (2006), for which both the individual's Sense of Mastery and Sense of Relatedness are considered. Prince-Embury (2006) states that, although mastery and relatedness have distinct developmental pathways, they are highly inter-related.

Reliability coefficients were calculated for the current group of participants.

Table 5.4: Reliability coefficients for the combined resilience scale (37 items)

	N	*Cronbach's alpha*
Total group	821	0.934
Black	470	0.917
White	351	0.952
Male	288	0.940
Female	533	0.930

The reliabilities were high for all groups.

5.5.3.4 The Emotional Reactivity scale

The scale consists of 20 items and three subscales: Sensitivity (six items), Recovery (four items), and Impairment (10 items). A total score for each of the three subscales within the scale is calculated by summing the responses to the items. A total score for emotional reactivity was calculated only when all three of the subscales had scores. Alpha coefficients were calculated for the current group of participants.

Table 5.5: Reliability coefficients for the Emotional Reactivity scale (20 items)

	N	*Cronbach's alpha*
Total group	778	0.899
Black	442	0.864
White	336	0.935
Male	276	0.913
Female	502	0.889

The reliabilities were high for all groups.

5.5.4 The Coping Schemas Inventory

The *Coping Schemas Inventory (CSI)* (Wong, Reker & Peacock, 2006) reflects adolescents' preference for different coping strategies. The scale was used to measure the latent variable coping. This measure consists of 72 items, covering nine coping subscales which can be categorised into four domains of coping. Problem-focused coping is measured by the subscales Situational Coping, Self-restructuring, and Social Support. Emotion-focused coping consists of Active Emotional Coping, Passive Emotional Coping, and Tension Reduction. Existential coping is indicated by Meaning Coping and Acceptance Coping. Religious Coping is measured with one subscale with the same name.

Participants had to indicate to what extent they rely on a specific strategy to cope with situations. They indicated their responses on a Likert-type scale with five options ranging from *not at all* to *a great deal*. An example of a question contained in each of the subscales is provided below. Situational coping: *To what extent do you do something about the situation?* Self-restructuring: *… do what is necessary to fulfil the requirements of the situation?* Social support: *… rely on others to do what I cannot do myself*? Active emotional coping*: … express my feelings and thoughts*? Passive emotional coping: *… wish that I could undo the past*? Tension reduction: *… practice controlled breathing techniques*? Acceptance: *… accept what has happened because eventually things will work out as well as can be expected?* Meaning: *… believe there must be a purpose in the suffering I experience*? Religion: *… do what is necessary to maintain a personal relationship with God?* The scale has a minimum possible score 72 of and a maximum score of 360.

Wong *et al*. (2006) report that the nine subscales' alpha coefficients are acceptable and range from 0.78 to 0.97, except for the Acceptance scale, for which a coefficient of 0.65 was obtained. The most frequently used coping schemas in a sample of American students were situational, active emotional, meaning and self-restructuring coping (Wong *et al*., 2006). Also, in their study females consistently scored higher than males on all coping schemas, but this probably reflect a gender bias in response style, not in actual use of coping strategies (Wong *et al*., 2006).

5.5.4.1 Problem-focused coping

The Situational and Self-restructuring Coping scales each consists of eight items, while the Social Support coping scale has six items. A total score for all the subscales is calculated by summing the responses to the items. Coefficient alpha values were calculated for this group of participants.

Table 5.6: Reliability coefficients for the Problem-focused coping scales

	Situational (8 items)		***Self-restructuring (8 items)***		***Social support (6 items)***	
	N	***Chronbach's alpha***	***N***	***Chronbach's alpha***	***N***	***Chronbach's alpha***
Total group	770	0.702	768	0.751	729	0.646
Black	426	0.665	423	0.736	431	0.597
White	344	0.746	345	0.773	298	0.725
Males	268	0.697	270	0.670	246	0.644
Females	502	0.706	498	0.785	483	0.646

The reliability for Situational Coping is acceptable for the total group, but lower than 0.7 for both black participants and males. The reliability for Self-restructuring Coping is acceptable for the total group, but lower than 0.7 for male participants. The reliability for the Social Support scale is lower than 0.7 for the total group, and low for black participants.

5.5.4.2 Emotion-focused coping

The Active Emotional and Tension Reduction Coping scales each consists of eight items, and the Passive Emotional Coping scale of 12. The total score for each scale was calculated by summing the responses on individual items. The coefficient alpha values were calculated for this group of participants.

Table 5.7: Reliability coefficients for the Emotion-focused coping scales

	Active emotional (8 items)		*Passive emotional (12 items)*		*Tension reduction (8 items)*	
	N	***Chronbach's alpha***	***N***	***Chronbach's alpha***	***N***	***Chronbach's alpha***
Total group	784	0.697	768	0.734	784	0.705
Black	437	0.654	426	0.736	430	0.704
White	347	0.754	342	0.739	354	0.712
Male	278	0.681	275	0.704	276	0.705
Female	326	0.707	493	0.749	508	0.703

The reliability of the Active Emotional scale is lower than 0.7 for the total group, as well as for the black and male participants. The reliability of the Passive Emotional and Tension Reduction scales is acceptable.

5.5.4.3 Existential coping

The Meaning Coping scale consists of four items and the Acceptance Scale of nine. A total score for all the subscales was calculated by summing the responses to the items. The coefficient alpha values were calculated for this group of participants.

Table 5.8: Reliability coefficients for the Existential coping scales

	Meaning (4 items)		*Acceptance (9 items)*	
	N	***Chronbach's alpha***	***N***	***Chronbach's alpha***
Total group	801	0.595	768	0.706
Black	448	0.584	427	0.673
White	353	0.593	341	0.750
Male	283	0.554	264	0.677
Female	518	0.618	504	0.721

The reliability of the Meaning scale is low for all of the groups. The low reliabilities should be considered when interpreting data from this scale. The reliability was influenced probably by the small number of items on this scale. The reliability of the Acceptance scale is acceptable for the total group, but lower than 0.7 for black and male participants.

5.5.4.4 Religious coping

The Religious Coping subscale consists of nine items. A total score for the subscale is calculated by summing the responses to the items. The coefficient alpha values were calculated for this group of participants.

Table 5.9: Reliability coefficients for the Religious coping scale (9 items)

	N	***Cronbach's alpha***
Total group	800	0.852
Black	447	0.830
White	353	0.881
Male	280	0.811
Female	520	0.869

The reliabilities were high for all the groups.

5.5.5 The Behavioural and Emotional Rating Scale

The *Behavioural and Emotional Rating Scale 2 (BERS)* (Epstein & Sharma 1998) assesses five strengths with five subscales, totalling 52 self-report items. The subscales and manifest variables are: Interpersonal, Intrapersonal and Affective Strengths, Family Involvement, and School Functioning. As explained in the previous chapter, this measuring instrument were chosen as the measured strengths were found to be significant in the context of trauma exposure, and as it also corresponds with the systemic perspective of the current study. Initially, the *BERS* was designed to be completed by adults who knew the child, but these items were rewritten to also include a youth rating scale (Buckley, Ryser, Reid, & Epstein, 2006). The five-factor structure obtained for the first scale was confirmed for the youth rating scale as well (Buckley *et al*., 2006).

Participants had to indicate the extent to which each item described them by responding to a Likert-type scale with four options ranging from *very much like you* to *not at all like you*. An example of a question determining interpersonal strength is: *I let someone know when my feelings are hurt*. Intrapersonal strength is measured by items such as: *I believe in myself*. A question measuring affective strength is, for example: *It is okay when people hug me*. An example of a question determining family involvement is: *My family makes me feel wanted*. School functioning is measured by items such as*: I do my schoolwork on time*. The scale has a minimum possible score of zero and a maximum score of 156.

Epstein (2000) reports test-retest reliabilities of between 0.85 and 0.99 and asserts that, due to the sound psychometric properties of the scale, the *BERS* has broad applicability. However, Lappalainen, Savolainen, Kuorelahti and Epstein (2009) warn that, regardless of how well the psychometric properties of a scale are documented, these properties should be determined again when the test is used in a different culture. Alpha coefficients ranging from 0.66 to 0.77 was obtained by De Villiers (2009) for a South African sample of children in middle childhood.

Girls seem to achieve a somewhat higher average than boys on each of the scales (Epstein & Sharma, 1998; Lappalainen *et al*., 2009).

5.5.5.1 Interpersonal strengths

This scale consists of 15 items. A total score for the subscale is calculated by summing the responses to the items. The reliability coefficients were calculated for the current group of participants.

Table 5.10: Reliability coefficients for the Interpersonal strengths scale (15 items)

	N	*Cronbach's alpha*
Total group	817	0.848
Black	460	0.836
White	357	0.866
Male	292	0.863
Female	525	0.867

The reliabilities for all the groups are acceptable.

5.5.5.2 Intrapersonal strengths

This scale consists of 11 items. A total score for the subscale is calculated by summing the responses to the items. The reliability coefficients were calculated for the current group of participants.

Table 5.11: Reliability coefficients for the Intrapersonal strengths scale (11 items)

	N	*Cronbach's alpha*
Total group	819	0.821
Black	461	0.809
White	358	0.835
Male	294	0.842
Female	525	0.798

The reliabilities for all the groups are acceptable.

5.5.5.3 Affective strengths

This scale consists of seven items. A total score for the subscale is calculated by summing the responses to the items. The reliability coefficients were calculated for the current group of participants.

Table 5.12: Reliability coefficients for the Affective strengths scale (7 items)

	N	*Cronbach's alpha*
Total group	833	0.743
Black	473	0.734
White	357	0.753
Male	301	0.737
Female	529	0.742

The reliabilities for all the groups are acceptable.

5.5.5.4 Family involvement

The scale consists of 10 items. A total score for the subscale is calculated by summing the responses to the items. The reliability coefficients were calculated for the current group of participants.

Table 5.13: Reliability coefficients for the Family involvement scale (10 items)

	N	*Cronbach's alpha*
Total group	809	0.775
Black	460	0.723
White	349	0.788
Male	295	0.786
Female	514	0.766

The reliabilities for all the groups are acceptable.

5.5.5.5 School functioning

This scale consists of nine items. A total score for the subscale is calculated by summing the responses to the items. The reliability coefficients were calculated for the current group of participants.

Table 5.14: Reliability coefficients for the School functioning scale (9 items)

	N	***Cronbach's alpha***
Total group	831	0.793
Black	471	0.799
White	360	0.787
Male	300	0.815
Female	531	0.800

The reliabilities for all the groups are acceptable.

5.5.6 Summary of the properties of the measuring instruments used in the study

Five questionnaires were used in the study. The *SLESQ* provided three manifest variables for trauma exposure. The *Satisfaction with Life Scale* measures global life satisfaction and yielded reliable data. The *RSCA* provided two manifest variables for resilience, and the scales used are reliable for the current group of participants. The *CSI* provided four manifest variables for coping. However, the reliability of some of the subscales was slightly lower; especially social support, active emotional coping and meaning had lower reliability coefficients for the current participant group. Some of the Problem-focused coping and Existential coping subscales had lower reliability coefficients for male and black participants. The *BERS-2* provided five manifest variables for strengths. All of these were measured reliably for the current group of participants.

5.6 Ethical considerations

During the process of data collection and analysis, the researcher adhered to the Health Professions Council of South Africa's (HPCSA) guidelines as stipulated in the Ethical rules of conduct for practitioners registered under the Health Professions Act, 1974 (Government Gazette, 2006).

Permission to conduct this survey was obtained from the Department of Education and school principals. Participation was voluntary and the informed assent of learners and their parents was obtained prior to participation. The ethical considerations were discussed with the participants again before administration. They also had the freedom to withdraw from the study at any stage. The field workers debriefed learners after the administration of the questionnaires to address any issues that resulted from involvement in the research process. Confidentiality was maintained throughout the process.

None of the participants experienced any harm as a result of their participation in this study. However, participants did have the option of referral for psychological services if required, and a few high-risk students were helped in this way. Furthermore, intervention programmes were initiated at the participating schools and information leaflets on coping were distributed.

5.7 Statistical analysis

In the early seventies factor analysis (pioneered by Spearman) and path analysis (developed by Wright) were combined to form SEM (Blunch, 2008). The overarching question asked by SEM is whether the model produces an estimated population covariance matrix that is consistent with the sample covariance matrix produced by the data set (Ullman, 1996; Ullman, 2006). Parameters – including path coefficients, variances and covariances of the exogenous variables – are estimated to create an estimated population covariance matrix (Ullman, 1996).

First, the model should be specified (Blunch, 2008) as was done earlier in this chapter. The method of SEM is a confirmatory technique and requires prior knowledge of potential relationships among variables (Ullman, 1996). According to Streiner (2006), this is the most difficult and

important part of SEM, as it requires thought and understanding of a theoretical model. Also, the primary cause of poorly fitting models is the omission of crucial variables at this stage (Streiner, 2006).

Second, the model should be identified and reformulated if necessary (Blunch, 2008). In order for a model to be identified, two conditions should be met. The first condition is that the number of data points should be at least as large as the number of parameters to be estimated (Blunch, 2008). The data points refer to the variances and covariances in the sample covariance matrix, while the parameters refer to the variances and covariances of the exogenous variables (Ullman, 2006). The second condition is that all the latent variables must have an assigned scale (Blunch, 2008). The model is considered identified if there is a unique numerical solution for each of the parameters in the model (Ullman, 2006).

Third, the model should be estimated (Blunch, 2008). A model is estimated in such a way that the difference between the empirical covariance matrix and the covariance matrix implied by the model is minimised (Blunch, 2008). Two of the most common indices of how well the data fit the model, is the chi-squared test for goodness of fit, and the root mean square error of approximation (RMSEA) fit index (Streiner, 2006). A non-significant chi-square test implies that there is no significant difference between the data and the model, which is considered the desired output (Streiner, 2006). The RMSEA is interpreted by using a rule of thumb, as there is no statistical test of significance for the RMSEA (Streiner, 2006). Values less than 0.08 reflect a reasonable fit, and values less than 0.06 a good fit (Hu & Bentler, 1999). As the model is estimated, it is tested in various ways and can even be revised in order to improve its fit (Blunch, 2008). However, when the model is modified, the analysis changes from a confirmatory to an exploratory technique, and conclusions should be considered with great caution (Ullman, 2006). The model is provisionally accepted only until it can be tested on new data for final acceptance or rejection (Blunch, 2008).

One of the advantages of using SEM is that the relationships between factors are free of measurement error, because the error is estimated and removed (Ullman, 2006). The removal of measurement error implies that construct-level hypotheses are tested at the appropriate level (Ullman 2006). Also, SEM allows for complex relationships to be estimated (Ullman, 1996). However, like factor analysis, it is a large sample technique (Ullman, 1996). Bentler and Chou

(1987) recommend 15 cases per measured variable. As the current study consists of 19 measured variables, a sample size of at least 385 participants is required.

The analyses were conducted using the AMOS (Arbuckle & Wothke, 1999) software developed by AMOS Development Corporation.

5.8 Conclusion

A correlational design was used to clarify the relationship between trauma exposure, resilience, strengths, coping, and life satisfaction in a sample of South African adolescents. Seven hypotheses were stated: Trauma exposure correlates with (1) life satisfaction, (2) resilience, (3) coping, and (4) strengths. (5) Resilience correlates with life satisfaction. (6) Coping and (7) strengths correlate with resilience. A random sample of young adolescents was drawn from 10 schools across the Free State province. The sample is predominantly female, Christian, and lives in urban areas with at least one parent. The group of participants seems to be doing quite well when indicators of parental employment and living conditions are compared with national numbers.

The data were obtained by means of five questionnaires. The reliability of some of the *CSI* scales were lower for the male and black participants. However, both resilience and strengths were reliably measured for the group of participants. Ethical requirements were adhered to during the data-gathering process. The method of SEM will be used to compare the estimated population covariance matrix with the sample covariance matrix to determine the goodness of fit of the proposed model. The results obtained will be discussed in the next chapter.

6. RESULTS AND DISCUSSION

6.1 Introduction

In this chapter the descriptive statistics obtained for the current sample will be explored first. Secondly, the model proposed in the methodology chapter will be tested using structural equations modelling (SEM) to determine whether it fits the data sampled. The results of the SEM will be presented and compared for three groups: the total group, the black group, and the white group. Finally, the results will be discussed and interpreted in context of both the theoretical model and literature discussed in earlier chapters.

6.2 Descriptive statistics

Trauma exposure was not measured on a continuous scale, but the data yielded by the questionnaire will be explored in this section. The average scores, standard deviations, and skewness and kurtosis values for all the other instruments will also be reported.

6.2.1 Trauma exposure in the current group of participants

The number of participants exposed to each of the traumatic events is of interest and is reflected below. Some cases showed a high percentage of missing data per question, ranging from 4.5% to 7% of participants who did not answer the question. The highest number of missing data was for the question on sexual assault, which might reflect the sensitive nature of this item. Also, it should be kept in mind that almost two-thirds of the sample was girls, which might also reflect gender-specific sensitivity around this issue.

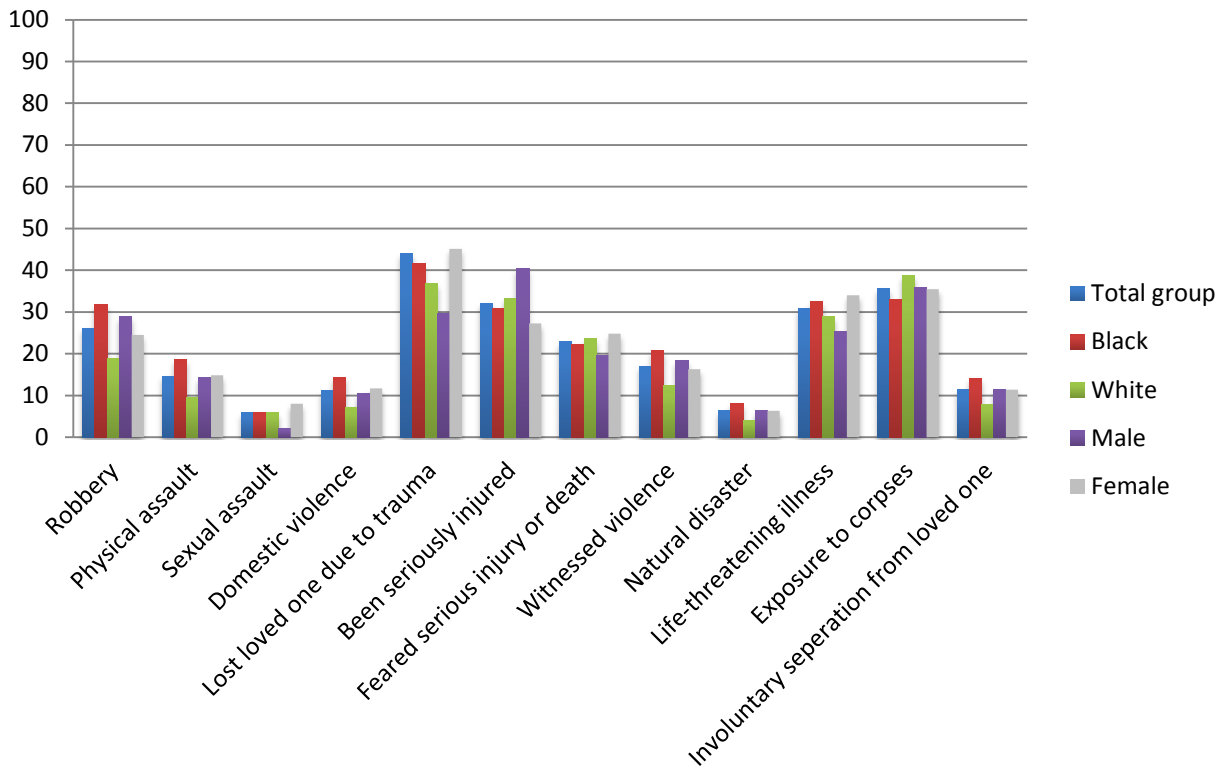

Figure 6.1: The prevalence for types of trauma exposure

The types of trauma with the highest exposure was losing a loved one due to unnatural causes (N=287), exposure to corpses (N=232), and serious injury (N=209). The type of trauma event with the lowest level of exposure was sexual assault (N=38), but it should be kept in mind that this was also the item with the most missing data. The highest prevalence for the black group was for losing a loved one, while the highest prevalence for the white group was exposure to corpses. The highest prevalence for males was for serious injury, while the highest prevalence for females was losing a loved one.

The frequency of exposure is indicated in the following table.

Table 6.1: Number of traumatic events participants were exposed to

Nr. of events	*Total group*		*Black*		*White*		*Male*		*Female*	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
0	90	13.8	46	12.7	44	15.1	40	16.7	50	12.1
1	129	19.8	60	16.6	69	23.7	50	20.8	79	19.2
2	142	21.8	77	21.3	65	22.3	50	20.8	92	22.3
3	125	19.2	70	19.4	55	18.9	46	19.2	79	19.2
4	69	10.6	41	11.4	28	9.6	17	7.1	52	12.6
5	43	6.6	33	9.1	10	3.4	17	7.1	26	6.3
6	26	4.0	17	4.7	9	3.1	10	4.2	16	3.9
7	18	2.8	10	2.8	8	2.7	5	2.1	13	3.2
8	4	0.6	3	0.8	1	0.3	3	1.3	1	0.2
9	5	0.8	3	0.8	2	0.7	1	0.4	4	1.0
12	1	0.2	1	0.3	0	0	1	0.4	0	0

A total of 90 participants had not been exposed to any traumatic events. The proportion of the sample exposed to at least one traumatic event is 86.2%, while 8.4% have been exposed to six or more traumatic events. Consistent with the South African studies discussed in previous chapters, trauma exposure is high for the current sample. One black male participant reported that he has been exposed to 12 events.

A greater proportion of black participants (87.3%) have been exposed to trauma compared to white participants (84.9%); and a greater proportion of females (87.9%) compared to males (83.3%).

6.2.2 The descriptive statistics obtained for the measuring instruments

The distribution of the subscale scores was evaluated by examining both skewness and kurtosis. Although tests of significance for skewness and kurtosis exist, these are extremely sensitive to sample size (Tabachnick & Fiddell, 2007). Thus, the guideline of values less than ±1 was used to

evaluate the skewness and kurtosis of the distributions (Brown, 2011). Structural equation modelling relies on data that are normal or nearly normal (Ward, Martin, Theron, & Distiller, 2007).

Table 6.2: Descriptive statistics for the scales used in the study (N=652)

Construct	*Subscale*	*Min*	*Max*	*Mean*	*SD*	*Skewness*		*Kurtosis*	
						Stat	*Std. error*	*Stat*	*Std. error*
Satisfaction with Life		5	35	24.28	6.16	-0.53	0.10	-0.05	0.19
Resilience	Combined	17	176	125.94	24.98	-0.54	0.10	0.56	0.19
	Emotional reactivity	2	80	31.53	15.16	0.63	0.10	0.15	0.19
Coping	Problem-focused	29	110	73.08	13.61	0.01	0.10	-0.05	0.19
	Emotion-focused	41	140	88.70	15.91	0.32	0.10	0.18	0.19
	Existential	15	65	44.70	8.45	-0.15	0.10	-0.13	0.19
	Religious	9	45	38.09	6.88	-1.11	0.10	0.81	0.19
Strengths	Interpersonal	4	45	33.73	7.25	-0.77	0.10	0.88	0.19
	Intrapersonal	2	33	26.95	5.25	-1.42	0.10	2.79	0.19
	Affective	0	21	15.69	3.93	-0.79	0.10	0.63	0.19
	Family Involvement	3	30	23.16	5.13	-1.05	0.10	1.12	0.19
	School Functioning	2	27	20.84	4.57	-1.01	0.10	1.20	0.19

The mean score for the *Satisfaction with Life Scale* is 24.28 (SD=6.16). According to Pavot and Diener (1993), a score of 20 represents the neutral point on the scale; a score between five and nine indicates extreme dissatisfaction with life; and a score of 30 or higher, high satisfaction. Mean life satisfaction scores vary from 23 to 28 (Vassar, 2008). Neither the skewness nor kurtosis values indicate problematic distributions for the scores on the scale.

The mean score for the combined Resilience scale is 125.94 (SD=24.98), and for the Emotional Reactivity scale it is 31.53 (SD=15.16). The mean score obtained for the combined scale correlates with a T-score of 47, and the mean score obtained for the Emotional Reactivity scale with a T-score of 55 (Prince-Embury, 2006). All of these T-scores are considered average for adolescents from non-clinical populations (Prince-Embury & Steer, 2010). Neither the skewness nor kurtosis values indicate problematic distributions for any of the resilience scales.

The mean score for the Problem-focused coping scale is 73.08 (SD=13.61), for the Emotion-focused coping scale it is 88.70 (SD=15.91), for the Existential coping scale it is 44.70 (SD=8.45), and for the Religious coping scale it is 38.09 (SD=6.88). Given the minimum and maximum scores possible for these scales, the first three mean scores are considered average, while the mean score for Religious coping is high. Also, the skewness value for the Religious coping scale was –1.11, indicating that the scores on this scale are not normally distributed and that the majority of learners had high scores. Neither the skewness nor kurtosis values of the other coping scales indicate problematic distributions according to the specified criteria.

The skewness and kurtosis values for two of the five strengths scales indicated a normal distribution. The mean score for the Interpersonal Strengths scale is 33.73 (SD=7.25), and for the Affective Strengths scale it is 15.69 (SD=3.93). Both of these scores are considered indicative of average strength (Epstein, 1998). The skewness values of the remaining three strengths scales indicated that scores on these scales were not normally distributed. The mean score for the Intrapersonal Strengths scale is 26.95 (SD=5.25), and the skewness value is -1.42. The mean score for the Family Involvement scale is 23.16 (SD=5.13), and the skewness value is -1.05. The mean score for the School Functioning scale is 20.84 (SD=4.57), and the skewness value is -1.01. However, although the majority of participants obtained higher scores for Intrapersonal strength, Family Involvement, and School Functioning, the scores are still considered average compared to the standard scores reported by Epstein (1998). Given that a normal distribution is an assumption

of a variety of techniques, the skewness of these scales might have some impact on the data analysis.

The differences in mean scores for black and white participants were also determined. The following table provide the descriptive statistics for these two groups, as well as the t-values obtained with the t-test for independent groups.

Table 6.3: A comparison of the mean scores obtained by white and black participants

		Black (N=361)		*White (N=291)*		*t-value*
		Mean	***SD***	***Mean***	***SD***	
Satisfaction with Life		24.04	6.07	24.58	6.26	-1.12
Resilience	Combined	121.92	24.08	130.92	25.22	-4.65*
	Emotional reactivity	31.78	14.09	31.23	16.41	0.46
Coping	Problem-focused	72.12	13.72	74.25	13.4	-2.00
	Emotion-focused	87.93	16.53	89.67	15.07	-1.39
	Existential	43.92	8.66	45.68	8.10	-2.65*
	Religious	38.01	6.82	38.20	6.96	-0.35
Strengths	Interpersonal	33.04	7.58	34.58	6.73	-2.70*
	Intrapersonal	26.33	5.63	27.73	4.64	-3.42*
	Affective	15.24	4.21	16.24	3.47	-3.25*
	Family Involvement	22.38	5.18	24.13	4.91	-4.39*
	School Functioning	21.00	4.72	20.65	4.38	0.97

* Significant at the 0.01 level, df=650

A statistically significant difference was found between the black and white participants for the for the following scales: Resilience ($t=-4.65$, $p<0.01$), Existential coping ($t=-2.65$, $p<0.01$), Interpersonal strength ($t=-2.70$, $p<0.01$), Intrapersonal strength ($t=-3.42$, $p<0.01$), Affective strength ($t=-3.25$, $p<0.01$), and Family Involvement ($t=-4.39$, $p<0.01$). For all of these scales the black group obtained a lower score, although these mean scores are still at an average level. Thus, their resilience, existential coping skill, and strengths are lower than those of the white group. Although these differences were statistically significant, the effect sizes were small (eta squared < 0.06), though (Cohen, 1988).

6.2.3 Summary of descriptive statistics

The majority of the current group of participants had been exposed to at least one traumatic event, with 8.4% of this group having been exposed to six or more events. A greater proportion of black participants had been exposed compared to white participants. The type of trauma to which participants had been exposed the most is losing a loved one due to unnatural causes.

The group of participants reported average levels of life satisfaction, resilience, coping, and strengths, with the black group reporting lower levels of resilience, existential coping and strengths than the white group. The distribution of scores on the Religious coping scale, the Intrapersonal strengths scale, the Family Involvement scale and the School Functioning scale is negatively skewed and might, therefore, have an impact on further data analysis.

6.3 Structural equation modelling

This section will first list the labels used for the different variables contained in the model. The model that will be tested will be presented graphically. Finally, the results of the SEM analysis will be presented and discussed.

6.3.1 Variables

The 47 variables included in the model consisted of 19 observed variables and 28 unobserved variables. Of these, 24 were exogenous variables and 23 endogenous. The labels that will be used to present the variables included in the model are listed in table 6.4.

Table 6.4: Labels for variables

Variable	*Label*
Satisfaction with life	SWL
Ideal	swl1
Conditions	swl2
Satisfied	swl3
Important	swl4
Change	swl5
Exposure to crime and violence	trauma_CV
Exposure to family-related trauma	trauma_Famrel
Exposure to natural disasters, accidents, illness and injury	trauma_Other
Sense of mastery and sense of relatedness combined	Res_Combo
Emotional reactivity	R_ER
Interpersonal strengths	S_IeP
Family involvement	S_FI
Intrapersonal strengths	S_IaP
School functioning	S_SF
Affective strengths	S_AS
Spiritual coping	C_Spirit
Existential coping	C_Exist
Emotion-focused coping	C_Emot
Problem-focused coping	C_Prob

These variables were conceptualised in the previous chapters and are combined in a model of resilience, which is based on the existing theory in this field. The model is graphically represented in the case of SEM analysis.

6.3.2 The model used in analysis

The following model will be investigated for three groups: the total group of participants, the black participants, and the white participants. The model was carried out using the Maximum Likelihood Estimation. The model is recursive.

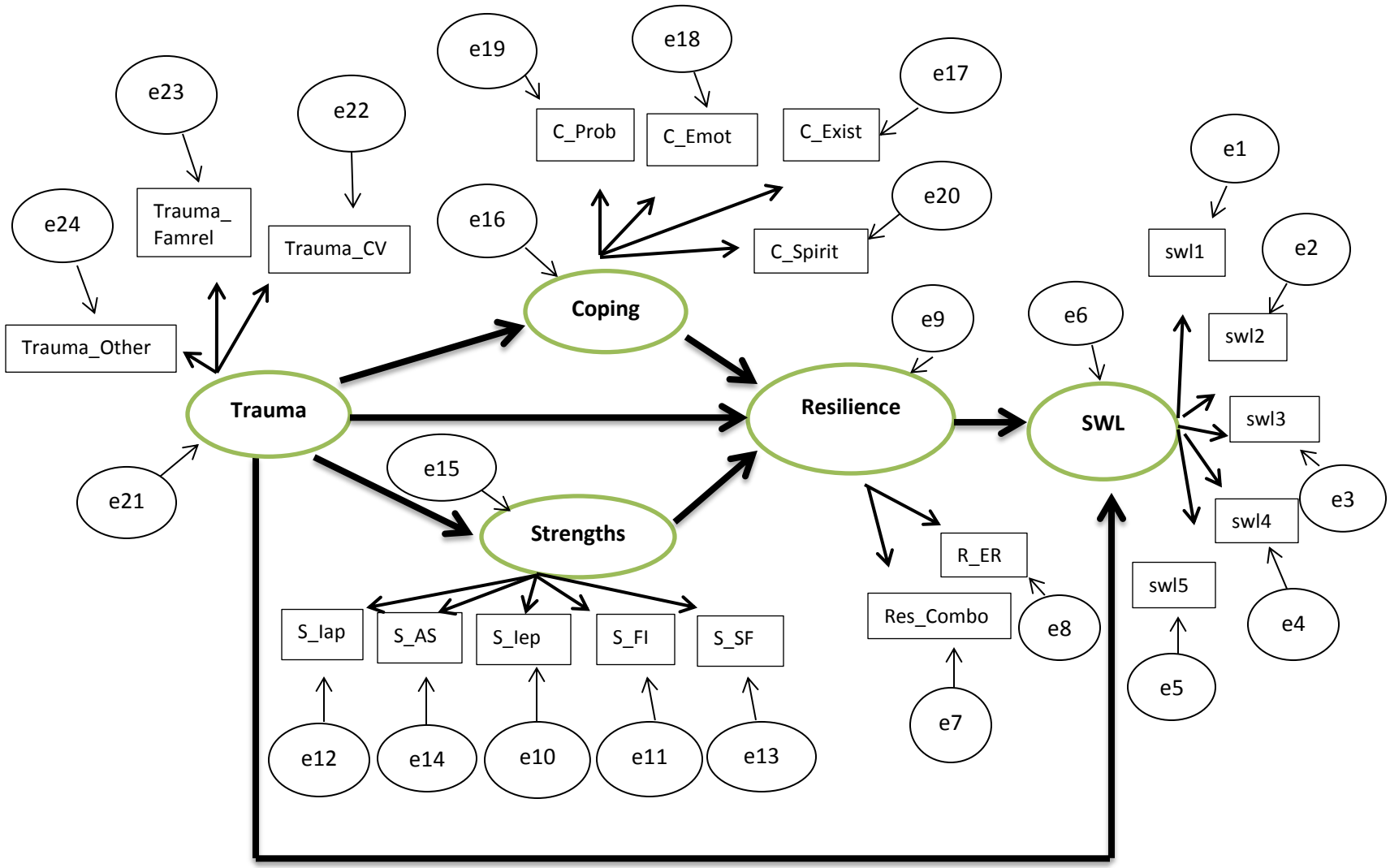

Figure 6.2: The model to be tested

The circles represent the latent variables, and the squares the manifest variables that were measured. Also, this figure depicts the error that was estimated and removed for each manifest variable.

6.3.3 Model: Total group

The model was estimated for a sample of 652 Grade 8 learners, as explained in the methodology chapter.

6.3.3.1 Correlations

The correlations between the different variables for the total group are depicted in table 6.5.

Table 6.5: Correlation matrix for the total group

	SWL	*trauma_CV*	*trauma_Famrel*	*Trauma_Other*	*Res_Combo*	*R_ER*	*S_IeP*	*S_FI*	*S_IaP*	*S_SF*	*S_AS*	*C_Spirit*	*C_Exist*	*C_Emot*	*C_Prob*
SWL	1	–0.147**	–0.097*	–0.161**	0.410**	–0.156**	0.243**	0.263**	0.249**	0.222**	0.201**	0.223**	0.290**	0.138**	0.304**
trauma_CV		1	0.286**	0.318**	–0.164**	0.173**	–0.194**	–0.201**	–0.200**	–0.142**	–0.166**	–0.073	–0.100*	0.046	–0.051
trauma_Famrel			1	0.231**	–0.070	0.155**	–0.109**	–0.084*	–0.071	–0.089*	–0.080*	0.045	0.036	0.074	0.053
Trauma_Other				1	–0.074	0.107**	–0.105**	–0.059	–0.054	–0.148**	–0.007	0.019	0.000	0.090*	0.041
Res_Combo					1	–0.141**	0.444**	0.453**	0.474**	0.369**	0.487**	0.324**	0.480**	0.306**	0.468**
R_ER						1	–0.292**	–0.235**	–0.241**	–0.282**	–0.191**	–0.055	0.055	0.243**	0.099*
S_IeP							1	**0.691****	**0.753****	**0.690****	**0.685****	0.173**	0.247**	0.108**	0.233**
S_FI								1	**0.712****	**0.606****	**0.669****	0.249**	0.209**	0.071	0.209**
S_IaP									1	**0.639****	**0.749****	0.270**	0.271**	0.113**	0.258**
S_SF										1	**0.551****	0.198**	0.153**	0.044	0.142**
S_AS											1	0.223**	0.254**	0.143**	0.266**
C_Spirit												1	0.420**	0.234**	0.428**
C_Exist													1	**0.688****	**0.786****
C_Emot														1	**0.742****
C_Prob															1

* Significant on the 0.05 level.

** Significant on the 0.01 level.

Correlations in bold have medium to high effect sizes.

Most of the correlations between the variables are statistically significant. However, only the correlations significant at the 0.01 level, and with at least a medium effect size of 0.3 (Cohen, 1988), will be reported here. These include the correlations between the strengths, and between the coping strategies.

Interpersonal strength correlates positively with family involvement ($r=0.691$, $r^2=0.477$), intrapersonal strength ($r=0.753$, $r^2=0.567$), school functioning ($r=0.690$, $r^2=0.476$) and affective strength ($r=0.685$, $r^2=0.469$). Family involvement correlates positively with intrapersonal strength ($r=0.712$, $r^2=0.507$), school functioning ($r=0.606$, $r^2=0.367$) and affective strength ($r=0.669$, $r^2=0.448$). Intrapersonal strength correlates positively with school functioning ($r=0.639$, $r^2=0.408$) and affective strength ($r=0.749$, $r^2=0.561$). School functioning correlates positively with affective strength ($r=0.551$, $r^2=0.304$). It can, therefore, be concluded that an increase in any of the strengths is associated with an increase in all the other strengths. The strongest correlation with a high effect size was between interpersonal and intrapersonal strengths. Thus, a greater ability to control emotions and behaviour in social settings correlates with a greater belief in your abilities and competence.

Existential coping has a significant positive correlation with emotion-focused coping ($r=0.688$, $r^2=0.473$) and problem-focused coping ($r=0.786$, $r^2=0.618$). Finally, emotion-focused coping has a significant positive correlation with problem-focused coping ($r=0.742$, $r^2=0.551$). Thus, the increased use of existential coping is associated with an increased use of emotion-focused and problem-focused coping, while the increased use of emotion-focused coping is also related with an increased use in problem-focused coping. The strongest correlation with a high effect size is for existential and problem-focused coping. Thus, meaning and acceptance correlate strongly with situational, self-restructuring and social support coping. These relationships are not causal and direct effects can, therefore, not be established.

6.3.3.2 Regression weights

The table below represents the estimates of the parameters, their standard errors, critical ratios, and p-values of a two-sided test of the parameters. The standardised regression weights for the variables are also provided. The standardised regression weights reflect the amount of change in the dependent variable that can be ascribed to a single standard deviation unit's worth of change in the predictor variable (Arbuckle & Wothke, 1999).

Table 6.6: Regression weights for the total group

			Regression weights				*Standardised regression weights*
			Estimate	*S.E.*	*C.R.*	*P*	
Coping	<---	Trauma	–1.510	1.241	–1.217	0.224	–0.068
Strengths	<---	Trauma	–1.633	0.337	–4.840	**	–0.288
Resilience	<---	Trauma	–4.715	2.022	–2.332	*	–0.132
Resilience	<---	Strengths	3.209	0.287	11.200	**	0.507
Resilience	<---	Coping	0.755	0.067	11.185	**	0.469
SWL	<---	Trauma	–0.230	0.108	–2.132	*	–0.140
SWL	<---	Resilience	0.024	0.003	7.609	**	0.517
swl2	<---	SWL	1.217	0.108	11.249	**	**0.686**
swl3	<---	SWL	1.237	0.111	11.144	**	**0.690**
swl4	<---	SWL	0.985	0.107	9.193	**	0.497
swl5	<---	SWL	1.058	0.118	8.977	**	0.468
Res_Combo	<---	Resilience	1.000				**0.842**
R_ER	<---	Resilience	–0.131	0.033	–3.986	**	–0.175
C_Prob	<---	Coping	1.000				0.926
C_Spirit	<---	Coping	0.244	0.021	11.826	**	0.447
C_Emot	<---	Coping	0.995	0.039	25.779	**	**0.788**
C_Exist	<---	Coping	0.577	0.021	27.862	**	**0.860**
S_AS	<---	Strengths	1.000				**0.816**
S_IaP	<---	Strengths	1.449	0.053	27.200	**	**0.884**
S_IeP	<---	Strengths	1.944	0.076	25.543	**	**0.859**
S_FI	<---	Strengths	1.301	0.055	23.827	**	**0.812**
Trauma_Other	<---	Trauma	0.944	0.156	6.046	**	0.483
trauma_CV	<---	Trauma	1.000				**0.662**
trauma_Famrel	<---	Trauma	0.546	0.092	5.952	**	0.436
S_SF	<---	Strengths	1.057	0.051	20.699	**	0.**741**
swl1	<---	SWL	1.000				0.536

* Standardised regression weights significant at the 0.05 level.

** Standardised regression weights significant at the 0.01 level.

Standardised regression weights in bold have medium to large effect sizes.

The regression weights significant on the 0.05 level will be reported here. An increase in exposure to trauma predicts a significant decline in life satisfaction, strengths and resilience. Both strengths and coping predict increased resilience. Resilience, in turn, predicts an increase in life satisfaction. All the latent variables, furthermore, correlated significantly with their respective manifest variables.

The squared multiple correlation that was calculated for satisfaction with life was 0.332. Thus, 33.2% of the variance in satisfaction with life is explained by the variance of the predictor variables combined.

6.3.3.3 Fit indices

There are various indices to determine the fit of a model. A statistically significant chi-squared value might indicate that the data might not fit the model. Determining goodness of fit, however, is not as straightforward as simply assessing the chi-squared value (Ullman, 1996), as this test depends on sample size and is mostly significant for large sample sizes (Blunch, 2008). According to Ullman (1996), the RMSEA and CFI are actually the most frequently reported fit indices. An RMSEA value of less than 0.08 reflects reasonable fit (Streiner, 2006), whereas a CFI value of greater than 0.95 often indicates goodness of fit (Hu & Bentler, 1999). Streiner (2006) agrees that indices such as the CFI should be greater than 0.95 if the chi-squared value is significant. However, Kelloway (1998) and Smedema, Catalano and Ebener (2010) consider values of greater than 0.9 to still indicate a good fit.

The AIC value should be small but, according to Ullman (1996), there are no clear guidelines for interpreting this value. Therefore, it is used in comparisons and, if the value is small compared to competing models, it is considered small enough (Ullman, 1996). The NFI, IFI and GFI should preferably be greater than 0.95. A PGFI value of larger than 0.6 is considered satisfying (Blunch, 2008).

Conflicting results based on different fit indices seem to be quite common (Ullman, 2006). In such a case, the model can be considered as tentatively adequate (Ullman, 2006), and a specific index – such as the RMSEA – can be chosen as a main measure of model fit (Blunch, 2008). The RMSEA will, therefore, also serve as the main index of goodness of fit for the current study. The

following table presents the fit indices used to determine the goodness of fit of the model for the data obtained.

Table 6.7: Fit indices for the total group

Index	*Value*
Degrees of freedom	145.000
Chi-square	507.006 (p=0.00)
Root Mean Square Error of Approximation (RMSEA)	0.062
90% Confidence interval for RMSEA	(0.056; 0.068)
PCLOSE	0.000
ECVI for default model	0.917
90% Confidence interval for ECVI	(0.817; 1.028)
Model AIC	597.006
Model BIC	798.608
Normed Fit Index (NFI)	0.902
Comparative Fit Index (CFI)	0.928
Incremental Fit Index (IFI)	0.928
Relative Fit Index (RFI)	0.885
Root Mean Square Residual (RMR)	9.163
Goodness of Fit Index (GFI)	0.923
Adjusted Goodness of Fit (AGFI)	0.899
Parsimony Goodness of Fit (PGFI)	0.704

The chi-squared value is statistically significant, which might indicate that the data might not fit the model, but it should be kept in mind that the sample is relatively big. The obtained RMSEA value of 0.062 indicates a reasonable fit. For this model, the CFI value (0.928) is slightly smaller than 0.95 and, therefore, indicates an adequate, but not a very good, fit. The NFI, IFI and GFI are all greater than 0.9, but smaller than 0.95, indicating an adequate fit. The model is a satisfying fit according to the obtained PGFI value (0.704). In light of these findings, the model for the total group is considered as a reasonable fit.

6.3.4 Model: Black participants

The black group consisted of 366 of the total group of 652 participants.

6.3.4.1 Correlations

The correlation matrix for the black group is depicted in table 6.8.

Table 6.8: Correlation matrix for the black group

	SWL	*trauma_CV*	*trauma_Famrel*	*Trauma_Other*	*Res_Combo*	*R_ER*	*S_IeP*	*S_FI*	*S_IaP*	*S_SF*	*S_AS*	*C_Spirit*	*C_Exist*	*C_Emot*	*C_Prob*
SWL	1	–0.083	–0.049	–0.097	0.339**	–0.166**	0.139**	0.148**	0.123*	0.104*	0.093	0.192**	0.183**	0.053	0.190**
trauma_CV		1	0.270**	0.359**	–0.115*	0.172**	–0.154**	–0.087	–0.143**	–0.126*	–0.096	–0.061	–0.045	0.095	0.003
trauma_Famrel			1	0.198**	–0.012	0.174**	–0.105*	0.012	–0.035	–0.081	–0.037	0.062	0.117*	0.159**	0.109*
Trauma_Other				1	–0.004	0.080	–0.076	0.001	–0.030	–0.086	0.047	0.002	0.022	0.119*	0.061
Res_Combo					1	–0.106*	0.344**	0.348**	0.382**	0.304**	0.384**	0.315**	0.389**	0.211**	0.361**
R_ER						1	–0.296**	–0.203**	–0.231**	–0.232**	–0.195**	–0.142**	0.081	0.334**	0.168**
S_IeP							1	**0.656****	**0.730****	**0.740****	**0.644****	0.171**	0.135*	–0.034	0.097
S_FI								1	**0.698****	**0.626****	**0.676****	0.229**	0.064	–0.073	0.050
S_IaP									1	**0.693****	**0.723****	0.269**	0.159**	–0.001	0.127*
S_SF										1	**0.572****	0.172**	0.074	–0.047	0.042
S_AS											1	0.189**	0.117*	0.007	0.117*
C_Spirit												1	0.416**	0.285**	0.411**
C_Exist													1	**0.668****	**0.780****
C_Emot														1	**0.759****
C_Prob															1

* Significant on the 0.05 level.

** Significant on the 0.01 level.

Correlations in bold have medium to high effect sizes.

Most of the correlations between the variables are statistically significant. However, only the correlations significant at the 0.01 level, and with at least a medium effect size of 0.3 (Cohen, 1988), will be reported here. These include the correlations between the strengths, and between the coping strategies.

Interpersonal strength correlates positively with family involvement ($r=0.656$, $r^2=0.430$), intrapersonal strength ($r=0.730$, $r^2=0.533$), school functioning ($r=0.740$, $r^2=0.548$) and affective strength ($r=0.644$, $r^2=0.415$). Family involvement correlates positively with intrapersonal strength ($r=0.698$, $r^2=0.487$), school functioning ($r=0.626$, $r^2=0.392$) and affective strength ($r=0.676$, $r^2=0.457$). Intrapersonal strength correlates positively with school functioning ($r=0.693$, $r^2=0.480$) and affective strength ($r=0.723$, $r^2=0.523$). School functioning correlates positively with affective strength ($r=0.572$, $r^2=0.327$). It can, therefore, be concluded that an increase in any of the strengths is associated with an increase in all the other strengths. The strongest correlation with a high effect size was between interpersonal and school functioning. Thus, a greater ability to control emotions and behaviour in social settings correlates with a greater competence in school.

Existential coping has a significant positive correlation with emotion-focused coping ($r=0.668$, $r^2=0.446$) and problem-focused coping ($r=0.780$, $r^2=0.608$). Finally, emotion-focused coping has a significant positive correlation with problem-focused coping ($r=0.759$, $r^2=0.576$). Thus, the increased use of existential coping is associated with an increased use of emotion-focused and problem-focused coping, while the increased use of emotion-focused coping is also related with an increased use in problem-focused coping. The strongest correlation with a high effect size is for existential and problem-focused coping. Thus, meaning and acceptance correlate strongly with situational, self-restructuring and social support coping. These relationships are not causal and direct effects can, therefore, not be established.

6.3.4.2 Regression weights

The table below represents the estimates of the parameters, their standard errors, critical ratios, and p-values of a two-sided test of the parameters. The standardised regression weights for the variables are also provided.

Table 6.9: Regression weights for the black group

			Regression weights				*Standardised regression weights*
			Estimate	***S.E.***	***C.R.***	***P***	
Coping	<---	Trauma	0.938	1.487	0.631	0.528	0.048
Strengths	<---	Trauma	–0.871	0.368	–2.371	*	–0.170
Resilience	<---	Trauma	–3.409	2.229	–1.529	0.126	–0.108
Resilience	<---	Strengths	2.740	0.358	7.653	**	0.443
Resilience	<---	Coping	0.656	0.091	7.231	**	0.406
SWL	<---	Trauma	–0.130	0.108	–1.198	0.231	–0.102
SWL	<---	Resilience	0.020	0.005	4.357	**	0.497
swl2	<---	SWL	1.399	0.222	6.310	**	**0.659**
swl3	<---	SWL	1.404	0.214	6.556	**	**0.648**
swl4	<---	SWL	0.842	0.174	4.854	**	0.374
swl5	<---	SWL	1.026	0.200	5.128	**	0.391
Res_Combo	<---	Resilience	1.000				**0.873**
R_ER	<---	Resilience	–0.098	0.044	–2.220	*	–0.144
C_Prob	<---	Coping	1.000				**0.939**
C_Spirit	<---	Coping	0.235	0.027	8.708	**	0.443
C_Emot	<---	Coping	1.026	0.051	19.952	**	0.800
C_Exist	<---	Coping	0.563	0.027	20.584	**	**0.837**
S_AS	<---	Strengths	1.000				**0.798**
S_IaP	<---	Strengths	1.475	0.076	19.324	**	**0.880**
S_IeP	<---	Strengths	1.905	0.107	17.864	**	**0.845**
S_FI	<---	Strengths	1.238	0.072	17.095	**	**0.802**
Trauma_Other	<---	Trauma	0.827	0.212	3.891	**	0.487
trauma_CV	<---	Trauma	1.000				**0.724**
trauma_Famrel	<---	Trauma	0.439	0.119	3.691	**	0.384
S_SF	<---	Strengths	1.123	0.068	16.476	**	**0.798**
swl1	<---	SWL	1.000				0.451

* Standardised regression weights significant at the 0.05 level.

** Standardised regression weights significant at the 0.01 level.

Standardised regression weights in bold have medium to large effect sizes.

Exposure to trauma decreases strengths. Both strengths and coping predict increased resilience. Resilience, in turn, predicts an increase in life satisfaction. All the latent variables, furthermore, correlated significantly with their respective manifest variables.

The squared multiple correlation that was calculated for satisfaction with life was 0.274. Thus, 27.4% of the variance in satisfaction with life is explained by the variance of the predictor variables combined.

6.3.4.3 Fit indices

The following table presents the fit indices used to determine the goodness of fit of the model for the data obtained.

Table 6.10: Fit indices for the black group

Index	*Value*
Degrees of freedom	145.000
Chi-square	324.979 (p=0.00)
Root Mean Square Error of Approximation (RMSEA)	0.058
90% Confidence interval for RMSEA	(0.05; 0.067)
PCLOSE	0.053
ECVI for default model	1.241
90% Confidence interval for ECVI	(1.108; 1.395)
Model AIC	452.979
Model BIC	584.466
Normed Fit Index (NFI)	0.881
Comparative Fit Index (CFI)	0.929
Incremental Fit Index (IFI)	0.930
Relative Fit Index (RFI)	0.844
Root Mean Square Residual (RMR)	8.714
Goodness of Fit Index (GFI)	0.911
Adjusted Goodness of Fit (AGFI)	0.883
Parsimony Goodness of Fit (PGFI)	0.695

The chi-squared value is statistically significant. The obtained RMSEA value of 0.058 indicates a good fitting model (Hu & Bentler, 1999). For this model, the CFI value (0.929) is slightly smaller than 0.95, but can still be considered a good fit. The AIC value of 452.979 is smaller than the AIC value for the total group (597.0006), which might indicate that the model fits the black group better than the total group. The IFI and GFI are greater than 0.9, but smaller than 0.95, indicating an adequate fit. The PGFI value (0.695) is larger than 0.6 and, thus, indicates a satisfying fit.

In light of these findings, the model for the black group is thus considered a good fit.

6.3.5 Model: White participants

The white group consisted of 291 of the total group of 652 Grade 8 learners.

6.3.5.1 Correlations

The correlation matrix for the white group is depicted in table 6.11.

Table 6.11: Correlation matrix for the white group

	SWL	*trauma_CV*	*trauma_Famrel*	*Trauma_Other*	*Res_Combo*	*R_ER*	*S_IeP*	*S_FI*	*S_IaP*	*S_SF*	*S_AS*	*C_Spirit*	*C_Exist*	*C_Emot*	*C_Prob*
SWL	1	–0.227**	–0.157**	–0.241**	0.489**	–0.145*	0.379**	0.401**	0.427**	0.380**	0.353**	0.258**	0.422**	0.246**	0.441**
trauma_CV		1	0.269**	0.277**	–0.171**	0.177**	–0.221**	–0.318**	–0.250**	–0.192**	–0.238**	–0.087	–0.144*	–0.005	–0.100
trauma_Famrel			1	0.289**	–0.099	0.132*	–0.085	–0.180**	–0.091	–0.117*	–0.116*	0.026	–0.056	–0.042	–0.005
Trauma_Other				1	–0.166**	0.137*	–0.151**	–0.146*	–0.096	–0.231**	–0.093	0.039	–0.033	0.050	0.013
Res_Combo					1	–0.175**	**0.560****	0.547**	**0.585****	0.483**	**0.615****	0.340**	**0.579****	0.422**	**0.588****
R_ER						1	–0.292**	–0.274**	–0.262**	–0.346**	–0.190**	0.036	0.031	0.143*	0.028
S_IeP							1	**0.733****	**0.784****	**0.636****	**0.745****	0.176**	0.394**	0.313**	0.412**
S_FI								1	**0.724****	**0.618****	**0.643****	0.277**	0.381**	0.258**	0.399**
S_IaP									1	**0.584****	**0.784****	0.276**	0.428**	0.285**	0.444**
S_SF										1	0.546**	0.235**	0.278**	0.182**	0.287**
S_AS											1	0.276**	0.450**	0.354**	0.481**
C_Spirit												1	0.429**	0.167**	0.451**
C_Exist													1	**0.716****	**0.792****
C_Emot														1	**0.716****
C_Prob															1

* Significant on the 0.05 level.

** Significant on the 0.01 level.

Correlations in bold have medium to high effect sizes.

Most of the correlations between the variables are statistically significant. However, only the correlations significant at the 0.01 level, and with at least a medium effect size of 0.3 (Cohen, 1988), will be reported here. These include the correlations between resilience, strengths and coping, as well as the correlations between the strengths and the coping strategies.

Resilience correlates positively with interpersonal ($r=0.560$, $r^2=0.314$), intrapersonal ($r=0.585$, $r^2=0.342$), and affective strength ($r=0.615$, $r^2=0.378$). The effect sizes were all medium. Resilience also correlates positively with existential ($r=0.579$, $r^2=0.335$) and problem-focused coping ($r=0.588$, $r^2=0.346$). These effect sizes were also medium. Thus, a sense of mastery and relatedness correlates with the ability to control oneself in social settings, believing in own competence, the ability to regulate emotions, coping focused on accepting and finding meaning in difficulty, and coping focused on the situation, restructuring the self, or social support.

Interpersonal strength correlates positively with family involvement ($r=0.733$, $r^2=0.537$), intrapersonal strength ($r=0.784$, $r^2=0.615$), school functioning ($r=0.636$, $r^2=0.404$) and affective strength ($r=0.745$, $r^2=0.555$). Family involvement correlates positively with intrapersonal strength ($r=0.724$, $r^2=0.524$), school functioning ($r=0.618$, $r^2=0.382$) and affective strength ($r=0.643$, $r^2=0.413$). Intrapersonal strength correlates positively with school functioning ($r=0.584$, $r^2=0.341$) and affective strength ($r=0.784$, $r^2=0.615$). The strongest correlations with high effect sizes were between interpersonal and intrapersonal strength, and intrapersonal and affective strength. Thus, a greater ability to control emotions and behaviour in social settings correlates with a greater belief in your abilities and competence, while a stronger belief in oneself correlates with the ability to regulate emotions to and from others.

Existential coping has a significant positive correlation with emotion-focused coping ($r=0.716$, $r^2=0.513$) and problem-focused coping ($r=0.792$, $r^2=0.627$). Finally, emotion-focused coping has a significant positive correlation with problem-focused coping ($r=0.716$, $r^2=0.513$). All the effect sizes were high. Thus, the increased use of existential coping is associated with an increased use of emotion-focused and problem-focused coping, while the increased use of emotion-focused coping is also related with an increased use in problem-focused coping. These relationships are not causal and direct effects can, therefore, not be established.

6.3.5.2 Regression weights

The table below represents the estimates of the parameters, their standard errors, critical ratios, and p-values of a two-sided test of the parameters. The standardised regression weights for the variables are also provided.

Table 6.12: Regression weights for the white group

			Regression weights				*Standardised regression weights*
			Estimate	***S.E.***	***C.R.***	***P***	
Coping	<---	Trauma	–26.474	6.782	–3.903	**	**–0.602**
Strengths	<---	Trauma	–8.219	2.020	–4.069	**	**–0.773**
Resilience	<---	Trauma	–23.956	23.194	–1.033	0.302	–0.299
Resilience	<---	Strengths	2.665	1.348	1.977	*	0.354
Resilience	<---	Coping	0.644	0.192	3.357	**	0.354
SWL	<---	Trauma	–1.643	1.143	–1.437	0.151	–0.441
SWL	<---	Resilience	0.013	0.012	1.044	0.296	0.273
swl2	<---	SWL	1.070	0.099	10.776	**	**0.744**
swl3	<---	SWL	1.152	0.112	10.318	**	**0.784**
swl4	<---	SWL	1.181	0.127	9.311	**	**0.678**
swl5	<---	SWL	1.073	0.135	7.927	**	0.563
Res_Combo	<---	Resilience	1.000				**0.879**
R_ER	<---	Resilience	–0.154	0.053	–2.883	*	–0.207
C_Prob	<---	Coping	1.000				**0.905**
C_Spirit	<---	Coping	0.261	0.033	8.026	**	0.454
C_Emot	<---	Coping	0.960	0.059	16.279	**	**0.772**
C_Exist	<---	Coping	0.597	0.031	19.000	**	**0.893**
S_AS	<---	Strengths	1.000				**0.844**
S_IaP	<---	Strengths	1.413	0.071	19.964	**	**0.893**
S_IeP	<---	Strengths	2.025	0.105	19.245	**	**0.882**
S_FI	<---	Strengths	1.367	0.082	16.767	**	**0.816**
Trauma_Other	<---	Trauma	1.076	0.333	3.236	**	0.270
trauma_CV	<---	Trauma	1.000				0.364
trauma_Famrel	<---	Trauma	0.524	0.179	2.936	**	0.228
S_SF	<---	Strengths	1.039	0.078	13.279	**	**0.695**
swl1	<---	SWL	1.000				**0.659**

* Standardised regression weights significant on the 0.05 level.

** Standardised regression weights significant on the 0.01 level.

Standardised regression weights in bold have medium to large effect sizes.

Exposure to trauma significantly decreases both strengths and coping. Both strengths and coping predict increased resilience. Neither exposure to trauma nor resilience significantly influences life satisfaction. All of the latent variables, furthermore, correlated significantly with their respective manifest variables.

The squared multiple correlation that was calculated for satisfaction with life was 0.458. Thus, 45.8% of the variance in satisfaction with life is explained by the variance of the predictor variables combined.

6.3.5.3 Fit indices

The following table presents the fit indices used to determine the goodness of fit of the model for the data obtained.

Table 6.13: Fit indices for the white group

Index	*Value*
Degrees of freedom	145.000
Chi-square	454.050 (p=0.00)
Root Mean Square Error of Approximation (RMSEA)	0.086
90% Confidence interval for RMSEA	(0.077; 0.095)
PCLOSE	0.000
ECVI for default model	2.007
90% Confidence interval for ECVI	(1.798; 2.242)
Model AIC	582.050
Model BIC	550.716
Normed Fit Index (NFI)	0.846
Comparative Fit Index (CFI)	0.889
Incremental Fit Index (IFI)	0.890
Relative Fit Index (RFI)	0.818
Root Mean Square Residual (RMR)	6.487
Goodness of Fit Index (GFI)	0.851
Adjusted Goodness of Fit (AGFI)	0.805
Parsimony Goodness of Fit (PGFI)	0.650

The chi-squared value is statistically significant. The obtained RMSEA value of 0.086 indicates a poorer fit. For this model, the CFI value (0.889) is smaller than 0.9 and, therefore, does not meet the standard for a good fit. The AIC value of 582.05 is bigger than for the black group (452.979), which confirms that the model fit the black group better than the white group. The NFI, IFI and GFI are all smaller than 0.9 and, therefore, does not meet the standard for a good fit. The PGFI value (0.65) is larger than 0.6, indicating a satisfying fit.

In light of the results above, the model is considered not a good fit for the white group.

6.3.6 A comparison of the model for the three groups

In summary, the following table provides a comparison of the fit indices for the three groups: the total group, the black group and the white group.

Table 6.14: Comparing the model for the total, black, and white groups

Index	***Guideline for significance***	***Total group***	***Black group***	***White group***
Degrees of freedom		145.000	145.000	145.000
Chi-square	p should be non-significant, thus >0.05	507.006 (p=0.00)	324.979 (p=0.00)	454.050 (p=0.00)
RMSEA	<0.06: good fit <0.08: adequate fit	**0.062**	**0.058**	0.086
Model AIC	The smallest value when models are compared	597.006	**452.979**	582.05
Normed Fit Index (NFI)	>0.95	0.902	0.881	0.846
Comparative Fit Index (CFI)	>0.95: good fit >0.90: adequate fit	**0.928**	**0.929**	0.889
Incremental Fit Index (IFI)	>0.95: good fit >0.90: adequate fit	**0.928**	**0.930**	0.890
Relative Fit Index (RFI)	>0.95: good fit >0.90: adequate fit	0.885	0.844	0.818
Goodness of Fit Index (GFI)	>0.95	0.923	0.911	0.851
Adjusted Goodness of Fit (AGFI)	>0.95	0.899	0.883	0.805
Parsimony Goodness of Fit (PGFI)	<0.6	**0.704**	**0.695**	**0.650**

The chi-squared value is statistically significant for all three groups. The main measure of model fit for the current study is the RMSEA value. The RMSEA value for the total group (0.062) reflects a reasonable fit, while the RMSEA value for the black group (0.058) indicates a good fit. None of the groups had a CFI value of greater than 0.95, but the value for the black group (0.93) was the greatest and still larger than 0.9. The AIC value is used to compare models, and the black group obtained the smallest value (452.979), indicating that the model fits this group the best. The NFI, IFI, GFI and PGFI values were the highest for the total group, indicating that the model still is an adequate fit for the total group.

6.3.7 Summary of the SEM analysis

Although most of the correlations between the variables were statistically significant, the correlations between the strengths, and between the coping strategies, had medium to high effect sizes. The model was found to be a good fit for the data obtained from the black group, and a reasonable fit for the data obtained from the total group. These findings will be interpreted in the following session.

6.4 Discussion

The aim of the current study is to clarify the role of strengths, coping and resilience in the relationship between trauma exposure and life satisfaction for a group of young adolescents. The resilience process model of Kumpfer (1999) provided the background for the model constructed for statistical analysis. The model proposes that trauma exposure might directly influence adolescents' life satisfaction. Alternatively, trauma exposure might influence an adolescent's strengths, coping or resilience. Coping and strengths influence resilience, and resilience, in turn, influences life satisfaction. This model was tested for the whole group, and for black and white participants respectively.

The main finding is that the model is an adequate fit for the data obtained from the whole group, and a good fit for the data obtained from the black group. Some of the findings for the white group are worth mentioning: significant correlations, with medium effect sizes, were found between resilience, coping, and strengths, and almost 46% of the variance in life satisfaction is explained by

the variance in the other variables. However, the direction of influence hypothesised in the current study does not seem to explain well the process of resilience in the white group. Therefore, the remainder of the discussion will focus on the results obtained for the total and black groups.

Seven hypotheses were stated in the previous chapter and tested by the model. The following table presents the results and highlights the differences found for the total and black groups.

Table 6.15: Hypotheses confirmed by the statistical model

Hypothesis	***Black group (good fit)***	***Total group (adequate fit)***
1. Trauma exposure influences life satisfaction	Not supported	Confirmed
2. Trauma exposure influences resilience	Not supported	Confirmed
3. Trauma exposure influences strengths	Confirmed	Confirmed
4. Trauma exposure influences coping	Not supported	Not supported
5. Strengths influence resilience	Confirmed	Confirmed
6. Coping influences resilience	Confirmed	Confirmed
7. Resilience influences life satisfaction	Confirmed	Confirmed

Thus, four of the seven hypotheses are supported by the data obtained for the black group, while six hypotheses are supported by the data obtained for the total group. The confirmed hypotheses provide evidence in support of the model proposed by Kumpfer (1999) and demonstrate its relevance for the South African context. The role of each variable in the process of resilience, with reference to these hypotheses, will be discussed next.

6.4.1 The influence of trauma exposure in the process of resilience

The **prevalence** rate for exposure to trauma is high among participants, with 86.2% having been exposed to at least one traumatic event. This number is within the range of 82% to 100% reported for exposure among South African youth (Suliman *et al*., 2009). Only 19.8% have been exposed to one event, and 8.4% of participants have been exposed to six or more events. These numbers are very similar to the findings of a study by Suliman *et al*. (2009). The correlations coefficients also demonstrated that the different types of trauma are related for both groups. Thus, increases in

exposure to one type of trauma are associated with increases in exposure to other types of trauma. Thus, multiple exposures seem to be the norm for South African adolescents, which is concerning given that persistent challenges increase their vulnerability (Richter, Foster, & Sherr, 2006). Goldstein and Brooks' (2006) warning that increasingly more children are exposed to more risks is certainly valid in the South African context. The differences between black and white participants were small, but black participants were exposed more to multiple traumatic events.

The four **types of events** participants were more likely to have experienced, are losing a loved one to unnatural causes, being exposed to corpses, being seriously injured, and suffering from a life-threatening illness. The high prevalence of losing a loved one and being exposed to corpses can be explained in part by exposure to crime and violence, which is widespread in South Africa (Masuku, 2002). Only 17.9% of the sample reported having lost a parent, while 44% reported having lost a loved one. Thus, the remaining losses are accounted for probably by losing family members and friends. Especially community violence is rampant in South Africa (Barabarin, 2003), which might be a contributing factor to the high prevalence rates of trauma exposure and loss. The prevalence of both serious injury and life-threatening illnesses are high among African adolescents (Patton *et al*., 2006), and high in both urban and rural settings in South Africa (Flischer *et al*., 2006). The findings for the current sample are, therefore, not out of the ordinary for the South African context.

6.4.1.1 The role of trauma exposure in resilience and life satisfaction

Exposure to trauma predicts a **decrease in satisfaction with life** for the **total group**. This finding confirms the results of a study by Rapaport, Clary, Fayyat, and Endicott (2005) which indicated that trauma exposure correlates with lower levels of life satisfaction for an American population group. From a normal developmental perspective, life satisfaction tends to decrease in any case in young adolescents (Goldbeck, Schmitz, Besier, Herschbach, & Heinrich, 2007; Proctor, Linley, & Maltby, 2009). Thus, the high levels of trauma exposure among young South African adolescents might amplify this trend for the current study's population group. Various studies indicated that some adversity can actually increase life satisfaction (e.g. Luhmann & Eid, 2009; Seery *et al*., 2010) but, given the high rates of serious and multiple exposure in South Africa, these adaptation effects are not applicable to the total group. All types of trauma decrease life satisfaction. The strongest correlation is with exposure to other types of trauma. It might be that

the unpredictability of accidents and injury, and the cumulative effects of a life-threatening illness especially, reduces life satisfaction for South African adolescents.

Exposure to trauma significantly **decreases resilience** for the **total group**. Thus, although Kumpfer's (1999) model posits that a traumatic event can trigger the process of resilience, it seems that, for the current sample, exposure has a direct negative effect on the traits associated with resilience. However, various researchers agree that resilience develops when stressful experiences are challenging, but not overwhelming (e.g. Katz *et al*., 2009; Seery *et al*., 2010). The high levels of severe and/or multiple trauma exposure in South Africa make it more and more difficult for adolescents to show resilience in the face of these adversities. Especially exposure to crime and violence reduces a sense of mastery and relatedness in adolescents. This finding is similar to the results of an earlier South African study (Fincham, Altes, Stein, & Seedat, 2009) which showed that violence is especially stressful to children, and that resilience does not seem to protect South African children against the effects of exposure to violence. It also proves the influence of exposure to crime and violence on normal development, as adolescents experience a lack of control (sense of mastery) and a lack of trust and support (sense of relatedness) due to exposure. Pynoos *et al*. (2009) found that trauma exposure negatively influences self-efficacy, while both Pynoos *et al*. (2009) and Maddaleno, Concha-Eastman and Marques (2006) reported the negative influence of trauma exposure on attachment.

Furthermore, all the types of trauma included in the study increase emotional reactivity. Various researchers (e.g. Connolly & Eagle, 2009; Maddaleno *et al*., 2006; Pynoos *et al*., 2009) described how trauma exposure interferes with normal development by compromising adolescents' emotional regulation. This seems to be true for the current sample. Given that the capacity for emotional regulation is still developing during early adolescence (Tobin & Graziano, 2006), the concurrent negative influence of exposure to trauma might have long-term effects for regulation in these children's lives. The strongest correlation was found for exposure to crime and violence and emotional reactivity. Van der Merwe and Dawes (2000) also found that exposure to especially violence in South Africa results in emotional dysregulation in children. Various studies describe the consequences of trauma-related emotional dysregulation: spontaneity is subdued, empathy and pro-social behaviour restricted, the adolescent's range of affect is restricted, and negative emotions are prominent and dealt with inappropriately (Barabarin, 2003; Maddaleno *et al*., 2006; Pynoos *et al*., 2009; Van der Merwe & Dawes, 2000). Thus, it cannot be denied that the

crime and violence characteristic of our country interferes with normal development in early adolescence. Masten (2001) is of the opinion that such interfering factors pose a greater threat to well-being than risk factors per se.

For the **black group** trauma exposure did not significantly affect satisfaction with life or resilience, even though this group has been exposed more to multiple traumas compared with the white group. There may be several explanations for this finding. First, it should be kept in mind that the reliability coefficient for life satisfaction was lower for the black group. Life satisfaction might, therefore, not be measured as reliably for the black adolescents. Second, given that the current study used a global approach (Gilman & Huebner, 2000) to conceptualise life satisfaction, it might be that the criteria the black group used to judge life satisfaction are factors not necessarily influenced by trauma exposure. It is possible that the black group do not consider themselves worse off compared with their peers, or with their past experiences. It might even be that they do not have high expectations for their lives (Nussbaum, 2008), as they are more likely to come from disadvantaged backgrounds (Meintjies & Hall, 2012). A third explanation for this finding might be rooted in cultural differences: Diener (2000) reports that certain aspects of subjective well-being are more valued in individualistic cultures, while an earlier study by Suh *et al*. (1998) found that subjective well-being in collectivistic cultures are determined by social and family norms. Thus, it might be that the collectivistic culture – and subsequent reliance on the social group – of the black group protect them against declining life satisfaction in the presence of trauma exposure. Finally, this group can be so desensitised by frequent exposure to traumatic events that it does not influence their life satisfaction any more. In fact, South Africa's history of political violence (Kaminer & Eagle, 2010) might have facilitated a desensitation effect in black communities specifically.

6.4.1.2 Trauma exposure and strengths

For both the total and black groups, trauma exposure predicts a significant **decline in strengths**. This finding is a cause for concern given that strengths predict positive outcomes in children exposed to risk (Benard, 2007). Also, the extent to which trauma exposure decreases emotional, social and academic functioning for the participant group might indicate the extent of the risk for diagnosable post-traumatic stress responses in this group.

Exposure to **crime and violence** significantly decreases all the strengths for the total group. This might point to the far-reaching effects of exposure to crime and violence specifically: It negatively affects adolescents' perception of their abilities and competence; and it decreases their ability to accept and express emotions, to control emotions and behaviour in social settings, to participate in their families, and to be competent in school. The strongest correlation was between exposure to crime and violence, and family involvement. Exposure to crime and violence, therefore, reduces the level of interaction and participation in the family. This finding confirms Van der Merwe and Dawes' (2000) statement that crime in South Africa has an impact on multiple levels – also on family functioning. It is possible that, because exposure to crime and violence influences their perceptions, emotions and ability to ask for help, adolescents tend to withdraw from their families after exposure. Also, many adolescents might be exposed to crime in the context of gang membership (Reddy *et al*., 2010) and these gangs might discourage their members to find support within the family. Another explanation might be found in the fact that parents are so overwhelmed by multiple risk factors (Weissberg *et al*., 2003) that they are unable to support their adolescents after experiencing a traumatic event. This finding is another a cause for concern given that the support of one adult can reduce the negative impact of exposure to violence (Kwast & Laws, 2001), while limited family connectedness correlates with negative responses to crime in young adolescents (Kronenberg *et al*., 2010). However, for the black group alone, exposure to crime and violence does not significantly affect family involvement or affective strength. This finding might point to the value of building these two strengths in black populations as protective factors during trauma exposure.

Family-related trauma predicts decreases in interpersonal and affective strengths, as well as family involvement and school functioning. The strongest correlation is with decreased interpersonal strength for the total group. In addition, the only significant correlation for the black group was for family-related trauma and interpersonal strength. Thus, if adolescents experience a traumatic event in the family context, it decreases their ability to control their emotions and behaviour in social settings. This finding confirms various studies which demonstrate a higher prevalence of emotional regulation and behavioural problems for children exposed to domestic violence (Kerig *et al*., 2012; Mohr & Fantuzzo, 2000) or the loss of a parent (Bicego, Rutstein, & Johnson, 2003; Cluver, MacPhail, & Rees, 2007; Suliman *et al*., 2009). As family-related trauma is mostly accompanied by a disruption in the parent–child relationship (Pine *et al*., 2005), the lack of support that the adolescent experiences in this context might put them at higher risk for various

emotional problems. From a normal developmental perspective, family-related trauma might negatively influence parent–child attachment, which is often seen as the basis for social regulation skills (Leman *et al*., 2012). Also, it might be that the regulatory skills important to interpersonal strength are not modelled adequately in families who experience trauma. This finding further confirms support for Richter *et al*.'s (2006) assertion that potentially protective factors outside of the home environment have limited impact in the context of risk factors experienced within the home environment.

The **other types of trauma** (natural disasters, accidents, illness, and injury) significantly decrease both interpersonal strength and school functioning for the total group. These types of trauma, therefore, decrease adolescents' ability to control their emotions in social settings, and it negatively affects their competence in school tasks and class room behaviour. Given that exposure to other types of trauma interfere with social and academic competence, these types of trauma might increase young adolescents' risk for diagnosable post-traumatic stress responses. Qouta *et al*. (2007) confirm that injury and threats to life (such as accidents or illness) correlate with higher levels of PTSD in children. From a normal developmental perspective, the emotional dysregulation that results from exposure to trauma might indeed cause adolescents to withdraw socially and experience scholastic problems (Connolly & Eagle, 2009). The other types of trauma do not significantly affect any of the strengths in the black group. Thus, although the black group also experienced high levels of exposure to these types of traumatic events, this does not seem to decrease their strengths. Again, the importance of nurturing strengths in black populations is highlighted by this finding.

6.4.1.3 Trauma exposure and coping

Exposure to trauma **does not significantly affect coping**. Thus, for the current groups of participants, exposure to trauma neither increases nor decreases the use of coping strategies. In interpreting this finding, it should be kept in mind that a few of the coping subscales had slightly lower reliabilities for the black group. Furthermore, religious coping was not normally distributed. These measurement problems could have influenced the results obtained by the analysis.

Exposure to trauma might not lead to decreased use of coping strategies due to an inoculation effect: South African adolescents might be so used to exposure that a single event does

not necessarily trigger a coping response for them. It could even be that South African adolescents' appraisal of traumatic events is influenced by frequent trauma exposure to such an extent that it does not have an impact on coping responses anymore. Taylor and Weems (2009) consider adolescents' appraisal of events a key factor in determining their emotional responses. In addition, **exposure to trauma might not lead to increased use of coping strategies**, because the chronic and multiple traumatic events that South African adolescents experience might be too overwhelming, as Katz *et al.* (2009) also suggest. This explanation would confirm the findings of Vera *et al*. (2011) and George (2009) who cite a lack of environmental control, problem-solving skills and resources as reasons for the fact that coping does not play a significant moderating role when young adolescents are exposed to trauma. Zimmer-Gembeck and Skinner (2011) further found that young adolescents are less inclined to seek help in difficult situations compared to older adolescents. Given that the majority of the current sample is female, Frydenberg's (2008) finding that young adolescent girls report an inability to cope might hold true. Thus, contrary to the model that Kumpfer (1999) suggests, as well as the findings of Schexnaildre (2007), exposure to trauma does not trigger a coping response for the current group of participants.

6.4.2 The influence of strengths and coping on resilience

It should be noted that, for both groups, all the strengths were correlated with one another. Thus, an increased use of one strength is associated with increased use of other strengths. This finding might provide preliminary support for the protective–protective model (Brook *et al*., 1989) which posits that the use of certain protective factors increases the effects of other protective factors.

The coping strategies were correlated also. An increased use of one coping strategy is associated with an increased use in other coping strategies. This finding confirms the results of an older study by Seiffge-Krenke (2000) which indicated that adolescents make use of different coping strategies simultaneously. This finding is encouraging given that a repertoire of coping strategies increases flexibility and the success of the coping process (Compas *et al*., 2001). This potential "snowball" effect of both strengths and coping holds promise for interventions focused on developing strengths and coping skills in that developing one strength or coping strategy can activate additional strengths and coping strategies.

6.4.2.1 Strengths and resilience

All the strengths predict increased resilience and decreased reactivity for the total group and the group of black participants. Adolescents' resilience is, therefore, increased by their belief in their abilities and competence and in their ability to accept and express emotions, to control emotions and behaviour in social settings, to participate in their families, and to be competent in school. Thus, the findings of various studies examining the role of specific strengths in resilience (Alvord & Grados, 2005; Hoge *et* al., 2007; Kumpfer & Summerhays, 2006; Werner, 2000; Werner 2007), also in the South African context (Theron & Theron, 2010; Van Rensburg & Barnard, 2005), are confirmed. Further, the role of strengths in resiliece for this group of participants provides evidence for Epstein's (1998) theory that these strengths buffer against the effect of trauma exposure specifically. Given the high prevalence of trauma exposure and the concurrent average scores obtained for resilience and life satisfaction, protection, indeed, seems to matter more than risk (Jessor, Turbin, & Costa, 2010) and protective factors seem crucial to the resilience process (Finkelstein *et al*., 2005; Windle, 2011). The strongest correlation for both groups was between affective strength and resilience. Competent expression of emotions is a component of emotional regulation (Thompson, 1994), and good emotional regulation is associated with resilience (Prince-Embury, 2006). It is, therefore, not surprising that this strength correlates with resilience. This finding can further be explained from a normal developmental perspective: Because increased regulation is a developmental task associated with adolescence (Tobin & Graziano, 2006), competence in this task might be important especially for resilience in the adolescent years. It seems crucial to specifically develop affective strength and family involvement among black South African adolescents, as these two strengths are not influenced by trauma exposure, yet contribute to resilience.

The current findings, therefore, confirm that strengths contribute to resilience and enable children to overcome adversity (Benard, 2007; Jessor *et al*., 2010).

6.4.2.2 Coping and resilience

All four coping strategies increase resilience, confirming that coping is a micro-process involved in resilience (Frydenberg, 2008; Leipold & Greve, 2009; Seery, Holman & Silver, 2010). The strongest correlation for both groups was between existential coping and resilience. Thus, coping

strategies focusing on acceptance of situations and finding meaning in difficulty increase resilience. However, the scales measuring existential coping (finding meaning in suffering and accepting circumstances one cannot change) had sligtlhy lower than accepted reliabilities for the group of participants. This result should, therefore, be interpreted with care. Yet, from a theoretical perspective, it might indeed be that existential coping increases resilience in the South African context specifically, as many traumatic events represent conditions that cannot be changed. Thus, to achieve congruence, South African adolescents may use existential coping strategies which at least enable them to make sense of suffering. This finding might either challenge Condly's (2006) remark that young adolescents might not be cognitively mature enough to use existential coping strategies or support his statement, as existential coping was not reliably measured for the current group of participants.

Both problem- and emotion-focused coping increase emotional reactivity for both groups. Thus, whether they focus on dealing with a difficult situation or its associated negative emotions, adolescents' reactivity increases. Firstly, this finding confirms Folkman and Moskowitz's (2004) observation that positive and negative emotions co-occur during the coping process. Coping, therefore, does not protect one against unpleasant emotional reactions, and resilient adolescents still experience the pain and discomfort associated with exposure to trauma (Theron, 2004). In fact, according to Windle (2011) resilience manifests in the concurrent presence of distress and competence. Secondly, it underscores the complexity of the coping process. The experience of reactivity is not necessarily detrimental to the coping process, as it might further facilitate coping responses (Compas, 1987). However, this finding also brings to the fore the importance of monitoring adolescents who are facing adversity, as the increased emotional reactivity they experience while coping might increase the chance of disengagement, negative cognitions and unregulated release of emotion (Compas *et al*., 2001).

Problem- and emotion-focused coping, therefore, increase both resilience and reactivity. However, the correlation with resilience is stronger compared to the correlation with reactivity. Although some studies have linked emotion-focused coping to increased emotional symptoms (Braun-Lewensohn *et al.*, 2009; Piko, 2001), other findings correlate both emotion- and problem-focused coping with resilience (Johnsen, Eid, Laberg, & Thyer, 2002). In interpreting the findings of the current study, it should be noted that both social support (problem-focused) and active emotional coping had slightly lower reliability coefficients for both the black and total group.

For the black group, religious coping reduces emotional reactivity. It might be that religious practices such as prayer and participation in services have a regulatory function for these adolescents and help them gain control of emotions. The social support (Santrock, 2001), positive role models and values (APA, 2002) found through religious practice might all play a role in greater emotional regulation in adolescents. This finding confirms the results of Crawford *et al*.'s (2006) study that spirituality promotes resilience in youth. Also, it provides evidence of the importance of spiritual coping for individuals from African backgrounds – similar to the findings of an American study by Kuo (2010).

The affirmed role of coping in resilience is encouraging, as coping skills are important especially in situations where children cannot leave risky environments behind (Kumpfer, 1999), which is the case for many South African children.

6.4.3 The influence of resilience on life satisfaction

Resilience predicts life satisfaction for the total group and the group of black participants. An increased sense of mastery and relatedness increases life satisfaction, but increased reactivity decreases life satisfaction in adolescents. The findings of previous South African studies (Basson, 2008; Visser & Routledge, 2007) are confirmed in that the majority of the current participants reported higher satisfaction with life. However, the average score obtained for life satisfaction by the total group is considered average, and not high, compared with the international average score obtained by Cummins (1998) and the guidelines provided by Pavot and Diener (1993). An average life satisfaction is nonetheless considered remarkable in the context of the high prevalence of trauma exposure for this group. This might indicate that the current group of participants is indeed resilient.

Since resilience is defined from a normal developmental perspective in the current study, it might be that mastery and relatedness are such important developmental tasks during the adolescent years that competence in these tasks result in resilience, especially for adolescents. Oberle *et al*. (2011) confirm that social relationships specifically play a key role in adolescents' life satisfaction, and various other researchers argue for the role of social and family support in adolescent life satisfaction (Edwards & Lopez, 2006; Gilman & Huebner, 2003; Ma & Huebner, 2008; Morgan *et al*., 2009; Ryan & Deci, 2001). This finding is significant, given that few studies on

child and adolescent resilience explore subjective indicators of well-being (Luthar *et al*., 2006). The current study, therefore, confirms the influence of resilience on the life satisfaction of young South African adolescents. Adolescents need to be resilient in order to be more happy.

This finding further supports the indirect role of strengths and coping in satisfaction with life, since strengths and coping influence resilience which, in turn, influences satisfaction with life. Previous studies confirm the role of strengths, such as intrapersonal strength (Fogle, Huebner, & Laughlin, 2002; Gilman, 2001; Gilman & Huebner, 2003; Oberle *et al*., 2001), interpersonal strength (Gillham *et al*., 2011), family involvement (Flouri & Buchanan, 2002; Gilman & Huebner, 2003; Ma & Huebner, 2008; Morgan *et al*., 2009), school functioning (Lewis, Huebner, Malone, & Valois, 2011; Oberle *et al*., 2011) and coping (Edwards & Lopez, 2006; Frydenberg, 2008; Moos & Holahan, 2003; Ryan & Deci, 2001) in satisfaction with life.

6.5 Conclusion

The following table provides a summary of the findings of the current study.

Table 6.16: The main findings of the study

Total group (adequate fit)	***Black group (good fit)***
Trauma exposure predicts decreased life satisfaction.	
Trauma exposure predicts decreased resilience.	
Trauma exposure predicts a decrease in strengths.	Trauma exposure predicts a decrease in strengths.
Strengths increase resilience and decrease emotional reactivity.	Strengths increase resilience and decrease emotional reactivity.
Coping increases resilience. Problem- and emotion-focused coping increase emotional reactivity.	Coping increases resilience. Problem- and emotion-focused coping increase emotional reactivity. Religious coping decreases emotional reactivity.
Resilience increases life satisfaction. Emotional reactivity decreases life satisfaction.	Resilience increases life satisfaction. Emotional reactivity decreases life satisfaction.

The resilience model that was developed during this study confirms that intervention programmes should focus on both reducing exposure to trauma and developing strengths, coping and resilience to enhance subjective well-being among South African adolescents.

Not only is trauma exposure prevalent among South African adolescents, but it also decreases life satisfaction, resilience and strengths, while it increases emotional reactivity. Exposure to crime and violence has far-reaching negative effects in that it influences resilience and all strengths, especially so for family involvement. However, the fact that the participant group obtained at least average resilience and life satisfaction scores is testament to their resilience in the context of frequent trauma exposure.

Family involvement and affective strength might be important strengths to develop in black adolescents, as these are not affected by trauma exposure, yet contribute to resilience. In fact, the important role of strengths in the context of trauma exposure was highlighted here, since all of the strengths increase resilience and decrease emotional reactivity. Coping strategies also seem to influence resilience. Finally, increased resilience does predict increased life satisfaction, providing evidence that developing resilience in adolescents might contribute positively to their subjective well-being.

These results have implications for intervention on all system levels in the South African context. These implications will be discussed in the last chapter of this thesis.

7. CONCLUSION

7.1 Introduction

This chapter first evaluates the contribution of this study with regard to both its literature review and its findings. The limitations of the study are explored because they not only promote prudence in interpreting the findings, but also indicate direction for future studies. Recommendations are made for future studies and for the implementation of the results in practice. The researcher concludes with a personal reflection on the research process.

7.2 Contribution of the study

7.2.1 The contribution of the literature review

The current study aligns itself with both the second and third waves of research in the field of resilience. First, it explores the underlying process of resilience by examining the interaction between various individual and systemic variables; secondly, it makes recommendations for interventions in this regard. More specifically, this study endeavours to establish how resilience enables adolescents who have been exposed to trauma to achieve well-being.

7.2.1.1 Systems that have an impact on resilience in the adolescent years

The literature review described the process of adjustment in adolescents from a developmental and ecological perspective. The guiding theoretical model of the study is that of ***Developmental Psychopathology*** (Rutter & Sroufe, 2000). This model aided the understanding of the process of resilience by first explaining the ecological systems relevant to young adolescents in South Africa: Every system in the individual's life has the potential to be a risk or protective factor (Masten & Coatsworth, 1998) and,

therefore, has an impact on the process of resilience, even though this impact is not necessarily measured directly.

Kim *et al*. (2011) suggest that both proximal and distal systems be included in adolescent studies. Thus, the literature survey focused on the family and school environment as proximal systems that might affect adolescent functioning. ***Family life*** seems to be the factor most studied in the field of adolescent development (Smetana *et al*., 2006). Recent research indicates that, aside from the structural changes to families that are evident globally (Amoateng & Heaton, 2012), South African families struggle with many socio-political changes which often increase the vulnerability of these families (Amoateng & Richter, 2007; Barbarin, 2003).

The literature review indicated clearly that the ***education system*** in South Africa greatly increases adolescents' risks due to factors such as the poor quality of education and a lack of resources (Branson & Zuze, 2012; Hoadley, 2007). The effects of these risk factors are amplified at poorer schools (Branson & Zuze, 2012) and this further exacerbates inequality. Moreover, the transition to secondary schooling often coincides with pubertal changes (Shaffer & Kipp, 2002) which could temporarily increase vulnerability in young adolescents.

Poverty, crime and the health care system were examined as distal systems that might influence adolescent functioning indirectly. South Africa is one of the most unequal countries in the world (Mokate *et al*., 2011), with a great divide between the affluent and the poor. Moreover, the majority of South African children live in the poorest areas in the country (Meintjies & Hall, 2012). ***Poverty*** seems to be a mega risk factor, as it cumulatively increases many other risk factors, such as restricted access to basic services, poor scholastic performance, and absent parents (Barbarin, 2003; Lake & Reynolds, 2012) in children's lives. Racial disparity remains a strong factor, with black children being exposed more to high-risk environments than white children (Hall, 2012b; Mokate *et al*., 2011).

South Africa also has one of the highest ***violent crime*** rates in the world (Masuku, 2002). Violence has an impact on individual, family, and community level (Van der Merwe & Dawes, 2000), and the indirect effects of witnessing violence seem to be as detrimental as experiencing it first hand (Barbarin *et al.*, 2001). Repeated exposure to violence further amplifies the impact of trauma exposure and interferes with normal

developmental processes (Barbarin, 2003; Seedat *et al*., 2009). Community violence specifically seems to hinder resilience (Barbarin *et al*., 2001), while rising adolescent gang membership (Reddy *et al*., 2010) enhances a culture of violence in South Africa.

Finally, the ***health care system*** in South Africa remains fragile despite initiatives such as the increased legal protection of children through the Children's Act of South Africa. The fact that a large number of South African children live in poverty (Meintjies & Hall, 2012) means that the majority of children are dependent on the public health care system which is characterised by poorer quality care when compared with private health care institutions. Private health care absorbs disproportionate numbers of skilled staff, while public institutions struggle with challenges such as the poor management of funds and low morale among employees (Chopra *et al*., 2009; Lund *et al*., 2009).

In contrast with the risk factors described above, the literature review also pointed to the presence of ***protective factors*** in these contexts. International research indicates that family factors, such as family support, parental involvement in decision making, and authoritative parenting, are protective factors for children (Dubow *et al*., 1997; Luthar *et al*., 2006; Smetana *et al*., 2006). Many extended families in South Africa live together, resulting in alternative primary caregivers being available to children (Meintjies & Hall, 2012). Also, mothers now seem to be better educated than in previous generations (Kalule-Sabiti *et al*., 2007) and this holds promise for the quality of mother–child interaction. Furthermore, the high value attached to family life, especially by the black population (Amoateng & Heaton, 2012), could encourage parents to invest the time and resources necessary to benefit their children. School attendance and academic achievement have been identified as protective factors in international studies (Bushway *et al*., 2011; McGrath *et al*., 2009). In South Africa, the school enrolment rates from early childhood to Grade 9 are good (Mokate *et al*., 2011), with slightly more females than males being enrolled at schools (Lam *et al*., 2011). Also, the shortcomings of outcomes-based education are increasingly being acknowledged and addressed. Finally, Wilkinson and Picket (2009) indicate that economic equality might enhance children's well-being. The South African government has made progress in this regard by ensuring greater child security by allocating and distributing social grants (Mokate *et al*., 2011).

It is against this backdrop that the necessity of enhancing the resilience of South African youth is evident. Risk and resilience studies in South Africa are specifically focused on preventing risk factors and promoting resilience (Macleod, 2009b). In their review of South African studies on resilience, Theron and Theron (2010) identified a lack of studies considering the racial diversity in the country and cultural differences in their perspectives of resilience. Furthermore, most South African studies use a combination of protective factors to infer resilience, while resilience-specific instruments would contribute to a clearer profile of youth resilience (Theron & Theron, 2010). In addition, research in North America and Western-Europe dominates the field of resilience, and international perspectives on the resilience process are still lacking (Liebenberg & Ungar, 2008; Luthar & Zelazo; 2003).

7.2.1.2 The process of developing resilience

The ***resilience model of Kumpfer*** (1999) was used to complement the DP model in providing a better description the dynamic process of resilience in this study. This model allows for the inclusion of multiple variables to account for the possible pathways from adverse events to positive outcomes. In line with the stance of researchers such as Kumpfer (1999), and Coleman and Hagell (2007b), the trait and process approaches were integrated in the conceptualisation of resilience in the current study. Resilience was, therefore, measured as a trait consisting of normal developmental tasks, such as mastery. However, resilience was also studied as being part of a process in which an adverse event (trauma exposure) triggers a process of coping and resilience to influence a specified outcome (life satisfaction). The following diagram depicts the model of resilience that was examined in the current study.

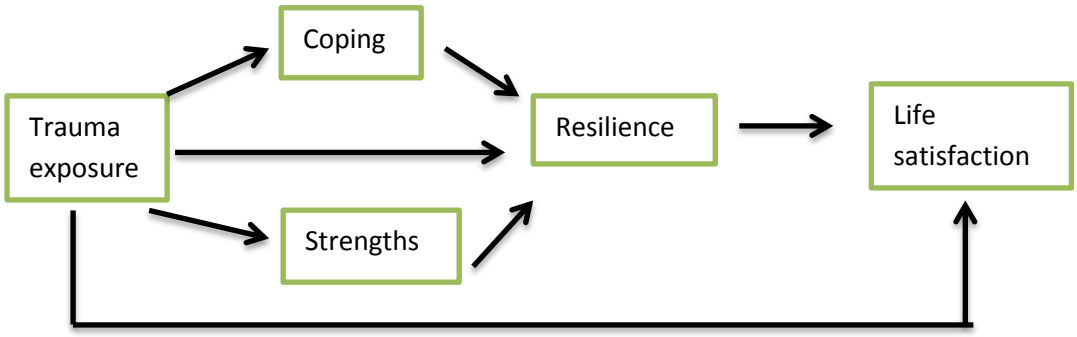

Figure 7.1: The model of resilience investigated in this thesis

The process of resilience is initiated by stressful events (Kumpfer, 1999) such as ***trauma exposure***. The incidence of exposure to traumatic events among South African youth is very high. The research further emphasises that multiple events are the norm, especially so in South Africa (Suliman *et al*., 2009). Trauma exposure in itself is a risk factor for mental health conditions. Various factors determine how adolescents would respond to exposure, for example, the type of traumatic event, their subjective experiences, and the extent to which exposure interferes with normal developmental tasks (Kronenberg *et al*., 2010; Qouta *et al*., 2007).

Various authors indicate that ***life satisfaction*** is considered an appropriate outcome that determines an individual's resilience (Luthar *et al*., 2006; Wright & Masten, 2006). South African adolescents report moderate to high levels of life satisfaction (Basson, 2008; Koen, 2008; Visser & Routledge, 2007). The current study adheres to a global model (Gilman & Huebner, 2000) of life satisfaction to allow adolescents to determine the criteria for happiness themselves. Also, the global model keeps its measurement context free, which might be important in a multi-cultural country such as South Africa. The relationship between trauma exposure and life satisfaction seems to be complex. Although many studies indicate that trauma exposure decreases life satisfaction (Rapaport, 2005), some studies hypothesise a normal curve, with some lifetime adversity corresponding with the highest levels of life satisfaction compared with no adversity or overwhelming adversity (Seery *et al*., 2010). Because this relationship can be multifaceted, it is important to include multiple variables in studies on trauma exposure to understand the pathways from exposure to life satisfaction better.

The presence of ***strengths*** or protective factors is essential for developing resilience (Windle, 2011). Although there is evidence for the moderating role that strengths can play in the relationship between trauma exposure and life satisfaction (Epstein, 1998; Govindji & Linley, 2007), few South African research studies have examined the role of strengths in post-traumatic adjustment (Fincham *et al*., 2009). However, strengths do seem to contribute to well-being, and evidence from American studies indicates that strengths play a more significant role in post-traumatic outcomes compared with the traumatic event itself (Rosenthal *et al*., 2009).

Coping is a transactional process important to resilience (Kumpfer, 1999). The use of both adaptive and maladaptive coping strategies seems to increase during early adolescence (Seiffge-Krenke, 2000). Problem-solving seems to be the most prevalent

strategy that American adolescents use (Zimmer-Gembeck & Skinner, 2011), while adolescents from African backgrounds tend to rely more on spiritual coping strategies (Kuo, 2010). Adolescents in clinical samples depend more on emotion-focused coping than on other strategies (Seiffge-Krenke, 2000). The literature review provides evidence that action-oriented coping assists adolescents' recovery from trauma exposure (Hoge *et al.*, 2007) and that effective coping also contributes to subjective well-being (Anke & Fugl-Meyer, 2003; Lent, 2004). However, there is a paucity of research on the association between coping and positive outcomes (Frydenberg, 2008; Schexnaildre, 2007), and the success of coping seems to be highly context specific (Livneh & Martz, 2007; Moos & Holahan, 2003).

The role of demographic variables, such as gender and race, in the process of resilience should not be ignored. Recent research indicates ***gender*** differences in well-being and resilience during adolescence, with girls mostly worse off than boys (Coleman & Hagell, 2007b; Schwarz *et al*., 2011). However, these findings do not necessarily mean that girls are more vulnerable, but instead they emphasise the differences in strengths and coping strategies used by girls and boys. ***Race*** membership in itself does not predict resilience (Magnus *et al*., 1999). However, in South Africa, there might be significant differences in resilience between different race groups due to racial disparity with regard to exposure to high-risk environments, poverty and access to resources (George, 2009). Also, black South Africans are considered collectivistic, while white South Africans are individualistic. These cultural differences could result in more racial differences in factors that influence their well-being (Proctor *et al*., 2009; Schwarz *et al*., 2011).

Thus, the literature review of studies on adolescent well-being provided sufficient evidence for the interrelationships between risk and protective factors. Trauma exposure is a stressful event which might decrease life satisfaction in adolescents. Yet, strengths – including individual strengths (intrapersonal and affective strengths) and ecological strengths (interpersonal strength, family involvement and school functioning) – have been found to moderate the impact of trauma exposure. Furthermore, protective factors such as these strengths are vital to the process of resilience. Strengths also contribute to life satisfaction in adolescents. Coping enhances resilience and contributes to life satisfaction. In addition to the problem- and emotion-focused coping strategies which are widely studied in this field of research, the current study investigated existential and spiritual coping.

The contribution of the findings obtained with regard to these variables will be presented next.

7.2.2 The contribution of the findings

The following section provides an explanation of how the research findings have addressed the research goals that were set for this study. The significant pathways discussed in this section further indicate how adolescents exposed to trauma develop resilience.

7.2.2.1 The incidence of trauma exposure, resilience and life satisfaction

The findings of this thesis established the incidence of trauma exposure, resilience and life satisfaction in a sample of young adolescents. The high rate of ***trauma exposure*** for this group of participants confirms the rates reported in earlier South African studies in this regard (e.g., Suliman *et al*., 2009). Moreover, two-thirds of the group of participants have been exposed to more than one traumatic event, with 8.4% having been exposed to six or more events. The prevalence of trauma exposure among the black group was higher than for the white group of participants. Also, a greater proportion of the black group has been exposed to multiple events compared to the white group. Because approximately 85% of the participants have experienced at least one traumatic event by early adolescence, the importance of equipping South African children to cope with trauma is evident.

In addition, the participants reported an average level of ***life satisfaction***. Previous South African studies confirm average to high rates of life satisfaction among adolescents (e.g., Basson, 2008). The average rates of life satisfaction are remarkable in the light of the high rates of trauma exposure among this group of participants. These findings might indicate that South African children are, indeed, resilient. However, interventions to promote subjective well-being further would still be indicated, as the life satisfaction scores were average, but not high.

Also, the reported ***resilience*** rate is average for this group of participants. This study contributes to the existing literature by establishing the incidence of resilience among

South African youth with a resilience-specific measuring instrument. The resilience rate for the black group was lower than for the white group. Given that black adolescents are more exposed to trauma, and less resilient, it would be particularly important to understand how to develop and increase resilience in black adolescents.

The black group further reported lower average scores than the white group in four of the strengths. Only with regard to school functioning did the black and white participants not differ significantly. This could indicate the potential of the school environment to be a strength – even for adolescents who have not yet developed other strengths. In fact, the evidence that the total group of participants reported a higher score for school functioning implies that this strength might be important to adolescents in the South African context.

The participants obtained average scores for problem-focused, emotion-focused and existential coping. The significantly high score obtained for religious coping indicates its salience in the South African context. Also, the black group obtained a lower score for existential coping than the white group, although their score was still average. This might indicate either that black adolescents are unfamiliar with existential coping strategies or that they struggle to find meaning in adverse events. It should be kept in mind, though, that the reliability of one of the subscales of existential coping was slightly lower for the black group.

These findings not only provide a current description of the population of young South African adolescents, but also confirm that these adolescents are resilient despite their high exposure to trauma. The fact that black participants are more exposed to trauma, yet report lower levels of resilience and strengths, again confirms the correlation between racial membership and higher risk environments in South Africa – although this finding might not be unique to the South African context. It further indicates that especially our black adolescents need to be assisted to develop their resilience and well-being.

7.2.2.2 Correlations between the risk and resilience variables

The results indicated significant correlations between most of the variables included in the study. This finding not only provides evidence for the interrelated nature of the variables, but also confirms the complexity of the interaction between risk and

protective factors in the resilience process. It, therefore, supports the need for a systemic, integrated process model to conceptualise resilience, such as the model proposed by Kumpfer (1999). The strongest correlations with medium effect sizes were between the five strengths; and between problem-focused, emotion-focused, and existential coping. This finding is important to the field of positive psychology because it indicates a "snowball effect" in terms of both strengths and coping: Developing one strength or coping strategy in a child might increase the use of other strengths or coping strategies. Also, with regard to resilience research, it confirms the protective-protective model by Brook *et al*. (1989), who suggest that protective factors might be interrelated.

The findings also indicate that the correlations between strengths, coping, resilience and life satisfaction are stronger than the correlations between trauma exposure and these variables. Although trauma exposure does have a significant negative effect, the impact of increasing strengths, coping and resilience for adolescent life satisfaction might be more significant. The influence of trauma exposure on life satisfaction and strengths indicates that poor outcomes are not inevitable. However, stressful events such as trauma exposure can be overcome if the adolescents have sufficient protective factors in their lives. First, from a resilience perspective, the notion that protection matters more than risk (Jessor *et al*., 2010) is confirmed. Second, from a developmental psychology perspective, this finding might indicate resilience factors to be more important than risk factors, particularly for young adolescents. Lastly, from a context-specific perspective, this finding has clarified the role of these risk and resilience factors in South Africa specifically.

7.2.2.3 The goodness-of-fit of the model

The model developed by the researcher was a ***reasonable fit for the total group and a good fit for the black group***. This finding makes several contributions to the field of resilience. First, it identifies risk and resilience variables important to subjective well-being in young adolescents. Crime and violence, family-related trauma, accidents, injury and illness all are risk factors that reduce the strengths and life satisfaction in adolescents. In addition, emotional reactivity reduces life satisfaction. Intrapersonal, affective and interpersonal strengths, as well as family involvement and school functioning, increase resilience. These can, thus, be considered protective factors, which could even lead to enhanced life satisfaction despite trauma exposure. Also, problem-

focused, emotion-focused, existential and spiritual coping increase resilience. A sense of mastery and relatedness are resilience factors that increase life satisfaction.

Second, the model provides an explanation of *how* risk and resilience influence life satisfaction in adolescents. Thus, it answers the research question stated in the first chapter: *how does resilience enable adolescents exposed to trauma to achieve well-being?* Trauma reduces life satisfaction, strengths and resilience, but strengths and coping skills can be developed to increase resilience which, in turn, increases life satisfaction.

Third, the confirmed model provides evidence to support the resilience model proposed by Kumpfer (1999) in that strengths, coping and resilience have been found to play a role in the relationship between a stressful event and a positive outcome. Since there is a paucity of research on subjective outcomes in children and adolescents (Luthar *et al*., 2006), this finding contributes to the field of developmental psychology in clarifying factors that are important to life satisfaction in this age group.

This study is particularly significant because the model is a good fit for the group of ***black adolescents***. It addresses the scarcity of South African studies that encompass the racial diversity in South Africa (Theron & Theron, 2010), as well as the lack of studies in developing countries (Liebenberg & Ungar, 2008). Because black South Africans usually have a collectivistic world view (as explained in section 3.4.2.3a), this study adds to a better understanding of factors that are important to well-being in this cultural group. Also, since intervention aimed at developing resilience is indicated for black adolescents as mentioned above, this study contributes to the literature by providing evidence for the vital components to be included in such intervention programmes.

The findings not only describe the incidence of ***trauma exposure***, but the model also demonstrates its impact on indicators of positive functioning. Trauma exposure has been found to reduce life satisfaction and resilience for the total group. This finding confirms the far-reaching effect of exposure to traumatic events and highlights the importance of reducing events related to crime and violence. Also, the importance of protecting children from the negative effect of trauma exposure is evident. Trauma exposure among the black group did not influence resilience or the outcome, namely life satisfaction, significantly. This could indicate a desensitation effect among black adolescents, which probably has a protective function in the context of chronic and/or

multiple exposure. However, the life satisfaction scale showed a slightly lower reliably coefficient for the black group, indicating the need for further research to provide better understand of the factors underlying life satisfaction in the black population.

Trauma exposure reduced the strengths of both the total group and the black group. Exposure to crime and violence reduced all the strengths of the total group. In the black group, family involvement and affective strength were not influenced by exposure to violence. This means that interventions should build these two strengths particularly because they seem to be more resistant to the negative effect of trauma exposure. Family-related trauma has the greatest impact on interpersonal strengths. This would imply that support and modelling of healthy regulation skills are important especially for adolescents experiencing domestic violence or the loss of a parent. The other types of trauma (accidents, illness, injury and natural disasters) reduced the strengths of the total group, but not of the black group. Again, the black group might be so desensitised by frequent exposure that these types of trauma do not have a direct impact on their strengths. Intervention is, consequently, indicated specifically for all adolescents exposed to crime, violence and family-related trauma.

It was surprising to find that trauma exposure did not influence coping significantly – one would have expected the use of coping strategies to increase as exposure to trauma increased. This finding might indicate ineffective coping among South African youth. Although this result should be explored further, it might indicate that intervention among adolescents should be a priority – especially as coping has been found to significantly increase resilience. However, it should be noted that some of the problem-focused and existential coping subscales had slightly lower reliability coefficients for the group of black adolescents. The relevant subscales had a small number of items, though. Future research in this area should further explore the factors underlying problem-focused and existential coping among black adolescents.

For both the total and black group, ***strengths and coping*** increase resilience, and resilience increases life satisfaction. Thus, in order to promote subjective well-being in adolescents, intervention efforts should be aimed at developing coping skills, strengths, and resilience. This finding contributes to the field of positive psychology by confirming the contributors to adolescent life satisfaction within the South African context.

Strengths are reduced by trauma exposure, but trauma exposure increases resilience. Thus, the importance of building strengths is highlighted by these results. The findings confirm Epstein's (1998) theory that these strengths are a buffer against trauma exposure as well as Windle's (2011) statement that protective factors are essential to the resilience process. The finding also supports a strength-based approach to intervention, instead of only identifying risk.

Because coping increases resilience, the study confirms that coping is a micro-component in the resilience process (Leipold & Greve, 2009). The fact that existential coping in particular increases resilience confirms the congruence model in the sense that existential coping is indicated for situations that cannot be changed – as is often the case in crime, violence and family-related trauma in South Africa. The findings further point to the complex nature of the coping process because coping increases both resilience and emotional reactivity in adolescents. This would imply that adolescents who are experiencing difficulty should be monitored for emotional reactivity and related unhealthy coping behaviours, such as withdrawal and guilt. For the black group, spiritual coping significantly reduced emotional reactivity. Encouraging religious practice might, therefore, be a critical component of intervention aimed at this population group.

Resilience increases life satisfaction. Thus, developing adolescents' resilience can contribute to their subjective sense of well-being. This finding also confirms the importance of normal developmental tasks – mastery and a sense of relatedness – to subjective well-being in the early adolescent years. For this reason, intervention programmes that are aimed at enhancing well-being should assist adolescents to develop self-efficacy; a sense of mastery over the environment; flexibility during difficulty; the ability to ask for help; social support networks; social skills; and empathy.

The model was not a good fit for the ***white group*** and indicated differences in the process of resilience between black and white adolescents. Future studies could explore both different pathways and different protective factors for white adolescents. One such correlation that could yield results in future studies would be to establish whether there is a relationship between coping and strengths. It might be that increasing the strengths and resources could assist adolescents to develop more effective coping skills. Also, protective factors such as positive peer group relationships – which have not been

measured in this study – might be of greater significance to life satisfaction in white adolescents.

Researchers such as Condly (2006:231), and Kumpfer and Summerhayes (2006:160), support the use of ***Structural Equation Modelling*** (SEM) to obtain a clearer idea of the direct and indirect effects in the process of resilience. The size of the group of participants obtained for the current study enabled data analysis by means of SEM. Although the causal pathways highlighted in this section are considered only probable (and not proved) they, nonetheless, have provided more insight into the process of resilience in South African adolescents.

Future studies could investigate various types of group differences, for example, the difference in strengths, coping and resilience among adolescents who have never been exposed to a traumatic event, those exposed to a few events, and those who have been exposed to multiple events. Also, adolescents with low life satisfaction could be compared to those with high life satisfaction with regard to the variables included in this study.

7.2.2.4 Summary of the contribution of the findings

The findings clarified the process of resilience for a group of young South African adolescents. The model of resilience tested in this thesis identified the risk and resilience factors that are important to subjective well-being in early adolescence. It also confirmed the validity of a theoretical model of resilience – proposed by an American researcher, Kumpfer (1999) – for application in the South African context. As such, the study contains the data needed to inform intervention strategies that are aimed at enhancing resilience and well-being among youth. From a contextual perspective, the research adds to the body of literature on resilience in South Africa, a developing country with citizens from both individualistic and collectivistic backgrounds. From a developmental psychology perspective, it adds to the body of literature on factors that are important to well-being in early adolescence. From a positive psychology perspective, it highlights the significant role of strengths and coping in well-being. This was a large-scale study and participants were drawn randomly, enhancing the ecological validity of the study. The results can, therefore, be generalised. Not only are there few such studies in the South African context, but the recommendations based on these results hold promise for all South African adolescents.

7.3 Limitations of the study

The study has a number of limitations which should be kept in mind when interpreting the results.

One of the greatest limitations in South African research is the paucity of measuring instruments that have been standardised for the South African context. For this reason, this study relied on instruments devised for American populations. Although the measuring instruments were found to be reliable for the current sample, there still is a need for locally developed and standardised instruments. The translation of the questionnaires into Afrikaans and Sesotho resulted in the use of more formal language than generally used by adolescents: Learners did not always understand the vocabulary. However, learners were provided with both English and Sesotho or Afrikaans questionnaires to ensure that they understood the questions well. Also, the research team was present during the entire administration and could immediately answer questions related to the content of the instruments. It should further be noted that permission was not obtained from the authors of the questionnaires to have it translated.

The Satisfaction with Life Scale showed lower reliability for adolescents than for adults. With regard to the current group of participants, the reliability was slightly lower for black and male learners. The reliability index for some of the coping subscales was also slightly below the accepted standard of 0.7 for the participant group. The lower reliabilities might be due to the fact that black and male learners interpreted the questions differently, or that dimensions other than those included in the measuring instruments affect their life satisfaction and coping.

Self-report questionnaires do impose some limitations, such as reactivity, and the learners might have deliberately chosen responses they considered to be socially acceptable. Also, as the survey was quite long, fatigue could have influenced later responses. However, measures were taken to control the environment in which this survey was completed (as explained in chapter 5) and to ensure that the responses were as valid and reliable as possible. Learners were given regular breaks, for example, and the research team was available throughout the process to answer questions. The entire survey took a maximum of two hours to complete.

Although a correlational design was deliberately chosen to include multiple variables in the study, internal validity is lower in non-experimental studies. However, non-experimental research is preferable in studies aimed at informing practice (Wilson & Maclean, 2011). Moreover, the method of analysis, SEM, is a more complex statistical model which can provide preliminary support for inferences of causality. The models analysed with SEM have been developed from theory and, therefore, propose the direction of influence between variables. However, causality can be confirmed only with experimental designs. Also, the variables were measured once and, therefore, captured adolescents' experiences only at a given moment in time. No conclusions can be reached regarding the changes in variables over time. It is further possible that other researchers may arrive at different conclusions based on the same research design and data set.

The schools included in the study were randomly drawn from five clusters to ensure generalisability of the findings. However, this sampling method resulted in female and white learners' being overrepresented. Also, due to the smaller classes in rural schools, learners from rural areas were underrepresented.

From the literature review, it is evident that resilience should ideally be studied by using multiple measures for both subjective and objective outcomes, such as subjective well-being, academic performance and parent ratings on behaviour. Only one subjective outcome was included in this study. However, the inclusion of life satisfaction as an outcome is considered justified for the current study, given the large number of participants, the paucity of research on subjective outcomes during adolescence, and the fact that subjective well-being is seen as a good indicator of resilience.

7.4 Recommendations

Various recommendations can be made for research and practice based on the findings and limitations of this study. The following recommendations pertain to ***future studies*** on risk and resilience in adolescence.

There is a need for standardised questionnaires on trauma exposure, resilience, coping and well-being for the South African population. Thus, future studies focused on the development of measuring instruments could contribute greatly to this field. Also, it

is advised that multiple indicators of positive functioning be included in studies on resilience.

Since so many children and adolescents still live in rural areas in South Africa, future studies should include rural population groups. Moreover, future studies should take care to be more representative with regard to gender as various international studies find gender differences for adolescents with regard to coping and well-being. In general, more research is needed on resilience and well-being in South African populations. This study could, therefore, be replicated for different age groups. Also, longitudinal studies in this field would be of great worth to increase our understanding of developmentally related changes in resilience and well-being in children and adolescents. Kumpfer's resilience model could be tested further for different South African populations and age groups.

Finally, it is important for the research in this area to inform interventions, and vice versa, to support the translational agenda of resilience research.

Health care professionals should embrace research, practice and advocacy on behalf of children and adolescents. Psycho-education is indicated for families, schools, companies and government institutions to understand the importance of resilience for the future of our children and society. Intervention efforts should be informed by research, and experiences in the community should guide future research. Also, both research results and practical experiences should be communicated to the relevant policy makers. Furthermore, professionals should be involved in their communities to effectively reach adolescents through institutions such as the school.

It is critical that health care workers in South Africa be well informed on ***trauma exposure*** and protective factors, as well as their influence on normal functioning and development. Trauma counselling should be a non-negotiable part of training programmes for health care professionals. Mental health professionals should take heed of the importance of addressing the loss of feelings of mastery and relatedness after exposure to trauma. In this regard, support groups to increase a sense of relatedness for victims of trauma might be helpful. Adolescents should also be assisted with emotional regulation during and/or after trauma exposure.

A ***strengths-based*** approach should be followed in services and programmes available to adolescents. Especially family involvement and affective strength should be nurtured in black adolescents. School functioning could be improved to become a significant strength to adolescents from different backgrounds. Also, adolescents should be assisted to develop a variety of coping skills, as well as to discern the best strategy for a given situation.

Social support – whether from family, peers or professionals – remains a critical contributor to resilience and well-being. Adolescents should be encouraged to reach out to adults whom they trust. In addition, the importance of prosocial peer groups should be emphasised. Adolescents could be assisted to develop the social skills they need to form quality friendships.

Families continue to play a vital role in young adolescents' lives. Thus, parents should be encouraged to take an interest in their children's lives. Given that trauma exposure is so high for this group of participants, greater parental monitoring is indicated, although it might seem developmentally inappropriate. Parents also play a role in other systems in the child's life. For example, parents might create opportunities for practising religion together as a family. Also, parents should be involved in children's school and extramural activities to understand the challenges that adolescents are facing in the school environment and to provide them with adequate support. Finally, parents could be assisted to develop the parenting, coping and emotional regulation skills they need to model resilience and effectively help their children.

Since families in South Africa are often vulnerable, ***schools*** are becoming increasingly more important to efforts that are aimed at improving well-being in adolescents. The school is, furthermore, a stabilising factor in that it creates a common ground for adolescents from both poorer and more affluent areas, adolescents from both healthy and dysfunctional families, and adolescents from various cultural groups. Teachers can take steps to enhance learners' school functioning by encouraging their engagement with school work, the establishment of a learning culture, and positive classroom behaviour. Teachers should be encouraged to be supportive and should be trained in coping and stress management skills to enable them to model these to their learners.

The school might be an effective instrument that could reach families by providing resilience programmes to be implemented at schools. This is the one place where all children must go, and schools provide a captured audience for strategies to improve resilience. These programmes should preferably be incorporated into life skills curricula, and attendance should be compulsory. This would prevent the stigmatisation of adolescents who belong to high-risk groups, and enrich all learners with the skills necessary to become competent adults.

Political intent already seems to be aimed at enhancing the well-being of South African citizens. However, government institutions should use research results and consultation with professionals to manage and allocate resources for health, development and education better. It is worthwhile to invest in our children and adolescents. With regard to policy in our country, it is preferable to change the odds for our children, instead of expecting them to beat the odds. This includes addressing crime and violence, poverty, inequality, poor education, and health issues. Children cannot be expected to be continuously resilient in the face of these persistent, chronic and overwhelming risks.

The government and law enforcement agencies should persist in the battle against crime and violence. Although recommendations for curbing violence are beyond the scope of this thesis, a greater effort is needed to reduce crime. These efforts might include aspects such as strengthening and supporting the police force, efforts to reduce poverty and unemployment, and encouraging positive community life in neighbourhoods. Government institutions and employers could implement strategies to enable parents to spend more time with their children. Job creation in rural areas would be important in this regard. Another example would be to provide competitive employment options such as working flexi-time or from home. Education strategies and policies should be geared to enhance school functioning by ensuring the adequate training of teachers and the appropriate allocations of funds, for example. Partnerships and exchange programmes between struggling and successful schools might enrich both the learners' and the teachers' educational experiences.

Finally, the availability and accessibility of resources in ***communities*** should be addressed. These could include resources such as counsellors, after-school care programmes, recreational facilities, parenting programmes, and libraries or computer laboratories. Even local businesses could contribute greatly in this regard by providing

resources such as sports facilities and equipment to a local school or clinic on an ongoing basis. Mental health services should be adolescent friendly in that they should be easily accessible and protective of the adolescent's identity, while providing short-term services also, with staff who are competent to work with adolescents. The provision of support and health care via information and communication technology should also be explored. Computer games, SMS helplines and informative applications are all examples of how technology could be harnessed to promote well-being among adolescents.

7.5 Personal reflection

My promoter once told me that obtaining a doctorate is not the culmination but, in fact, the launch of one's career. I have come to understand this truth in the final months of completing this thesis, for writing it has awakened a passion in me for resilience and for doing something about resilience. I carefully chose a topic for the thesis four years ago, as I wanted to do my research in an area that would have the potential to make a difference in children's lives. Never did I think that, by the end of this four-year journey, I would be even more motivated to do exactly that – use my results to the benefit of the community. I count it a privilege to be energised, and not drained, by this research process. Aside from shaping my career, my doctoral studies also helped me develop:

a sound theoretical grounding,
the skill to conceptualise,
critical thinking and argumentation,
a scholarly approach to my work,
a deeper understanding of the research process and research design,
experience to overcome the obstacles that are part of any research process,
academic writing skills (in my second language, no less!),
presentation skills,
perseverance,
self-discipline,
a process-oriented approach as opposed to a task-oriented approach,

and resilience.

The doctoral journey requires the ability to bounce back from set-backs, criticism (even the constructive kind), a lack of motivation or energy, and unpredictable events (doctorate- or life-related) to continue towards excellence and completion. These skills have prepared me for the career that lies ahead: I experience a sense of excitement and I feel the responsibility to take my thesis to the streets. In reflecting on the APA's public education campaign on resilience, Newman (2005) emphasises the importance of applying knowledge on resilience in communities:

> ***For psychologists, using resilience as a bridge to their community has proven valuable … Not only does information about building resilience allow psychologists to help their communities, it also helps communities understand the value of psychology. In fact, where there has been community outreach, people have even gone beyond understanding the value of psychology to experiencing the value of psychology for themselves*** (p. 228).

List of references

Abdool Karim, S.S., Churchyard, G.J., Abdool Karim, Q., & Lawn, S.D. (2009). HIV infection and tuberculosis in South Africa: An urgent need to escalate the public health response. *Lancet,* published online August 25th. doi: 10.1016/S0140-6736(09)60916-8

Achenbach, T.M. (1974). *Developmental psychopathology*. Oxford, London: Ronald Press.

Adams, R. & Laursen, B. (2001). The organisation and dynamics of adolescent conflict with parents and friends. *Journal of Marriage and the Family, 63*, 97-110. doi: 10.1111/j.1741-3737.2001.00097.x

Ainsworth, M.D.S. (1989). Attachments beyond infancy. *American Psychologist, 44*, 709-716. doi: 10.1037/0003-066X.44.4.709

Aldwin, C. M. (2007). *Stress, coping, & development: An integrative perspective* (2nd ed.). New York, NY: Guildford Press.

Alim, T.N., Feder, A., Graves, R.E., Wang, Y., Weaver, J., Westphal, M., … Charney, D.S. (2008). Trauma, resilience, and recovery in a high-risk African-American population. *American Journal of Psychiatry*, 10 pages. doi: 10.1176/appi.ajp.2008.07121939

Allen, J.P., & Miga, E.M. (2010). Attachment in adolescence: A move to the level of emotion regulation. *Journal of Social and Personal Relationships, 27*, 181-190. doi: 10.1177/0265407509360898

Allen, J.P., Porter, M.R., Marsh, P., McFarland, F.C., & McElhaney, K.B. (2005). Two faces of adolescents' success with peers; adolescent popularity, social adaptation, and deviant behaviour. *Child Development, 76*, 747-760. doi: 10.1111/j.1467-8624.2005.00875.x

Allen, J.P., Porter, M., McFarland, C., McElhaney, K.B., & Marsh, P. (2007). The relation of attachment security to adolescents' paternal and peer relationships, depression, and

externalizing behavior. *Child Development, 78*, 1222-1239. doi: 10.1111/j.1467-8624.2007.01062.x

Allen, N.B., & Sheeber, L.B. (2009). The importance of affective development for the emergence of depressive disorders during adolescence. In N.B. Allen & L.B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive diorders* (pp. 1-10). Cambridge: Cambridge University Press.

Alsaker, F.D., & Flammer, A. (1999). Cross-national research in adolescent psychology: The Euronet project. In F.D. Alsaker & A. Flammer (Eds.), *The adolescent experience: European and American adolescents in the 1990's (Euronet)* (pp. 1-14). Mahwah, NJ: Lawrence Erlbaum Associates.

Alvord, M.K., & Grados, J.J. (2005). Enhancing resilience in children: A proactive approach. *Professional Psychology: Research and Practice, 36*, 238-245. doi: 10.1037/0735-7028.36.3.238

American Psychological Association (APA). (2002). *A reference for professionals: Developing adolescents*. Washington, DC: American Psychological Association.

American Psychological Association. (2009). *The road to resilience*. Retrieved from www.nus.edu.sg

Amoateng, A.Y. (2007). Toward a conceptual framework for families and households. In A.Y. Amoateng & T.B. Heaton (Eds.). *Families and households in post-apartheid South Africa* (pp. 27 - 42). Cape Town, South Africa: Human Sciences Research Council.

Amoateng, A.Y., & Heaton, T.B. (2012). Racial differences in attitudes towards selected aspects of family life in South Africa. *Southern African Journal of Demography, 13*, 37-58. Retrieved from www.my.unisa.ac.za

Amoateng, A.Y., Heaton, T.B., & Kalule-Sabiti, I. (2007). Living arrangements in South Africa. In A.Y. Amoateng & T.B. Heaton (Eds.). *Families and households in post-apartheid South Africa* (pp. 43 - 59). Cape Town, South Africa: Human Sciences Research Council.

Amoateng, A.Y., & Richter, L.M . (2007). Social and economic context of families and households in South Africa. In A.Y. Amoateng & T.B. Heaton (Eds.). *Families and households in post-apartheid South Africa* (pp. 1-25). Cape Town, South Africa: Human Sciences Research Council.

Anke, A.G.W., & Fugl-Meyer, A.R. (2003). Life satisfaction several years after severe multiple trauma – a retrospective investigation. *Clinical Rehabilitation, 17*, 431-442. doi: 10.1191/0269215503cr629oa

Anthony, D. (2011). *The state of the world's children 2011: Adolescence, an age of opportunity.* New York, NY: United Nations Children's Fund.

Arbuckle, J. L., & Wothke, W. (1999). *AMOS 4.0 Users Guide*. Chicago, IL: Smallwaters Corporation.

Ardelt, M., & Day, L. (2002). Parents, siblings, and peers: Close social relationships and adolescent deviance. *Journal of Early Adolescence, 22*, 310-349. doi: 10.1177/02731602022003004

Arnett, J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist, 54*, 317-326. doi: 10.1037/0003-066X.54.5.317

Ash, C., & Huebner, E.S. (2001). Environmental events and life satisfaction reports of adolescents: A test of cognitive mediation. *School Psychology International, 22*, 320-336. doi: 10.1177/0143034301223008

Bak, M. (2008). Townships in transition: Women's caring keeps the township together. *Journal of Southern African Studies, 34*, 255-268. doi**:** 10.1080/03057070802037928

Baldwin, A.L., Baldwin, C.P., Kasser, T., Zax, M., Sameroff, A., & Seifer, R. (1993). Contextual risk and resiliency during late adolescence. *Development and Psychopathology, 5*, 741-761. doi: 10.1017/S095457940000626X

Barbarin, O.A. (2003). Social risks and child development in South Africa: A nation's program to protect the human rights of children. *American Journal of Orthopsychiatry, 73*, 248-254. doi: 10.1037/0002-9432.73.3.248

Barbarin, O.A., & Richter, L. (1999). Adversity and psychosocial competence of South African children. *American Journal of Orthopsychiatry, 69*, 319-327. doi: 10.1037/h0080406

Barbarin, O.A., Richter, L., & De Wet, T. (2001). Exposure to violence, coping resources and psychological adjustment of South African children. *American Journal of Orthopsychiatry, 71*, 16-25. doi: 10.1037/0002-9432.71.1.16

Barnard, G., & Lysenko, T. (2010). *OECD Economic Surveys: July 2010*. South Africa: The Economic Development and Review Committee. Retrieved from www.oecd.org

Basson, N. (2008). *The influence of psychosocial factors on the subjective well-being of adolescents*. Master's dissertation, University of the Free State, South Africa.

Bearinger, L.H., Sieving, R.E., Ferguson, J. & Sharma, V. (2007). Global perspectives on the sexual and reproductive health of adolescents: Patterns, prevention and potential. *Lancet, 369*, 1220-1231. doi: 10.1016/S0140-6736(07)60367-5

Benard, B. (2007). The foundations of the resiliency paradigm. In N. Henderson (Ed.), *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities* (pp. 3-7). Ojai, CA: Resiliency in Action.

Bender, D., & Lösel, F. (1997). Protective and risk effects of peer relations and social support on antisocial behaviour in adolescents from multi-problem milieus. *Journal of Adolescence, 20*, 661-678. doi: 10.1006/jado.1997.0118

Bentler, P.M., & Chou, C.P. (1987). Practical issues in structural modelling. *Sociological Methods and Research, 16*, 78-117. doi: 10.1177/0049124187016001004

Bentley, K.A. (2005). *Understanding culture and rights in South Africa today: Moving beyond racial hegemony in national identity*. Draft paper. Human Sciences Research Council. Retrieved from http://www.hsrc.ac.za/en/research-outputs/view/2069

Benzies, K., & Mychasiuk, R. (2009). Fostering family resiliency: A review of the key protective factors. *Child and Family Social Work, 14*, 103-114. doi: 10.1111/j.1365-2206.2008.00568x

Berg-Nielsen, T. S., Vika, A., & Dahl, A. A. (2003). When adolescents disagree with their mothers: CBCL-YSR discrepancies related to maternal depression and adolescent self-esteem. *Child: care, health and development, 29*, 207-213. doi: 10.1046/j.1365-2214.2003.00332.x

Berman, S.L., Kurtines, W.M., Silverman, W.K., & Serafini, L.T. (1996). The impact of exposure to crime and violence on urban youth. *American Journal of Orthopsychiatry, 3,* 329-336. doi: 10.1037/h0080183

Berman, S.L., Weems, C.F., Rodriguez, E.T., & Zamora, I.J. (2006). The relation between identity status and romantic attachment style in middle and late adolescence. *Journal of Adolescence, 29*, 737-748. doi: 10.1016/j.adolescence.2005.11.004

Besser, A., & Neria, Y. (2009). PTSD symptoms, satisfaction with life, and prejudicial attitudes toward the adversary among Israeli civilians exposed to ongoing missile attacks. *Journal of Traumatic Stress, 22*, 268-275. doi: 10.1002/jts.20420

Betancourt, T.S., Borisova, I.I., Williams, T.P., Brennan, R.T., Whitfield, T.H., De La Soudiere, M., Williamson, J., & Gilman, S.E. (2010). Sierra Leone's former child soldiers: A follow-up study of psychosocial adjustment and community reintegration. *Child Development, 81*, 1077-1095. doi: 10.1111/j.1467-8624.2010.01455.x

Betts, J., Gullone, E., & Allen, J.S. (2009). An examination of emotion regulation, temperament, and parenting style as potential predictors of adolescent depression risk status: A correlational

study. *British Journal of Developmental Psyhology, 27*, 473-485. doi: 10.1348/026151008X314900

Bicego, G., Rutstein, S., & Johnson, K. (2003). Dimensions of the emerging orphan crisis in sub-Saharan Africa. *Social Sciences and Medicine, 56*, 1235-1247. doi: 10.1016/S0277-9536(02)00125-9

Biswas-Diener, R., Kashdan, T.B., & Minhas, G. (2011). A dynamic approach to psychological strength development and intervention. *The Journal of Positive Psychology, 6*, 106-118. doi: 10.1080/17439760.2010.545429

Black, K., & Lobo, M. (2008). A conceptual review of family resilience factors. *Journal of family nursing*, *14*, 33 – 55. doi: 10.1177/1074840707312237

Blakemore, S-J., Burnett, S., Dahl, R.E. (2010). The role of puberty in the developing adolescent brain. *Human Brain Mapping, 31*, 926-933. doi: 10.1002/hbm.21052

Blunch, N.J. (2008). *Introduction to structural equation modelling using SPSS and AMOS*. London: Sage publications.

Bornstein, M.H., Hahn, C., & Haynes, O.M. (2010). Social competence, externalizing and internalizing behavioral adjustment from early childhood through early adolescence: Developmental cascades. *Development and Psychopathology, 22*, 717-735. doi: 10.1017/S0954579410000416

Bowlby, J. (1969). Disruption of affectional bonds and its effects on behavior. *Canada's Mental Health Supplement, 59*, 12. Retrieved from http://link.springer.com/article/10.1007%2FBF02118173?LI=true

Bowlby, J. (1973). *Seperation: Anxiety and anger, Vol. 2*. New York, NY: Basic books.

Boyd, D.G., & Bee, H.L. (2014). *Lifespan development* (6th ed.). London: Pearson Education.

Boyd, J., Eckert, P. (2002). *Creating resilient educators: A global learning communities manual.* Tasmania: Global Learning Communities. Retrieved from www.vision.net.au

Branje, S.J.T., Van Lieshout, C.F.M., Van Aken, M.A.G., & Haselager, G.J.T. (2004). Perceived support in sibling relationships and adolescent adjustment. *Journal of Child Psychology and Psychiatry, 45*, 1385-1396. doi: 10.1111/j.1469-7610.2004.00332.x

Brannick, M. T. (1995). Critical comments on applying covariance structure modeling. *Journal of Organizational Behavior, 16*, 201-213. doi: 10.1002/job.4030160303

Branson, N., Lam, D., & Zuze, T.L. (2012). *Education: Analysis of the NIDS wave 1 and 2 datasets. National Income Dynamics Study discussion paper*. Cape Town, South Africa: SALDRU, UCT.

Branson, N., & Zuze, T.L. (2012). Education, the great equaliser: Improving access to quality education. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge 2012* (pp. 69-74). Cape Town, South Africa: Children's Institute, University of Cape Town.

Braun-Lewensohn, O., Celestin-Westreich, S., Celestin, L., Verleye, G., Verte, D., & Ponjaert-Kristoffersen, I. (2009). Coping styles as moderating the relationships between terrorist attacks and well-being outcomes. *Journal of Adolescence, 32*, 585-599. doi: 10.1016/j.adolescence.2008.06.003

Brendtro, L.K., Brokenleg, M., & Van Bockern, S. (1990). *Reclaiming youth at risk: Our hope for the future*. Bloomington, IN: Solution Tree.

Bretherton, I. (1990). Open communication and internal working models: Their role in the development of attachment relationships. In R.A. Thompson (Ed.), *Nebraska symposium on motivation: Vol 36. Socioemotional development* (pp. 57-113). Lincoln, NE: University of Nebraska Press.

Briere, J., Kaltman, S., & Green, B.L. (2008). Accumulated childhood trauma and symptom comlexity. *Journal of Traumatic Stress, 21*, 223-226. doi: 10.1002/jts.20317

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513-531. doi: 10.1037/0003-066X.32.7.513

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge: Harvard University Press.

Bronfenbrenner, U., & Crouter, A. C. (1983). The evolution of environmental models in developmental research. In P.H. Mussen (Ed.), *Handbook of child psychology* (Vol.1, pp. 357-414). New York, NY: Wiley

Brook, D.W., Rubenstone, E., Zhang, C., Morojele, N.K., & Brook, J.S. (2011). Environmental stressors, low well-being, smoking, and alcohol use among South African adolescents. *Social Science & Medicine, 72*, 1447-1453. doi: 10.1016/j.socscimed.2011.02.041

Brook, J.S., Morojele, N.K., Pahl, T., & Brook, D. (2006). Predictors of drug use among South African adolescents. *Journal of Adolescent Health, 38*, 26-34. doi: 10.1016/j.jadohealth.2004.08.004

Brook, J.S., Whiteman, M., Gordon, A.S., & Cohen, P. (1989). Changes in drug involvement: A longitudinal study of childhood and adolescent determinants. *Psychological Reports, 65*, 707-726. doi: 10.2466/pr0.1989.65.3.707

Brooks, J.E. (2006). Strengthening resilience in children and youths: Maximizing opportunities through the schools. *Children and Schools, 28*, 69-76. doi: 10.1093/cs/28.2.69

Brooks, R.B. (1994). Children at risk: Fostering resilience and hope. *American Journal of Orthopsychiatry, 5*, 545-553. doi: 10.1037/h0079565

Brown, S. (2011). *Measures of shape: Skewness and kurtosis*. Retrieved from http://web.ipac.caltech.edu/staff/fmasci/home/statistics_refs/SkewStatSignif.pdf

Buckley, J.A., Ryser, G., Reid, R., & Epstein, M.H. (2006). Confirmatory factor analysis of the Behavioral and Emotional Rating Scale-2 (BERS-2) parent and youth rating scales. *Journal of Child and Family Studies, 15*, 27-37. doi: 10.1007/s10826-005-9000-2

Budlender, D., & Woolard, I. (2012). Income inequality and social grants: Ensuring social assistance for children most in need. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge* (pp. 48-51). Cape Town, South Africa: Children's Institute, University of Cape Town.

Burrows, S., Van Niekerk, A., & Laflamme, L. (2010). Fatal injuries among urban children in South Africa: Risk distribution and potential for education. *Bulletin World Health Organisation, 88*, 267-272. doi: 10.2471/BLT.09.068486

Burt, M.R. (2002). Reasons to invest in adolescents. *Journal of Adolescent Health, 31*, 136-152. doi: 10.1016/S1054-139X(02)00486-X

Bushway, S.D., Krohn, M.D., Lizotte, A.J., Phillips, M.D., & Schmidt, N.M. (2011). Are risky youth less protectable as they age? The dynamics of protection during adolescence and young adulthood. *Justice Quarterly*, 1-33. doi: 10.1080/07418825.2011.592507

Byrne, B. (2000). Relationship between anxiety, fear, self-esteem, and coping strategies in adolescence. *Adolescence, 35*, 201-215. Retrieved from http://cat.inist.fr/?aModele=afficheN&cpsidt=1363294

Carter, B., & McGoldrick, M. (1989). The changing family life cycle: A framework for family therapy. In B. Carter & M. McGoldrick (Eds.), *The changing family life cycle: A framework for family therapy* (pp. 3-28). Boston: Allyn and Bacon.

Carlson, E.A., Sroufe, L.A., & Egeland, B. (2004). The construction of experience: A longitudinal study of representation and behavior. *Child Development, 75*, 66-83. doi: 10.1111/j.1467-8624.2004.00654.x

Casale, D., & Desmond, C. (2007). The economic well-being of the family: Households' access to resources in South Africa, 1995 - 2003. In A.Y. Amoateng & T.B. Heaton (Eds.). *Families and households in post-apartheid South Africa* (pp. 61-88). Cape Town, South Africa: Human Sciences Research Council.

Centre for Justice and Crime Prevention. (2006). Snapshot results of the 2005 national youth victimisation study. *Research Bulletin.* Retrieved from www.cjcp.org.za

Chandler, M. J., Lalonde, C. E., Sokol, B. W., & Hallett, D. (2003). Personal persistence, identity development, and suicide: A study of Native and Non-native North American adolescents. *Monographs of the Society for Research in Child Development*, i-138. Retrieved from http://www.jstor.org/discover/10.2307/1166217?uid=2&uid=4&sid=21103348573407

Chopra, M., Lawn, J.E., Sanders, D., Barron, P., Abdool Karim, S.S., Bradshaw, D., Jewkes, R., Abdool Karim, Q., Flisher, A.J., Mayosi, B.M., Tollman, S.M., Churchyard, G.J., & Coovadia, H. (2009). Achieving the health Millennium Developmental Goals for South Africa: Challenges and priorities. *Lancet, 374*, 1023-1031. doi: 10.1016/S0140-6736(09)61306-4

Chun, C. A., Moos, R. H., & Cronkite, R. C. (2006). Culture: A fundamental context for the stress and coping paradigm. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 29-53). New York: Springer.

Cicchetti, D. (2000). Foreword. In E.M. Cummings, P.T. Davies, & S.B. Campbell (Eds.), *Developmental psychopathology and family process* (pp. ix-xi). New York, NY: The Guilford Press.

Cicchetti, D., Ganiban, J., & Barnett, D. (1991). Contributions from the study of high risk populations to understanding the development of emotion regulation. In J. Garber & K. Dodge (Eds.), *The development of emotion regulation and dysregulation* (pp. 15-48). New York, NY: Cambridge University Press.

Cicchetti, D., & Toth, S.L., (1998). Perspectives on research and practice in developmental psychopathology. In W. Damon, I.E. Sigel, & A. Renninger (Eds.), *Handbook of child psychology: Vol 4. Child psychology in practice* (5th ed., pp. 479-583). New York, NY: Wiley.

Civitci, N., & Civitci, A. (2009). Self-esteem as mediator and moderator of the relationship between loneliness and life satisfaction in adolescents. *Personality and Individual Differences, 47*, 954-958. doi: 10.1016/j.paid.2009.07.022

Clark, J. (2013). *The case for social grants.* Moneyweb. Retrieved from http://www.moneyweb.co.za/moneyweb-2013-budget/the-case-for-social-grants

Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). New York, NY: Academic Press.

Coleman, J., & Hagell, A. (2007a). Adolescence, risk and resilience: A conclusion. In J. Coleman & A. Hagell (Eds.), *Adolescence, risk and resilience: Against the odds* (pp. 165-174). England: John Wiley & Sons Ltd.

Coleman, J., & Hagell, A. (2007b). The nature of risk and resilience in adolescence. In J. Coleman & A. Hagell (Eds.), *Adolescence, risk and resilience: Against the odds* (pp. 1-16). England: John Wiley & Sons Ltd.

Collins, W.A., & Laursen, B. (2006). Parent-adolescent relationships. In P. Noller, & J.A. Feeny (Eds.), *Close relationships: Functions, forms and processes* (pp. 111-125). New York, NY: Psychology Press.

Collins, W.A., Maccoby, E., Steinberg, L., Hetherington, E.M., & Bornstein, M. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist, 55*, 218-232. doi: 10.1037/0003-066X.55.2.218

Collinson, M., Kok, P., & Garenne, M. (2006). *Migration and changing settlement patterns: Multilevel data for policy*. Pretoria, South Africa: Statistics South Africa. Retrieved from http://www.hsrc.ac.za/en/research-outputs/view/2370

Compas, B.E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin, 101*, 393-403. doi: 10.1037/0033-2909.101.3.393

Compas, B. E. (2009). Coping, regulation, and development during childhood and adolescence. In E. A. Skinner & M. J. Zimmer-Gembeck (Eds.), *Coping and the development of regulation. New Directions for Child and Adolescent Development* (pp. 87–99). San Francisco, CA: Jossey-Bass.

Compas, B.E., Connor, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M. (1999). Getting specific about coping: Effortful and involuntary responses to stress in development. In M. Lewis, & D. Ramsey (Eds.), *Soothing and stress* (pp. 229-256). New York, NY: Cambridge University Press.

Compas, B.E., Connor-Smith, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127. doi: 10.1037//0033-2909.127.1.87

Compas, B.E., Connor-Smith, J.K., Thomsen, A.H., & Wadsworth, M. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127. doi: 10.1037//0033-2909.127.1.87

Condly, S.J. (2006). Resilience in children: A review of literature with implications for education. *Urban Education, 41*, 211-236. doi: 10.1177/0042085906287902

Conley, C.S., Rudolph, K.D., & Bryant, F.B. (2012). Explaining the longitudinal association between puberty and depression: Sex differences in the mediating effects of peer stress. *Development and Psychopathology, 24*, 691-701. doi: 10.1017/S0954579412000259

Connolly, P., & Eagle, G. (2009). The effects of trauma on child development: Children in South Africa. In J. Watts, K. Cockroft, & N. Duncan (eds.), *Developmental psychology* (2nd ed.) (pp. 539-562). Cape Town, South Africa: UCT Press.

Consortium for Research on Educational Access, Transitions, and Equity. (2011). *Parental participation and meaningful access in South African schools. CREATE South Africa policy brief, nr. 4.* Retrieved from http://r4d.dfid.gov.uk/Output/187086/Default.aspx

Constantine, N.A., Benard, B., & Diaz, M. (1999). *Measuring protective factors and resilience traits in youth: The healthy kids resilience assessment.* Paper presented at the Seventh annual meeting of the Society for Prevention Research, New Orleans, LA.

Craig, G.J., & Dunn, W.L. (2007). *Understanding human development* (2nd ed.). Upper Saddle River, NJ: Pearson Education.

Crawford, E., Wright, M. O., & Masten, A. S. (2006). Resilience and spirituality in youth. In E.C. Roehlkepartain, P.E. King, L. Wagener, & P.L. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (p.355-370). Thousand Oaks, CA: Sage Publications.

Crowell, J.A., Treboux, D., Gao, Y., Fyffe, C., Pan, H., & Walters, E. (2002). Assessing secure base behavior in adulthood: Development of a measure, links to adult attachment representations and relations to couples' communication and reports of relationships. *Developmental Psychology, 38*, 679-693. doi: 10.1037/0012-1649.38.5.679

Cuffe, S.P., Addy, K.L., Garrison, C.Z., Waller, J.L., Jackson, K.L., McKeown, R.E., & Chilapagari, S. (1998). Prevalence of PTSD in a community sample of older adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 147-154. doi: 10.1097/00004583-199802000-00006

Cummins, R.A. (1998). The second approximation to an international standard for life satisfaction. *Social Indicators Research, 43*, 307-334. doi: 10.1023/A:1006831107052

Currie, I. (1994). Minority rights: Education, culture and language. In M. Chaskalson (Ed.). *Constitutional Law of South Africa* (pp. 35.1-35.35). Juta.

De Villiers, M. (2009). *Die ontwikkeling en evaluering van 'n intervensieprogram om kinders se stresweerstandigheid te bevorder.* Doctoral thesis, University of the Free State, South Africa.

Deater-Deckard, K., Ivy, L., & Smith, J. (2006). Resilience in gene-environment transactions. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 49-63). New York, NY: Springer.

Deblinger, E., & Runyon, M. (2005). Understanding and treating feelings of shame in children who have experienced maltreatment. *Child Maltreatment, 10*, 364-376. doi: 10.1177/1077559505279306

Department of social development. (2003). *Social grants beneficiaries*. Retreived from www.welfare.gov.za

Deters, P.B., Novins, D.K., Fickensher, A., & Beals, J. (2006). Trauma and posttraumatic stress disorder symptomatology: Patterns among American Indian adolescents in substance abuse treatment. *American Journal of Orthopsychiatry, 76*, 335-345. doi: 10.1037/0002-9432.76.3.335

DeVellis, R. F. (2003). *Scale Development: Theory and applications* (2nd ed.). Thousand Oaks, CA: Sage.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist, 55*, 34-43. doi: 10.1037//0003-066X.55.1.34

Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71-75. doi**:** 10.1207/s15327752jpa4901_13

Diener, E., Suh, E.M., Lucas, R.E., & Smith, H.L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276-302. doi: 10.1037/0033-2909.125.2.276

Disaster reduction unit. (2011). *Crisis prevention and recovery*. Geneva, Switzerland: United Nations Development Program. Retrieved from www.undp.org

Dissel, A., & Ngubeni, K. (2003, July). *Giving women their voice: Domestic violence and restorative justice in South Africa.* Paper presented at the XIth International Symposium on Victimology, Stellenbosch, South Africa.

Donnellan, M.B., Trzesniewski, K.H., & Robins, R.W. (2006). Personality and self-esteem development in adolescence. In D. Mroczek & T.D. Little (Eds.), *Handbook of personality development* (pp. 285-310). Mahwah, NJ: Lawrence Erlbaum Associates.

Dorn, L.D., Susman, E.J., & Ponirakis, A. (2003). Pubertal timing and adolescent adjustment and behaviour: Conclusions vary by rater. *Journal of Youth and Adolescence, 32*, 157-167. doi: 10.1023/A:1022590818839

Douglas, I., Alam, K., Maghenda, M., McDonnell, Y., McLean, L., & Campbell, J. (2008). Unjust waters: Climate change, flooding and the urban poor in Africa. *Environment & Urbanisation, 20*, 187-205. doi: 10.1177/0956247808089156

Dubow, E.F., Edwards, S., & Ippolito, M.F. (1997). Life stressors, neighbourhood disadvantage, and resources: A focus on inner-city children's adjustment. *Journal of Clinical Child Psychology, 26*, 130-144. doi**:** 10.1207/s15374424jccp2602_2

Duncan, G.J., & Magnuson, K. (2003). Off with Hollingshead: Socioeconomic resources, parenting and child development. In M. Bornstein, & R. Bradley (Eds.), *Socioeconomic status, parenting and child development* (pp. 83-106). Mahwah, NJ: Lawrence Erlbaum.

Duncan, N. (1997). Malnutrition and childhood development. In C. De la Rey, N. Duncan, T.Shefer, & A. Van Niekerk (eds.), *Contemporary issues in human development: A South African focus* (pp. 190-206). Johannesburg, South Africa: Thomson publishing.

Easterly, W. (2009). How the Millennium Developmental Goals are unfair to Africa. *World Development, 37*, 26-35. doi: 10.1016/j.worlddev.2008.02.009

Eaton, D.K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., et al. (2008). Youth risk behavior surveillance – United States, 2007. *Morbidity and Mortality Weekly Report, 57*, 1-131. Retrieved from http://europepmc.org/abstract/MED/18528314/reload=0;jsessionid=xyMm9r0emHFnBYXFiAaB.0

Eaton, L., & Louw, J. (2000). Culture and self in South Africa: Individualism-Collectivism predictions. *The Journal of Social Psychology, 140*, 210-217. doi: 10.1080/00224540009600461

Ebersohn, L. (2007). Voicing perceptions of risk and protective factors in coping in a HIV&AIDS landscape: Reflecting on capacity for adaptiveness. Gifted Education International, 23, 149-159. doi: 10.1177/026142940702300205

Eccles, J.S. (1999). The development of children ages 6 to 14. *The Future of Children, 9*, 30-44. Retrieved from www.jstor.org/stable/1602703

Eccles, J.S., Midgley, C., Wigfield, A., Buchanan, C.M., Reuman, D., Flanagan, C., & MacIver, D. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experience in schools and families. *American Psychologist, 48*, 90-101. doi: 10.1037/0003-066X.48.2.90

Edwards, L.M., & Lopez, S. (2006). Perceived family support, acculturation, and life satisfaction in Mexican American youth: A mixed methods exploration. *Journal of Counseling Psychology, 53*, 279-287. doi: 10.1037/0022-0167.53.3.279

Egeland, B., Carlson, E., & Sroufe, A. (1993). Resilience as a process. *Development and psychopathology, 5*, 517-528. doi: 10.1017/S0954579400006131

Eisenberg, M.E., Neumark-Sztainer, D., Story, M., & Perry, C. (2005). The role of social norms and friends' influences on unhealthy weight control behaviours among adolescent girls. *Social Science & Medicine, 60*, 1165-1173. doi: 10.1016/j.socscimed.2004.06.055

Elkind, D. (1967). Egocentrism in adolescence. *Child Development, 38*, 1025-1034. Retrieved from http://www.jstor.org/discover/10.2307/1127100?uid=2&uid=4&sid=21103348839497

EM-DAT. (2011). *South Africa, country profile: Natural disasters*. Brussels: The OFDA/CRED International Disaster Database. Retrieved from www.emdat.be

Emmet, T. (2003). Social disorganisation, social capital, and violence prevention in South Africa. *African Safety Promotion: A Journal of Injury and Violence Prevention, 1,* 4-18. doi: 10.4314%2Fasp.v1i2.31546

Engle, P.L., Castle, S., & Menon, P. (1996). Child development: Vulnerability and resilience. *Social Science & Medicine., 43*, 621-635. doi: 10.1016/0277-9536(96)00110-4

Epstein, M.H. (1998). *Behavioral and Emotional Rating Scale: Examiner's manual* (2nd ed.). Austin, TX: Pro-ed.

Epstein, M.H. (2000). The Behavioural and Emotional Rating Scale: A strength-based approach to assessment. *Assessment for Effective Intervention, 25*, 249-256. doi: 10.1177/073724770002500304

Epstein, M.H., Ryser, G., & Pearson, N. (2002). Standardisation of the Behavioural and Emotional Rating Scale: Factor structure, reliability, and criterion validity. *Journal of Behavioural Health Services & Research, 29*, 208-216. doi: 10.1007/BF02287707

Epstein, M.H., & Sharma, J. (1998). *Behavioural and Emotional Rating Scale: A strength-based approach to assessment*. Austin, TX: Pro-Ed.

Erasmus, J.C., & Mans, G.G. (2005). Churches as service providers for victims of sexual and/or violent crimes. A case study from the Paarl community. *Acta Criminologica, 18,* 140-156. Retrieved from http://researchspace.csir.co.za/dspace/handle/10204/5026

Erikson, E.H. (1950). *Childhood and society*. Great Britain: Norton.

Erikson, E.H. (1963). *Childhood and society* (2nd ed.). New York, NY: Norton.

Erikson, E.H. (1974). *Dimensions of a new identity*. New York, NY: Norton.

Equal Education. (2009). *Comment on regulations relating to the prohibition of the payment of unauthorised remuneration of the giving of financial benefit or benefit in kind to certain state employees*. Retrieved from http://www.equaleducation.org.za/sites/default/files/Regulations%20Relating%20To%20Teacher%20Remuneration-20090921.pdf

Fergus, S., & Zimmerman, M.A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health, 26*, 399-419. doi: 10.1146/annurev.publichealth.26.021304.144357.

Fichter, M.M. (2005). Anorexic and bulimic eating disorders. *Der Nervenarzt, 76*, 1141-1153. doi**:** 10.1007/s00115-005-1976-8

Fincham, D.S., Altes, L.K., Stein, D.J., & Seedat, S. (2009). Posttraumatic stress disorder symptoms in adolescents: risk factors versus resilience moderation. *Comprehensive Psychiatry, 50*, 193-199. doi: 10.1016/j.comppsych.2008.09.001

Fincham, F.D., & Beach, S.R.H. (2010). Marriage in the new millennium: A decade in review. *Journal of Marriage and Family, 72*, 630-649. doi: 10.1111/j.1741-3737.2010.00722.x

Fine, G., Alison, H.C., Van der Westhuizen, D, & Kruger, C. (2012). Predicting frequency of suicide attempts of adolescent outpatients at Weskoppies Hospital using clinical and demographic characteristics. *South African Journal of Psychology, 18*, 22-26. Retrieved from http://www.ajol.info/index.php/sajpsyc/article/view/82261

Finkelstein, N., Rechberger, E., Russell, L., VanDeMark, N., Noether, C.D., & O'Keefe, M. (2005). Building resilience in children of mothers who have co-occurring disorders and histories of violence: Intervention model and implementation issues. *Journal of Behavioural Health Services Research, 32*, 141-154. doi: 10.1007/BF02287263

Flanagan, C.A., Gill, S., & Gallay, L.S. (2005). Social participation and social trust in adolescence: The importance of heterogenous encounters. In A.M. Omoto (Ed.), *Process of community change and social action. The Claremont Symposium on Applied Social Psychology* (pp. 149-166). Mahwah, NJ: Erlbaum.

Flischer, A.J., Ward, C.L., Liang, H., Onya, H., Mlisa, N., Terblance, S., Bhana, A., Parry, C.D.H., & Lombard, C.J. (2006). Injury-related behaviour among South African high school students at six sites. *South African Medical Journal, 96*, 825-830. Retrieved from http://www.ajol.info/index.php/samj/article/view/13814

Flouri, E., & Buchanan, A. (2002). Life satisfaction in teenage boys: The moderating role of father involvement and bullying. *Aggressive Behavior, 28*, 126-133. doi: 10.1002/ab.90014

Fogle, L.M., Huebner, E.S., & Laughlin, J.E. (2002). The relationship between temperament and life satisfaction in early adolescence: Cognitive and behavioural mediation models. *Journal of Happiness Studies, 3*, 373-392. doi: 10.1023/A:1021883830847

Folkard, S.M. (2005). *Risk and resiliency factors in children's lives: Voices of learners at a primary school in Kwazulu-Natal*. Master's dissertation, University of Kwazulu-Natal, South Africa.

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology, 46*, 839-852. doi: 10.1037/0022-3514.46.4.839

Folkman, S., Lazarus, R.S., Pimley, S., & Novacek, J. (1987). Age differences in stress and coping processes. *Psychology and Aging, 2*, 171-184. doi: 10.1037/0882-7974.2.2.171

Folkman, S., & Moskowitz, J.T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745-774. doi: 10.1146/annurev.psych.55.090902.141456

Fortier, M.A., DiLillo, D., Messman-Moore, T.L., Peugh, J., DeNardi, K.A., & Gaffey, K.J. (2009). Severity of childhood sexual abuse and revictimization: the mediating role of coping and

trauma symptoms. *Psychology of Women Quarterly, 33*, 308-320. doi: 10.1111/j.1471-6402.2009.01503.x

Fox, N.A., & Calkins, S. (2003). The development of self-control of emotions: Intrinsic and external influences. *Motivation and Emotion, 27*, 7-26. doi: 10.1023/A:1023622324898

Friedli, L. (2009). *Mental health, resilience and inequalities*. Denmark: World Health Organisation. Retrieved from http://www.euro.who.int/en/health-topics/noncommunicable-diseases/mental-health/publications/2009/mental-health,-resilience-and-inequalities

Friedman, M.J., Resick, P.A., Bryant, R.A., & Brewin, C.R. (2011). Considering PTSD for DSM-5. *Depression and Anxiety, 28*, 750-769. doi: 10.1002/da.20767

Frydenberg, E. (2008). *Adolescent coping: Advances in theory, research and practice*. New York, NY: Psychology Press.

Gable, S.L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology, 9*, 103-110. doi: 10.1037/1089-2680.9.2.103

Gaibie, F., & Davids, Y.D. (2009, July). *Quality of life among South Africans*. Paper presented at the IX ISQOLS Conference on Quality of Life, Florence, Italy.

Garcia, C. (2010). Conceptualisation and measurement of coping during adolescence: A review of the literature. *Journal of Nursing Scholarship, 42*, 166-185. doi: 10.1111/j.1547-5069.2009.01327.x

Garmezy, N. (1993). Children in poverty: Resilience despite risk. In D. Reiss, J.E. Ricthers, M. Radke-Yarrow, & D. Scharff (Eds.), *Children and violence* (pp. 127-130). St Louis, MO: Washington University Press.

Garmezy, N., & Masten, A.S. (1994). Chronic adversities. In M. Rutter, L. Herzov, & E. Taylor (Eds.), *Child and Adolescent Psychiatry* (3rd ed., pp. 191-208). Oxford, London: Blackwell.

George, A.A. (2009). *Risk and resilience in adolescent suicidal ideation*. Doctoral thesis, University of the Free State, South Africa.

Gewirtz, A.H., & Edleson, J.L. (2007). Young children's exposure to intimate partner violence: Towards a developmental risk and resilience framework for research and intervention. *Journal of Family Violence, 22*, 151-163. doi: 10.1007/s10896-007-9065-3

Gillham, J., Adams-Deutsch, Z., Werner, J., Reivich, K., Coulter-Heindl, V., Linkins, M., Winder, B., Peterson, C., Park, N., Abenavoli, R., Contero, A., & Seligman, M.E.P. (2011). Character strengths predict subjective well-being during adolescence. *The Journal of Positive Psychology, 6*, 31-44. doi: 10.1080/17439760.2010.536773

Gilligan, R. (2001). *Promoting resilience: A resource guide on working with children in the care system*. London: British Agencies for Adoption and Fostering.

Gilman, R. (2001). The relationship between life satisfaction, social interest, and frequency of extracurricular activities among adolescent students. *Journal of Youth and Adolescence, 30*, 749-767. doi: 10.1023/A:1012285729701

Gilman, R., & Huebner, E. S. (2000). Review of life satisfaction measures for adolescents. *Behaviour Change, 17*, 178-195. doi: 10.1375/bech.17.3.178

Gilman, R., & Huebner, S. (2003). A review of life satisfaction research with children and adolescents. *School Psychology Quarterly, 18*, 192-205. doi: 10.1521/scpq.18.2.192.21858

Gilman, R., & Huebner, S. (2006). Characteristics of adolescents who report very high life satisfaction. *Journal of Youth and Adolescence, 35*, 311-319. doi: 10.1007/s10964-006-9036-7

Gilman, R., Huebner, S., Tian, L., Park, N., O'Byrne, J., Schiff, M., Sverko, D., & Langknecht, H. (2008). Cross-national adolescent multidimensional life satisfaction reports: Analyses of mean scores and response style differences. *Journal of Youth and Adolescence, 37*, 142-154. doi: 10.1007/s10964-007-9172-8

Goldbeck, L., Schmitz, T.G., Besier, T., Herschbach, P., & Henrich, G. (2007). Life satisfaction decreases during adolescence. *Quality of Life Research, 16*, 969-979. Retrieved from http://link.springer.com/article/10.1007/s11136-007-9205-5

Goldstein, S., & Brooks, R.B. (2006). Why study resilience? In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 3-15). New York, NY: Springer.

Goodman, L.A., Corcoran, C., Turner, K., Yuan, N., & Green, B.L. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful Life Events Screening Questionnaire. *Journal of Traumatic Stress, 11*, 521-542. doi: 10.1023/A:1024456713321

Govender, S. (2007). *New Children's Act to care for and protect children*. Retrieved from www.medical.bizcommunity.com

Government Gazette. (2006). *Health professions act, 1974 (act no. 56 of 1974)*. Retrieved from http://www.hpcsa.co.za/downloads/rules_reg_constitution/thical_rules_rules_of_conduct_generic_2006_08_04_amended_2009_03_30.pdf

Government Gazette. (2010). *Governement notice*. Retrieved from www.polity.org.za

Govindji, R., & Linley, A. (2007). Strengths use, self-concordance and well-being: Implications for strengths coaching and coaching psychologists. *International Coaching Psychology Review, 2*, 143-153. Retrieved from http://www.tri-coachingpartnership.co.uk/members/Misc/ICPR_2_2.pdf#page=31

Grant, K.E., Compas, B.E., Stuhlmacher, A., Thurm, A., McMahon, S., & Halpert, J. (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychology Bulletin, 129*, 447-466. doi: 10.1037/0033-2909.129.3.447

Gravetter, F.J., & Forzano, L.B. (2006). *Research methods for the behavioural sciences*. Belmont, CA: Cengage Learning.

Greenberg, M.T. (2006). Promoting resilience in children and youth: Preventative interventions and their interface with neuroscience. *Annals New York Academy of Science, 1094*, 139-150. doi: 10.1196/annals.1376.013

Greenglass, E.R. (2002). Proactive coping and quality of life management. In E. Frydenberg (Ed.), *Beyond coping: Meeting goals, visions and challenges* (pp. 37-62). New York, NY: Oxford University Press.

Gresham, D., & Gullone, E. (2012). Emotion regulation strategy use in children and adolescents: The explanatory roles of personality and attachment. *Personality and Individual Differences, 52*, 616-621. doi: 10.1016/j.paid.2011.12.016

Grey, N., Holmes, E., & Brown, C.R. (2001). Peritraumatic emotional "hot spots" in memory. *Behavioural and Cognitive Psychology, 29*, 367-372. doi: 10.1017/S1352465801003095

Gross, J.J., & Levinson, R.W. (1993). Emotional suppression: Physiology, self-report and expressive behavior. *Journal of Personality and Social Psychology, 64*, 970-986. doi: 10.1037/0022-3514.64.6.970

Grotberg, E.H. (1995, September). *The international resiliency project: Research, application and policy*. Paper presented at The Symposio Internacional: Stress e Violencia. Lisboa, Portugal.

Gutman, L.M., Sameroff, A.J., & Eccles, J.S. (2002). The academic achievement of African American students during early adolescence: An examination of multiple risk, promotive, and protective factors. *American Journal of Community Psychology, 30*, 367-399. doi: 10.1023/A:1015389103911

Hall, K. (2012). Children's access to education. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge 2012* (pp. 95-97). Cape Town, South Africa: Children's Institute, University of Cape Town.

Hall, K., & Posel, D. (2012). Inequalities in children's household contexts: Place, parental presence and migration. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge 2012* (pp. 43-47). Cape Town, South Africa: Children's Institute, University of Cape Town.

Hall, K.., & Woolard, I. (2012). Children and inequality: An introduction and overview. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge* (pp. 32-36). Cape Town, South Africa: Children's Institute, University of Cape Town.

Hampel, P., & Petermann, F. (2005). Age and gender effects on coping in children and adolescents. *Journal of Youth and Adolescence, 34*, 73-83. doi: 10.1007/s10964-005-3207-9

Hampel, P., & Petermann, F. (2006). Perceived stress, coping, and adjustment in adolescents. *Journal of Adolescent Health, 38*, 409-415. doi: 10.1016/j.jadohealth.2005.02.014

Hare, T.A., Tottenham, N., Galvan, A., Voss, H.U., Glover, G.H., & Casey, B.J. (2008). Biological substrates of emotional reactivity and regulation in adolescence during an emotional go-nogo task. *Biological Psychiatry, 63*, 927-934. doi: 10.1016/j.biopsych.2008.03.015015

Harrison, P.J. (2002). The neuropathology of primary mood disorder. *Brain, 125*, 1428-1449. doi: 10.1093/brain/awf149

Hathaway, L.M., Boals, A., & Banks, J.B. (2010). PTSD symptoms and dominant emotional response to a traumatic event: An examination of DSM-IV criterion A2. *Anxiety, Stress & Coping: An International Journal, 23*, 119-126. doi: 10.1080/10615800902818771

Hawley, D.R., & DeHaan, L. (1996). Toward a definition of family resilience: Integrating life-span and family perspectives. *Family Process, 35*, 283 – 298. doi: 10.1111/j.1545-5300.1996.00283.x

Hazan, C., & Zeifman, D. (1999). Pair bonds as attachments: Evaluating the evidence. In J. Cassidy & P. Shaver (Eds.), *Handbook of attachment: Theory, research and clinical applications* (pp. 336-354). New York, NY: Guilford Press.

Henderson, P.C. (2006). Examining assumptions around vulnerability from the perspective of rural children and youth. *Childhood, 13*, 303-327. doi: 10.1177/0907568206066354

Henn, C.M. (2005). *The relationship between certain family variables and the psychological well-being of black adolescents*. Doctoral thesis, University of the Free State, South Africa.

Henrard, K. (2002). Post apartheid South Africa's democratic transformation process: redress of the past, reconciliation and unity in diversity. *The Global Review of Ethnopolitics, 1*, 18-38. doi: 10.1080/14718800208405103

Hetherington, E.M., & Kelly, J. (2002). *For better or worse: Divorce reconsidered*. New York, NY: Norton.

Hill, A. (2003). *The relationships between psychological well-being and cognitive flexibility amongst adolescents*. Doctoral thesis, University of the Free State, South Africa.

Ho, M.Y., Chueng, F.M., & Chueng, S.F. (2008). Personality and life events as predictors of adolescents' life satisfaction: Do life events mediate the link between personality and life satisfaction? *Social Indicators Research, 89*, 457-471. doi: 10.1007/s11205-008-9243-6

Hoadley, U. (2007, February). *The boundaries of care: Education policy interventions for vulnerable children.* Paper presented at Education & Poverty Reduction Strategies: Issues of policy coherence conference, Pretoria, South Africa.

Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York, NY: Plenum Press

Hofstede, G. (1980). *Culture's consequences*. Beverly Hills, CA: Sage.

Hoge, E.A., Austin, E.D., & Pollack, M.H. (2007). Resilience: Research evidence and conceptual considerations for posttraumatic stress disorder. *Depression and Anxiety, 24*, 139-152. doi: 10.1002/da.20175

Holder, D. W., Durant, R. H., Harris, T. L., Daniel, J. H., Obeidallah, D., & Goodman, E. (2000). The association between adolescent spirituality and voluntary sexual activity. *Journal of Adolescent Health, 26*, 295-302. doi: 10.1016/S1054-139X(99)00092-0

Hook, D. (2009). Bronfenbrenner's ecological theory of development. In J. Watts, K. Cockcroft, & N. Duncan (Eds.), *Developmental psychology* (2nd ed., pp. 501-513). South Africa: UCT Press.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling, 6*, 1-55. doi: 10.1080/10705519909540118

Huebner, E.S., Drane, W., & Valois, R.F. (2000). Levels and demographic correlates of adolescent life satisfaction reports. *School Psychology International, 21*, 281-292. doi: 10.1177/0143034300213005

Huebner, E.S., Suldo, S.M., & Gilman, R. (2006). Life satisfaction. In G. Bear & K. Minke (Eds.), *Children's needs III* (pp. 357-368). Washington, DC: National Association of School Psychologists.

Hunter, S.B., Barber, B.K., Olsen, J.A., McNeely, C.A., & Bose, K. (2011). Adolescents' self-disclosure to parents across cultures: Who discloses and why. *Journal of Adolescent Research, 26*, 447-478. doi: 10.1177/0743558411402334

Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology, 17*, 139-153. Retrieved from http://www.sciencedirect.com/science/article/pii/S1057740807700207#

Irvin, J.L. (1996). Developmental tasks of early adolescence: How adult awareness can reduce at-risk behaviour. *Clearing House, 69*, 222-229. Retrieved from http://www.jstor.org/discover/10.2307/30189168?uid=2&uid=4&sid=21103350529797

Jacelon, C.S. (1997). The trait and process of resilience. *Journal of Advanced Nursing, 25*, 123-129. doi: 10.1046/j.1365-2648.1997.1997025123.x

Jacobs, E., Punt, C., & Phaladi, S.F. (2009). *A Profile of the Free State Province: Demographics, Poverty, Income, Inequality and Unemployment from 2000 till 2007*. Provide Project background paper. Elsenburg. Retrieved fom http://www.elsenburg.com/provide/reports

Jamieson, L., Mahery, P., & Seyisi-Tom, K. (2010). Key legislative developments in 2009/2010: Child health rights. In M. Kibel, L. Lake, S. Pendlebury, & C. Smith (Eds.). *South African child gauge 2009/2010* (pp. 12-17). Cape Town, South Africa: Children's Institute, University of Cape Town.

Jansen, J.D. (1998). Curriculum reform in South Africa: A critical analysis of outcomes-based education. *Cambridge Journal of Education, 28*, 321-332. doi: 10.1080/0305764980280305

Jessor, R., Turbin, M.S., & Costa, F.M. (2010). Predicting developmental change in healthy eating and regular exercise among adolescents in China and the United States: The role of psychosocial and behavioural protection and risk. *Journal of Research on Adolescence, 20*, 707-725. doi: 10.1111/j.1532-7795.2010.00656.x

Johnsen, B.H., Eid, J., Laberg, J.C., & Thyer, J.F. (2002). The effect of sensitization and coping style on post-traumatic stress symptoms and quality of life: Two longitudinal studies. *Scandinavian Journal of Psychology, 43*, 181-188. doi: 10.1111/1467-9450.00285

Joseph, J.E., Liu, X., Jiang, Y., Lynam, D., & Kelly, T. (2009). Neural correlates of emotional reactivity in sensation seeking. *Psychological Science, 20*, 215-223. doi: 10.1111/j.1467-9280.2009.02283.x

Joubert, L. (2011). South Africa's changing climate. *Current Allergy and Clinical Immunology, 24*, 62-64. Retrieved from http://www.allergysa.org.za/journals/June2011/Article3.pdf

Judge, T. A., & Watanabe, S. (1993). Another look at the job satisfaction-life satisfaction relationship. *Journal of applied psychology, 78*, 939. doi: 10.1037/0021-9010.78.6.939

Kalule-Sabiti, I., Palamuleni, M., Makiwane, M., & Amoateng, A.Y. (2007). Family formation and dissolution patterns. In A.Y. Amoateng & T.B. Heaton (Eds.). *Families and households in post-apartheid South Africa* (pp. 1-25). Cape Town, South Africa: Human Sciences Research Council.

Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: The foundations of hedonic psychology*. New York, NY: Russell Sage.

Kaminer, D., & Eagle, G. (2010). *Traumatic stress in South Africa*. Johannesburg, South Africa: Wits University Press.

Karatsoreos, I.N., & McEwen, B.S. (2011). Psychobiological allostasis: Resistance, resilience, and vulnerability. *Trends in Cognitive Sciences, 15*, 576-584. doi: 10.1016/j.tics.2011.10.005

Katz, M., Liu, C., Schaer, M., Parker, K.J., Ottet, M., Epps, A., Buckmaster, C.L., Bammer, R., Moseley, M.E., Schatzberg, A.F., Eliez, S., & Lyons, D.M. (2009). Prefrontal plasticity and stress inoculation-induced resilience. *Developmental Neuroscience, 31*, 293-299. doi: 10.1159/000216540

Keel, P.K., & Klump, K.L. (2003). Are eating disorders culture-bound syndromes? Implications for conceptualising their etiology. *Psychological Bulletin, 129*, 747-769. doi: 10.1037/0033-2909.129.5.747

Kelloway, E.K. (1995). Structural equation modelling in perspective. *Journal of Organizational Behavior, 16*, 215-224. doi: 10.1002/job.4030160304

Kerig, P.K., Ludlow, A., & Wenar, C. (2012*). Developmental psychopathology* (6th ed.). New York, NY: McGraw-Hill.

Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology, 36*, 366-380. doi: 10.1037/0012-1649.36.3.366

Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C.B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*, 1048-1060. doi: 10.1001/archpsyc.1995.03950240066012

Keyes, C.L.M., Shmotkin, D., & Ryff, C.D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*, 1007-1022. doi: 10.1037//0022-3514.82.6.1007

Khumalo, I. P. (2011). *The evaluation of the general psychological well-being and the mental health continuum models in an African context*. Doctoral thesis, North West University, South Africa.

Kim, S., Kamphaus, R., Orpinas, P., & Kelder, S.H. (2011). A multiple risk factor model of the development of aggression among early adolescents from urban disadvantaged neighbourhoods. *School Psychology Quarterly, 26*, 215-230. doi: 10.1037/a0024116

King, R.A., Schwab-Stone, M., & Flisher, A.J. (2001). Psychosocial and riks behaviour correlates of youth suicide attempts and suicidal ideation. *Journal of the American Academy for Child and Adolescent Psychiatry*, 40, 837-846. doi: 10.1097/00004583-200107000-00019

Koen, A. (2008). *The relationship between emotional intelligence and psychological well-being in adolescents: A multicultural study*. Master's dissertation, University of the Free State, South Africa.

Kohlberg, L., & Gilligan, C. (1971). The adolescent as a philosopher: The discovery of the self in a postconventional world. *Daedalus, 100*, 1051-1086. Retrieved from http://www.jstor.org/discover/10.2307/20024046?uid=2&uid=4&sid=21103350529797

Konstanski, M., Fisher, A., & Gullone, E. (2004). Current conceptualisation of body image dissatsifaction: Have we got it wrong? *Journal of Child Psychology and Psychiatry, 45*, 1317-1325. doi: 10.1111/j.1469-7610.2004.00315.x

Kristjansson, K. (2010). Positive psychology, happiness, and virtue: The troublesome conceptual issues. *Review of General Psychology, 14*, 296-310. doi: 10.1037/a0020781

Kroger, J. (2000). *Identity development: Adolescence through adulthood*. Thousand Oaks, CA: Sage.

Kronenberg, M.E., Hansel, T.C., Brennan, A.M., Osofsky, H.J., Osofsky, J.D., & Lawrason, B. (2010). Children of Katrina: Lessons learned about postdisaster symptoms and recovery patterns. *Child Development, 81*, 1241-1259. doi: 10.1111/j.1467-8624.2010.01465.x

Kumpfer, K.L. (1999). Factors and processes contributing to resilience. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and development: positive life adaptations* (pp. 179-224). New York, NY: Kluwer Academic/Plenum.

Kumpfer, K.L. , & Summerhays, J.F. (2006). Prevention approaches to enhance resilience among high-risk youth. *Annals New York Academy of Science, 1094*, 151-163. doi: 10.1196/annals.1376.014

Kuo, B.C.H. (2011). Culture's consequences on coping: Theories, evidences and dimensionalities. *Journal of Cross-cultural Psychology, 42*, 1084-1100. doi: 10.1177/0022022110381126

Kwast, E., & Laws, S. (2001). *United Nations Secretary-general's study on violence against children: Adapted for children and young people*. Retrieved from www.unicef.org

Laible, D. (2007). Attachment with parents and peers in late adolescence: Links with emotional competence and social behaviour. *Personality and Individual Differences, 43*, 1185-1197. doi: 10.1016/j.paid.2007.03.010

Lake, L., Berry, L., Dawes, A., Biersteker, L. & Smit, C. (2013). *Stepping up to the challenge: Prioritising essential services for young children*. Cape Town, South Africa: Children's Institute, University of Cape Town.

Lake, L., & Reynolds, L. (2010). Addressing the social determinants of health. In M. Kibel, L. Lake, S. Pendlebury, & C. Smith (Eds.). *South African child gauge 2009/2010* (pp. 82-89). Cape Town, South Africa: Children's Institute, University of Cape Town.

Lam, D., Ardington, C., & Leibbrandt, M. (2011). Schooling as a lottery: Racial differences in school advancement in urban South Africa. *Journal of Development Economics, 95*, 121-136. doi: 10.1016/j.jdeveco.2010.05.005

Langdridge, D., & Hagger-Johnson, G. (2009). *Introduction to research methods and data analysis in psychology* (2nd ed.). England: Pearson Education.

Lappalainen, K., Savolainen, H., Kuorelahti, M., & Epstein, M.H. (2009). An international assessment of the emotional and behavioral strengths of youth. *Journal of Child and Family Studies, 18*, 746-753. doi: 10.1007/s10826-009-9287-5

Larson, R.W., Moneta, G., Richards, M.H., & Wilson, S. (2002). Continuity, stability, and change in daily emotional experience across adolescence. *Child Development, 73*, 1151-1165. doi: 10.1111/1467-8624.00464

Larson, R.W., & Sheeber, L.B. (2009). The daily emotional experience of adolescents: Are adolescents more emotional, why, and how is that related to depression? In N.B. Allen, & L.B. Sheeber (Eds.), *Adolescent emotional development and the emergence of depressive diorders* (pp. 11-32). Cambridge: Cambridge University Press.

Layne, C.M., Baker, A., Isakson, B., Durakovic-Belko, E., Arslanagic, B., Olsen, J.A., Legerski, J.P., Pasalic, A., Campara, N., Saltzman, W.R., & Pynoos, R.S. (2010). Unpacking trauma exposure risk factors and differential pathways of influence: Predicting postwar mental distress in Bosnian adolescents. *Child Development, 81*, 1053-1076. doi: 10.1111/j.1467-8624.2010.01454.x

Lazarus, R.S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55*, 2324-2347. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8346332

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.

Lee, D.A., Scragg, P., & Turner, S. (2001). The role of shame and guilt in traumatic events: A clinical model of shame-based and guilt-based PTSD. *British Journal of Medical Psychology, 74*, 451-466. doi: 10.1348/000711201161109

Leibbrandt, M., Finn, A., & Woolard, I. (2014). Describing and decomposing post-apartheid income inequality in South Africa. *Development Southern Africa, 29*, 19-34. doi: 10.1080/0376835X.2012.645639

Leibbrandt, M., Woolard, I., Finn, A., & Argent, J. (2010). *Trends in South African income distribution and poverty since the fall of apartheid*. OECD Social, Employment, and Migration working paper nr. 101. Paris: Organisation for Economic Cooperation and Development Publishing.

Leipold, B., & Greve, W. (2009). Resilience: A conceptual bridge between coping and development. *European Psychologist, 14*, 40-50. doi: 10.1027/1016-9040.14.1.40

Leman, P., Bremner, A., Parke, R.D., & Gauvain, M. (2012). *Developmental psychology*. London: McGraw-Hill Higher Education.

Lent, R. (2004). Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. *Journal of Counselling Psychology, 51*, 482-509. doi: 10.1037/0022-0167.51.4.482

Lerner, R.M., Von Eye, A., Lerner, J.V., Levin-Bizan, S., & Bowers, E.P. (2010). Special issue introduction: The meaning and measurement of thriving: A view of the issues. *Journal of Youth and Adolescence, 39*, 707-719. doi: 10.1007/s10964-010-9531-8

Leung, C.Y.W., McBride-Chang, C., & Lai, B.P.Y. (2004). Relations among maternal parenting style, academic competence, and life satisfaction in Chinese early adolescents. *Journal of Early Adolescence, 24*, 113-143. doi: 10.1177/0272431603262678

Leventhal, T., & Brooks-Gunn, J. (2000). The neighbourhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin, 126*, 309-337. doi: 10.1037/0033-2909.126.2.309

Lewinsohn, P.M., Joiner, T.E.J., & Rohde, P. (2001). Evaluation of cognitive diathesis-stress models in predicting major depressive disorder in adolescents. *Journal of Abnormal Psychology, 110*, 203-215. doi: 10.1037/0021-843X.110.2.203

Lewis, A.D., Huebner, E.S., Malone, P.S., & Valois, R.F. (2011). Life satisfaction and student engagement in adolescents. *Journal of Youth and Adolescence, 40*, 249-262. doi: 10.1007/s10964-010-9517-6

Liebenberg, L, & Ungar, M. (2008). Introduction: Understanding youth resilience in action: The way forward. In L. Liebenberg, & M. Ungar (Eds.), *Resilience in action* (pp. 3-16). Toronto: University of Toronto Press.

Linley, P.A., Nielsen, K.M., Wood, A.M., Gillett, R., & Biswas-Diener, R. (2010). Using signature strengths in pursuit of goals: Effects on goal progress, need satisfaction, and well-being, and implications for coaching psychologists. *International Coaching Psychology Review, 5*, 6-15. Retrieved from http://www.groups.psychology.org.au/Assets/Files/ICPR_5_1_web%5B1%5D.pdf#page=8

Lippincot, J.M., & Deutsch, R.D. (2005). *Seven things your teenager won't tell you (and how to talk to them about them anyway)*. New York, NY: Ballantine.

Little, T.D., Snyder, C.R., & Wehmeyer, M. (2006). The agentic self: On the nature and origins of personal agency across the life span. In D. Mroczek & T.D. Little (Eds.), *Handbook of personality development* (pp. 61-80). Mahwah, NJ: Lawrence Erlbaum Associates.

Livneh, H., & Martz, E. (2007). An introduction to coping theory and research. In H. Livneh & E. Martz (Eds.), *Coping with chronic illness and disability* (pp. 3-27). New York, NY: Springer.

Lorion, R.P. (2000). Theoretical and evaluation issues in the promotion of wellness and the protection of "well enough". In D. Cicchetti, J. Rappaport, I. Sandler, R. Weissberg (Eds.), *The promotion of wellness in children and adolescents* (pp. 1-27). Washington, DC: CWLA.

Louw, D., & Louw, A. (2007). Middle childhood. In D. Louw, and A. Louw (Eds.). *The development of the child and the adolescent* (pp. 212 – 275). South Africa: Psychology Publications.

Louw, D., Louw, A., & Ferns, I. (2007). Adolescence. In D. Louw, and A. Louw (Eds.). *The development of the child and the adolescent* (pp. 276 – 349). South Africa: Psychology Publications.

Louw, D., Richter, L., Duncan, N., & Louw, A. (2007). Risk, resilience and the rights of children. In D. Louw, and A. Louw (Eds.). *The development of the child and the adolescent* (pp. 350-391). South Africa: Psychology Publications.

Louw, J., Shisana, O., Peltzer, K., & Zungu, N. (2009). Examining the impact of HIV and AIDS on South African educators. *South African Journal of Education, 29*, 205-217. Retrieved from http://www.scielo.org.za/scielo.php?pid=S0256-01002009000200004&script=sci_arttext&tlng=es

Luhmann, M., & Eid, M. (2009). Does it really feel the same? Changes in life satisfaction following repeated life events. *Journal of Personality and Social Psychology, 97*, 363-381. doi: 10.1037/a0015809

Lund, C., Boyce, G., Flisher, A.J., Kafaar, Z., & Dawes, A. (2009). Scaling up child and adolescent mental health services in South Africa: Human resource requirements and costs. *The Journal of Child Psychology and Psychiatry, 50*, 1121-1130. doi: 10.1111/j.1469-7610.2009.02078.x

Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*, 543-562. doi: 10.1111/1467-8624.00164

Luthar, S.S., Sawyer, J.A., & Brown, P.J. (2006). Conceptual issues in studies of resilience: Past, present and future research. *Annals New York Academy of Sciences, 1094*, 105-115. doi: 10.1196/annals.1376.009

Luthar, S.S., & Zelazo, L.B. (2003). Research on resilience: An integrative review. In S.S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities*, (pp. 510-550). New York, NY: Cambridge University Press.

Luthar, S.S., & Zigler, E. (1991). Vulnerability and competence: A review of research on resilience in childhood. *American Journal of Orthopsychiatry, 61*, 6-22. doi: 10.1037/h0079218

Ma, C.Q., & Huebner, E.S. (2008). Attachment relationships and adolescents' life satisfaction: Some relationships matter more to girls than boys. *Psychology in the Schools, 45*, 177-190. doi: 10.1002/pits.20288

Ma, X., Liu, X., Hu, X., Qui, C., Wang, Y., Huang, Y., et al. (2011). Risk indicators for post-traumatic stress disorder in adolescents exposed to the 5.12 Wenchuan earthquake in China. *Psychiatry Research, 189*, 385-391. doi: 10.1016/j.psychres.2010.12.016

Mabunda, M.M., Swart, L., & Seedat, M. (2008). Magnitude and categories of pedestrian fatalities in South Africa. *Accident Analysis and Prevention, 40*, 586-593. doi: 10.1016/j.aap.2007.08.019

MacLean, M.G., Embry, L.E., & Cauce, A.M. (1999). Homeless adolescents' paths to separation from family: Comparison of family characteristics, psychological adjustment, and victimisation. *Journal of Community Psychology, 27*, 179-187. doi: 10.1002/(SICI)1520-6629(199903)27:2<179::AID-JCOP5>3.0.CO;2-S

Macleod, C. (2009a). Danger and disease in sex education: The saturation of 'adolescence' with Colonialist assumptions. *Journal of Health Management, 11*, 375-389. doi: 10.1177/097206340901100207

Macleod, C. (2009b). Theory and South African developmental psychology research and literature. In J. Watts, K. Cockroft, & N. Duncan (eds.), *Developmental psychology* (2nd ed., pp. 619-638). Cape Town, South Africa: UCT Press.

Macleod, C., & Tracey, T. (2010). A decade later: Follow-up review of South African research on the consequences of and contributory factors in teen-aged pregnancy. *South African Journal of Psychology, 40*, 18-31. doi: 10.1177/008124631004000103

Maddaleno, M., Concha-Eastman, A., & Marques, S. (2006). Youth violence in Latin America: A framework for action. *African Safety Promotion: A Journal of Injury and Violence Prevention, 4*, 120-136. Retrieved from http://www.unisa.ac.za/contents/faculties/humanities/shs/docs/a-safety-2006vol2final.pdf#page=123

Maganani, R., Macintyre, K., Karim, A.M., Brown, L., Hutchinson, P., Kaufman, C., Rutenburg, N., Hallman, K., May, J., & Dallimore, A. (2005). The impact of life skills education on adolescent sexual risk behaviours in KwaZulu-Natal, South Africa. *Journal of Adolescent Health, 36,* 289-304. doi: 10.1016/j.jadohealth.2004.02.025

Magnus, K.B., Cowen, E.L., Wyman, P.A., Fagen, D.B., & Work, W. (1999). Correlates of resilient outcomes among highly stressed African-American and White urban children. *Journal of Community Psychology, 27*, 473-488. doi: 10.1002/(SICI)1520-6629(199907)27:4<473::AID-JCOP8>3.0.CO;2-8

Mahery, P., Proudlock, P., & Jamieson, L. (2010). *A guide to the children's act for health professionals*. Cape Town, South Africa: Children's institute, University of Cape Town.

Maier, H.W. (1978). *Three theories of child development* (3rd ed.). New York, NY: Harper & Row Publishers.

Mash, E.J., & Wolfe, D.A. (2002). *Abnormal child psychology* (2nd ed.). Belmont, CA: Wadsworth.

Mashego, T., & Madu, S.N. (2009). Suicide-related behaviours among secondary school adolescents in the Welkom and Bethlehem areas of the Free State province (South Africa). *South African Journal of Psychology, 39*, 489-497. doi: 10.1177/008124630903900410

Masten, A.S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M.C. Wang, & E.W. Gordon (Eds), *Educational resilience in inner-city America: Challenges and prospects* (pp. 3-25). Hillsdale, NJ: Erlbaum.

Masten, A.S. (2001). Ordinary magic: Resilience processes and development. *American Psychologist, 56*, 227-238. doi: 10.1037/0003-066X.56.3.227

Masten, A.S. (2006). Developmental psychopathology: Pathways to the future. *International Journal of Behavioral Development, 30*, 47-54. doi: 10.1177/0165025406059974

Masten, A.S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. Development and Psychopathology, 23, 493-506. doi: 10.1017/S0954579411000198

Masten, A.S., Best, K.M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology, 2*, 425-444. doi: 10.1017/S0954579400005812

Masten, A.S., & Cicchetti, D. (2010). Developmental cascades. *Development and Psychopathology, 22*, 491-495. doi: 10.1017/S0954579410000222

Masten, A.S., & Coatsworth, J.D. (1995). Competence, resilience and psychopathology. In D. Cicchetti, & D.J. Cohen (Eds.), *Developmental psychopathology: Vol. 2. Risk, disorder and psychopathology* (pp. 715-752). New York, NY: Wiley.

Masten, A.S., & Coatsworth, J.D. (1998). The development of competence in favourable and unfavourable environments. *American Psychologist, 53*, 205-220. doi: 10.1037/0003-066X.53.2.205

Masten, A.S., Hubbard, J.J., Gest, S.D., Tellegen, A., Garmezy, N., & Ramirez, N. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11*, 143-169. Retrieved from http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=43635

Masten, A.S., & Osofsky, J.D. (2010). Disasters and their impact on child development: Introduction to the special section. *Child Development, 81*, 1029-1039. doi: 10.1111/j.1467-8624.2010.01452.x

Masten, A.S., & Wright, M.O. (1998). Cumulative risk and protection models of child maltreatment. *Journal of Aggression, Maltreatment & Trauma, 2*, 7-30. doi: 10.1300/J146v02n01_02

Masuku, S. (2002). Prevention is better than cure. Addressing violent crime in South-Africa. *SA Crime Quarterly, 2*, 1-7. Retrieved from http://web.ebscohost.com/ehost/detail?sid=dc4de734-80f1-4d5e-9170-fee834cf1caf%40sessionmgr110&vid=1&hid=117&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=sih&AN=57276037

Matza, L.S., Kupersmidt, J.B., & Glenn, D.M. (2001). Adolescents' perceptions and standards of their relationships with their parents as a function of sociometric status. *Journal of Research on Adolescence, 11*, 245-272. doi: 10.1111/1532-7795.00012

McCullough, G., Huebner, S., & Laughlin, J.E. (2000). Life events, self-concept, and adolescents' positive subjective well-being. *Psychology in the Schools, 37*, 281-290. doi: 10.1002/(SICI)1520-6807(200005)37:3<281::AID-PITS8>3.0.CO;2-2

McGrath, N., Nyirenda, M., Hosegood, V., & Newell, M. (2009). Age at first sex in rural South Africa. *Sexually Transmitted Infections, 85*, i49-i55. doi: 10.1136/sti.2008.033324

McNulty, J.K., & Fincham, F.D. (2011). Beyond positive psychology?: Toward a contextual view of psychological processes and well-being. *American Psychologist*, 10 pages. doi: 10.1037/a0024572

McQueen, A., Getz, J.G., & Bray, J.H. (2003). Acculturation, substance use, and deviant behavior: Examining separation and family conflict as mediators. *Child Development, 74*, 1737-1750. doi: 10.1046/j.1467-8624.2003.00635.x

Meadow, H.L., Mentzer, J.T., Rahtz, D.R., & Sirgy, M.J. (1992). A life satisfaction measure based on judgment theory. *Social Indicators Research, 26*, 23-59. doi: 10.1007/BF00303824

Meintjies, H., & Hall, K. (2010). Demography of South Africa's children. In M. Kibel, L. Lake, S. Pendlebury, & C. Smith (Eds.). *South African child gauge 2009/2010* (pp. 99-104). Cape Town, South Africa: Children's Institute, University of Cape Town.

Meintjies, H., & Hall, K. (2012). Demography of South Africa's children. In K. Hall, I. Woolard, L. Lake, & C. Smith (Eds.), *South African child gauge 2012* (pp. 82-85). Cape Town, South Africa: Children's Institute, University of Cape Town.

Meyers, S.A., & Miller, C. (2004). Direct, moderated, and cumulative relations between neighborhood characteristics and adolescent outcomes. *Adolescence, 39*, 121-144. Retrieved from http://psycnet.apa.org/psycinfo/2004-15075-009

Michaud, P.A. (2006). Adolescents and risks: Why not change our paradigm? *Journal of Adolescent Health, 38*, 481-483. Retrieved from http://www.jahonline.org/issues

Mikulincer, M., & Shaver, P.R. (2005). Attachment theory and emotions in close relationships: Exploring the attachment-related dynamics of emotional reactions to relational events. *Personal Relationships, 12*, 149-168. doi: 10.1111/j.1350-4126.2005.00108.x

Miller, T.J. (2011). *Life satisfaction, social support, emotional numbing, and trauma*. Undergraduate thesis, Ball state University, Muncie, IN, United States of America. Retrieved from http://cardinalscholar.bsu.edu

Moe, J., Johnson, J.L., & Wade, W. (2007). Resilience in children of substance users: In their own words. *Substance Use & Misuse, 42*, 381-398. doi: 10.1080/10826080601142147

Mohr, W.K., & Fantuzzo, J.W. (2000). The neglected variable of physiology in domestic violence. In R.A. Geffner, P.G. Jaffe, & M. Sudermann (Eds.), *Children exposed to domestic violence: Current issues in research, intervention, prevention and policy development* (pp. 69-84). Binghamton: The Haworth Maltreatment & Trauma Press.

Mokate, L., Cohen, J., Jacobs, C., Gregoriou, P., Okon, E., Laryea-Adjei, G., Gelders, B., & Viviers, A. (2011). *South Africa's children: A review of equity and child rights*. South African Human Rights Commission/UNICEF. Retrieved from http://www.unicef.org/southafrica/resources_8101.html

Moos, R.H., & Holahan, C.J. (2003). Dispositional and contextual perspectives on coping: Toward an integrative framework. *Journal of Clinical Psychology, 59*, 1387-1403. doi: 10.1002/jclp.10229

Moos, R.H., & Schaefer, J.A. (1984). The crisis of physical illness. In R.H. Moos (Ed.), *Coping with physical illness. Volume 2: New perspectives* (pp. 3-31). New York, NY: Plenum Press.

Morgan, M.L., Vera, E.M., Gonzales, R.R., Conner, W., Vacek, K.B., & Coyle, L.D. (2009). Subjective well-being in urban adolescents: Interpersonal, individual, and community influences. *Youth & Society, 43*, 609-634. doi: 10.1177/0044118X0935317

Morojele, N.K., Brook, J.S., & Kachienga, M.A. (2006). Perceptions of sexual risk behaviours and substance abuse among adolescents in South Africa: A qualitative investigation. *AIDS Care, 18*, 215-219. doi: 10.1080/09540120500456243

Morojele, N.K., Parry, C.D.H., & Brook, J.S. (2009). *Substance abuse and the young: Taking action*. Cape Town, South Africa: Medical Research Council.

Morris, A.S., Silk, J.S., Steinberg, L., Myers, S.S., & Robinson, L.R. (2007). The role of the family context in the development of emotion regulation. *Social Development, 16*, 361-388. doi: 10.1111/j.1467-9507.2007.00389.x

Mould, J., Grobler, A.A., Odendaal, D.C., & De Jager, L. (2011). Ethnic differences in age of onset and prevalence of disordered eating attitudes and behaviours: A school-based South African study. *South African Journal of Clinical Nutrition, 24*, 137-141. Retrieved from http://www.ajol.info/index.php/sajcn/article/view/69591

Mounts, N.S. (2004). Adolescents' perceptions of parental management of peer relationships in an ethnically diverse sample. *Journal of Adolescent Research, 19*, 446-467. doi: 10.1177/0743558403258854

Mukoma, W., & Flisher, A.J. (2008). A systematic review of school-based HIV prevention programmes in South Africa. In K. Klepp, A.J. Flisher, & Kaaya (Eds.), *Promoting sexual and reproductive health in east and southern Africa* (pp. 267-287). Pretoria, South Africa: HSRC Press.

Naglieri, J.A., & LeBuffe, P.A. (2007). Measuring resilience in children. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 107-121). New York, NY: Springer.

National Youth Commission. (1997). *National youth policy*. Pretoria, South Africa. Retrieved from http://home.intekom.com/nyc/policy/nyc/nyc_policy.htm

Nelson, E.E., Leibenluft, E., McClure, E.B., & Pine, D.S. (2005). The social re-orientation of adolescence: A neuroscience perspective on the process and its relation to psychopathology. *Psychological Medicine, 35*, 163-174. doi: 10.1017/S0033291704003915

Nestler, E.J. (2005). Is there a common molecular pathway to addiction? *Nature Neuroscience, 8,* 1445-1449. doi: 10.1038/nn1578

Neto, F. (1993). The Satisfaction with Life Scale: Psychometric properties in an adolescent sample. *Journal of Youth and Adolescence, 22*, 125-134. doi: 10.1007/BF01536648

Newman, R. (2005). APA's resilience initiative. *Professional Psychology: Research and Practice, 36*, 227-229. doi: 10.1037/0735-7028.36.3.227

Nickerson, A., & Nagle, R. (2005). Parent and peer attachment in late childhood and early adolescence. *Journal of Early Adolescence, 25*, 223-249. doi: 10.1177/0272431604274174

Nolen-Hoeksema, S.M. (2002). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology, 109*, 504-511. doi: 10.1037/0021-843X.109.3.504

Nooner, K.B., Linares, L.O., Batinjane, J., Kramer, R.A., Silva, R., & Cloitre, M. (2012). Factors related to posttraumatic stress disorder in adolescence. *Trauma, Violence & Abuse, 13*, 153-166. doi: 10.1177/1524838012447698

Nussbaum, M.C. (2008). Who is the happy warrior? Philosophy poses questions to Psychology. *The Journal of Legal Studies, 37*, 81 – 113. doi: 10.1086/587438

O'Brien, C., & Scott, J. (2007). The role of the family. In J. Coleman & A. Hagell (Eds.), *Adolescence, risk and resilience: Against the odds* (pp. 17-40). England: John Wiley & Sons.

Oberle, E., Schonert-Reichl, K.A., & Zumbo, B.D. (2011). Life satisfaction in early adolescence: Personal, neighbourhood, school, family, and peer influences. *Journal of Youth and Adolescence, 40*, 889-901. doi: 10.1007/s10964-010-9599-1

Obradovic, J., & Hipwell, A. (2010). Psychopathology and social competence during the transition to adolescence: The role of family adversity and pubertal development. *Development and Psychopathology, 22*, 621-634. doi: 10.1017/S0954579410000325

Oishi, S. (2006). The concept of life satisfaction across cultures: An IRT analysis. *Journal of Research in Personality, 40*, 411-423. doi: 10.1016/j.jrp.2005.02.002

Olsson, C.A., Bond, L., Burns, J.M., Vella-Brodrick, D.A., & Sawyer, S.M. (2003). Adolescent resilience: A concept analysis. *Journal of Adolescence, 26*, 1-11. doi: 10.1016/S0140-1971(02)00118-5

Operario, D., Pettifor, A., Cluver, L., MacPhail, C., & Rees, H. (2007). Prevalence of parental death among young people in South Africa and risk for HIV infection. *Journal of Acquired Immune Deficiency Syndrome, 44*, 93-98. doi: 10.1097/01.qai.0000243126.75153.3c

Osofsky, J.D. (1997). Children and youth violence: An overview of the issues. In J.D. Osofsky (Ed.), *Children in a violent society* (pp. 3-9). New York, NY: The Guilford Press.

Osowiecki, D.M., & Compas, B.E. (1999). A prospective study of coping, perceived control, and psychological adjustment to breast cancer. *Cognitive Therapy and Research, 23*, 169-180. doi: 10.1023/A:1018779228432

Palfrey, J., Gasser, U., Maclay, C., & Beger, G. (2011). Digital natives and the three divides to bridge. In D. Anthony (Ed.), *The state of the world's children 2011: Adolescence, an age of opportunity* (pp. 14-15). New York, NY: United Nations Children's Fund.

Palmer, S. (2006). *Toxic childhood: How the modern world is damaging our children and what we can do about it*. London: Sue Palmer.

Panday, S., & Richter, L. (2007). Youth policy initiative. *HSRC Review, 5*, 1-2. Retrieved from http://www.hsrc.ac.za/en/research-outputs?search=Youth+policy+initiative&x=0&y=0&department=all&year=all&type=all#form-research

Park, C.L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology,1*, 115–144. doi: 10.1037/1089-2680.1.2.115

Patrick, M.E., Collins, L.M., Smith, E., Caldwell, L., Flisher, A., & Wegner, L. (2009). A prospective longitudinal model of substance use onset among South African adolescents. *Substance Use & Misuse, 44*, 647-662. doi: 10.1080/10826080902810244

Patterson, J.M. (2002). Integrating family resilience and family stress theory. *Journal of Marriage and Family, 64*, 349-360. doi: 10.1111/j.1741-3737.2002.00349.x

Patton, G.C., Coffey, C., Sawyer, S.M., Viner, R.M., Haller, D.M., Bose, K., Vos, T., Ferguson, J., & Mathers, C.D. (2009). Global patterns of mortality in young people: A systematic analysis of population health data. *Lancet, 374*, 881-892. doi: 10.1016/S0140-6736(09)60741-8

Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment, 5*, 164-172. doi: 10.1037/1040-3590.5.2.164

Peacock, E.J., Wong, P.T.P., & Reker, G.T. (1993). Relations between appraisals and coping schemas: Support for the congruence model. *Canadian Journal of Behavioural Science, 25*, 64-80. doi: 10.1037/h0078787

Pearlin, L.I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behaviour, 19,* 2-21. Retrieved from http://www.jstor.org/discover/10.2307/2136319?uid=2&uid=4&sid=21103350324607

Peltzer, K. (1999). Posttraumatic stress symptoms in a population of rural children in South Africa. *Psychological Reports, 85*, 646-650. doi: 10.2466/pr0.1999.85.2.646

Peltzer, K. (2006). Injury and lifestyle factors among school-aged Black and White South African children in the Limpopo province. *African Safety Promotion: Journal of Injury and Violence Prevention, 4*, 15-25. Retrieved from http://www.sabinet.co.za/abstracts/safety/safety_v4_n3_a3.html

Peltzer, K. (2008). Injury and social determinants among in-school adolescents in six African countries. *Injury Prevention, 14*, 381-388. doi: 10.1136/ip.2008.018598

Peltzer, K., Cherian, V.I., & Cherian, L. (2000). Cross-cultural attitudes towards suicide among South African secondary school pupils. *East African Medical Journal, 77*, 165-167. Retrieved from http://www.ajol.info/index.php/eamj/article/view/46615

Pepler, D.J., Catallo, R., & Moore, T.E. (2000). Consider the children: Research informing interventions for children exposed to domestic violence. In R.A. Geffner, P.G. Jaffe, & M. Sudermann (Eds.), *Children exposed to domestic violence: Current issues in research, intervention, prevention and policy development* (pp. 37-58). Binghamton: The Haworth Maltreatment & Trauma Press.

Perkins, D.F. (2006a). *Adolescence: Developmental tasks*. Retrieved from www.education.com

Perkins, D.F. (2006b). *What are the developmental tasks facing adolescents?* Retrieved from www.education.com

Peterson, C., Park, N., & Seligman, M.E.P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies, 6*, 25-41. doi: 10.1007/s10902-004-1278-z

Peterson, I., Swartz, L., Bhana, A., & Flisher, A.J. (2010). Mental health promotion initiatives for children and youth in contexts of poverty: The case of South Africa. *Health Promotion International, 25*, 331-341. doi: 10.1093/heapro/daq026

Pettifor, A.E., Rees, H.V., Kleinschmidt, I. (2005). Young people's sexual health in South Africa: HIV prevalence and sexual behaviours from a nationally representative household survey. *AIDS, 19*, 1525-1534. Retrieved from http://journals.lww.com/aidsonline/Abstract/2005/09230/Young_people_s_sexual_health_in_South_Africa__HIV.12.aspx

Pettifor, A.E., Rees, H.V., & Steffenson, A. (2004). *HIV and sexual behaviour among young South Africans: A national survey of 15-24 year olds*. Johannesburg, South Africa: Reproductive Health Research Unit, University of the Witwatersrand.

Piko, B.F. (2001). Gender differences and similarities in adolescent's ways of coping. *Psychological Record, 51*, 223-235. Retrieved from http://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1307&context=tpr&sei-redir=1&referer=http%3A%2F%2Fscholar.google.co.za%2Fscholar%3Fq%3DGender%2Bdifferences%2Band%2Bsimilarities%2Bin%2Badolescent%25E2%2580%2599s%2Bways%2Bof%2Bcoping%26btnG%3D%26hl%3Den%26as_sdt%3D0%252C5#search=%22Gender%20differences%20similarities%20adolescent%E2%80%99s%20ways%20coping%22

Piko, B.F., & Hamvai, C. (2010). Parent, school and peer-related correlates of adolescent's life satisfaction. *Children and Youth Services Review, 32*, 1479-1482. doi: 10.1016/j.childyouth.2010.07.007

Pine, D.S., & Cohen, J.A. (2002). Trauma in children and adolescents: Risk and treatment of psychiatric sequelae. *Biological Psychiatry, 51*, 519-531. doi: 10.1016/S0006-3223(01)01352-X

Pine, D.S., Costello, J., & Masten, A. (2005). Trauma, proximity, and Developmental Psychopathology: The effects of war and terrorism on children. *Neuropsychopharmacology, 30*, 1781-1792. doi: 10.1038/sj.npp.1300814

Pinyerd, B., & Zipf, W.B. (2005). Puberty-timing is everything. *Journal of Pediatric Nursing, 20*, 75-82. doi: 10.1016/j.pedn.2004.12.011

Plomin, R., & Rutter, M. (1998). Child development, molecular genetics and what to do with genes once they are found. *Child Development, 69*, 1223-1242. doi: 10.1111/j.1467-8624.1998.tb06169.x

Posel, D., & Casale, D. (2006). Internal labour migration and household poverty in post-apartheid South Africa. In R. Kanbur & H. Bhorat (Eds.), *Poverty and policy in post-apartheid South Africa* (pp. 351-365). Pretoria, South Africa: HSRC Press.

Pretorius, C., Van den Berg, H.S., & Louw, D.A. (2003). Psychosocial predictors of substance abuse among adolescents. *Acta Criminologica, 16*, 1-11. Retrieved from http://www.sabinet.co.za/abstracts/crim/crim_v16_n4_a2.html

Prince-Embury, S. (2006). *Resiliency scales for children and adolescents. A profile of personal strengths*. San Antonio, TX: Harcourt assessment.

Prince-Embury, S. (2009). The resiliency scales for children and adolescents as related to parent education level and race/ethnicity in children. *Canadian Journal of School Psychology, 24*, 167-182. doi: 10.1177/0829573509335475

Prince-Embury, S., & Courville, T. (2008a). Comparison of one-, two-, and three-factor models of personal resiliency using the Resiliency Scales for Children and Adolescents. *Canadian Journal of School Psychology, 23*, 11-25. doi: 10.1177/0829573508316589

Prince-Embury, S., & Courville, T. (2008b). Measurement invariance of the Resiliency Scales for Children and Adolescents with respect to sex and age cohorts. *Canadian Journal of School Psychology*, 1-15. doi: 10.1177/0829573508316590

Prince-Embury, S., & Steer, R.A. (2010). Profiles of personal resiliency for normative and clinical samples of youth assessed by the Resiliency Scales for Children and Adolescents. *Journal of Psychoeducational Assessment*, 1-12. doi: 10.1177/0734282910366833

Proctor, C.L., Linley, P.A., & Maltby, J. (2009). Youth life satisfaction: A review of the literature. *Journal of Happiness Studies, 10*, 583-630. doi: 10.1007/s10902-008-9110-9

Promislo, M.D., Deckop, J.R., Giacalone, R.A., & Jurkiewicz, C.L. (2010). Valuing money more than people: The effects of materialism on work-family conflict. *Journal of Occupational and Organizational Psychology, 83*, 935-953. doi: 10.1348/096317909X480167

Pynoos, R.S., Steinberg, A.M., Layne, C.M., Briggs, E.C., Ostrowski, S.A., & Fairbank, J.A. (2009). DSM-V diagnostic criteria for children and adolescents: A developmental perspective and recommendations. *Journal of Traumatic Stress, 22*, 391-398. doi: 10.1002/jts.20450

Qouta, S., Punamaki, R.L., Montgomery, E., & Sarraj, E.E. (2007). Predictors of psychological distress and positive resources among Palestinian adolescents: Trauma, child and mothering characteristics. *Child Abuse & Neglect, 31*, 699-717. doi: 10.1016/j.chiabu.2005.07.007

Rapaport, Clary, Fayyad, & Endicott. (2005). Quality of life impairment in depressive and anxiety disorders. *American Journal of Psychiatry, 162*, 1171-1178. doi: 10.1176/appi.ajp.162.6.1171

Rapoport, J.L., Castellanos, F.X., Gogate, N., Janson, K., Kohler, S., & Nelson, P. (2001). Imaging normal and abnormal brain development: New perspectives for child psychiatry.

Australian & New Zealand Journal of Psychiatry, 35, 272-282. doi: 10.1046/j.1440-1614.2001.00900.x

Reddy, S.P., Panday, S., Swart, D., Jinabhai, C.C., Amosun, S.L., James, S., Monyeki, K.D., Stevens, G., Morojele, N., Kambaran, N.S., Omardien, R.G., & Van den Borne, H.W. (2003). *Umthenthe Uhlaba Usamila: The South African Youth Risk Behaviour Survey 2002*. Cape Town, South Africa: South African Medical Research Council.

Reddy, S.P., James, S., Sewpaul, R., Koopman, F., Funani, N.I., Sifunda, S., Josie, J., Masuka, P., Kambaran, N.S., & Omardien, R.G. (2010). *Umthente Uhlaba Usamila: The South African Youth Risk Behaviour Survey 2008*. Cape Town, South Africa: South African Medical Research Council.

Redpath, J. (2003). South Africa's heart of darkness. Sex crimes and child offenders: some trends. *SA Crime Quarterly, 4*, 17-24. Retrieved from http://web.ebscohost.com/ehost/detail?sid=aaf841ed-0a5d-4715-97a7-27fefc2cb034%40sessionmgr113&vid=1&hid=117&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=sih&AN=57310976

Reiss, D., & Neiderhiser, J.M. (2000). The interplay of genetic influences and social processes in develomental theory: Specific mechanisms are coming into view. *Development and Psychopathology, 12*, 357-374. Retrieved from http://journals.cambridge.org/action/displayFulltext?type=1&fid=55128&jid=DPP&volumeId=12&issueId=03&aid=55127&bodyId=&membershipNumber=&societyETOCSession=

Rhee, S., Furlong, M.J., Turner, J.A., & Harari, I. (2001). Integrating strength-based perspectives in psychoeducational evaluations. *The California School Psychologist, 6*, 5-17. doi: 10.1007/BF03340879

Ricciardelli, L.A., McCabe, M.P., Williams, J.R., & Thompson, J.K. (2007). The role of ethnicity and culture in body image and disordered eating among males. *Clinical Psychology Review, 27,* 582-606. doi: 10.1016/j.cpr.2007.01.016

Richardson, G.E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*, 307-321. doi: 10.1002/jclp.10020

Richter, L., Foster, G., & Sherr, L. (2006). *Where the heart is: Meeting the psychosocial needs of young children in the context of HIV/AIDS*. Den Haag, Nederland: Bernard van Leerstigting. Retrieved from http://www.bernardvanleer.org/Where_The_Heart_Is_Meeting_the_psychosocial_needs_of_young_children_in_the_context_of_HIV_AIDS

Robins, R.W., Trzesniewski, K.H., Tracey, J.L., Gosling, S.D., & Potter, J. (2002). Global self-esteem across the life span. *Psychology and Aging, 17*, 423-434. doi: 10.1037/0882-7974.17.3.423

Roisman, G.I., Masten, A.S., Coatsworth, J.D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development, 75*, 123-133. doi: 10.1111/j.1467-8624.2004.00658.x

Rose, A.J. (2002). Co-rumination in the friendships of girls and boys. *Child Development, 73*, 1830-1843. doi: 10.1111/1467-8624.00509

Rose, A.J., Swenson, L.P., & Waller, E.M. (2004). Overt and relational aggression and perceived popularity: Developmental differences in concurrent and prospective relations. *Developmental Psychology, 40*, 378-387. doi: 10.1037/0012-1649.40.3.378

Rosenthal, B.S., Wilson, W.C., & Futch, V.A. (2009). Trauma, protection, and distress in late adolescence: A multi-determinant approach. *Adolescence, 44*, 693-703. Retrieved from http://valerieafutch.net/wp-content/uploads/2010/08/Trauma-article.pdf

Roth, J., & Brooks-Gunn, J. (2000). What do adolescents need for health development? Implications for youth policy. *Social Policy Report, XIV*, 3-19. Retrieved from http://www.familyindex.net/NR/exeres/1C3E2EC4-8353-4E4F-8736-0981FA16768B,frameless.htm

Rutter, M. (1985). Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *The British Journal of Psychiatry, 147*, 598-611. doi: 10.1192/bjp.147.6.598

Rutter, M. (1995). Psychosocial adversity: Risk, resilience and recovery. *South African Journal of Child and Adolescent Psychiatry, 7*, 75-88. doi: 10.1080/16826108.1995.9632442

Rutter, M. (1999). Resilience concepts and findings: Implications for family therapy. Journal of Family Therapy, 21, 119-144. doi: 10.1111/1467-6427.00108

Rutter, M. (2006). Implications of resilience concepts for scientific understanding. *Annals of the New York Academy of Sciences, 1094*, 1-12. doi: 10.1196/annals.1376.002

Rutter, M. (2007). Resilience, competence and coping. *Child Abuse & Neglect, 31*, 205-209. doi: 10.1016/j.chiabu.2007.02.001

Rutter, M. (2012). Annual research review: Resilience – clinical implications. *Journal of Child Psychology and Psychiatry, 4*, 474-487. doi: 10.1111/j.1469-7610.2012.02615.x

Rutter, M., & Sroufe, L.A. (2000). Developmental psychopathology: Concepts and challenges. *Development and Psychopathology, 12*, 265-296. Retrieved from http://journals.cambridge.org/action/displayAbstract;jsessionid=B0A922601C073E63606DCA12F53EF3B5.journals?fromPage=online&aid=55119

Ryan, R.M., & Deci, E.L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. doi: 10.1146/annurev.psych.52.1.141

Ryff, C.D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science, 4*, 99-104. Retrieved from http://www.jstor.org/discover/10.2307/20182342?uid=2&uid=4&sid=21103417216033

Ryff, C.D., & Keyes, C.L.M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719-727. doi: 10.1037/0022-3514.69.4.719

Saarni, C., Campos, J.J., & Camras, L. (2006). Emotional development. In W. Damon & R.M. Lerner (Series eds.) & N. Eisenberg (Vol. ed.), *Handbook of child psychology: Volume 3. Social, emotional and personality development* (6th ed., pp. 226-299). New York, NY: Wiley.

Sabatier, C., Mayer, B., Friedlmeier, M., Lubiewska, K., & Trommsdorff, G. (2011). Religiosity, family orientation, and life satisfaction of adolescents in four countries. *Journal of Cross-Cultural Psychology*, 1-19. doi: 10.1177/0022022111412343

Sadock, B.J., & Sadock, V.A. (2003). *Synopsis of psychiatry* (9th ed.). Philadelphia, PA: Lippincott, Williams & Wilkins.

Saha, R., Huebner, E.S., Suldo, S.M., & Valois, R.F. (2010). A longitudinal study of adolescent life satisfaction and parenting. *Child Indicator Research, 3*, 149-165. doi: 10.1007/s12187-009-9050-x

Sameroff, A.J. (2000). Developmental systems and psychopathology. *Development and Psychopathology, 12*, 297-312. Retrieved from http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=55121

Sanders, D., Bradshaw, D., & Ngongo, N. (2010). The status of child health in South Africa. In M. Kibel, L. Lake, S. Pendlebury, & C. Smith (Eds.). *South African child gauge 2009/2010* (pp. 29-40). Cape Town, South Africa: Children's Institute, University of Cape Town.

Santrock, J. W. (2001). *Adolescence* (8th ed.). New York, NY: McGraw-Hill.

Sawyer, S.M., Afifi, R.A., Bearinge, L.H., Blakemore, S-J., Dick, B., Ezeh, A.C., & Patton, G.C. (2012). Adolescence: A foundation for future health. *Lancet, 379*, 1630-1640. doi: 10.1016/S0140-6736(12)60531-5

Scheeringa, M.S., Zeanah, C.H., & Cohen, J.A. (2011). PTSD in children and adolescents: Toward an empirically based algorithm. *Depression and Anxiety, 28*, 770-782. doi: 10.1002/da.20736

Schexnaildre, M.A. (2007). *Predicting posttraumatic growth: Coping, social support, and posttraumatic stress in children and adolescents after hurricane Katrina*. Master's dissertation, Louisiana State University, United States of America.

Schneider, M., Norman, R., Parry, C., Bradshaw, D., & Pluddermann, A. (2007). Estimating the burden of disease attributable to alcohol use in South Africa in 2000. *South African Medical Journal, 97*, 664-672. Retrieved from http://www.ajol.info/index.php/samj/article/view/13896/59676

Schwarz, B., Mayer, B., Trommsdorff, G., Ben-Arieh, A., Friedlmeier, M., Lubiewska, K., Mishra, M., & Peltzer, K. (2011). Does the importance of parent and peer relationships for adolescent's life satisfaction vary across cultures? *The Journal of Early Adolescence*, 26 pages. doi: 10.1177/0272431611419508

Seccombe, K. (2002). "Beating the odds" versus "changing the odds": Poverty, resilience, and family policy. *Journal of Marriage and Family Therapy, 64*, 384-394. doi: 10.1111/j.1741-3737.2002.00384.x

Seedat, S., Van Niekerk, A., Jewkes, R., Suffla, S., & Ratele, K. (2009). Violence and injuies in South Africa: Prioritising an agenda for prevention. *The Lancet, 374*, 1011-1022. doi: 10.1016/S0140-6736(09)60948-X

Seery, M.D., Holman, E.A., & Silver, R.C. (2010). Whatever does not kill us: Cumulative lifetime adversity, vulnerability, and resilience. *Journal of Personality and Social Psychology, 99*, 1025-1041. doi: 10.1037/a0021344

Seiffge-Krenke, I. (2000). Causal links between stressful events, coping style, and adolescent symptomatology. *Journal of Adolescence, 23*, 675-691. doi: 10.1006/jado.2000.0352

Seiffge-Krenke, I., & Beyers, W. (2005). Coping trajectories from adolescence to young adulthood: Links to attachment state of mind. *Journal of Research on Adolescence, 15*, 561-582. doi: 10.1111/j.1532-7795.2005.00111.x

Seiffge-Krenke, I., & Stemmler, M. (2002). Factors contributing to gender differences in depressive symptoms: A test of three developmental models. *Journal of Youth and Adolescence, 31*, 405-417. doi: 10.1023/A:1020269918957

Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 1-14. doi: 10.1037//0003-066X.55.1.5

Sesma, A., Mannes, M., & Scales, P.C. (2006). Positive adaptation, resilience, and the developmental asset framework. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 281-296). New York, NY: Springer.

Shaffer, D.R, & Kipp, K. (2002). *Developmental psychology: Childhood and adolescence* (7th ed.). Belmont, CA: Thomson Wadsworth.

Shanahan, L., McHale, S.M., Osgood, D.W., & Crouter, A.C. (2005, April). *Development of differential parental warmth toward siblings from middle childhood to late adolescence*. Paper presented at the Biennial Meeting of the Society for Research on Child Development, Atlanta, United States of America.

Sharp-Light, N. (2007). Selecting parenting programs that foster resiliency. In N. Henderson (Ed.), *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities* (pp. 205 - 208). Ojai, CA: Resiliency in Action.

Shek, D.T.L. (2005). Paternal and maternal influences on the psychological well-being, substance abuse, and delinquency of Chinese adolescents experiencing economic disadvantage. *Journal of Clinical Psychology, 63*, 219-234. doi: 10.1002/jclp.20057

Sheridan, S.M., Eagle, J.W., & Dowd, S.E. (2006). Families as contexts for children's adaptation. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 165-179). New York, NY: Springer.

Shin, D.C., & Johnson, D.M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research, 5*, 475-492. doi: 10.1007/BF00352944

Shumaker, D.M., Deutsch, R.M., & Brenninkmeyer, L. (2009). How do I connect? Attachment issues in adolescence. *Journal of Child Custody, 6*, 91-112. doi: 10.1080/15379410902894866

Sigelman, C.K., & Rider, E.A. (2006). *Life span human development* (6th ed.). Belmont, CA: Wadsworth.

Silk, J.S., Steinberg, L., & Morris, A.S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development, 74*, 1869-1880. doi: 10.1046/j.1467-8624.2003.00643.x

Skinner, E.A., & Zimmer-Gembeck, J. (2007). The development of coping. *Annual Review of Psychology, 58*, 119-144. doi: 10.1146/annurev.psych.58.110405.085705

Slone, M., & Shosani, A. (2008). Efficacy of a school-based primary prevention program for coping with exposure to political violence. *International Journal of Behavioural Development, 32*, 348 – 358. doi: 10.1177/0165025408090976

Smedema, S.M., Catalano, D., & Ebener, D.J. (2010). The relationship of coping, self-worth, and subjective well-being: A structural equation model. *Rehabilitation Counseling Bulletin, 53*, 131-142. doi: 10.1177/0034355209358272

Smetana, J.G., Campione-Barr, N., & Daddis, C. (2004). Longitudinal development of family decision-making: Defining healthy behavioral autonomy for middle-class African American adolescents. *Child Development, 75*, 1418-1434. doi: 10.1111/j.1467-8624.2004.00749.x

Smetana, J.G., Campione-Barr, N., & Metzger, A. (2006). Adolescent development in interpersonal and societal contexts. *Annual Review of Psychology, 57*, 255-284. doi: 10.1146/annurev.psych.57.102904.190124

Smetana, J.G., & Daddis, C. (2002). Domain-specific antecedents of parental psychological control and monitoring: The role of parenting beliefs and practices. *Child Development, 73*, 563-580. doi: 10.1111/1467-8624.00424

Smetana, J.G., Metzger, A., Gettman, D.C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development, 77*, 201-217. doi: 10.1111/j.1467-8624.2006.00865.x

Smetana, J.G., Villalobos, M., Tasopoulos-Chan, M., Gettman, D.C., & Campione-Barr, N. (2008). Early and middle adolescents' disclosure to parents about activities in different domains. *Journal of Adolescence*, 32, 693-713. doi: 10.1016/j.adolescence.2008.06.010

Smit, I. (2003). *The relation between the career involvement of mothers and the psychological wellbeing of their children.* Master's dissertation, University of the Free State, South Africa.

Smith, L.H., Guthrie, B.J., & Oakley, D.J. (2005). Studying adolescent male sexuality: Where are we? *Journal of Youth and Adolescence, 34*, 361-377. doi: 10.1007/s10964-005-5762-5

Smith, C. (2006). South African children: Future social capital vs. failure and despair. *Journal of Child and Adolescent Mental Health, 18*, v-vi. doi: 10.2989/17280580609486610

Snyder, C.R., & Lopez, S.J. (2002). *Handbook of positive psychology*. New York, NY: Oxford University Press.

South African Police service (SAPS). (2012). *Crime statistics overview RSA, 2011/2012*. Retrieved from www.saps.gov.za

South African Social Security Agency. (2011). *Number of grant recipients by grant type per province as at 30 April 2011*. Retrieved from www.sassa.gov.za

South African Social Security Agency. (2005 – 2012). *SOCPEN database*. Pretoria, South Africa: SASSA.

Spear, L.P. (2000). The adolescent brain and age-related behavioral manifestations. *Neuroscience and Biobehavioral Reviews, 24*, 417-463. doi: 10.1016/S0149-7634(00)00014-2

Sroufe, L.A. (1990). Considering normal and abnormal together: The essence of developmental psychopathology. *Development and Psychopathology, 2*, 335-347. doi: 10.1017/S0954579400005769

Sroufe, L.A. (1997). Psychopathology as an outcome of development. *Development and Psychopathology, 9*, 251-268. doi: 10.1017/S0954579497002046

Sroufe, L.A., Egeland, B., Carlson, E.A., & Collins, W.A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York, NY: The Guilford Press.

Sroufe, L.A., & Rutter, M.R. (1984). The domain of developmental psychology. *Child Development, 55*, 17-29. Retrieved from http://www.jstor.org/discover/10.2307/1129832?uid=2&uid=4&sid=21103349552197

Stangor, C. (2011). *Research methods for the behavioural sciences*. Belmont, CA: Wadsworth.

Stanton, A.L., Parsa, A., & Austenfeld, J.L. (2002). The adaptive potential of coping through emotional approach. In C.R. Snyder & S.J. Lopez (Eds.), *Handbook of positive psychology* (pp. 148-158). New York, NY: Oxford University Press.

Stark, K., Joubert, G., Struwig, M., Pretorius, M., Van der Merwe, N., Botha, H., Kotze, J., & Krynauw, D. (2010). Suicide cases investigated at the state mortuary in Bloemfontein, 2003-2007. *South African Family Practice, 52*, 332-335. Retrieved from http://www.ajol.info/index.php/safp/article/view/61436

Statistics South Africa. (2004). *Primary tables South Africa – Census '96 and 2001 compared*. Retrieved from www.statssa.gov.za

Statistics South Africa. (2009). *Quarterly labour force survey, 1st quarter 2009*. Retrieved from www.statssa.gov.za

Statistics South Africa. (2011). *General Household Survey 2010*. Retrieved from www.statssa.gov.za

Stein, D.J., Chiu, W.T., Hwang, I., Kessler, R.C., Sampson, N., Alonso, J., … Nock, M.K. (2010). Cross-national analysis of the associations between traumatic events and suicidal behaviour: Findings from the WHO world mental health surveys. *PLoS ONE, 5*, e10574. doi:10.1371/journal.pone.0010574

Steinberg, L. (2001). We know some things: Parent-adolescent relations in retrospect and prospect. *Journal of Research in Adolescence, 11*, 1-19. doi: 10.1111/1532-7795.00001

Steinberg, L. (2005). Cognitive and affective development in adolescence. *Trends in Cognitive Science, 9*, 69-74. doi: 10.1016/j.tics.2004.12.005

Steinberg, L., & Avenevoli, S. (2000). The role of context in the development of psychopathology: A conceptual framework and some speculative propositions. *Child Development, 71*, 66-74. doi: 10.1111/1467-8624.00119

Steinberg, L., & Silk, J. (2002). Parenting adolescents. In M.H. Bornstein (Ed.), *Handbook of parenting, vols.1-4* (2nd ed., pp.103-133). Mahwah, NJ: Erlbaum.

Steyn, M., Badenhorst, J., & Kamper, G. (2010). Our voice counts: Adolescents' view on their future in South Africa. *South African Journal of Education*, *30*, 169-188. doi: 10.4314%2Fsaje.v30i2.55480

Stice, E., & Bearman, S.K. (2001). Body-image and eating disturbances prospectively predict increases in depressive symptoms in adolescent girls: A growth curve analysis. *Developmental Psychology, 73*, 597-607. doi: 10.1037/0012-1649.37.5.597

Stice, E., & Whitenton, K. (2002). Risk factors for body dissatisfaction in adolescent girls: A longitudinal investigation. *Developmental Psychology, 38*, 669-679. doi: 10.1037/0012-1649.38.5.669

Streiner, D.L. (2006). Building a better model: An introduction to structural equation modelling. *Canadian Journal of Psychiatry, 51*, 317-324. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/16986821

Stocker, C., Burwell, R.A., & Briggs, M.L. (2002). Sibling conflict in middle childhood predicts children's adjustment in early adolescence. *Journal of Family Psychology, 16*, 50-57. doi: 10.1037/0893-3200.16.1.50

Stuss, D.T. (1992). Biological and psychological development of executive functions. *Brain & Cognition, 20*, 8-23. doi: 10.1016/0278-2626(92)90059-U

Suh, E., Diener, E., Oishi, S., & Triandis, H.C. (1998). The shifting basis of life satisfaction judgements across cultures: Emotions versus norms. *Journal of Personality and Social Psychology, 74*, 482-493. doi: 10.1037/0022-3514.74.2.482

Suliman, S., Kaminer, D., Seedat, S., & Stein, D.J. (2005). Assessing post-traumatic stress disorder in South African adolescents: Using the child and adolescent trauma survey (CATS) as a screening tool. *Annals of General Psychiatry, 4*, 1-10. doi:10.1186/1744-859X-4-2

Suliman, S., Mkabile, S.G., Fincham, D.S., Ahmed, R., Stein, D.J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive Psychiatry, 50*, 121-127. doi: 10.1016/j.comppsych.2008.06.006

Sullivan, C. M., Nguyen, H., Allen, N., Bybee, D., Juras, J. (2001). Beyond searching for deficits: Evidence that physically and emotionally abused women are nurturing parents. *Journal of Emotional Abuse, 2*, 51-71. doi: 10.1300/J135v02n01_05

Tabachnick, B. G., & Fidell, F. S. (2007). *Using multivariate statistics* (5th ed.). New York, NY: Harper and Row.

Tarter, R.E., & Vanyukov, M. (1999). Revisiting the validity of the construct of resilience. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and development: positive life adaptations* (pp.85-100). New York, NY: Kluwer Academic/Plenum.

Taylor, L.K., & Weems, C.F. (2009). What do youth report as a traumatic event? Toward a developmentally informed classification of traumatic stressors. *Psychological Trauma: Theory, Research, Practice and Policy, 1*, 91-106. doi: 10.1037/a0016012

Theron, L.C. (2004). The role of personal protective factors in anchoring psychological resilience in adolescents with learning difficulties. *South African Journal of Education, 24*, 317-321. doi: 10.4314%2Fsaje.v24i4.25008

Theron, L.C., & Theron, A.M.C. (2010). A critical review of studies of South African youth resilience, 1990-2008. *South African Journal of Science, 106*, 1-8. doi: 10.4102/sajs.v106i7/8.252

Theokas, C., Almerigi, J.B., Lerner, R.M., Dowling, E.M., Benson, P.L., Scales, P.C., Von Eye, A. (2005). Conceptualising and modelling individual and ecological asset components of thriving in early adolescence. *Journal of Early Adolescence, 25*, 113-143. doi: 10.1177/0272431604272460

Thoits, P.A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior, Extra issue*, 53-79. Retrieved from http://www.jstor.org/stable/2626957

Thompson, R.A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development, 59*, 25-52. doi: 10.1111/j.1540-5834.1994.tb01276.x

Tobin, R.M., & Graziano, W.G. (2006). Development of regulatory processes through adolescence: A review of recent empirical studies. In D. Mroczek & T.D. Little (Eds.), *Handbook of personality development* (pp. 263-284). Mahwah, NJ: Lawrence Erlbaum Associates.

Trout, A.L., Ryan, J.B., La Vigne, S.P., & Epstein, M.H. (2003). Behavioral and Emotional Rating Scale: Two studies of convergent validity. *Journal of Child and Family Studies, 12*, 399-410. doi: 10.1023/A:1026059906344

Trzesniewski, K.H, Donnellan, M.B., & Robins, R.W. (2003). Stability of self-esteem across the life span. *Journal of Personality and Social Psychology, 84*, 205-220. doi: 10.1037/0022-3514.84.1.205

Ullman, J.B. (1996). Structual equation modelling. In B.G. Tabachnick & L.S. Fidell (Eds.), *Using multivariate statistics* (5th ed., pp. 676-780). Boston, MA: Pearson education.

Ullman, J.B. (2006). Structural equation modelling: Reviewing the basics and moving forward. *Journal of Personality Assessment, 87*, 35-50. doi**:** 10.1207/s15327752jpa8701_03

Ungar, M. (2007). *Too safe for their own good: How risk and responsibility help teens thrive*. Toronto: McClelland & Stewart.

Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work, 38*, 218-235. doi: 10.1093/bjsw/bc1343

UN Dialogue and Mutual Understanding. (2010). *Joint statement by heads of UN entities for the launch of the international Year of Youth.* Retrieved from www.social.un.org/youthyear

Unicef. (2000). Domestic violence against women and girls. *Innocenti Digest, 6.* Retrieved from www.unicef-irc.org/publications

Unicef. (2008). *Info by country: South Africa*. Retrieved from www.unicef.org

Valchev, V.H., Nel, J.A., Van de Vijver, F.J.R., Meiring, D., De Bruin, G.P., & Rothmann, S. (2012). Similarities and differences in implicit personality concepts across ethnocultural groups in South Africa. *Journal of Cross-Cultural Psychology*, 1-24. doi: 10.1177/0022022112443856

Vanderbilt-Adriance, E., & Shaw, D.S. (2008). Conceptualising and re-evaluating resilience across levels of risk, time, and domains of copetence. *Clinical Child and Family Psychology Review, 11*, 30-58. doi: 10.1007/s10567-008-0031-2

Van der Berg, S., & Shepherd, D. (2008*). Signalling performance: An analysis of continuous assessment and matriculation examination marks in South African schools.* Pretoria, South Africa: Umalusi council for quality assurance in general and further education and training.

Van der Merwe, J.S. (2004). *The relation between interpersonal fortitude and resistance to posttraumatic stress symptoms of children in youth care centres*. Master's dissertation, University of the Free State, South Africa.

Van der Merwe, A., & Dawes, A. (2000). Prosocial and antisocial tendencies in children exposed to community violence. *South African Journal of Child and Adolescent Mental Health, 12*, 19-36. doi: 10.1080/16826108.2000.9632365

Van der Put, C., Van der Laan, P., Stams, G., Dekovic, M., & Hoeve, M. (2011). Promotive factors during adolescence: Are there changes in impact and prevalence during adolescence and how does this relate to risk factors? *International Journal of Child, Youth, and Family Studies, 1*, 119-141. Retrieved from http://journals.uvic.ca/index.php/ijcyfs/article/view/5430

Van Eys, P.P., & Dodge, K.A. (1999). Closing the gaps: Developmental psychopathology as a training model for clinical child psychology. *Journal of Clinical Child Psychology, 28*, 467-475. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/10587896

Van Niekerk, J. (2003). Failing our future. Responding to the sexual abuse of children. *SA Crime Quarterly, 3*, 11-16. Retrieved from http://www.issafrica.org/publications/south-african-crime-quarterly/south-african-crime-quarterly-3/failing-our-future-responding-to-the-sexual-abuse-of-children-joan-van-niekerk

Van Renen, L., & Wild, L.G. (2008). Family functioning and suicidal ideation/behaviour in adolescents: A pilot study. *Journal of Child and Adolescent Mental Health, 20*, 111-121. doi: 10.2989/JCAMH.2008.20.2.7.690

Van Rensburg, E., & Barnard, C. (2005). Psychological resilience among sexually-molested girls in the late middle-childhood: A case study approach. *Child Abuse Research in South Africa, 6*, 1-12. Retrieved from http://www.sabinet.co.za/abstracts/carsa/carsa_v6_n1_a1.html

Vassar, M. (2008). A note on the score reliability for the Satisfaction With Life Scale: An RG study. *Social Indicators Research, 86*, 47-57. doi: 10.1007/s11205-007-9113-7

Vera, E.M., Vacek, K., Blackmon, S., Coyle, L., Gomez, K., Jorgenson, K., Luginbuhl, P., Moallem, I., & Steele, J.C. (2011). Subjective well-being in urban, ethnically diverse adolescents: The role of stress and coping. *Youth & Society*, 17 pages. doi: 10.1177/0044118X11401432

Visser, M., & Routledge, L.A. (2007). Substance abuse and psychological well-being of South African adolescents. *South African Journal of Psychology, 37*, 595-615. doi: 10.1177/008124630703700313

Von Rueden, U., Gosch, A., Rajmil, L., Bisegger, C., & Ravens-Sieberer, U. (2006). Socioeconomic determinants of health related quality of life in childhood and adolescence: Results from a European study. *Journal of Epidemiology and Community Health*, 60, 130-135. doi: 10.1136/jech.2005.039792

Vostanis, P. (2007). Mental health and mental disorders. In J. Coleman & A. Hagell (Eds.), *Adolescence, risk and resilience: Against the odds* (pp. 89-106). England: John Wiley & Sons.

Wagner, B.M., & Reiss, D. (1995). Family systems and developmental psychopathology: Courtship, marriage, or divorce? In D. Chicchetti & D.J. Cohen (Eds.), *Developmental psychopathology, vol. 1: Theory and methods* (pp .696-730). England: John Wiley & Sons.

Wagnild, G., & Young, H.M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement, 1*, 165-178. Retrieved from http://psycnet.apa.org/psycinfo/1996-05738-006

Walsh, F. (1998). *Strengthening family resilience*. New York, NY: Guilford Press.

Walsh, F. (Ed.). (1999). *Spiritual resources in family therapy*. New York, NY: Guilford Press.

Walsh, F. (2002). A family resilience framework: innovative practice applications. *Family Relations, 51*, 130-137. doi: 10.1111/j.1741-3729.2002.00130.x

Ward, C.L., Martin, E., Theron, C., & Distiller, G.B. (2007). Factors effecting resilience in children exposed to violence. *South African Journal of Psychology, 37*, 165-187. doi: 10.1177/008124630703700112

Wasserman, D., Cheng, Q., & Jiang, G. (2005). Global suicide rates among young people aged 15-19. *World Psychiatry, 4*, 114-120. Retreived from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1414751/

Waters, E., Merrick, S., Treboux, D., Crowell, J., & Albersheim, L. (2000). Attachment security in infancy and early adulthood: A twenty-year longitudinal study. *Child Development, 3*, 684-689. doi: 10.1111/1467-8624.00176

Weissberg, R.P., Kumpfer, K.L., & Seligman, M.E.P. (2003). Prevention that works for children and youth. *American Psychologist, 58*, 425-432. doi: 10.1037/0003-066X.58.6-7.425

Weisz, J.R. (1990). Development of control-related beliefs, goals, and styles in childhood and adolescence: A clinical perspective. In J. Rodin, C. Schooler, & K. Warner Schaie (Eds.), *Self-directedness: Cause and effects throughout the life course* (pp. 103-145). Hillsdale, NJ: Erlbaum.

Werner, H. (1957). The concept of development from a comparative and organismic point of view. In D. Harris (Ed.), *The concept of development: An issue in the study of human behavior.* Minneapolis, MN: University of Minnesota Press.

Werner, E. E. (1996). Vulnerable but invincible: high risk children from birth to adulthood. *European Child & Adolescent Psychiatry, 5*, 47-51. doi: 10.1007/BF00538544

Werner, E. (2000). Protective factors and individual resilience. In J.P. Shonkoff, & S.S. Meisels (Eds.), *Handbook of early child interventions* (2nd ed., pp. 115-132). New York, NY: Cambridge University Press.

Werner, E.E. (2006). What can we learn about resilience from large-scale longitudinal studies? In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 91-105). New York, NY: Springer.

Werner, E. (2007). How children become resilient: Observations and cautions. In N. Henderson (Ed.), *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities* (pp. 15-23). Ojai, CA: Resiliency in Action.

Werner, E. & Smith, R. (1992). *Overcoming the odds: High-risk children from birth to adulthood*. New York, NY: Cornell University Press.

White, R.W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*, 297-333. doi: 10.1037/h0040934

Whiteman, S.D., McHale, S.M., & Crouter, A.C. (2003). What parents learn from experience: The first child as a first draft? *Journal of Marriage and the Family, 65*, 608-621. doi: 10.1111/j.1741-3737.2003.00608.x

Whitson, M.L., Connell, C.M., Bernard, S., & Kaufman, J.S. (2010). An examination of exposure to traumatic events and symptoms and strengths for children served in a behavioral health system of care. *Journal of Emotional and Behavioral Disorders*, 1-15. doi: 10.1177/1063426610380596

Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why equality is better for everyone*. London: Penguin.

Wilson, G.T., Becker, C. B., & Hefferman, K. (2003). Eating disorders. In E.J. Mash & R.A. Barkley (Eds.), *Child psychopathology* (2nd ed., pp. 687-715). New York, NY: Guilford Press.

Wilson, S., & Maclean, R. (2011). *Research methods and data analysis for Psychology*. New York, NY: McGraw-Hill.

Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology, 21*, 152-169. doi: 10.1017/S0959259810000420

Winslow, E.B., Sandler, I.N., & Wochik, S.A. (2006). Building resilience in all children. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 337-356). New York, NY: Springer.

Wissing, M.P., & Van Eeden, C. (2002). Empirical classification of the nature of psychological well-being. *South African Journal of Psychology, 32*, 32-44. Retrieved from http://www.sabinet.co.za/abstracts/sapsyc/sapsyc_v32_n1_a5.html

Wolin, S., & Wolin, S. (2007). Shifting the 'At risk' paradigm. In N. Henderson (Ed.), *Resiliency in action: Practical ideas for overcoming risks and building strengths in youth, families, and communities* (pp. 123-126). Ojai, CA: Resiliency in Action.

Wong, P.T.P. (1991). Existential versus causal attributions: The social perceiver as philosopher. In S. Zelen (Ed.), *New models, new extensions of attribution theory* (pp. 84-125). New York, NY: Springer-Verlag.

Wong, P.T.P., Reker, G.T., & Peacock, E.J. (2006). A resource-congruence model of coping and the development of the Coping Schemas Inventory. In P.T.P. Wong, & L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 223-283). New York, NY: Springer Science & Business Media.

Wong, P.T.P., Wong, L.C.J., & Scott, C. (2006). Beyond stress and coping: The positive psychology of transformation. In P.T.P. Wong, & L.C.J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 1-26). New York, NY: Springer Science & Business Media.

Wood, A.M., Linley, P.A., Maltby, J., Kashdan, T.B., & Hurling, R. (2011). Using psychological strengths leads to less stress and greater self-esteem, vitality, and positive affect: Longitudinal examination of the strengths use questionnaire. *Personality and Individual Differences, 50*, 15-19. doi: 10.1016/j.paid.2010.08.004

World Health Organisation. (2011). *Young people: Health risks and solutions.* Retrieved from http://www.who.int/mediacentre/factsheets/fs345/en/

Wright, M.O., & Masten, A.S. (1997). Vulnerability and resilience in young children. In J.D. Noshpitz, S. Greenspan, S. Wieder, & J. Osofsky (Eds.), *Handbook of child and adolescent psychiatry: Vol. 1 Infancy and preschoolers: Development and syndromes* (pp. 202-224). New York: Wiley.

Wright, M.O., & Masten, A.S. (2006). Resilience processes in development. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (pp. 17-37). New York, NY: Springer.

Yates, T. M., Dodds, M. F., Sroufe, L. A., & Egeland, B. (2003). Exposure to partner violence and child behavior problems: A prospective study controlling for child physical abuse and neglect, child cognitive ability, socioeconomic status, and life stress. *Development and psychopathology, 15*, 199-218. doi: 10.1017.S0954579403000117

Yule, W. (2003). Early intervention strategies with traumatised children, adolescents and families. In R. Orner, & U. Schnyder (Eds.), *Reconstructing early interventions after trauma* (pp. 177-183). Oxford, London: Oxford University Press.

Zimmer-Gembeck, M.J., & Skinner, E.A. (2011). Review: The development of coping across childhood and adolescence: An integrative review and critique of research. *International Journal of Behavioural Development, 35*, 1-17. doi: 10.1177/0165025410384923

Zimmerman, M.A., & Arunkumar, R. (1994). Resiliency research: Implications for schools and policy. *Social Policy Report: Society for Research in Child Development, 8*, 1-17. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.132.8277&rep=rep1&type=pdf

Zimmerman, P., Mohr, C., & Spangler, G. (2009). Genetic and attachment influences on aolescents' regulation of autonomy and aggressiveness. *Journal of Child Psychology and Psychiatry, 50*, 1339-1347. doi: 10.1111/j.1469-7610.2009.02158.x

Zolkoski, S.M., & Bullock, L.M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review, 34*, 2295-2303. doi: 10.1016/j.childyouth.2012.08.009

Zullig, K.J., Valois, R.F., Huebner, E.S., & Drane, J.W. (2005). Associations among family structure, demographics, and adolescent perceived life satisfaction. *Journal of Child & Family Studies, 14*, 195-206. doi: 10.1007/s10826-005-5047-3