

School environment as moderator in the relationship between school engagement, coping and resilience among South African adolescents

By

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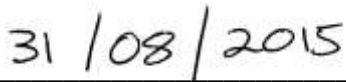
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Declaration

I (Petrus Jakobus Jacobs) declare that this dissertation (in article format) hereby submitted by me for the Magister Artium degree in Counselling Psychology at the University of the Free State is my own independent work and has not been previously submitted by me or any other faculty or university. Furthermore, I cede copyright of this dissertation in favour of the University of the Free State.



Petrus Jakobus Jacobs



Date

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Abstract

Adolescents are exposed to a variety of developmental and social challenges on a daily basis. Those who find it difficult to cope with these demands tend to present with behavioural and psychological problems. The school environment, which is a major socialising setting, appears to play an important role in the psychological well-being of adolescents. Unfortunately the school environment appears to be a risk factor for South African adolescents. Furthermore, inequalities in education across urban and rural schools are strongly apparent. Adolescents need to be resilient in order to face these challenges. Both school engagement and coping were found to contribute to resilience amongst adolescents. The aim of the study was therefore to investigate the moderating role of school environment in the relationship between school functioning, coping and resilience among adolescents.

A quantitative, non-experimental, correlational design was implemented. A total of 790 learners (N=790) who participated in a larger research project conducted in 2010 was used in the study, with a mean age of 13.87 years (SD=0.613). The following measuring instruments were used: a biographical questionnaire; the Behavioural and Emotional Rating Scale (BERS-2); the Coping Schema Inventory (R-CSI); and the Resiliency Scales for Children and Adolescents (RSCA). The data was analysed by means of a hierarchical multiple regression analysis.

The results indicated that school environment plays a significant moderating role in the relationship between problem-focused coping and resilience, as well as between emotion-focused coping and resilience. A significant positive relationship was found between problem-focused coping and resilience in both urban and rural school environments. Emotion-focused coping has a significant negative relationship with resilience in urban school environments. Even though school environment did not play a significant moderating role in the relationship between school functioning and resilience, a significant main effect was found for school functioning as related to resilience. These findings emphasise the importance of further research in terms of coping and school engagement to promote resilience among South African adolescents. It is also evident that greater insight and knowledge are needed with regards to the moderating role of school environment when considering the relationship between school engagement, coping and resilience amongst adolescents.

Key words: school engagement; school functioning; problem-focused coping; emotion-focused coping; resilience; school environment; adolescents; South Africa.

Opsomming

Adolessente word daagliks aan 'n verskeidenheid ontwikkelings- en sosiale uitdagings blootgestel. Dié wat sukkel om hierdie eise te hanteer, het die geneigdheid om met sielkundige en gedragsprobleme te presenteer. Die skoolomgewing, 'n belangrike plek waar sosialisering plaasvind, blyk 'n beduidende rol in die sielkundige welstand van adolessente te speel. Dit wil egter voorkom of die skoolomgewing 'n risikofaktor vir Suid-Afrikaanse adolessente is. Ongelykhede in die onderwys in stedelike sowel as plattelandse skole is ook duidelik waarneembaar. Adolessente moet veerkragtig wees ten einde hierdie uitdagings die hoof te bied. Vorige studies het bevind dat skoolbetrokkenheid sowel as coping tot veerkragtigheid in adolessente bydra. Die doel van die studie was dus om ondersoek in te stel na die matigende rol wat die skoolomgewing in die verhouding tussen skoolfunksionering, coping en veerkragtigheid onder adolessente speel.

'n Kwantitatiewe, nie-eksperimentele, korrelasionele ontwerp is geïmplementeer. 'n Totaal van 790 leerders (N=790) wie in 'n groter navorsingsprojek in 2010 deel geneem het, met 'n gemiddelde ouderdom van 13.87 jaar (SD=13.87) was gebruik vir die huidige studie. Die volgende meetinstrumente is gebruik: 'n biografiese vraelys; die *Behavioural and Emotional Rating Scale* (BERS-2); die *Coping Schema Inventory* (R-CSI) en die *Resiliency Scales for Children and Adolescents* (RSCA). Data-ontleding is met behulp van 'n hiërargiese veelvoudige regressieontleding gedoen.

Die resultate het getoon dat die skoolomgewing 'n beduidende matigende rol in die verhouding tussen probleemgefokusde coping en veerkragtigheid, asook tussen emosiegefokusde coping en veerkragtigheid, speel. 'n Beduidende positiewe verhouding is gevind tussen probleemgefokusde coping en veerkragtigheid in stedelike sowel as plattelandse skoolomgewings. Emosiegefokusde coping het ook 'n beduidende negatiewe verhouding met veerkragtigheid in stedelike skoolomgewings. Alhoewel die skoolomgewing nie 'n beduidende matigende rol in die verhouding tussen skoolfunksionering en veerkragtigheid in die studie gespeel het nie, is 'n beduidende hoofeffek vir skoolfunksionering in verband met veerkragtigheid gevind. Hierdie bevindinge beklemtoon die belangrikheid vir verdere navorsing ten opsigte van coping en skoolbetrokkenheid om veerkragtigheid onder Suid-Afrikaanse adolessente te bevorder. Dit is ook duidelik dat dieper insig en kennis nodig is aangaande die matigende rol wat die skoolomgewing in die verhouding tussen skoolbetrokkenheid, coping en veerkragtigheid onder adolessente speel.

Slutelwoorde: skoolbetrokkenheid; skoolfunksionering; probleemgefokusde coping; emosiegefokusde coping; veerkragtigheid; skoolomgewing; adolessente; Suid-Afrika.

Introduction and literature review

Adolescents are exposed to a variety of roles as well as developmental and social changes during the adolescent years (Dunn & Craig, 2013). Adolescents who find it difficult to cope successfully during this time of adjustment, appear to be at risk for behavioural and psychological problems (Downey, Johnston, Hansen, Birney, & Stough, 2010). In addition, their social environments can increase the risk for mental illness and consequently increases their vulnerability (Thompson, Connelly, Thomas-Jones, & Eggert, 2013). The school environment plays an important role in the psychological well-being of adolescents (Kidger, Araya, Donovan, & Gunnell, 2012). In fact, Thompson et al. (2013) remarked that the school environment is a major socialisation setting, being second only to the family context.

The school environment in South Africa, however, seems to present a risk factor for the country's adolescents. The poor quality of education holds numerous negative consequences for adolescents, including unemployment due to the low calibre of educational skills imparted, and an increased risk of developing mental health problems (Peterson, Swartz, Bhana, & Flisher, 2010; Spaul, 2013b). It is because of these risks that it is important to understand the role of the school environment in the resilience of South African adolescents.

Education in South Africa

According to law, basic education is compulsory for children between the ages of 7 and fifteen, and for Grades 1 through to 9 (Government Gazette, 2011). To prevent discrimination and promote equality in South African education, the Education Laws Amendment Act of 2007 provides minimum norms and standards and promotes school performance indicators for all South African schools (Pendlebury, 2009). Multiple challenges are associated with South African education despite the ideals contained in this act. These include: significant school dropout between Grades 10 and 12; overcrowding in more than 25% of classrooms; financial constraints; too few qualified teachers; teachers not knowledgeable in the subject matter they teach; and children living more than 30 minutes away from the nearest school (De Lannoy & Lake, 2009; Department of Basic Education, 2015; Masinire, Maringe, & Nkambule, 2014). Especially adolescents in rural areas have limited access to education (De Lannoy & Lake, 2009). Even though poverty levels dropped between 2001 and 2005, South Africa remains one of the most unequal countries in the world with regards to wealth distribution (Petersen et al., 2010). In fact, income inequality has been on the increase since 2001 (Peterson et al., 2010).

Spaull (2013a) indicates that there is a major difference in level of education within South African schools, with poorer schools struggling to assist their learners to perform on the academic levels expected from their various grade levels. A recent study by Branson and Zuze (2012) links the inequality of education to conditions of poverty, with schools in wealthier neighbourhoods showing stronger academic performance than schools in poorer neighbourhoods. Certain schools perform on levels compared to international standards, while other schools struggle to successfully train their students in the required basic numerical and literacy capabilities (Spaull, 2013b). Thus, the current education system plays a role in exacerbating the inequality that previously disadvantaged schools experienced in the country's apartheid era (Branson & Zuze, 2012). It is therefore not surprising that Branson and Zuze (2012) emphasise the need for addressing inequality with regards to quality of education and access to higher education. In the South African context, this inequality is evident when comparing urban to rural schools.

Urban and rural schools

Definitions of rurality are generally incomplete (Masinire et al., 2014). Some conceptualisations of rurality consider settlement or demographic features to be critical aspects in defining these environments (Arnold, Biscoe, Farmer, Robertson, & Shapley, 2007). Other perspectives conceptualise rurality as a traditional way of living where the population members lack comprehensive public health services and where agriculture, forestry and gold mining constitute their major economic activities (Mans et al., 2008). In third world countries like South Africa, rurality is associated with structures and histories that have created circumstances of deficit, deprivation, disadvantage and oppression (Department of Education, 2015; Masinire et al., 2014). In contrast, urban areas in South Africa are mainly characterised by a 'western' lifestyle, with modern health care facilities, and an economy based on commerce, industry and services (Mans et al., 2008). For the purpose of this study, schools situated demographically outside of Bloemfontein in the Free State province were considered rural schools, while those situated inside the city boundaries of Bloemfontein were considered urban schools.

Spaull (2013b) indicates that there is a major difference in academic performance between schools in South Africa; a factor that is greatly dependent on the dimensions of wealth, school location, language and province. More specifically, learners from urban schools perform significantly better than those enrolled in rural schools (Reddy et al., 2012; Spaull, 2013b; Taylor, 2011). Another factor that threatens the prosperity of rural South African schools

constitutes safety and security concerns, with learners and staff being exposed to a wide spectrum of criminal incidents (Gina & White, 2014). It is generally accepted that effective learning and teaching cannot take place in schools that are not safe and secure (Gina & White, 2014).

Parents who are unable to pay school fees, the unavailability of qualified teachers in certain schools and deficient leadership styles amongst school managers are considered additional threats to the quality of education in rural South African schools (Mestry & Ndhlovu, 2014). Furthermore, Mestry and Ndhlovu (2014) state that a great number of schools in poor rural communities still face the challenge of overcrowded classrooms. According to Masinire et al. (2014) the poor culture and quality of teaching in rural schools is damaging learners' attitudes towards education.

Given the challenges posed by the South African education system, it is conceivable that the school environment can be considered a stress factor for adolescents. It would therefore be important to understand how adolescents remain resilient within this specific context.

Resilience

Research on resilience is challenging since there appear to be widespread differences in opinion on its conceptualisation (Fletcher & Sarkar, 2013). Some researchers explain that resilience is an individual trait which moderates the undesirable effects of stress (Tarter & Vanyukov, 1999). A decade ago Connor and Davidson (2003) defined resilience as individual qualities that empower a person to thrive in the presence of adversity. It entails an individual's ability to stabilise or quickly recover in significant adverse circumstances (Leipold & Greve, 2009). Earlier studies, such as that of Jacelon (1997), have mainly focused on the identification of physical and psychological characteristics which enable individuals to be resilient to adverse circumstances. Some of these individual traits include: curiousness, emotional stamina, flexibility, resourcefulness, self-confidence, self-discipline and good problem-solving ability (Giordano, 1997; Jackson, Firtko, & Edenborough, 2007). Fergus and Zimmerman (2005), however, criticised this perception of resilience as it implies that individuals who do not succeed in overcoming adverse challenges are to blame for this failure. Furthermore, this conceptualisation implies that resilient individuals will always bounce back after challenging circumstances, which simply is not the case (Rutter, 2007).

A second perspective conceptualises resilience as a dynamic process which entails the interaction of the individual and his or her environment (Luthar, Cicchetti, & Becker, 2000). Walsh (2003) defines resilience as positive adaption in the context of significant adversity, which has been fostered through a dynamic process. Thus, adolescents can be resilient during certain periods and fail to display resilience during other times (Wright & Masten, 2006). This implies that resilience is a hypothetical construct which is incidental to an individual's competent functioning (Slone & Shoshani, 2008), rather than an observed trait (Rutter, 2007). Botha (2014) explains that when considering resilience as a dynamic process, the presence of protective factors is essential to a child's resilience.

The majority of perspectives on resilience entail two basic concepts: the presence of adversity and positive adaption despite adversity (Fletcher & Sarkar, 2013). Adversity is described as undesirable life conditions which could be perceived as difficult to adjust to (Fletcher & Sarkar, 2013). Positive adaption is defined as behaviourally established social competence or accomplishments, when certain developmental tasks were successfully encountered (Fletcher & Sarkar, 2013). Certain researchers perceive resilience as a process. For example, Baldwin et al. (1993) explain that resilience is a continual process where an individual meets challenges, and resolves them before facing new challenging circumstances. Except for describing resilience as dynamic, it is also seen as a developmental process entailing new strengths and weaknesses emerging over a course of adverse circumstances (Luthar et al., 2000). Kumpfer (1999) asserts that resilience can be studied as both a process and an outcome – a positive outcome during the process of developing resilience will be a significant predictor of future resilience upon encountering new adverse situations.

For the purpose of this study resilience is conceptualised as an outcome from a normal developmental perspective. Prince-Embury (2009) identified three normal developmental tasks which contribute to resilience: a sense of mastery, a sense of relatedness, and emotional reactivity. Sense of mastery entails the level of optimism, self-efficacy and adaptability of the adolescent (Prince-Embury, 2008). Prince-Embury (2008) suggests that a sense of relatedness refers to the adolescent's experience of trust, comfortability with others, apparent access to support and tolerance of differences. Emotional reactivity encapsulates the adolescent's perceived sensitivity, time of recovery and impairment after experiencing emotional arousal (Prince-Embury & Courville, 2008). In a South African study, Mampane and Bouwer (2006) found similar characteristics among individuals with higher resilience: an internal locus of

control; assertiveness and good problem-solving skills; a positive self-concept; a sense of coherence; emotional stability; and a stable care-giving environment. A South African study by Theron, Theron and Malindi (2012) on resilience among the Basotho indicates that the following core concepts are important: having intrapersonal strengths, a future orientation, a resilient personality, educational progress, value devotion and equanimity, and interpersonal strengths (which includes being actively supported from multiple systems). Mampane (2014) mentioned in his study of resilience among rural South African youth that resilient learners in these environments defined resilience based on the following: a level of confidence and toughness, commitment to achieve their goals; being responsible and independent; utilising their own abilities to solve personal problems and set future goals; identifying a supportive network; and having proper role models as well as social support systems in their domestic and educational environments.

Since adolescence is one of the most challenging developmental phases, understanding resilience during these years is critical (Ng, Ang, & Ho, 2012). Resilience further acts as a protective factor against psychopathology (Ng et al., 2012). Resilient adolescents not only have more emotional and behavioural protective factors in their lives compared to non-resilient adolescents; they also seem to be protected against pathology (Mampane & Boucher, 2006; Ng et al., 2012). Various studies have thus far indicated that low levels of resilience predict depressive and anxiety symptoms (Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011; Kim & Yoo, 2007; Min et al., 2013; Skrove, Romundstad, & Indredavik, 2013).

In the school environment specifically, both school engagement (Malindi & Machenjedze, 2012) and coping (Herrman et al., 2011) have proven to contribute to resilience. Therefore the relationship between school engagement, coping and resilience will be examined in the present study.

School engagement

According to Thien and Razak (2013), schools should be more than just academic institutions to their students – they should also create a safe and happy environment for children in order to ensure wholesome, quality schooling. Malindi and Machenjedze (2012) support the notion of schools acting as more than academic institutions in their advising schools to more frequently encourage their students to participate in non-academic and relationship-building activities. The main reason for participation in these activities is to build an enthusiastic feeling

towards the school and ultimately create a safe environment for school functioning (Malindi & Machenjedze, 2012).

School engagement consists of behavioural aspects such as participation, emotional factors such as a sense of belonging, and cognitive aspects such as academic attainment (Abbott-Chapman et al., 2014; Lippman & Rivers, 2008; Thien & Razak, 2013). For the purpose of this study school engagement will be measured by determining learners' school functioning, i.e. their classroom functioning and self-reported educational abilities (Epstein, 1998). School functioning has been found to be a significant predictor of academic performance (Anderson, 2011; Brennan, Nygren, Stephens, & Croskey, 2015; Brown, Riley, Walrath, Leaf, & Valdez, 2008). Furthermore, gender differences occur, with females reporting higher levels of school functioning than males (Brennan et al., 2015).

It is evident that school engagement increases levels of resilience among children and adolescents (Malindi & Machenjedze, 2012). Ungar, Ghazinour and Richter (2013) found that children who experience stronger feelings of belonging in a school demonstrate higher levels of resilience. Additionally Herrman et al. (2011) proved that children and adolescents who attended schools that provided superior academic, sport and artistic prospects, showed higher levels of resilience. A review by Theron and Theron (2010) indicate well-resourced schools, academic excellence, supportive teachers and life-skills curricula to be important factors enhancing resilience in South African youth. Schools that succeeded in engaging their students equipped these learners with foundational adaptive systems which, in return, strengthened their general coping abilities when faced with adverse circumstances (Malindi & Machenjedze, 2012).

Coping is indeed a further contributor to adolescent resilience. Although resilience and coping appear to be related to one another, these variables are conceptually distinct, with the major difference being that resilience is a long-term resource against adversity, while coping mainly serves as an immediate or short-term protective factor (Ng et al., 2012).

Coping

Before discussing what coping entails, it would be wise to distinguish resilience from coping as these two constructs may seem quite similar at first, but actually holds distinct differences (Lees, 2009). Lees (2009) explains that the most prominent difference between the

two concepts is found when examining the goals or end outcome of each concept. According to Lazarus (1993) the aim of effective coping is characterised by successfully overcoming a situation and emerging with minimal damage. Resilience on the other hand is characterised by successfully adapting or bouncing back after an adverse situation which frequently result in development beyond the original position (Luthans, Youssef, & Avolio, 2007).

Coping is a reaction to a stressful life event with the purpose of diminishing its negative impact and enduring strain (Cairney, Kwan, Veldhuizen, & Faulkner, 2014). Coping entails the conscious and unconscious thoughts and actions that assist an individual in dealing with demanding circumstances (Green, Choi, & Kane, 2010). Although there are a number of coping strategies, the distinction made between problem-focused coping and emotion-focused coping, as described by Lazarus and Folkman (1984), is most known among adolescent studies (Zhang, Chang, Zhang, Greenberger, & Chen, 2011). Green et al. (2010) emphasise that the main purpose of coping strategies is to deliver psychological adaption in the midst of stressful events. Thus, problem-focused coping can be seen as more adaptive than emotion-focused coping (Van Niekerk, 2013).

Problem-focused coping

Baker and Berenbaum (2007) define problem-focused coping as a direct action taken towards a problem, with the aim of adjusting the conditions which are perceived as threatening in a specific situation. Problem-focused coping is described as goal orientated, consisting of aspects such as defining the difficulty, as well as generating, evaluating, and implementing solutions (Green et al., 2010). Green et al. (2010) explain that problem-focused coping could best be seen as an intention to change person-environment relationships.

Problem-focused coping is associated with providing the individual with more hope, effective problem-solving skills and leads to more positive outcomes (Van Niekerk, 2013). In general, Riley and Park (2014) found that problem-focused coping leads to more adaptive outcomes and better adjustment than emotion-focused coping. Also among adolescents, problem-focused coping is strongly correlated to the psychological adjustment (Downey et al., 2010).

Green et al. (2010) stated that problem-focused coping is associated with positive emotional outcomes due to the fact that it increases a sense of control in adverse circumstances.

According to the goodness-of-fit coping hypothesis, problem-focused coping is particularly more effective in conditions where controllability was higher (Lazarus & Folkman, 1984; Park, Sacco, & Edmondson, 2012), yet Riley and Park (2014) proved that this method of coping may also be more effective than emotion-focused coping in situations with low controllability.

Problem-focused coping consists of situational coping, self-restructuring, and social support (Wong, Reker, & Peacock, 2006). Chao (2011) confirms that social support is strongly associated with problem-focused coping. Situational coping involves strategies which are effective for situations appraised as controllable (Christensen, 2012). This coping schema is also labelled as a confrontational way of coping, due to focusing on solving problems through logical analysis (Lazarus & Folkman, 1984; Wong et al., 2006; Weiten, Dunn, & Hammer, 2011). Wong et al. (2006) describe self-restructuring as an active way of coping, where a stressful situation is perceived as controllable through altering one's behaviour. Maldonado-Feliciano (2005) stated that literature indicates social support to facilitate coping by supporting a person to change the situation itself, the meaning of the situation, the person's emotional reaction to the situation, or, in certain cases, all three. Even though research indicates that adolescents who use problem-focused coping tend to be more successful in dealing with their challenges, emotion-focused coping is successful when applied by adolescents in situations where there are no solutions available (Van Niekerk, 2013).

Emotion-focused coping

Emotion-focused coping constitutes attempts to manage negative emotions after experiencing an undesirable situation (Baker & Berenbaum, 2007). It includes efforts by an individual to alter or diminish negative emotions by means of either suppressing a negative emotional response, or accumulating positive emotions (Gruszczyńska, 2013). Emotion-focused coping is associated with controlling the emotional impact of a negative event and is thus mainly intended to regulate emotional distress (Green et al., 2010).

Emotion-focused coping consists of active emotional coping, passive emotional coping and tension reduction. When using active emotional coping, a person would generally vent emotions and seek guidance and emotional support from others (Christensen, 2012). Wong et al. (2006) explains that active emotional coping is a method of coping which is mainly used to prevent, reduce or minimise stressful situations that appear to be controllable for others. Passive emotional coping is generally used in situations that are regarded as extremely threatening or

of critical importance (Christensen, 2012). Wong et al. (2006) declared that this coping schema includes disengaging strategies, which are mainly aimed at controlling strong emotional responses. In essence, people who make use of this form of coping will make an effort to escape feelings of distress, even in maladaptive ways, such as wishful thinking and denial (Carver, 2011; Christensen, 2012). Tension reduction entails the practice of tension reduction exercises which includes mindful meditation, and can even prevent the development of tension (Wong et al., 2006).

Baker and Berenbaum (2007) explain that emotion-focused strategies are mostly used as a poor alternative to problem-focused coping. Because emotion-focused coping is only focused on a certain aspect of the problem, it is generally perceived as maladaptive (Green et al., 2010). Riley and Park (2014) also found that emotion-focused coping is generally less effective in terms of social and work related issues than problem-focused coping. Even though the goodness-of-fit coping hypothesis states that emotion-focused coping is more helpful in low-controllability situations than problem-focused coping (Riley & Park, 2014), the main concern with this coping style is the manner in which emotions are managed by individuals to decrease their undesirable psychological distress (Green et al., 2010).

Black South African adolescents were found to make use of emotion-focused coping more often than their coloured or white counterparts (Du Plessis, 2012). This may be due to black South African culture which encourages harmony, non-confrontation and interdependency in social relations (Du Plessis, 2012). Furthermore, in summarising various coping models, Botha (2014) emphasises that cultural differences influence coping responses as well as the values that guide the coping process.

Although Hager and Runtz (2012) found that emotion-focused coping may be more effective than problem-focused coping in certain situations (such as maltreatment during childhood), the majority of research findings indicate that problem-focused coping should generally be the preferred and more effective coping style (Riley & Park, 2014). Although other modes of coping have been identified in the literature (e.g. Green et al., 2010; Riley & Park, 2014), a discussion of these falls outside of the scope of the present study.

Gender and age differences in coping styles

Gender and age differences with regard to coping styles have been found in multiple studies (Chaudhary & Joseph, 2010). Some studies indicate that females tend to rely more on emotion-focused coping compared to males (Hassan, Mallozzi, Dhingra, & Haden, 2011), and also tend to report more issues with depression for this reason. Males tend to make use of problem-focused coping more than females and as a result generally cope better with stressful situations (Garcia, 2010).

Hassan et al. (2011) reported a higher frequency of emotion-focused coping among females, but found no significant difference in the use of problem-focused coping between males and females. In a study amongst Indian adolescents, it was found that the majority of adolescents have adopted a problem-focused coping style regardless of their gender (Chaudhary & Joseph, 2010). These contradictory findings highlight the complexity of the coping process.

Adolescents develop better problem-solving skills due to continued cognitive development in this life stage (Mullis & Chapman, 2000). Problem-solving skills improve, and these individuals may also develop more effective coping strategies. Research by Arsenio and Loria (2014), for instance, indicates that older adolescents have better control of their general mood and academic stress by means of using more adaptive coping styles than younger adolescents. Thus, older adolescents do not allow academic stress to impact their academic performance as negatively as it did in early adolescence (Arsenio & Loria, 2014).

To summarise, adolescents face multiple developmental and social changes, and may find it difficult to cope in these circumstances. The school environment can have a significant impact on the level of resilience, coping methods and the school engagement of adolescents during this time of change. The great difference in the quality of education in different environmental settings in South Africa negatively impacts the level of education and academic achievement, but also the psychological well-being of these adolescents. It would be important to better understand the impact of school environment on adolescent functioning. Thus, the aim of the present study is to examine the role of urban/rural schooling in the relationship between school engagement, coping and resilience amongst South African adolescents.

Methodology

The following section provides a discussion of the methodology followed for the present study, including the research questions, research design, participant group and sampling method, method of data collection, information on the measuring instrument, the ethical considerations important to the study and the method of analysis.

Research questions

The main aim of the study is to determine whether school environment plays a role in the relationship between school engagement, coping and resilience among adolescents in South Africa. As a result the following research questions were investigated:

- 1) What proportion of the variance in resilience can be explained by school engagement and coping among adolescents in South Africa?
- 2) Does school environment play a moderating role in the above-mentioned relationship?

Research design

A quantitative, non-experimental, correlational design (Stangor, 2011) was implemented. The correlational design is used in order to investigate and describe the relationship between two or more variables (MacDonald, Wong, & Dionne, 2015). The use of correlational designs, however, limits the researcher in his ability to prove the existence of a causal relationship between the measured variables (Goodwin, 2009). This implies that a correlational study can't determine whether one factor causes changes in another factor (Stangor, 2011). A correlational design was chosen for the present study as it is valuable to investigate variables with no clear causal relationships (Bless, Higson-Smith, & Kagee, 2006). Also, it allows for an estimation of the strength in the relationship between two variables to be determined, even though many other factors may have an influence on one of these variables (Bless et al., 2006).

Research participants

The present study makes use of a data set obtained during a larger research project conducted in 2010 (Risk and Resilience of Adolescents in the Free State Province). Two schools

from each of the five districts in the Free State were randomly selected to participate in the study. Thus, schools from both urban and rural areas were included. Data was collected from the entire Grade 8 class at each of the participating schools. A total of 790 learners (N=790) participated in the study. Grade 8 learners in South Africa are 13 years and older, and thus in the early adolescent stage of development. The participants had a mean age of 13.87 years (SD=0.613).

The mid-year population estimate of 2014 for ages between 10 and 14 years indicates that females represented 49.9% of the population, while males represented 50.1% of the population of the Free State province (Statistics South Africa, 2014). In the present study a larger proportion of participants were female (58.6%), while only 41.4% of the participants were males. Thus, males were slightly under-represented while females were slightly over-represented in the present study.

The following table provides a comparison of the racial presentation reported for the Free State province (Statistics South Africa, 2012) with the descriptive data obtained for the present study:

Table 1

Racial composition of the Free State province and study participants

Racial Group	Free State Province	Present Study
Black	87.6%	57.2%
Asian/Indian	0.4%	0.0%
Coloured	3.1%	10.8%
White	8.7%	32.0%
Other	0.3%	0.0%

It is evident that black participants are under-represented in the present study, while white and coloured participants are over-represented.

According to Pauw, Van Schoor, Chant and Valente (2005), 27.2% of the Free State population resides in rural areas, while 19.9% and 52.9% of the Free State population resides in metropolitan and small towns respectively. A percentage of 61.1% of participants in the present study indicated that they live in urban areas, with only 38.9% indicating that they live

in rural areas. Thus, while it seems that there are fewer participants from rural areas, they are actually quite well-represented in the present study.

The above-mentioned findings will be taken into consideration in interpreting the results of the study.

Data collection procedures

Standardised psychometric tests were used to collect the data. These tests were administered under the supervision of registered psychometrists and psychologists during regular days at school. The tests were available in Afrikaans, English and Sesotho. An accredited language editor translated the questionnaires using the back-translation method (Brislin, 1970; Foxcroft & Roodt, 2007). The entire survey took around two hours to complete, but participants were given a break halfway through the administration to prevent fatigue.

Measuring instruments

The following measuring instruments were used:

1. A *Biographical Questionnaire* was used to obtain data on demographical variables such as age, gender, race, and school environment (rural or urban).
2. The *Behavioural and Emotional Rating Scale (BERS-2)* (Epstein, 1998) is a strength-based questionnaire which is used to measure five sub-scales: interpersonal strength, family involvement, intrapersonal strength, school functioning, and affective strengths (Epstein, 1998). This instrument measures the behavioural and emotional strength levels of adolescents between the ages of 11 and 18 years (Epstein, Mooney, Ryser, & Pierce, 2004). Participants are required to rate how each statement applies to them on a 4-point Likert-type scale (0 = If the statement is not like you, 1 = If the statement is not much like you, 2 = If the statement is like you, 3 = If the statement is very much like you). A high score on each of the subscales indicates a high strength level (Epstein et al., 2004). For the purpose of this study, only the school functioning subscale will be used. Epstein (1998) reports a high level of internal consistency for the BERS-2. De Villiers (2009) obtained alpha-coefficients ranging from 0.66 to 0.77 using this measuring instrument on a South African population.

A Cronbach's alpha-coefficient of 0.814 was found for the school functioning subscale in the present study. This is indicative of a high internal consistency for the population in this study according to the guidelines provided by Nunnally and Bernstein (1994).

3. The *Revised Coping Schema Inventory* (R-CSI) (Wong, et al., 2006) determines adolescents' preference for various coping strategies. The R-CSI consists of 72 items and comprises the following nine subscales: situational coping, self-restructuring, social support, active emotional coping, passive emotional coping, stress reduction, religious coping, meaning and acceptance (Wong et al., 2006). Six of these nine subscales will be used as follows in the present study. The scores for situational coping, self-restructuring, and social support were combined to obtain an indication of problem-focused coping (Wong et al., 2006). The scores for active emotional coping, passive emotional coping, and tension reduction were combined to obtain an indication of emotion-focused coping (Wong et al., 2006).

The R-CSI is a 5-point Likert-type scale (1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = always), on which adolescents are required to indicate how often they make use of the coping strategy identified in the specific item. A high score for each of the subscales indicates greater use of the measured coping strategy (Wong et al., 2006). Wong et al. (2006) found alpha-coefficients ranging from 0.72 to 0.98 in an American sample. This study revealed Cronbach's alpha-coefficients of 0.871 for problem-focused coping and 0.848 for emotion-focused coping. This shows good internal consistency for the population in the present study.

4. The *Resiliency Scales for Children and Adolescents* (RSCA) (Prince-Embury, 2006) measures three domains of resilience, including: sense of mastery and sense of relatedness, which are combined for a resilience score; and emotional reactivity which is an indication of vulnerability. The test consists of a total of 64 self-report items, scored on a 5-point Likert-type scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, and 4 = almost always) (Prince-Embury, 2008). Participants are requested to indicate one of five responses on each item, based on personal opinion. These five self-report responses ranges from 0 (Never) to 4 (Almost Always) (Prince-Embury, 2006). Only the first two subscales were used in the present study to obtain a sign of the learners' resilience levels. De Villiers (2009) found acceptable internal consistency for this scale in a South African study, by demonstrating alpha-coefficients ranging from 0.9 to 0.93. A Cronbach's alpha-coefficient of 0.934 was found in the present study for the combined subscales. This is an indication that this measuring instrument has good internal consistency for the population of the present study.

Ethical considerations

Both the Department of Education as well as the principals of the participants' schools granted permission for the study. As stipulated in the ethical rules of conduct for practitioners registered under the Health Professions Act, 1974, all guidelines from the Health Professions Council of South Africa for the procedure of data collection and analysis (Government Gazette, 2006) were adhered to.

The participating learners and their parents provided informed consent for the study. The information was handled with confidentiality while autonomy of participation (Allan, 2008) was granted during the entire process.

During the course of administration, the fieldworkers provided support to participants who experienced problems. The participants were also debriefed after the survey to address any concerns that resulted from their contribution during the research process. Even though provision was made for learners who required further psychological interventions to be referred to registered psychologists for assistance, none of the participants required such referrals. All of the participating schools were provided with pamphlets containing information on coping. Thus, the well-being of the participants (Allan, 2008) was considered at all times.

Data analysis

The Statistical Package for the Social Sciences (SPSS, version 22) for Windows (International Business Machines Corporation, 2013) was used to analyse the data. Descriptive statistics were calculated for all the subscales. A hierarchical regression analysis was conducted to investigate the relationships between the variables (Hinton, McMurray, & Brownlow, 2014).

Results

Descriptive statistics

The descriptive statistics are presented in the table below.

Table 2

Descriptive statistics of participants' results on the measuring instruments

Measuring Instruments	<i>The Behavioural and Emotional Rating Scale (BERS-2)</i>	<i>The Coping Schema Inventory (R-CSI)</i>		<i>The Resiliency Scales for Children and Adolescents (RSCA)</i>
		School Functioning	Problem-Focused Coping	
Description	School Functioning	Problem-Focused Coping	Emotion-Focused Coping	Resilience
Mean score	20.891	49.391	60.073	123.412
Std deviation	4.688	14.707	16.766	25.515
Minimum	2.000	3.000	1.000	17.000
Maximum	27.000	88.000	112.000	176.000
Skewness	-1.046	-0.125	0.141	-0.515
Kurtosis	1.170	0.078	0.247	0.418

The mean score for the school functioning scale is 20.891 (SD=4.688), and the skewness value is -1.046. However, although the majority of participants obtained higher scores for 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 for a variety of statistical analyses, the skewness of these scales might have some impact on the data analysis.

The mean score for the problem-focused coping scale is 49.391 (SD=14.707), and for the emotion-focused coping scale it is 60.073 (SD=16.766). Given the minimum and maximum scores possible for these scales, these mean scores are considered average. Neither the skewness nor kurtosis values of the other coping scales indicate problematic distributions according to the specified criteria.

The mean score for the combined resilience scale is 123.412 (SD=25.515). The mean score is considered average for adolescents from non-clinical populations (Botha, 2014; Prince-Embury & Steer, 2010). Neither the skewness nor kurtosis values indicate problematic distributions for any of the resilience scales.

Inferential statistics

Hierarchical multiple regression analysis was used to assess the ability of school functioning and coping to predict levels of resilience, after controlling for the influence of school environment. Preliminary analyses were conducted to ensure that there were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Only one of the outliers was also a high leverage value (Respondent number 47). It was thus decided to remove this outlier from the dataset.

Hierarchical multiple regression results

Table 3

Model summary

Model	<i>R</i>	<i>r</i> ²	Adjusted <i>r</i> ²	Std. Error of the Estimate	Change Statistics				
					<i>r</i> ² Change	<i>F</i> Change	<i>df</i> 1	<i>df</i> 2	Sig. <i>F</i> Change
1	.573 ^a	.328	.324	20.96278	.328	93.053	4	763	.000
2	.580 ^b	.336	.330	20.87922	.008	3.040	3	760	.028

a. Predictors: (Constant), School environment, School functioning, Emotion-focused coping, Problem-focused coping.

b. Predictors: (Constant), School environment, School functioning, Emotion-focused coping, Problem-focused coping, Problem-focused coping X School environment, School functioning X School environment, Emotion-focused coping X School environment.

c. Dependent variable: Resilience

Table 4

Analysis of variance results

Model	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	Sig.
1 Regression	163564.299	4	40891.075	93.053	.000 ^b
Residual	335291.387	763	439.438		
Total	498855.686	767			
2 Regression	167539.904	7	23934.272	54.902	.000 ^c
Residual	331315.782	760	435.942		
Total	498855.686	767			

a. Dependent variable: Resilience

b. Predictors: (Constant), School environment, School functioning, Emotion-focused coping, Problem-focused coping.

c. Predictors: (Constant), School environment, School functioning, Emotion-focused coping, Problem-focused coping, Problem-focused coping X School environment, School functioning X School environment, Emotion-focused coping X School environment.

The addition of the interaction terms resulted in a statistically significant increase in the variance explained in the dependent variable ($F_{\text{change}}(3,760) = 0.028$; r^2 change = 0.008). The full regression model, with the interaction terms included, was statistically significant, explaining 33.6% of the variance in resilience [$F(7,760) = 54.902$; $p=0.000$]. Therefore, the results were investigated further.

Table 5

Coefficients

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	122.362	.969		126.224	.000	120.459	124.265					
Problem-focused coping	.816	.086	.466	9.474	.000	.647	.985	.473	.324	.281	.364	2.745
Emotion-focused coping	-.061	.074	-.040	-8.222	.412	-.207	.085	.346	-.030	-.024	.369	2.710
School functioning	1.740	.163	.320	10.656	.000	1.419	2.060	.376	.360	.316	.979	1.022
School environment	2.152	1.551	.041	1.388	.166	-.893	5.197	.028	.050	.041	.999	1.001
2 (Constant)	122.354	.966		126.689	.000	120.458	124.250					
Problem-focused coping	.989	.112	.564	8.861	.000	.770	1.208	.473	.306	.262	.215	4.644
Emotion-focused coping	-.258	.099	-.169	-2.609	.009	-.452	-.064	.346	-.094	-.077	.207	4.820
School functioning	1.768	.218	.325	8.115	.000	1.340	2.195	.376	.282	.240	.546	1.833
School environment	2.215	1.545	.042	1.434	.152	-.818	5.248	.028	.052	.042	.999	1.001
Problem-focused coping X School environment	-.405	.175	-.142	-2.314	.021	-.749	-.062	.270	-.084	-.068	.233	4.296
Emotion-focused coping X School environment	.448	.149	.189	3.000	.003	.155	.741	.229	.108	.089	.220	4.546
School functioning X School environment	-.038	.329	-.005	-.115	.908	-.684	.608	.209	-.004	-.003	.556	1.798

The interaction terms between problem-focused coping and school environment ($t=-2.314$; $p=0.021$), as well as between emotion-focused coping and school environment ($t=3$; $p=0.003$) were statistically significant. Thus, urban or rural school environment seems to moderate the relationship between problem-focused coping and resilience, and emotion-focused coping and resilience. However, there was no significant interaction effect between school functioning and school environment. Urban or rural school environment thus does not seem to moderate the relationship between school functioning and resilience. However, there is a significant main effect for school functioning on resilience ($t=8.115$; $p=0.00$). A one-unit increase in school functioning resulted in a 1.768 unit increase in resilience.

Simple slope analyses

In order to determine the statistical significance of the coefficient of the slopes for the regression lines, simple slope analyses were conducted.

Table 6

The relationship between problem-focused coping and resilience for rural schools

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
1 (Constant)	124.515	1.211		102.857	.000
School functioning	1.740	.163	.320	10.656	.000
Problem-focused coping	.816	.086	.466	9.474	.000
Emotion-focused coping	-.061	.074	-.040	-.822	.412
School environment	-2.152	1.551	-.041	-1.388	.166
2 (Constant)	124.569	1.206		103.281	.000
School functioning	1.730	.246	.318	7.019	.000
Problem-focused coping	.583	.135	.333	4.321	.000
Emotion-focused coping	.190	.112	.125	1.700	.090
School environment	-2.215	1.545	-.042	-1.434	.152
Emotion-focused coping X School environment	-.448	.149	-.226	-3.000	.003
Problem-focused coping X School environment	.405	.175	.183	2.314	.021
School functioning X School environment	.038	.329	.005	.115	.908

In the rural schools problem-focused coping is a significant predictor of resilience, with a one-unit increase in problem-focused coping resulting in a 0.583 unit increase in resilience. Thus, there is a statistically significant positive relationship between problem-focused coping and resilience for adolescents in rural schools ($t=0.4321$; $p=0.00$).

Table 7

The relationship between problem-focused coping and resilience for the urban schools

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
1 (Constant)	122.362	.969		126.224	.000
Problem-focused coping	.816	.086	.466	9.474	.000
Emotion-focused coping	-.061	.074	-.040	-.822	.412
School functioning	1.740	.163	.320	10.656	.000
School environment	2.152	1.551	.041	1.388	.166
2 (Constant)	122.354	.966		126.689	.000
Problem-focused coping	.989	.112	.564	8.861	.000
Emotion-focused coping	-.258	.099	-.169	-2.609	.009
School functioning	1.768	.218	.325	8.115	.000
School environment	2.215	1.545	.042	1.434	.152
Problem-focused coping X School environment	-.405	.175	-.142	-2.314	.021
Emotion-focused coping X School environment	.448	.149	.189	3.000	.003
School functioning X School environment	-.038	.329	-.005	-.115	.908

In urban schools problem-focused coping is a significant predictor of resilience, with a one-unit increase in problem-focused coping resulting in a 0.989 unit increase in resilience. Thus, there is a statistically significant positive relationship between problem-focused coping and resilience for adolescents in urban schools ($t=8.861$; $p=0.00$).

Although problem-focused coping and resilience are positively correlated for both urban and rural school environments, this correlation is stronger for the urban school environment than for the rural school environment.

Table 8

The relationship between emotion-focused coping and resilience for rural schools

Model	Unstandardised Coefficients		Standardised Coefficients	<i>t</i>	Sig.
	B	Std. Error	Beta		
1 (Constant)	124.515	1.211		102.857	.000
School functioning	1.740	.163	.320	10.656	.000
Problem-focused coping	.816	.086	.466	9.474	.000
Emotion-focused coping	-.061	.074	-.040	-.822	.412
School environment	-2.152	1.551	-.041	-1.388	.166
2 (Constant)	124.569	1.206		103.281	.000
School functioning	1.730	.246	.318	7.019	.000
Problem-focused coping	.583	.135	.333	4.321	.000
Emotion-focused coping	.190	.112	.125	1.700	.090
School environment	-2.215	1.545	-.042	-1.434	.152
Emotion-focused coping X School environment	-.448	.149	-.226	-3.000	.003
Problem-focused coping X School environment	.405	.175	.183	2.314	.021
School functioning X School environment	.038	.329	.005	.115	.908

In rural schools emotion-focused coping was not a significant predictor of resilience.

Table 9

The relationship between emotion-focused coping and resilience for urban schools

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	122.362	.969		126.224	.000
Problem-focused coping	.816	.086	.466	9.474	.000
Emotion-focused coping	-.061	.074	-.040	-.822	.412
School functioning	1.740	.163	.320	10.656	.000
School environment	2.152	1.551	.041	1.388	.166
2 (Constant)	122.354	.966		126.689	.000
Problem-focused coping	.989	.112	.564	8.861	.000
Emotion-focused coping	-.258	.099	-.169	-2.609	.009
School functioning	1.768	.218	.325	8.115	.000
School environment	2.215	1.545	.042	1.434	.152
Problem-focused coping X School environment	-.405	.175	-.142	-2.314	.021
Emotion-focused coping X School environment	.448	.149	.189	3.000	.003
School functioning X School environment	-.038	.329	-.005	-.115	.908

In urban schools emotion-focused coping was a significant predictor of resilience, with a one-unit increase in emotion-focused coping resulting in a 0.258 unit decrease in resilience. Thus, there is a statistically significant negative relationship between emotion-focused coping and resilience for adolescents in urban schools ($t=-2.609$; $p=0.009$).

In summary, the findings of the present study indicate that urban/rural school environment plays a significant moderating role in the relationship between problem-focused coping and resilience, as well as in the relationship between emotion-focused coping and resilience.

A statistically significant positive relationship exists between problem-focused coping and resilience for adolescents in rural schools. The results also indicate that there is an even

stronger correlation between problem-focused coping and resilience for the urban school environment than for the rural school environment. Emotion-focused coping was not a significant predictor of resilience in rural schools, while there is a statistically significant negative relationship between emotion-focused coping and resilience for adolescents in urban schools.

Finally, school functioning has a main effect on resilience, with higher school functioning related to higher levels of resilience.

Discussion

The aim of the study was to investigate if school environment plays a moderating role in the relationship between coping, school functioning and resilience amongst adolescents residing in the Free State province of South Africa. The predictor variables were coping and school functioning, and the outcome variable was resilience. The findings presented in the previous section will be discussed further.

School functioning and resilience

The results suggest that school functioning increases resilience among young adolescents, regardless of their school environment. In other words, their classroom functioning and self-reported educational abilities increase their sense of mastery and sense of relatedness (Epstein, 1998; Prince-Embury, 2008). Due to the great diversity and discrepancy in the access and quality of education in South Africa, it would make sense for classroom functioning to increase sense of relatedness, through greater tolerance of differences, and greater access to immediate support in the classroom. Higher levels of classroom functioning may then also lead South African adolescents to be more adaptable and display more self-efficacy (sense of mastery), regardless of the discrepancy in the quality of educational factors and varying access to resources across different environments. This finding supports Malindi and Machenjedze's (2012) recommendation that South African schools should encourage greater school engagement among learners. The results suggest that adolescents with higher levels of school functioning do not only benefit in terms of improved academic performance, as stated in the literature (Anderson, 2011; Brown, et al., 2008), but also contribute to the improvement of other integral psychological benefits, such as resilience.

It should be noted that the majority of the current group of participants reported higher levels of school functioning. The reason for this higher level of school functioning among the participants can be prescribed to the findings of previous studies where it was determined that higher levels of school engagement are associated with the promotion of positive behaviour and decreased risk-taking (Carter, McGee, Taylor, & Williams, 2007; Dotterer & Lowe, 2011). Thus, school functioning can be seen as a defence mechanism for these young adolescents, which explains the results where the majority of the group members indicated high levels of school functioning.

When considering that young adolescents face critical new developmental tasks (Dunn & Craig, 2013) during this life stage, it is also important to keep in mind that the recent transition to the secondary school environment can be extremely challenging for these individuals (Donnellan, Trzesniewski, & Robins, 2006). In addition, adolescents in South Africa are known to be subject to a wide range of environmental stressors, including educational difficulties, on a daily basis (Brook, Morojele, Pahl, & Brook, 2006; De Lannoy & Lake, 2009; Gina & White, 2014; Masinire et al., 2014; Spaul, 2013). It therefore is not surprising that researchers stipulate the importance of increasing the levels of resilience among South African adolescents (McClean, 2003; Mampane, 2014). The results of the present study suggest that school functioning may be an important factor to consider in promoting resilience. This finding aligns with that of other recent studies on school engagement (e.g. Herrman et al., 2011; Ungar et al., 2013).

The current results further indicated that school functioning increases resilience regardless of the school environment. The implication is that schools do not have to be similar, or even need similar resources, to promote school functioning. Even though rural school environments provide much less resources for young adolescents, the findings suggest that schools from both rural and urban environments can greatly contribute to their adolescents' resilience levels by means of encouraging and developing programmes that promote school engagement. In fact, school engagement can be promoted by using existing resources such as teacher relationships, parent engagement, and activity participation (Cahill, Beadle, Farrelly, Forster, & Smith, n.d.).

Problem-focused coping and resilience

The results indicate that problem-focused coping positively correlates with resilience among young adolescents. In other words, situational coping, self-restructuring, and social support increases these young adolescents' sense of mastery and sense of relatedness (Prince-Embury, 2008; Wong et al., 2006). In situations where South African adolescents have opportunities for receiving social support in challenging circumstances, they may bear the fruits of an increased sense of relatedness. Also, when adolescents are capable of dealing with a problem in which they display logical problem solving and adapting to circumstances which cannot be changed, these adolescents may feel empowered and confident when facing difficulties. As a result they can experience a higher sense of mastery by means of increased self-efficacy and adaptability to daily stressors. This finding is in line with the findings of previous studies which indicate that this coping style typically results in positive adaptation after experiencing challenging circumstances (Lazarus & Folkman, 1984; Riley & Park, 2014).

Since Louw and Louw (2007) as well as Dunn and Craig (2013) indicated that young adolescents experience a great deal of physical and emotional change, it might be of critical importance for these individuals to implement a coping style which leads to higher levels of resilience. Implementation of this preferred coping style may not only contribute to positive psychological adjustment (Downey et al., 2010; Green et al., 2010; Van Niekerk, 2013), but may also increase resilience in these individuals.

The results further indicate that there is a stronger positive correlation between problem-focused coping and resilience in urban school environments than for rural school environments. It is reported that adolescents from urban school environments have access to more resources than those from rural school environments (Sedibe, 2011). In fact, Reid and Vogel (2006) indicate that South African adolescents are generally limited in terms of access to resources. However, coping resources are critical for the coping process (Du Plessis, 2012) and resource availability is described as being greatly influential in the person's appraisal of a situation and on the choice of coping style (Hobfoll, 1988). Thus, the lack of resources in rural environments may explain the weaker positive correlation between problem-focused coping and resilience for adolescents in rural schools.

Emotion-focused coping and resilience

The results indicated a significant negative correlation between emotion-focused coping and resilience amongst learners in urban schools, and no correlation for learners in rural schools. Thus, young adolescents who make use of emotion-focused coping do not experience the psychological benefit of a higher level of resilience compared to those who make use of problem-focused coping. In fact, it seems as if active emotional coping, passive emotional coping and tension reduction decrease the adolescent's sense of mastery and sense of relatedness (Prince-Embury, 1998; Wong et al., 2006). This implies that the utilisation of emotion-focused coping will negatively influence the levels of optimism, self-efficacy, adaptability, experience of trust, comfortability with others, apparent access to support and tolerance of differences. As previously mentioned, South African adolescents experience a number of daily stressors. By utilising emotion-focused coping these individuals will not be able to adapt to new circumstances or solve challenging problems. As a result, South African adolescents who utilise emotion-focused coping might not be able to develop higher levels of resilience. Multiple other studies also indicate that problem-focused coping should be used instead of emotion-focused coping when considering the emotional consequences (Baker & Barenbaum, 2007; Lazarus & Folkman, 1984; Riley & Park, 2014).

Due to the fact that learners who receive schooling in rural environments do not have the available resources to necessarily apply problem-focused coping (Sedibe, 2011), they more than likely deal with their daily problems by means of emotion-focused coping and do not experience diminished levels of resilience. For these individuals, emotion-focused coping might not be a negative alternative, since the literature indicates that it is most effective in circumstances with low controllability (Van Niekerk, 2013).

Conclusion

There is a significant relationship between school engagement, coping and resilience among young South African adolescents. In addition, school environment plays a moderating role in the relationship between coping and resilience. These results may be useful to South African schools in terms of the healthy psychological development of young adolescents.

The present study has contributed to both research and practice. First, this study contributes to a greater understanding of the moderating role of the school environment, as well

as the importance of problem-focused coping and school engagement as contributors to resilience in South African adolescents. Secondly, the importance of encouraging and implementing strategies for both problem-focused coping and school engagement, regardless of school environment, were highlighted. This information can be used to implement programmes at schools and inform therapeutic interventions for professionals working with adolescents. The results are also encouraging in that it is possible for both urban and rural school to increase school engagement, and ultimately resilience, using the available resources and relationships in the adolescents' immediate context.

The following recommendations are made based on these findings. It is recommended that further research is initiated towards creating a deeper understanding of these concepts within the South African context, especially including participant groups representative of the entire South African population. Intervention programmes aimed at increasing school engagement, problem-focused coping and resilience, should be flexible enough to be implemented in both urban and rural school environments with limited resources. Especially interventions to assist schools situated in rural environments will be beneficial and should be encouraged in terms of increasing the resilience levels of these learners.

However, the results of the present study should be interpreted in the light of the following limitations. The first limitation relates to the ethnicity and gender of the participants. Females were slightly over-represented in the present study. This may have had an impact on the results since females generally tend to make more frequent use of emotion-focused coping when compared to males (Garcia, 2010; Hassan et al., 2011). Furthermore, white and coloured participants were over-represented, while black participants were under-represented in the present study. This may have an impact on the findings, since black adolescents were found to make greater use of emotion-focused coping than coloured or white adolescents in South Africa (Du Plessis, 2012).

Self-report measuring instruments were employed in the present study. Boase and Ling (2013) found these measuring instruments to have a low criterion validity, and indicated that results from self-report instruments can only be related to an individual's behaviour at a moderate level. Thus, participants may provide information which would be more socially desirable and expected in their environment, rather than being truthful about their behaviour.

The questionnaires used in the study at hand posed a further limitation of the study. The Behavioural and Emotional Rating Scale (BERS-2), Coping Schemas Inventory (R-CSI) as well as Resilience Scales for Children and Adolescents (RSCA) were all developed for members of the American population (Epstein & Sharma, 1998; Prince-Embury, 2006; Wong et al., 2006). Although all three of these questionnaires have high reliability scores, as previously discussed, these questionnaires are not standardised for the South African population.

It is recommended that future studies develop measuring instruments standardised for South African populations. This will enable researchers to gain deeper insight and understanding of resilience, coping styles and school functioning within the South African context.

A final limitation to consider is the fact that school functioning was not normally distributed in the present study and may subsequently have influenced the results.

School engagement and problem-focused coping may increase resilience for South African adolescents. The moderating role of the school environments was also evident from the results and may demonstrate the consequences of a lack of resources in rural school environments, as well as an urgent need for intervention in rural areas.

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