The moderator effect of socioeconomic status in the relationship between perceived social support, adolescent resilience and risk behaviour

By

Shana Jansen

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Declaration

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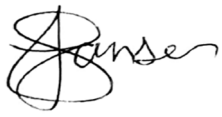

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Yours faithfully,

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My son, Zeek. You came into my life amidst the completion of this dissertation and a worldwide pandemic; yet your timing was perfect. This is all for you.

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Abstract

Adolescent risk behaviour is a crucial topic touched on by researchers over the years, both globally and locally. It remains imperative to establish factors that exacerbates adolescent risk taking behaviour, as well as factors that protect against it. While socio-economic status (SES), social support and resilience all play various roles in relation to adolescent risk behaviour, conflicting literature on this topic exists within the South African context. Thus, the aim of this study was to contribute to this body of research, by investigating the moderator effect of socio-economic status in the relationship between perceived social support, adolescent resilience and risk behaviour. A sample of 340 learners from grades 9 to 11 were obtained from two schools in Kimberley, Northern Cape. Participants were selected using a non-probability, convenience sampling method. For the purpose of this study, a quantitative, non-experimental and correlational research design was utilised.

Results indicated that perceived parental and school acquaintances support acts as a buffer against the risk of substance use in both lower and higher SES groups. Perceived teacher support decreases the risk of substance use in adolescents only from the lower SES group. Furthermore, SES did not succeed in moderating any of the remaining relationships between perceived social support types and substance use as a risk factor.

Perceived social support from school acquaintances acts as a buffer against sexual risk behaviour only for the higher SES group. SES did not moderate any of the remaining relationships between perceived social support types and sexual behaviour as a risk factor. SES further failed to moderate the relationship between all perceived social support types and violence as risk factor

Individual, caregiver and contextual resilience buffers against the risk of substance use for the lower SES group solely. Furthermore, SES failed to moderate any of the relationships between the three aforementioned resilience factors and sexual behaviour as well as violence as a risk factor.

***Keywords**: Adolescence; socio-economic status; perceived social support; resilience; risk behaviour; Kimberley; Northern Cape.*

Introduction

Engaging in risky behaviour based on poor decision-making is a common occurrence amongst the adolescent population. According to the WHO (2015), approximately 200 000 homicides occur globally among persons aged 10 to 29 years each year. Substance use is a growing risk among adolescents worldwide (Degenhardt et al., 2014), and is widely associated with harmful consequences such as these (Hale & Viner, 2016). Engaging in alcohol and/or drug use is in itself considered a behavioural risk; however, it also provides a feeding source for other risky behaviours such as violence and unsafe sexual behaviour (Otwombe et al., 2015). These findings raised questions about possible factors exacerbating adolescent risk behaviour and protective factors buffering against this behaviour within the South African context.

Zooming into protective factors, researchers found that factors such as support from family, peers, school and the community, as well as self-regulation and resilience significantly influence the behavioural development of adolescents (Banks & Weems, 2014; Masten, 2007; Rak & Patterson, 1996). Ungar (2008) postulates that resilience acts as a buffer against engaging in risky behaviour. Additionally, perceived social support also shows potential in enhancing adolescent functioning by acting as a buffer when faced with volatile situations (Demaray & Malecki, 2002; Wang et al., 2015).

Furthermore, Berry et al. (2013) hold that a significant portion of South African youth living in lower socioeconomic environments are susceptible to partaking in risk behaviours. Chassin (2008) established a link between lower socioeconomic status and alcohol use. However, limited research exists on alcohol use by adolescents from different socioeconomic environments within the South African context. Additionally, studies that focus on adolescent violence remain ambiguous with regard to socioeconomic differences (Osgood, 2008).

The impact of adolescent risk behaviour and the influencing role of resilience, perceived social support as well as the effects of socioeconomic status are evident. However, a clear gap exists in South African research regarding the effects of differing socioeconomic status and the importance of specific sources of support on adolescent resilience and risk behaviour. This study therefore aims to offer greater clarity in understanding the aforementioned.

Literature Review

Adolescence

Psychologist and developmental theorist, Erikson (1950) postulated that human development progressed/unfolded in a predetermined way through eight stages of development, with each stage posing a psychosocial crisis - involving a person's psychological needs conflicting with societal needs - that may have a positive or negative impact on the development pathway of each individual.

During adolescence, the psychosocial crisis faced is identity vs role confusion (Erikson, 1968). This stage extends from 12-18 years old and plays a crucial role in the development of personal identity. During this period, adolescents explore their values, beliefs, and goals in order to establish a sense of self (Malone et al., 2016). Furthermore, this period of transition from childhood to adulthood involves learning the roles they will fulfil as an adult. In order to achieve this, adolescents strive to find their place and fit in society (McLeod, 2018). Cherry (2018) posits that adolescents who fail to establish their identity within society will remain unsure of themselves, leading to role confusion.

According to Erikson (1968) role confusion emphasises that the adolescent is unsure about their identity or place in society. In response to this identity crisis - namely role confusion - adolescents may begin to experiment in various ways. Additionally, feeling pressured into a particular role or identity can result in rebellion. In contrast, those who receive support and encouragement through this vulnerable period are believed to emerge with a resilient sense of self and independence (McLeod, 2018).

Since this is such an important period, Newsome et al. (2016) believe that adolescence is not only the most vulnerable stage of an individual's life, but is also often associated with the taking of risky decisions. A study conducted by Shulman et al. (2015) found that various factors during this life stage predispose adolescents to taking risky decisions and ultimately engaging in risk behaviour. These include individual, social, and environmental factors. Genetic differences also play a role in how adolescents respond to these factors, with some displaying heightened resilience, and others, more vulnerability to engaging in risk behaviour (Newsome et al., 2016). Furthermore, as the tendency to engage in risk behaviour increases during adolescence (Gardner & Steinberg, 2005), the comorbid development of increased reactivity to emotions and immature self-regulation

skills predisposes adolescents to being more vulnerable to the negative consequences that emanate from engaging in risk behaviours (Steinberg, 2010).

Risk Behaviour

According to Louw et al. (2007) risk factors are those that increase the likelihood of an event having a negative impact on an individual; i.e. factors such as poor family/peer relationships, lack of access to community resources, gender, etc. Studies conducted on adolescent risk-taking have found that these risk factors significantly increase participation in risk behaviour (Institute of Medicine [IOM] & National Research Council [NRC], 2011). Coleman and Hagell (2007) explain that risk factors contribute to negative life outcomes, whereas risk behaviours are the potentially harmful activities that may result in these negative outcomes i.e. illness, injury, early mortality and morbidity.

Research on alcohol and drug use suggests that abuse of these substances is associated with a number of negative consequences such as the aforementioned mortality and injury, as well as violent behaviour and diminished psychological well-being. (Helman, 2011). Alcohol, cannabis, and methamphetamine ("tik") are some of the most frequently used substances among South African youth (Flisher et al., 2003; Parry et al., 2004; Pluddemann et al., 2010).

Alcohol use affects approximately 17.5 million South Africans; with drug use among adolescents having increased by 1100 percent from 1997 to 2007. These statistics are alarming and continue to increase (Scharff, 2014). Youth who drink are 7.5 times more likely to use other illegal drugs. According to Dada et al. (2019) the majority of South Africa's provinces reported alcohol as the dominant substance choice, followed by cannabis. Low-grade heroin (Nyaope/Whoonga) poses a problem in provinces such as Kwazulu-Natal and Gauteng, while Tik remains a growing concern in the Eastern and Western Cape. Polysubstance use is a challenge across all other regions (Dada et al., 2019).

Risks associated with engaging in substance use include a variety of consequences. A South African study conducted by Morojele et al. (2012) found motor vehicle accidents and deaths, violence and other crimes, sexual risk behaviour, and numerous health concerns to be amongst the highest risks associated with adolescents engaging in

substance use. Furthermore, Otwombe et al. (2015) agree that engaging in substance use opens the door to risk behaviours such as violence and unsafe sexual behaviour.

Ward et al. (2012) postulate that children and adolescents are at a higher risk of becoming victims of violence, with adolescents also being among the perpetrators of violence. The National Youth Victimisation Study conducted between September 2004 and September 2005 revealed that youth aged 12-22 stand double the chance of being a victim of crime than their adult counterparts (Burton, 2006). Furthermore, a South African study found that 14% of young people aged 12 – 22 had been assaulted, approximately one tenth had been robbed, and almost 4% reported sexual assault or rape (Leoschut, 2009). Youth violence also takes a gendered stance: Young men are at higher risk of being both victims and perpetrators of interpersonal violence between males that results in death and injury, while young women are commonly victims of sexual violence by male perpetrators. A Cape Town-based study among school-aged adolescents revealed that almost half of the surveyed males (49.8%) and more than half of the surveyed females (52.4%) reported being involved in a physically violent relationship either as a victim and/or as a perpetrator (Mahlangu et al., 2014).

Mahlangu et al. (2014) hold that physical violence may not only result in injuries or death, but also places an individual's health at risk by partaking in risky behaviours such as unsafe sex, substance abuse, and suicide attempts. Sexual risk behaviour not only includes exposure to sexual violence, but also the personal decision to engage in sexual behaviour that places an individual at risk. Risky sexual behaviour affects the health of adolescents and young adults by exposing them to various STDs including one of the most devastating ones, namely HIV/AIDS. It may also result in unwanted pregnancies for female youth, which in turn may affect their health, social and economic situation (Fetene & Mekonnen, 2018).

Engaging in risk behaviours such as substance use, violence and sexual risk behaviour often co-occurs (Jackson et al., 2012). Given the high prevalence of these behaviours among South African youth, research has strived to establish the individual, familial, and social factors that predispose adolescents to these risks. However, researchers have also zoomed into protective factors such as promoting resilience (Helman, 2011). According to Ungar (2008) when an individual is exposed to adverse situations, resilience acts as a buffer against engaging in risk behaviour.

Resilience

Resilience refers to both the ability to function well after experiencing significant adversity and the capability to adapt effectively to hardship (Grych et al., 2015). A number of researchers agree that resilience is not only linked to individual capacities, but also fostered in relationships and strengthened by the availability of community resources and opportunities (Luthar, 2006; Masten, 1999; Ungar, 2011). It can therefore be established that resilience is due to the interactions between an individual's environment and their innate capacity to overcome adversity. Additionally, Fergus and Zimmerman (2005) explain that resilience is developed by overcoming negative effects of exposure to risk, effectively coping with trauma, as well as avoiding the negative outcomes associated with risk.

Coleman and Hagell (2007) hold that resilience cannot exist without considering exposure to risk; postulating that one needs to experience risk to develop resilience. Furthermore, these authors posit that it is the combination of fluctuating risk and protective factors that determine resilience. Additionally, protective factors such as resilience guard adolescents from harm when exposed to risky behaviour (Coleman & Hagell, 2007). A study conducted by Loke and Mohd-Zaharim (2019) found that, firstly, adolescents with a higher level of resilience engage in fewer risk behaviours. Secondly, these adolescents took fewer risks when making decisions. Finally, adolescents with a higher level of resilience displayed a stronger aversion to risk and had fewer behavioural violations at school.

Although resilience is viewed as one's internal capacity to overcome adversity, it remains a multidimensional process. Therefore, in order to ensure positive development, resilience should include both individual qualities as well as support from the environment (Ungar, 2011). According to Brooks (1994), perceived social support builds the development of resilience from a young age. Additionally, researchers hold that social support is a key protective factor in strengthening overall resilience (Armstrong & Manion, 2013; Taliaferro & Muehlenkamp, 2014).

Within the South African context, Theron et al. (2013) define resilience within the context of community relatedness. The significance of family and social relationships as contributing factors to resilience are emphasised in particular (Theron & Theron, 2013;

Vermeulen & Greeff, 2015). Furthermore, Coleman and Hagell (2007) posit that building a positive self-esteem, good communication within family and social relationships, as well as community resources all contribute to adolescent coping, by ensuring their resilience. Additionally, Mosavel et al. (2013) found that community connectedness strengthens the resilience of high-risk adolescents. How the adolescent perceives the aforementioned support is therefore imperative to the development of their resilience.

Perceived social support has the potential to influence both risk and resilient outcomes in the behavioural development of adolescents (Wang et al., 2015). Moreover, perceived social support and resilience may act as a buffer for adolescent risk behaviour (Armstrong & Manion, 2013; Loke & Mohd-Zaharim, 2019; Taliaferro & Muehlenkamp, 2014). However, despite its importance, not enough research on perceived social support and resilience in relation to risk behaviour exists within the South African context.

Perceived Social Support

Social support is crucial in assisting adolescents in managing stressors by functioning as a source that guards them from psychological distress (Camara et al., 2014). The construct of social support has been defined and developed in various ways and from different perspectives over time (Cohen & Syme, 1985; Gottlieb, 1981; Lin et al., 1986). Lin et al. (1986) emphasise the importance of distinguishing between real and perceived support from the community, social networks, and friends. These authors propose that received social support should be distinguished from perceived social support when considering how individuals evaluate their social network, the resources it offers, and the overall satisfaction with the availability of support.

Received or actual support refers to that which is said, given or done for an individual; whereas perceived support involves the individuals' belief that his/her needs for support are being fulfilled (Nurullah, 2012). Tardy's (1985) model, on the other hand, explains that social support can be categorised as either emotional (e.g. empathy, care and affection), instrumental (e.g. financial or material), informational (e.g. advice) or appraisal (e.g. evaluative feedback); further emphasising the importance of support from various sources (i.e. parents, peers, teachers and the community).

The development of the Child and Adolescent Social Support Scale (CASSS), utilised in this study, was based on the aforementioned model. The developers interpret

social support as "an individual's perceptions of general support or specific supportive behaviours (available or enacted upon) from people in their social network, which enhances their functioning and/or may buffer them from adverse outcomes" (Malecki et al., 2014, p.6). The sources of support measured by the CASSS include parents, teachers, classmates, close friends, and the school.

Support from parents

Research on adolescents' social support networks has focused mainly on family/parental and peer support. The consensus across the board is that these relationships have an effect on the adolescent's development (Woolley et al., 2009). Hombrados-Mendieta et al. (2012) found that perceived parental support is the most important source of support for adolescents in fostering their well-being. On the contrary, Lubman et al. (2017) postulate that adolescents feel more comfortable talking about their challenges with peers than parents. This confirms findings that perceived peer support takes preference over parental support when it comes to adolescents' well-being (Kerr et al., 2006).

Support from classmates/friends

Between the ages of 12 and 14, classmates offer significantly more perceived support than teachers. From 15 years onwards, support from peers becomes equivalent to, or often higher than that perceived from parents (Hombrados-Mendieta et al., 2012). These results are consistent with findings that family support tends to decrease as friend support increases during adolescence (Cheng & Chan, 2004; Collins & Laursen, 2004; Furman & Buhrmester, 1992; Garnefski & Diekstra, 1996). However, Stice et al. (2004) hold that lack of support from parents - rather than friends - has been positively correlated to negative symptoms that may develop during adolescence.

Support from teachers and school

Cattley (2004) established a link between teachers' and school support, and adolescents' well-being. This positive correlation between the two holds up stronger than parental and friends' support. On the other hand, teacher and school support showed the least significance from the adolescents' perspective, as opposed to parental and classmate support, in another study (Hombrados-Mendieta et al., 2012).

From the literature it becomes evident that perceived social support has a place in the lives of adolescents. The construct in its entirety has been established as an important protective factor during child and adolescent development (Demaray & Malecki, 2002). However, one cannot establish the relevance of protective factors without considering factors that possibly exacerbate risk behaviour.

Research has repeatedly found that living in poverty may increase the risk of engaging in anti-social behaviour (Mahlangu et al., 2014). Ward et al. (2012) report a growing concern that too many South African youth are raised in dysfunctional homes, poorly performing schools, and violent communities; thus normalising participation in risk behaviour. The role of socio-economic status can therefore not be overlooked.

Socio-economic status

In South Africa, adolescents living in poverty-stricken areas with high unemployment rates and a history of oppression are often faced with multiple risks (Helman, 2011). This holds particularly true as exposure to one risk factor (e.g. substance abuse) may increase the likelihood of exposure to other risk factors (e.g. perpetration or victimisation of crime and violence) (Berry et al., 2013). Research remains fairly one-directional, with lower socio-economic status remaining negatively correlated to violence across the board. Ward et al. (2012) found factors such as a lack of quality education, economic hardship, high unemployment, as well as family and community vulnerability all contribute to adolescents partaking in crime and gang membership. Additionally, a study conducted by Boafo et al. (2014) found that adolescents aged 12 to 17 from lower socio-economic environments stand a higher chance of witnessing, experiencing, and/or falling victim to violence.

According to Swartz (2009) violent risk behaviour cannot be understood without taking into consideration the broader structural drivers such as poverty, inequality, peer/friend influence, family, school, and the community. With majority of South African youth living in poverty-stricken areas, violence remains rife. The cascading effect of this includes injuries and engaging in risk behaviour such as unsafe sex, substance misuse, and even suicidal tendencies (Mahlangu et al., 2014).

According to Jackson et al. (2012), substance misuse is a key contributing factor to falling victim to violence as well as sexual risk behaviour. The authors hold that alcohol,

drug use and risky sexual behaviour often co-occur. A South African study conducted with male youth reported that substance use is often associated with rape (Jewkes et al., 2011). Additionally, Pluddemann and Parry (2012) found that methamphetamine ("tik") increases the risk of becoming aggressive, experiencing mental health challenges, school dropout, as well as engaging in sexual risk behaviour. Furthermore, Burke et al. (2015) agree that poverty poses a risk factor for developing unsafe sexual behaviour.

On the other hand, despite the socio-economic circumstances, Mosavel et al. (2013) postulate that community connectedness contributes to resilience for high-risk adolescents. A South African study found that adolescents who scored high on resilience were often from disadvantaged socio-economic backgrounds and foster homes (Van Breda, 2015). Roos and Temane (2007) hold that townships, generally falling within the lower socioeconomic grouping, are often proficient communities. These environments possess resilience-promoting resources such as families and neighbours that pull together in times of need and provide mutual support. However, a lack of community cohesiveness may result in adverse effects (Helman, 2011).

Understanding the ecological effects on South African families is vital in establishing the development of youth pro-social skills and behaviours (Parchment et al., 2016). According to Petersen et al. (2014) stressors arising from poverty can increase participation in risk behaviours and hold the potential to reduce pro-social behavioural skills. Furthermore, Coleman and Hagell (2007) agree that inequalities based on class and location are important in considering risk behaviour; however, adolescents are capable of developing resilience despite these inequalities.

Overall, understanding why risk-taking behaviour is higher during adolescence than any other period of development has challenged psychologists for years (Steinberg, 2007). Additionally, Grych et al. (2015) posit that adversity, hardship, dysfunctional families, violence, poor living environments and a lack of support are only a few external factors that contribute to resilience and risk behaviour. Mahlangu et al. (2014) established that perceived social support, or a lack thereof, plays a role in adolescent risk behaviour. Whether this role is positive or negative remains unclear, with conflicting results based on past research studies. Furthermore, conflicting evidence about the effect of socio-economic status on perceived social support, risk and resilience among adolescents

within the South African context drove this study. Based on the aforementioned, the following research problem and objectives were formulated:

Research Problem and Objectives

The aim of the study is to investigate the moderator effect of socio-economic status in the relationship between perceived social support, adolescent resilience and risk behaviour. In helping to achieve the aim, the following research objectives were identified:

Research Objective 1

To investigate the prevalence of risk behaviour among adolescents in the Kimberley area, Northern Cape Province.

Research Objective 2

To determine if there is a significant relationship between perceived social support, the level of resilience and risk behaviour for the adolescent sample.

Research Objective 3

To investigate if socio-economic status (SES) moderates the relationship between perceived social support, adolescent resilience, and risk behaviour.

Research Design and Methodology

In order to address the above research objectives a quantitative, non-experimental and correlational research design was utilised. Quantitative research is a scientific approach used to prove or disprove hypotheses. One advantage is that it allows for a study with a large sample group whereby results can be generalised and used to make predictions (Brent & Kraska, 2010). Fouche and De Vos (2009) hold that non-experimental research describes phenomena as they occur and does not manipulate or control any variables. Furthermore, correlational research design was utilised as it determines the strength and direction of relationships between two or more variables (Stangor, 2011).

Participants and sampling procedure

A sample of 340 learners from grades 9 to 11 were obtained from two schools in the Francis Baard district of Kimberley, Northern Cape. Participants were selected using a non-probability, convenience sampling method. This indicates that participants were not

selected randomly from a population, and the sampling group was selected based on convenient and easy access, as well as availability (Maree & Pietersen, 2010). A total of 170 participants per school (Gr 9-11) were selected. Initially, the intention was to include two more schools in order to broaden the sample representation. However, these schools dropped out due to various circumstances beyond their control. Participants were therefore selected from one low socio-economic [LSE] (Quintile 2) and one high socio-economic [HSE] (Quintile 5) cluster of schools to differentiate socio-economic status.

Ethical considerations and Data collection

Ethical principles considered for this study included obtaining the necessary permission from relevant parties, confidentiality and anonymity, voluntary participation and withdrawal, informed parental, principal and student consent, as well as justice and non-maleficence.

Permission to conduct this study was obtained from the Northern Cape Department of Education (DOE), the Research Ethics Committee of the Faculty of the Humanities, Free State University, principals of the respective schools, as well as parents of the learners. An ethics clearance number - UFS-HSD2017/0577 - was obtained from the University, written permission was provided by the DOE; and principals, parents as well as learners signed informed consent/assent. Letters explaining the study, including the risks and voluntary nature thereof, were distributed to all parents and principals for their approval and signature before their children or learners, could partake in the study. Learners were provided with a similar document and given the opportunity to ask questions or withdraw from the study before giving assent to be a participant in the study.

Data was collected during school hours with the permission of the school principals who set time aside for this purpose. According to the Health Professions Council of South Africa (HPCSA; 2016) participating in a research study is done voluntarily and participants must be informed of their right to withdraw from a study at any given time. Potential participants were informed about the nature and aims of the research. They were also given the opportunity to ask questions related to the intended research and informed that participation was voluntary and that they could withdraw from participating at any time or stage. Once agreed upon, participants were asked to provide written assent.

According to the Health Professions Act (1974) researchers must safeguard confidential information obtained in the course of conducting research. Participants were informed that any identifiable information would be held in the strictest confidence and that the only individuals/organisations who would be in possession of the data include the researcher, research supervisor and the University of the Free State. Furthermore, only the final results of the study would be made available to the Department of Education and the school principals. Results would be available to participants upon their request. Additionally, participants' anonymity was respected throughout the process by ensuring that no personal information, such as their name and surname, was placed on the questionnaires. The purpose of this was to ensure that learners were as honest as possible and were protected from any bias. Questionnaires were then made available in booklet form and administered to participants in English, the language of learning and teaching at these schools. The questionnaires took approximately 1hr 30min to complete. A small break was given halfway through the questionnaires. The researcher remained at hand to answer and clarify any questions from learners.

Finally, Allan (2015) explains that the ethical principle of justice pertains to treating participants fairly, objectively and without bias. This was achieved by ensuring participants remained anonymous throughout the process and further ensuring any information provided by them would not be traceable back to the participant. Additionally, non-maleficence i.e. do not harm (HPCSA, 2016), was an ethical principle that was respected in this study. The study was structured not to cause any physical, social, psychological or economic harm. However, participants were informed that a particular question might trigger past unresolved emotional states. A system was put in place whereby the researcher (a Registered Counsellor at the time of the study) would provide immediate debriefing and referral to a Psychologist if the need arose.

Characteristics of sample

The biographical variables involved in the study were gender, age, grade, ethnicity and quintile. With the exception of age, all other biographical variables were measured on the nominal scale. The average age of the total study group was 14.86 years with a standard deviation of 0.89. The youngest learner in the research group was 13 years, while the oldest was 17 years old. Information on the distribution of the 340 respondents

regarding the three biographical variables was calculated using the SPSS computer software and is shown in Table 1 for the total group as well as the two Quintile groups.

Table 1

Frequency Distribution of Research Participants According to the Three Biographical Variables.

Biographical variables	Total group		Quintile 2 (LSE)		Quintile 5 (HSE)	
	F	%	F	%	F	%
Gender:						
Male	136	40.0	57	33.5	79	46.5
Female	204	60.0	113	66.5	91	53.5
Grade:						
9	224	65.9	54	31.8	170	100.0
10	68	20.0	68	40.0	0	0.0
11	48	14.1	48	28.2	0	0.0
Ethnicity:						
Black	129	37.9	59	34.7	70	41.2
White	24	7.1	0	0.0	24	14.1
Coloured	182	53.5	111	65.3	71	41.8
Asian	5	1.5	0	0.0	5	2.9

Of the total group, 60% consisted of females while 65.9% consisted of Grade 9 learners. The HSE group consisted only of Grade 9 learners (170) due to a lack of availability of other grades at the time of the study. Of the 340 participants, 224 were in Grade 9. Furthermore, 53.5% of the total group were coloured learners, 111 of whom were from the LSE group and 71 from the HSE group. This is followed by 129 Black, 24 White, and 5 Asian participants in the total group. There were no White and Asian learners from the LSE group, as opposed to 24 and 5 learners respectively from the HSE group.

Measuring instruments

Description of Variables

As the focus of the study is to determine whether learners' socio-economic status moderates the relationship between their perceived social support as well as resilience with regard to risk behaviour, these four constructs will be discussed in terms of variables. Socio-economic status is the interfering variable, while perceived social support and resilience are the independent variables. Risk behaviour is therefore the dependent variable.

Socio-economic status is represented by two categories (higher socio-economic and lower socio-economic) while perceived social support is represented by five domains, namely: parents, teachers, classmates, friends and school acquaintances. Resilience is measured by three subscales (individual, relationship with primary caregiver and contextual factors) while risk behaviour focused on the following four risk-domains namely, violence, bullying, substance use and sexual behaviour.

The measuring instruments used to measure the aforementioned variables will be discussed below.

Socio-economic Status (SES; Australian Bureau of Statistics, 2011), can be measured based on demographics, education, employment, location and wealth, among others. For purposes of this study, the focus was placed on demographic location. The South African National Department of Education makes use of the quintile system to categorise schools with regard to SES. This system places public schools in one of five groups or quintiles, where categorising is done according to the socio-economic status of prevailing communities as determined by the National Census data. Quintile 1 is considered the poorest income level while Quintile 5 is considered the wealthiest group (Government Gazette, 2006). The Department of Education in the Northern Cape Province was approached to guide the research sample selection using quintiles as the identifier of SES. To be able to use a categorical variable with more than two categories as predictor (as is the case here), several dummy variables were recoded.

The Child and Adolescent Social Support Scale (CASSS; Malecki et al., 1999; Malecki & Demaray, 2002) was utilised to measure perceived social support of participants. The CASSS is a 60-item multidimensional scale measuring perceived social support from five sources: parents, teachers, classmates, friends, and school acquaintances. Students respond by rating each item on two aspects: frequency and importance. Frequency ratings consist of a 6-point Likert Scale, ranging from 1 (Never) to 6 (Always). Importance ratings consist of a 3-point Likert Scale ranging from 1 (Not Important) to 3 (Very Important). Each subscale corresponds to one of the sources of support (e.g., parent, teacher, classmate, and close friend) and consists of 12 items each.

Frequency ratings for each subscale are added to obtain a total score for each of the five subscales. The five subscale scores are added to result in an overall total social

support score. Likewise, importance ratings are added for each subscale and tallied for a total importance scale score. A Cronbach alpha coefficient of 0.97 was reported for an American (Gr 3-12) sample. Drost (2011) holds that a reliability score of 0.70 or higher is acceptable for use in Social Science studies. The subscales therefore also demonstrate acceptable reliabilities across different grades: parent (0.88- 0.96), teacher (0.90- 0.96), classmate (0.91- 0.96), close friend (0.93- 0.97), and people in my school (0.95- 0.96). After conducting an electronic search for applications of the CASSS within the South African context, no studies could be found (Google, EbscoHost 08, September, 2020).

The Child and Youth Resilience Measure (CYRM; Liebenber et al., 2011; Resilience Research Centre, 2009). The CYRM-28 was used to measure adolescent resilience. This measure has three subscales: Individual, Relationships with primary caregivers, and Contextual factors. The measure has 28 items that are measured along a five-point Likert scale ranging from 1 (not at all) to 5 (a lot). Total scores range between 28 and 140, with higher scores indicative of greater resilience (Daigneault et al., 2013). A validation study conducted on two samples of Canadian youth (n1=497; n2=410) reported high levels of face validity and internal reliability for the three sub-scales (Liebenberg et al., 2011). Cronbach alpha coefficients between 0.65 and 0.91 were reported. Upon initial development of the CYRM, 60 quantitative and three qualitative South African participants from various socio-economic backgrounds were included to ensure variability.

The Youth Risk Behaviour Surveillance Survey (YRBSS; Centre for Disease Control and Prevention [CDC], 2012) was administered to measure risk behaviour in adolescents. The 89-item survey measures six domains of priority health-risk behaviours among youth: behaviours that contribute to unintentional injuries and violence; tobacco use, alcohol and other drug use; sexual behaviours that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; unhealthy dietary behaviours; and physical inactivity, as well as obesity and asthma. Following the guidelines of the Guide to Conducting Your Own Youth Behaviour Risk Survey (CDC, 2012), the survey for this study focused on violence (11 items), bullying (2 items), alcohol and other drug use (19 items), as well as risky sexual behaviour (9 items).

The survey includes closed-ended questions, with either a “yes” or “no” response, as well as Likert scale items with responses coded with a numerical value for each possible

response. Numerical values start at one, indicating lowest risk behaviour, and increase by one as risk behaviour increases. For example, responses to “Have you ever had sexual intercourse?” include “No”=1 and “Yes”=2, and responses to “During your life, on how many days have you had at least one drink of alcohol?” include “0 days”=1, “1 or 2 days”=2, “3 to 9 days”=3, “10 to 19 days”=4, “20 to 39 days”=5, “40 to 99 days”=6 and “100 or more days”=7. Good test-retest reliability indications were established for the YRBS (Brener et al., 2002) and internal consistency values for the various subscales ranged from 0.70 to 0.91 (Popham et al., 2011).

Statistical analysis

The reliability of the respective measuring instruments' scales was calculated using Cronbach's α coefficients and the Omega coefficient, displayed in Table 2.

Table 2

Reliability of Measuring Instruments' Subscales

Measurement scale	α-coefficient	Omega-coefficient
Risk behaviour:		
Violence	.625	.688
Substance use*	.799	.789
Sexual behavior	.890	.938
Resilience		
Individual	.640	.645
Relationship with caregiver	.678	.698
Contextual factors	.641	.654
Perceived Social Support:		
Parents	.889	.891
Teachers	.878	.880
Class mates	.906	.907
Friends	.924	.924
School acquaintances	.937	.938

* Note - substance use is composed of scores for substance use, marijuana use and other drug use.

According to Lance et al. (2006) a cut-off point of 0.7 for reliability coefficients in the social sciences is deemed acceptable. Although the three Resilience scales did not fully meet this cut-off point, it was decided to retain them in the study. All five Perceived Social Support scales provide high reliability indices.

Data analysis procedure

Descriptive statistics (frequencies and correlations) were utilised to investigate research objectives 1 and 2. In order to investigate the latter research objective, a specific

method of analysis was followed, which will be discussed in more detail. In the following hierarchical regression analysis (Howell, 2013), the possible moderator role that socio-economic status may play in the relationship between perceived social support, resilience and risk behaviour of learners is explored. A moderator variable influences the direction and/or strength of the relationship between the predictor (perceived social support and resilience) and the criterion variables (risk behaviour) (Baron & Kenny, 1986; Field, 2013).

To determine whether the intervening variable (s) is a moderator in the relationship between the independent and dependent variables, the product is separated between the independent variables (perceived social support and resilience scale respectively) and the intervening variable (socio-economic status) and added to the regression model. As socio-economic status consists of two categories, a code 1 was assigned to the lower socio-economic group and code 2 to the higher socio-economic group. If the calculated beta coefficient of the product term is significant, it can be deduced that there is a significant interaction, which is then indicative of a moderator effect (Howell, 2013).

All analyses were performed using the SPSS software (SPSS Institute, 2017), *with the 1% - as well as 5% level of significance* being under consideration for interpretation of results. To determine a significant interaction effect, a lessened p-value of 0.1 was applied (Aiken et al., 1991).

Results

The purpose of this section is to present the results obtained in this study. The descriptive and inferential statistics will be presented as follows:

Research Objective 1

To investigate the prevalence of risk behaviour among adolescents in the Kimberley area, Northern Cape Province; the mean, standard deviation as well as the range of scores obtained for the three types of risk-taking behaviour, namely violence, substance use and risky sexual behaviour, were calculated as shown in Table 3.

Table 3

Minimum, Maximum, Mean, Standard Deviation Scores for the Types of Risk-Taking Behaviour

Risk-taking behavior		**Gender**	**Min**	**Max**	**Mean**	**Sd**
Violence (Score range 9 to 44; midpoint = 17.5)		Female	12	27	14.31	2.22
		Male	12	30	15.11	3.72
		Total	12	30	14.63	2.93
Substance use	Alcohol use (Score range 6 to 44; midpoint = 19)	Female	6	34	12.94	6.97
		Male	6	34	13.47	7.65
		Total	6	34	13.15	7.24
	Marijuana use (Score range 3 to 20; midpoint = 8.5)	Female	3	16	4.19	2.73
		Male	3	16	4.83	3.29
		Total	3	16	4.45	2.98
	Use of other drugs (Score range 9 to 51; midpoint = 21)	Female	11	17	11.55	1.11
		Male	11	18	11.60	1.33
		Total	11	18	11.57	1.20
	Total substance use (Score range 18 to 115; midpoint=48.5)	Female	20	65	28.68	9.06
		Male	20	63	29.90	10.02
		Total	20	65	29.17	9.46
Risky sexual behaviour (Score range 6 to 35; midpoint = 12.5)		Female	10	32	12.11	5.06
		Male	10	35	16.23	7.89
		Total	10	35	13.76	6.65
Total risk-taking behaviour (Score range 33 to 190; midpoint = 78.5)		Female	42	111	55.10	13.17
		Male	42	109	61.24	17.17
		Total	42	111	57.56	15.18

For violence (with a possible score range of 9 to 44), learners' scores range from 12 to 30, with a mean of 14.63. If a possible total score of 44 is considered, the scores fall in the lower ranges of the scale. The mean of 14.63 is also below the mid-point mark of 17.5.

Substance use is discussed in terms of the following categories: alcohol use, marijuana use and the use of other drugs. With regards to alcohol use (with a possible score range of 6 to 44), participants' scores range from 6 to 34, with a mean of 13.15. If a possible total score of 44 is considered, the scores are in the lower range of the scale. The mean of 13.15 is also below the mid-point mark of 19. For marijuana use (with a possible score range of 3 to 20), participants' scores range from 3 to 16, with a mean of 4.45. If a possible total score of 20 is considered, the scores fall in the higher range of the scale. The mean of 4.45 is however below the mid-point mark of 8.5. The last category for substance use is the use of other drugs (with a possible score range of 9 to 51), participants' scores range from 11 to 18, with a mean of 11.57. If a possible total score of 51 is considered, the scores fall in the lower range of the scale. The mean of 11.57 is also below the mid-point mark of 21. The possible total substance use scores range from 18 to 115 with a midpoint mark of 48.5. Participants' total scores range from 20 to 65. If a possible total score of 115 is considered, the total scores fall in the lower range of the scale. The mean of 29.17 is also below the mid-point mark of 48.5.

For risky sexual behaviour (with a possible score range of 6 to 35), participants' scores range from 10 to 35, with a mean of 13.76. If a possible total score of 35 is considered, the scores are in the higher range of the scale. The mean of 13.76 is also slightly above the mid-point mark of 12.5.

For total risk-taking behaviour (with a possible score range of 33 to 190), participants' scores range from 42 to 111, with a mean of 57.56. If a possible total score of 190 is considered, the scores are in the lower to middle range of the scale. The mean of 57.56 is below the mid-point mark of 78.5.

Individual items were analysed to provide in-depth descriptions. With regards to violent risk behaviour, 8.5% of learners felt threatened on school property and 14.1% got into a physical fight in or outside of school. 2.6% indicated that a partner hurt them at least one time in the past 12 months, while 5.9% reported feeling forced into unwanted sexual actions in the past 12 months. Risk behaviour related to substance use indicated

22% of the learners had at least one drink on one or two occasions in the past 30 days, while 10.6% had at least one episode of binge drinking (five or more drinks within a few hours) during the last 30 days. Furthermore, 11.5% of learners had smoked marijuana at least once in their life and 1.5% of the learners reported having used cocaine/crack at least once. Additionally, 9.1% of learners were offered, sold, or given illegal drugs on school property during the past 12 months. The statistics on sexual risk behaviour showed that 19.7% of learners had had sex before, with 5.6% having had sex before the age of 14. Just under nine percent (8.8%) reported having sex with one partner in their lifetime, while 3.2% have had more than six sexual partners. Finally, only 13.8% use condoms as a contraceptive measure, while a low 1.2% use birth control pills.

Table 4 provides more detail on the descriptive statistics (means, standard deviations, skewness and kurtoses) for the variables that will be used in the analyses.

Table 4

Averages, Standard Deviations, Skewness and Kurtoses for the Variables

	Mean	Sd	Skewness	Kurtosis
Risk behaviour:				
Violence	14.63	2.93	2.370	7.579
Substance use	29.17	9.46	1.056	0.644
Sexual behavior	13.76	6.65	1.624	1.134
Resilience				
Individual	47.01	5.79	-0.617	0.195
Relationship with caregiver	29.76	4.59	-1.402	2.579
Contextual factors	42.59	5.62	-1.197	1.926
Perceived Social Support:				
Parents	52.10	11.79	-0.676	-0.206
Teachers	52.47	10.97	-0.342	-0.690
Classmates	45.48	13.17	-0.302	-0.668
Friends	57.99	12.12	-1.198	1.185
School acquaintances	38.45	14.10	0.078	-0.825

The skewness and the kurtosis coefficients are also shown in Table 4. For skewness, a range between -1 and +1 indicated slight skewness, values between -2 and +2 indicated moderate skewness (Peat et al., 2008) and for kurtosis, normal distribution is between -3 and +3 (Brown, 1997). From Table 4 it is clear that for the variable violence as a risk factor, a large kurtosis value was obtained (7,579). This indicates that most respondents achieved approximately the same score. Thus, it can be deduced that in this case the

variance in scores will be very small. For the remaining variables, skewness as well as kurtoses values that fall within the normal limits were obtained.

Research Objective 2

To investigate this research hypothesis, a Pearson's product moment correlation was utilised to analyse the relationship between the three risk-taking behaviour variables and the adolescents' perceived social support and resilience variables. Table 5 shows the correlations between the relevant variables for the total group.

Table 5

Correlations between the Variables for the Total Group (N=340)

Variable	2	3	4	5	6	7	8	9	10	11
1 Risk: Violence	.32**	.34**	-.10	-.04	-.01	.01	-.08	-.07	-.12*	-.04
2 Risk: Substance	-	.38**	-.23**	-.17**	-.04	-.06	-.15**	-.12*	-.17**	-.09
3 Risk: Sex		-	-.11*	-.06	-.02	-.06	-.13*	-.04	-.08	-.07
4 Parents			-	.44**	.35**	.20**	.41**	.33**	.64**	.33**
5 Teacher				-	.44**	.32**	.48**	.29**	.34**	.29**
6 Class mates					-	.41**	.56**	.35**	.27**	.30**
7 Friends						-	.27**	.36**	.18**	.21**
8 School acquaint							-	.35**	.40**	.36**
9 Individual								-	.52**	.53**
10 Caregiver									-	.52**
11 Contextual										-

** $p \leq 0,01$ * $p \leq 0,05$

From Table 5 it is noted that the risk variables (1-3) and particularly risk violence showed significantly negative correlations with PSS variables (parents, teachers and school acquaintances) as well as with resilience caregiver and individual. Cohen (as cited in Aron et al., 2013) postulates that correlation coefficients of .10 and above hold a small effect size, .30 and above a medium effect size, and .50 and above a large effect size; thus indicative of the strength of correlation between variables. The effect sizes of these correlations were of small effect and should therefore be interpreted with caution. Violence as risk behaviour seems to be influenced by the level of perceived support and resilient factors within the individual (Jain et al., 2012; Botha, 2014).

The PSS variables (4-8) reported significantly positive interactions with the resilience variables (9-11). Correlations reported ranged between moderate to large effect sizes which gives greater credence to the generalisability of the result to the greater learner population of the Kimberley area. The more supported an individual perceives themselves to be, the more likely they are to possess greater resilient factors (Camara et al., 2014).

Research Objective 3

Moderated hierarchical multiple regression analyses were conducted to determine the moderating effect of SES on the relationship between perceived social support and resilience scales, as well as risk behaviour of adolescents. In order to conduct the analyses, data was checked to ensure that all assumptions of multiple regression analyses were met. Normality, linearity, multicollinearity and homoscedasticity were investigated. Outliers were investigated through calculating Mahalanobis distance. The critical value of chi-square for one dependent variable at an alpha level of .001, is 10.828. None of the dependent variables violated the distance. All the other assumptions for regression analyses were met.

First, the moderator effect of SES on the relationships between perceived social support and risk behaviour, followed by resilience and risk behaviour of the adolescents was investigated. The analyses reflected in Table 6 investigated the main and interaction effect of socio-economic status and the five perceived social support scales with violence as risk factor.

Table 6

Hierachical Regression Analysis Predicting Violence as Risk Factor with Perceived Social Support as Independent Variable and SES as Intervening Variable

	Step 1	Step 2
	Standardised Regression Coefficients (*Beta*)	
Support: Parents	-.100	-.065
ParentsxSES		-.060
Model R^2	.010	.012
Model ΔR^2	.010	.002
Support: Teachers	-.037	-.009
TeachersxSES		-.055
Model R^2	.001	.001
Model ΔR^2	.004	.002
Support: Class mates	-.008	.051
Class matesxSES		-.097
Model R^2	.000	.000
Model ΔR^2	.006	.006
Support: Friends	.012	.058
FriendsxSES		-.080
Model R^2	.000	.000
Model ΔR^2	.005	.004
Support: School acquaintances	-.080	.011
SchoolxSES		-.134*
Model R^2	.006	.006
Model ΔR^2	.016	.010

** $p \leq 0.01$ * $p \leq 0.05$

When perceived social support from school acquaintances was entered it was not significant at at least the 5% level [R² = .006, $F_{1;338}$ = 2.167, p = .142]. In the second step, the product term between perceived social support from school acquaintances and SES was entered. The result indicates that a statistically significant interaction effect was found at the 10% level [ΔR^2 = .010, $F_{1;337}$ = 2.749; p = .065]. However, this relationship falls beyond the level of significance considered for this study. It can be concluded that SES fails to moderate the relationship between all perceived social support types and violence as risk factor. These findings will therefore not be discussed any further.

The analysis reflected in Table 7 investigated the main and interaction effect of SES and the five perceived social support scales with the use of substances as risk factor.

Table 7

Hierachical Regression Analysis Predicting Use of Substance as Risk Factor with Perceived Social Support as Independent Variable and SES as Intervening Variable

	Step 1	Step 2
	Standardised Regression Coefficients (*Beta*)	
Support: Parents	-.226	-.082
ParentsxSES		-.248***
Model R^2	.051	.051
Model ΔR^2	.092	.041
Support: Teachers	-.164	-.043
TeachersxSES		-.236***
Model R^2	.027	.027
Model ΔR^2	.068	.041
Support: Class mates	-.043	.131
ClassmatesxSES		-.091
Model R^2	.002	.002
Model ΔR^2	.011	.009
Support: Friends	-.059	.091
FriendsxSES		-.078
Model R^2	.003	.003
Model ΔR^2	.010	.007
Support: School acquaintances	-.154	.055
SchoolxSES		-.309***
Model R^2	.024	.024
Model ΔR^2	.075	.052

** $p \leq 0.01$ * $p \leq 0.05$

Table 7 shows that the relationships between substance use as risk and the following three perceived social support scales: parents, teachers and school acquaintances; are moderated by the adolescents' SES.

When perceived social support from parents was entered, it was significant at the 1% level [R² = .051, $F_{1;338}$ = 18.227, p = .000]. In the second step, the product term between

perceived social support from parents and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [$\Delta R^2 = .041$, $F_{1;337} = 15.203$; $p = .000$]. It can be concluded that SES indeed moderates the relationship between perceived social support from parents and substance use as risk factor. To investigate the nature of the moderator effect (of SES in the relationship between social support from parents and substance use as risk) for the two socio-economic groups (low and high), separate regression lines were calculated with perceived social support from parents as the predictor variable and substance use as the criterion variable. The regression lines are shown in Figure 1.

Figure 1

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Perceived Parental Support as Predictor of Substance Use as Risk Factor.

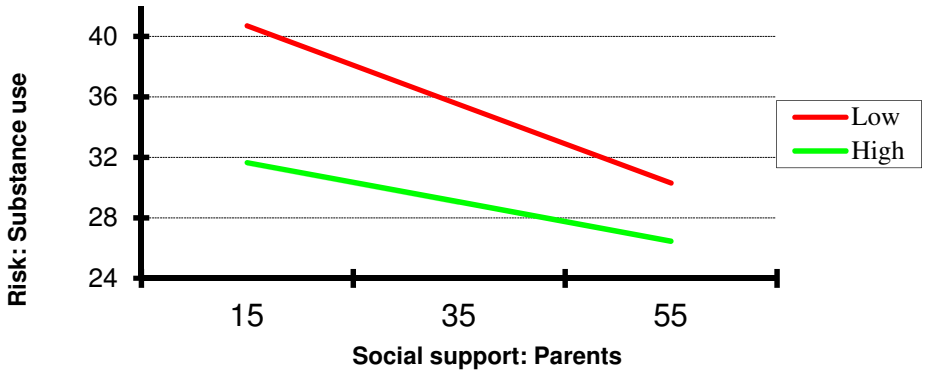
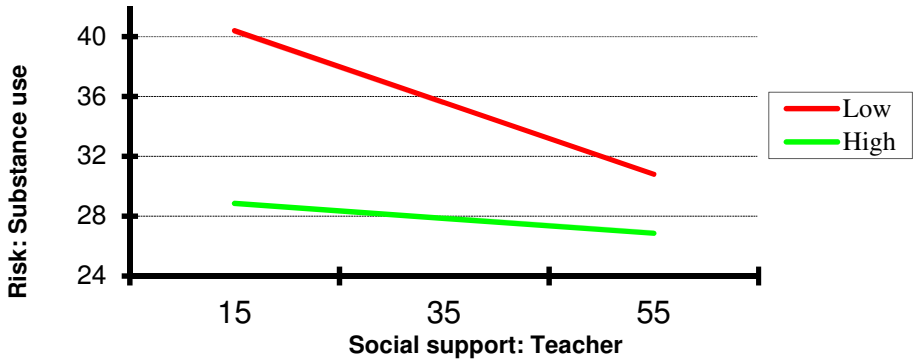


Figure 1 shows that when low levels of perceived social support from parents are experienced by adolescents, the group with lower SES reveals much higher levels of substance use as risk than the adolescents in the higher SES group. Furthermore, it is clear that for both socio-economic groups (low and high) there is a decrease in substance use as a risk factor with an increase in perceived social support from parents. For both groups the slope of the regression lines are negative, while for both groups significant negative correlations (r = -.283; p = .001 and r = -.184; p = .016 respectively) between their perceived social support from parents and substance use as risk occurs. Therefore, it can be deduced that for both these groups, the more they experience perceived support from their parents, the more likely they will be to manifest lower levels of substance use as risk. However, the relationship between the two variables mentioned is stronger for the lower SES group than for the higher SES group.

When perceived social support from teachers was entered it was also significant at the 1% level [R^2 = .027, $F_{1;338}$ = 9.339, p = .002]. In the second step the product term between perceived social support from teachers and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [ΔR^2 = .041, $F_{1;337}$ = 14.861; p = .000]. It can be deduced that SES moderates the relationship between perceived social support from teachers and substance use as risk factor. To investigate the nature of the moderator effect (of SES in the relationship between perceived social support from teachers and substance use as risk) for the two socio-economic groups (low and high), separate regression lines were calculated with teacher social support as the predictor variable and substance use as the criterion variable. The regression lines are represented in Figure 2.

Figure 2

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Teacher Support as Predictor of Substance Use as Risk Factor.



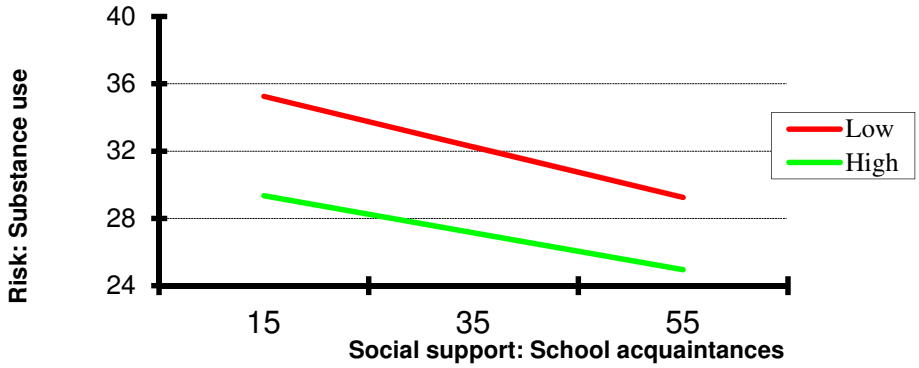
As in the case of Figure 1, it is also clear that when low levels of perceived social support from teachers are experienced by the adolescents, the group with lower SES status reveals much higher levels of substance use as risk than the adolescents in the higher SES group. For both groups the slope of the regression line is negative while only in the case of the lower SES group there is a significant negative correlation (r = -.273; p = 0.000) between their perceived support from teachers and substance use as risk. For this group, therefore, it can be inferred that the more they experience perceived support from teachers, the more likely they will be to manifest lower levels of substance use as risk. For the higher SES group, no statistically significant relationship (r = -.062; p = .422) was

found between the said two variables, and the same inference cannot be made. The moderator effect in this case indicates a difference in the strength of the bonds.

When perceived social support from school acquaintances was entered it was also significant at the 1% level [R^2 = .024, $F_{1;338}$ = 8.172, p = .005]. In the second step the product term between perceived social support from school acquaintances and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [ΔR^2 = .052, $F_{1;337}$ = 18.884; p = .000]. It can therefore be concluded that SES also moderates the relationship between perceived social support from school acquaintances and substance use as risk factor. To investigate the nature of the moderator effect (of SES in the relationship between perceived school support and substance use) for the two socio-economic groups (low and high), separate regression lines were calculated with school support as the predictor variable and violence as the criterion variable. The regression lines are shown in Figure 3.

Figure 3

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with School Acquaintances as Predictors of Substance Use as Risk Factor.



From Figure 3 it is evident that for both socio-economic groups (low and high) there is a decrease in substance use as a risk factor with an increase in perceived social support from school acquaintances. For both groups the slope of the regression lines is negative while for both groups significant negative correlations (r = -.213; p = .005 and r = -.180; p = .019 respectively) between their perceived social support from school acquaintances and substance use risk occurs. Therefore, it can be deduced that the more both these groups experience perceived social support from their school acquaintances, the more

likely they will be to display lower levels of substance use as a risk. However, the relationship between the two variables mentioned is stronger for the lower socio-economic group than for the higher socio-economic group.

Socio-economic status does not succeed in moderating any of the remaining relationships between perceived social support types and substance use as a risk factor.

The analyses reflected in Table 8 investigated the main and interaction effect of socio-economic status and the five perceived social support scales with sexual behaviour as risk factor.

Table 8

Hierachical Regression Analysis Predicting Sexual Behaviour as Risk Factor with Perceived Social Support as Independent Variable and SES as Intervening Variable

	Step 1 Standardised Regression Coefficients (*Beta*)	Step 2
Support: Parents	-.113	-.066
ParentsxSES		-.080
Model R^2	.013	.013
Model ΔR^2	.017	.004
Support: Teachers	-.058	-.017
TeachersxSES		-.080
Model R^2	.003	.003
Model ΔR^2	.008	.005
Support: Class mates	-.023	.043
Class matesxSES		-.108
Model R^2	.001	.001
Model ΔR^2	.008	.007
Support: Friends	-.055	-.006
FriendsxSES		-.087
Model R^2	.003	.003
Model ΔR^2	.008	.005
Support: School acquaintances	-.131	-.033
SchoolxSES		-.144**
Model R^2	.017	.017
Model ΔR^2	.029	.011

** $p \leq 0.01$ * $p \leq 0.05$

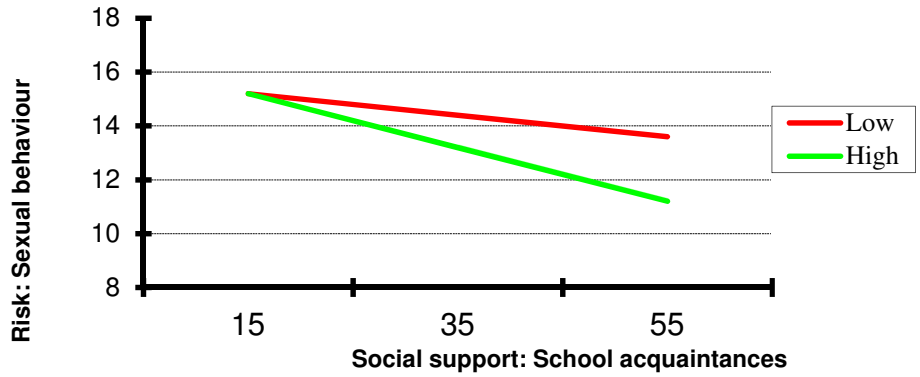
When perceived social support from school acquaintances was entered it was significant at the 5% level [$R^2 = .017$, $F_{1;338} = 5.920$, $p = .015$]. In the second step the product term between perceived social support from school acquaintances and SES was entered. The result indicates that a statistically significant interaction effect was found at the 5% level [$\Delta R^2 = .011$, $F_{1;337} = 3.924$; $p = .048$]. It can be deduced that the SES indeed

moderates the relationship between perceived social support from school acquaintances and sexual behaviour as risk factor.

To investigate the nature of the moderator effect (of SES in the relationship between perceived support from school acquaintances and sexual behaviour), separate regression lines were calculated for the two socio-economic groups (low and high) with perceived support from school acquaintances as the predictor variable and sexual behaviour as the criterion variable. The regression lines are shown in Figure 4.

Figure 4

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Perceived School Acquaintances Support as Predictor of Sexual Behaviour.



From Figure 4 it is clear that when low levels of perceived social support from school acquaintances are experienced by the adolescents, both groups show approximately the same degree of sexual behaviour as a risk. Although a decrease in both groups' regression lines occurs, only in the case of the higher socio-economic group does a significant negative correlation ($r = -.226$; $p = 0.003$) occur between their perceived support from school acquaintances and sexual behaviour as a risk . For this group, it can be inferred that the more they experience perceived social support from school acquaintances, the more likely they are to exhibit lower levels of sexual behaviour as risk. For the lower socio-economic group, no statistically significant relationship ($r = -.073$; $p = 0.346$) was found between the said two variables and the same inference cannot be made. For this group, there is a slight decrease in sexual behaviour as a risk factor in the presence of increased perceived social support from school acquaintances. The moderator effect thus

indicates that participants who have no urgent financial pressures and who experience their school environments as supportive are less likely to partake in risky sexual behaviour.

SES does not succeed in moderating any of the remaining relationships between perceived social support types and sexual behaviour as a risk factor.

In the section that follows, the moderator effect of SES in the relationship between resilience and risk behaviour (violence, substance use, sexual behaviour) will be investigated. The analyses reflected in Table 9 investigated the main and interaction effect of SES and the three resilience scales with violence as risk factor.

Table 9

Hierachical Regression Analysis Predicting Violence as Risk Factor with Resilience as Independent Variable and SES as Intervening Variable

	Step 1	Step 2
	Standardised Regression Coefficients (*Beta*)	
Resilience: Individual	-.068	-.045
IndividualxSES		-.066
Model R^2	.005	.005
Model ΔR^2	.008	.004
Resilience: Caregiver	-.121	-.094
CaregiverxSES		-.068
Model R^2	.015	.015
Model ΔR^2	.019	.004
Resilience: Contextual	-.039	-.021
ContextualxSES		-.073
Model R^2	.001	.001
Model ΔR^2	.007	.005

** $p \leq 0.01$ * $p \leq 0.05$

The results in Table 9 show that none of the interactions indicated in Step 2 yield a significant result at least at the 5% level. SES therefore fails to moderate any relationships between resilience factors and violence as a risk factor. Since results do not fall within the level of significance considered for this study, they will not be discussed any further.

The analyses reflected in Table 10 investigated the main and interaction effect of SES and the three resilience scales with substance use as risk factor.

Table 10

Hierachical Regression Analysis Predicting Substance Use as Risk Factor with Resilience as Independent Variable and SES as Intervening Variable

	Step 1	Step 2
	Standardised Regression Coefficients (*Beta*)	
Resilience: Individual	-.117	-.034
IndividualxSES		-.237***
Model R^2	.014	.014
Model ΔR^2	.063	.049
Resilience: Caregiver	-.172	-.076
CaregiverxSES		-.240***
Model R^2	.030	.030
Model ΔR^2	.078	.048
Resilience: Contextual	-.097	-.035
ContextualxSES		-.255***
Model R^2	.009	.009
Model ΔR^2	.070	.061

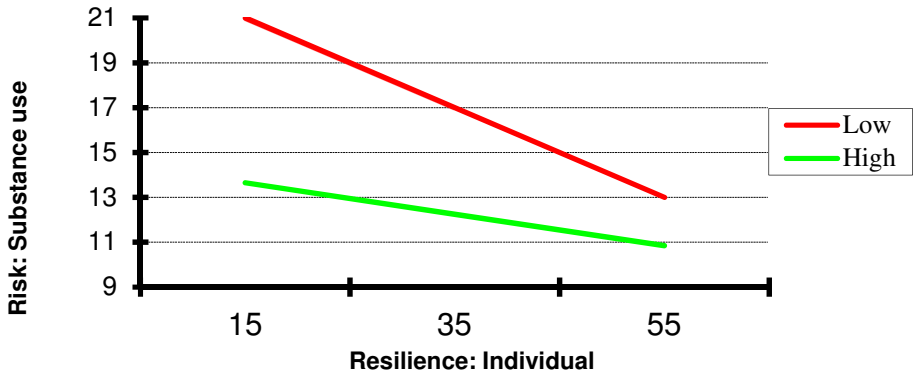
** $p \leq 0.01$ * $p \leq 0.05$

Table 10 shows that the relationships between substance use as a risk factor and all three resilience scales, namely individual, caregiver and contextual, are indeed moderated by the adolescents' SES.

When individual resilience was entered it was significant at the 5% level [$R^2 = .014$, $F_{1;337} = 4.660$, $p = .032$]. In the second step the product term between individual resilience and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [$\Delta R^2 = .049$, $F_{1;336} = 17.724$; $p = .000$]. Therefore, it can be deduced that SES moderates the relationship between individual resilience and substance use as risk factor. To investigate the nature of the moderator effect (of SES in the relationship between individual resilience and substance use), separate regression lines were calculated for the two socio-economic groups (low and high) with individual resilience as predictor variable and substance use as the criterion variable. The regression lines are shown in Figure 5.

Figure 5

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Individual Resilience as Predictor of Substance Use.



From Figure 5, it is evident that when low levels of individual resilience are experienced by the adolescents, the respondents from the lower SES group reveal much higher levels of risk regarding substance use than the respondents from the higher SES group. Although there is a decrease in both groups' regression lines, only in the case of the low SES group does a significant negative correlation (r = -.145; p = 0.049) occur between their individual resilience and substance use as risk. For this group, it can therefore be inferred that even in the presence of limited financial resources, participants who experience higher individual resilience, are more likely to manifest lower levels of substance use as risk. For the high SES group, no statistically significant relationship (r = -.104; p = 0.177) was found between the said two variables and the same inference cannot be made. For this group, there is a slight decrease in substance use as risk associated with an increase in individual resilience. The moderator effect in this case indicates a difference in the strength of the bonds.

When caregiver resilience was entered it was significant at the 1% level [R^2 = .030, $F_{1;337}$ = 10.253, p = .001]. In the second step the product term between caregiver resilience and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [ΔR^2 = .048, $F_{1;336}$ = 17.623; p = .000]. It can be concluded that SES indeed moderates the relationship between caregiver resilience and substance use as risk factor.

To investigate the nature of the moderator effect (of SES in the relationship between caregiver resilience and substance use), separate regression lines were calculated for the two socio-economic groups (low and high) with caregiver resilience as predictor variable and substance use as the criterion variable. The regression lines are shown in Figure 6.

Figure 6

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Caregiver Resilience as Predictor of Substance Use.

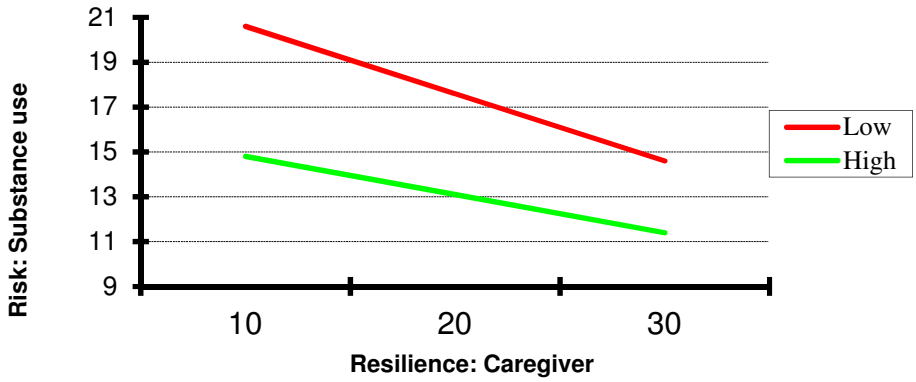


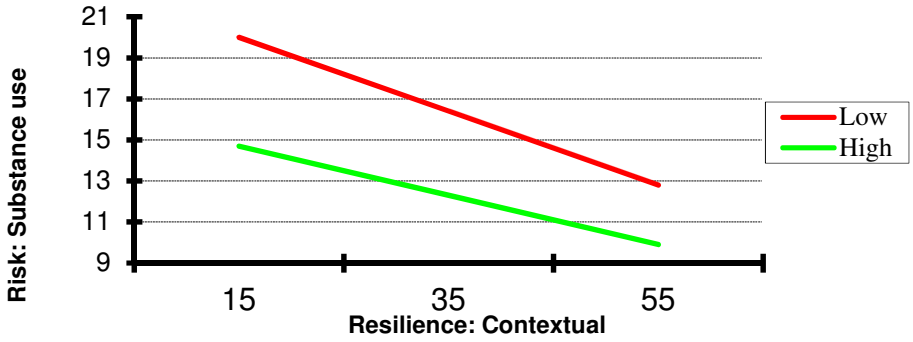
Figure 6 shows that for both groups there is a decrease in the regression lines. Although this is the case, only in the case of the lower SES group does a significant negative correlation (r = -.232; p = 0.002) between their caregiver resilience and substance use as risk exist. For this group, it can be concluded that the higher their caregiver resilience, the more likely they will be to exhibit lower levels of substance use as a risk. Thus, more resilient caregivers, even in the presence of limited financial resources, can have a reducing effect on the use of substances. For the higher SES group, no statistically significant relationship (r = -.123; p = 0.110) was found between the said two variables and the same conclusion cannot be made. For this group, there is a slight decrease in substance use as risk associated with an increase in caregiver resilience. The moderator effect in this case indicates a difference in the strength of the bonds.

When contextual resilience was entered it was not significant at at least the 5% level [R^2 = .009, $F_{1;333}$ = 3.187, p = .075]. In the second step the product term between contextual resilience and SES was entered. The result indicates that a statistically significant interaction effect was found at the 1% level [ΔR^2 = .061, $F_{1;332}$ = 21.784; p = .000]. It can therefore be concluded that SES also moderates the relationship between contextual resilience and substance use as risk factor. To investigate the nature of the

moderator effect (of SES in the relationship between contextual resilience and substance use) for the two socio-economic groups (low and high) separate regression lines were calculated with contextual resilience as predictor variable and substance use as the criterion variable. The regression lines are shown in Figure 7.

Figure 7

Regression Lines of Adolescents with Lower and Higher SES, Respectively, with Contextual Resilience as Predictor of Substance Use.



From Figure 7 it is evident that in this case there is a decrease in the regression lines of both groups. Only for the respondents from the lower SES group a significant negative correlation ($r = -.178$; $p = 0.022$) between their contextual resilience and substance use as risk exists. It can therefore be inferred that participants from lower socio-economic circumstances who experience more contextual resilience, are increasingly likely to manifest lower levels of substance use as risk. For the higher SES group, again, no statistically significant relationship ($r = -.109$; $p = 0.159$) was found between the two variables mentioned and the same inference cannot be made. For this group, there is a slight decrease in substance use as risk, with an increase in contextual resilience. The moderator effect in this case indicates a difference in the strength of the bonds.

The analyses reflected in Table 11 investigated the main and interaction effect of socio-economic status and the three resilience scales with sexual behaviour as risk factor.

Table 11

Hierachical Regression Analysis Predicting Sexual Behaviour as Risk Factor with Resilience as Independent Variable and SES as Intervening Variable

	Step 1	Step 2
	Standardised Regression Coefficients (*Beta*)	
Resilience: Individual	-.044	-.015
IndividualxSES		-.082
Model R^2	.002	.002
Model ΔR^2	.008	.006
Resilience: Caregiver	-.079	-.048
CaregiverxSES		-.077
Model R^2	.006	.006
Model ΔR^2	.011	.005
Resilience: Contextual	-.060	-.040
ContextualxSES		-.083
Model R^2	.004	.004
Model ΔR^2	.010	.006

*** $p \leq 0.01$ ** $p \leq 0.05$* $p \leq 0.10$

The results in Table 11 show that none of the interactions indicated in Step 2 yield a significant result at least at the 5% level. SES therefore fails to moderate any of the relationships between the resilience factors and sexual behaviour as a risk factor. The results do not fall within the level of significance considered for this study and will therefore not be discussed further.

Discussion

The overall aim of this study was to determine the prevalence of risk behaviour among adolescents in the Kimberley area of the Northern Cape Province. Three types of risk-taking behaviour; namely violence, substance use and risky sexual behaviour were investigated, and will be discussed below.

Before discussing the inferences made from this study, a brief overview of the descriptive statistics will be mentioned. The mean scores (see Table 3) for the violence category indicated that learners scored in the lower ranges of the scale (M = 14.63), reporting substantially lower than the scaled average score of 17.5. Participants' scores were much lower than the total score considered for violence on the scale, thus indicating a lower than average exposure to violence.

Substance use was divided into categories; namely alcohol use, marijuana use and the use of other drugs. Concerning alcohol use, participants' scores were in the lower range (M = 13.15) and fell below the scaled average score of 19. For marijuana use, scores fell in the higher range on the scale. The mean (M = 4.45) was however below the scaled average score of 8.5. The use of other drugs indicated scores falling into the lower range of the possible total score and the mean (M = 11.57) fell below the average score of 21. A lower prevalence was therefore found with regards to alcohol use and the use of other drugs. Marijuana, however, showed a higher prevalence amongst the learners.

For sexual risk behaviour, participants' scores were in the higher range of the scale with the M = 13.76 falling slightly above the scaled average score of 12.5. A high prevalence for sexual risk behaviour amongst the participants was established.

Concerning total risk-taking behaviour, participants' scores fell into the lower to middle range of the scale, indicating an average prevalence of overall risk behaviour amongst the adolescent sample (YRBSS; Centre for Disease Control and Prevention [CDC], 2012).

For all variables, skewness and kurtoses (see Table 4) values fell within normal limits. Values for skewness indicated slight to moderate skewness (Peat et al., 2008). Normal distribution for kurtosis (between -3 and +3) was obtained; with the exception of violence, that displayed a very high value, indicating that most respondents achieved similar scores (Brown, 1997). Reliability coefficients of all the variables measured (see Table 2) were acceptable, with the exception of Violence on the YRBSS and the three Resilience scales on the CYRM. Violence, as well as Individual, Caregivers and Contextual Resilience all measured above 0.6 but below the acceptable 0.7 within the social sciences (Lance et al., 2006). Substance use and Sexual behaviour, as well as all five Perceived Social Support scales showed high reliability indices.

To determine if there is a significant relationship between perceived social support, the level of resilience and risk behaviour, correlations between the various variables were calculated (see Table 5).

Results indicated that violence was negatively correlated to caregiver resilience with a coefficient of -.12 indicating a small effect size. The strength of this correlation was therefore small. Substance use showed a negative correlation to perceived social support

from parents (-.23), teachers (-.17) and school acquaintances (-.15), as well as individual (-.12) and caregiver resilience (-.17). In all cases, the correlations were small, falling below the acceptable medium effect size of .30. Furthermore, the negative correlation between sexual risk behaviour and perceived social support from parents (-.11) and school acquaintances (-.13) also displayed small effect sizes and were therefore small, yet significant correlations.

To investigate whether socio-economic status (SES) moderates the relationship between perceived social support, adolescent resilience, and risk behaviour, the following significant findings are discussed.

In discussing the inferred results, the first relationship investigated was between perceived social support (PSS), substance use as a risk factor and SES. Findings indicated that PSS from parents, teachers and school acquaintances was significantly (1% level of significance) correlated with substance use as a risk factor and SES as moderator.

Regarding the relationship with PSS from parents, it was found that participants from the lower SES group reported a higher risk for substance use as PSS from parents decreased. For the high SES group, a decrease in PSS from parents also increased the risk for substance use. Based on this finding it appears that for both SES groups, perceived parental support acts as a buffer against the risk for substance use; however, the risk for substance use is higher in the lower SES group. Researchers have established that parental support decreases the risk of the development of negative symptoms and risk behaviour during adolescence (Helman, 2011; Hendricks et al., 2015; Stice et al., 2004). Adolescents who experience more conflict and less support from parents are at higher risk of early drug use, drinking and smoking (Gutman et al., 2011). Additionally, socio-economic disadvantage within the South African context exacerbates the risk of partaking in delinquent behaviour, particularly in the absence of parental support (Callan, 2014; Louw et al., 2007; Ramirez et al., 2012). This therefore corresponds with the findings in this study that suggest that adolescents from lower socio-economic environments pose a higher risk of engaging in substance use than youth from higher socio-economic environments.

For the lower SES group, the relationship with PSS from teachers indicated that the more they experience PSS from teachers, the lower their risk of engaging in substance

use. However, for the higher SES group, no statistically significant relationship was found. As a result, it is deduced that perceived teacher support decreases the risk of substance use in adolescents from lower SES environments. These findings correspond with a study by Hodder et al. (2016) that found that adolescents who perceived support from teachers were less likely to engage in substance use than adolescents who did not. Moreover, youth from disadvantaged backgrounds are at higher risk of engaging in risk behaviour (Petersen et al., 2014) and teachers' support has been found to buffer against such risk behaviour (Camara et al., 2014; Cattley, 2004).

Concerning the relationship with PSS from school acquaintances, it was established that the risk of substance use was higher for participants from the lower SES group as their PSS from school acquaintances decreased. Substance use risk also increased as PSS from school acquaintances decreased for the higher SES group. Therefore, it appears that perceived school acquaintance support acts as a protective factor against substance use for both groups. However, the impact is somewhat greater for adolescents from lower SES backgrounds. Various researchers have found a correlation between peer influence and substance use; particularly that certain types of peer influence and peer substance use is a strong predictor of adolescent substance use (Allen et al., 2012; Hendricks, et al., 2015; Peltzer et al., 2007). However, the contrary is also true. Ramirez et al. (2012) found that when fewer of their friends engaged in substance use, they too were more likely to be abstinent. Additionally, the result in this study also correlates with findings by Hombrados-Mendieta et al. (2012) who posit that classmates and peers offer significant support during adolescence that acts as a buffer against risk behaviour. Since stressors associated with low SES can increase participation in risk behaviour (Petersen et al. 2014), it appears support from the school environment had a larger positive impact on adolescents from these environments as opposed to adolescents from higher SES backgrounds within this study.

Next, the relationship between PSS, sexual behaviour as a risk factor and SES was investigated. It was found that PSS from school acquaintances was significantly (5% level of significance) correlated with sexual behaviour as a risk factor and SES as moderator.

Results indicated that the relationship between PSS from school acquaintances and sexual risk behaviour was only significant for the higher SES group. Participants from the higher SES group reported a lower likelihood of engaging in sexual risk behaviour

with increased PSS from school acquaintances. It can be concluded that participants who have no pressing financial pressures and experience their school environments as supportive are less likely to partake in sexual risk behaviour. Griffiths et al. (2011) postulate that support from friends at home and school, as well as family, holds a superior position to support from other sources. Moreover, peer influence has a consistent impact on adolescent behaviour (Brechwald & Prinstein, 2011), whether it be positive or negative (Padilla-Walker & Bean, 2009). Widman et al., (2016) hold that peer influence and support is especially relevant for sexual risk behaviour. Wang et al. (2014) also agree that sexual risk behaviour decreases when adolescents experience a higher level of support. However, not all adolescents are susceptible to peer influence; some remain resilient while others are more vulnerable to conformity demands (Brechwald & Prinstein, 2011). In this study, there was only a slight decrease in sexual risk behaviour with an increase in support for the adolescents from lower socio-economic backgrounds, suggesting that poverty indeed poses a risk factor for developing sexual risk behaviour (Burke et al., 2015). Therefore, only the adolescents with fewer socio-economic stressors were less likely to engage in sexual risk behaviour when they perceived their school environments as supportive.

The next relationship to be investigated was the relationship between resilience, substance use and SES. Findings indicated that individual, caregiver and contextual resilience were significantly correlated (5% and 1% level of significance respectively) with substance use as a risk factor and SES as moderator.

In the case of individual resilience and substance use as risk, only the lower SES group held a significant negative correlation between the two variables. It could therefore be inferred that the higher their individual resilience, the lower their risk of engaging in substance use. Therefore, even in the presence of socio-economic stressors, participants who experience higher individual resilience are more likely to manifest lower levels of substance use as risk. As results have indicated, this study correlates with Coleman and Hagell's (2007) findings that despite inequalities based on class and location, adolescents from lower SES backgrounds are capable of developing resilience. In fact, a study conducted by Van Breda et al. (2015) in South Africa, found that adolescents who scored high on resilience were often from disadvantaged socio-economic backgrounds. Furthermore, Loke and Mohd-Zaharim (2019) agree that adolescents with a higher level

of resilience engage in fewer risk behaviours. Particularly in the case of substance use, adolescents with a high level of resilience are less likely to engage in substance use as opposed to adolescents with a lower level of resilience (Weiland et al., 2012); thus coinciding with this study's finding.

Again, only in the case of the lower SES group a significant negative correlation was established between caregiver resilience and substance use as risk. For this group, it was concluded that the higher their resilience as a result of their caregivers' contributions, the less likely substance use posed as risk behaviour. Thus, if caregivers help to build resilience, even in the presence of limited financial resources, it can have a reducing effect on the use of substances. South African researchers postulate that individual capacity, family/caregiver and social relationships are equally important in building resilience within the South African context (Theron & Theron, 2013; Vermeulen & Greeff, 2015). In addition, Ungar and Liebenberg (2011) also hold that relationships with caregivers play a crucial role in decreasing adolescents' engagement in risk behaviour. Since poverty on its own poses as a risk factor for engaging in risk behaviour (Callan, 2014; Petersen et al., 2014), caregivers that contribute in building adolescent resilience within the context of poverty, reduce their risk of engaging in risk behaviour (Parchment et al., 2016).

Finally, the lower SES group indicated a significant negative correlation between contextual resilience and substance use as risk. Therefore, it could be inferred that adolescents from lower socio-economic circumstances who experience more contextual resilience, are more likely to manifest lower levels of substance use as risk. It can be deduced that an increase in resilience as a result of positive and supportive contextual factors in low socio-economic environments, decreases the likelihood of adolescents engaging in substance use. According to Mosavel et al. (2013) resilience is strengthened by community connectedness for adolescents at risk of engaging in risk behaviour. Roos and Temane (2007) hold that lower socio-economic environments often possess resilience-promoting resources such as families and neighbours who provide mutual support. Therefore, contextual resilience in this study had a larger impact for adolescents from the lower SES grouping than from the higher SES grouping. Furthermore, Weiland et al. (2012) also found that overall resilience (individual, caregiver and contextual) reduces the risk of adolescents participating in substance use.

Limitations of the Study

Various limitations exist within this study. The generalisability may be limited by the methodology, and results should be interpreted in light of this.

Firstly, since this was a quantitative, correlational study, causality could not be determined. Secondly, a non-probability, convenience sampling method was utilised; thus not allowing everyone in the population the same chance of being selected. Additionally, as a result of employing this method, the higher socio-economic (HSE) group consisted of only Grade 9 learners ranging from ages 14 to 16. These factors may have affected the generalisability of the study to the entire adolescent population, due to limited sample representation and the narrow age range of the HSE group. Thirdly, the study was conducted at a particular point in time, therefore, no change in the variables over time was considered. Finally, self-report measuring instruments offer an opportunity for the distortion of results, given the inherent intentions of the participant. This may lead to participants providing socially conforming information that may not be a true reflection of their perceived support, risk or resilience. These are risks that the researcher tries to mitigate through adequate prior information and education before participants provide assent; however nothing can be guaranteed. Additionally, the questionnaires were only available in English. This may have posed a challenge in terms of comprehension for participants who have a different home language.

Recommendations for Future Research

To address the aforementioned limitations, it is suggested that future qualitative studies be conducted to investigate the effect of socio-economic status in relation to perceived social support, risk, and resilience. Qualitative studies could provide a more in-depth understanding of these variables within the South African context.

Random sampling could be employed to allow a fair and equal chance of selection for the study. In particular, stratified random sampling could ensure that representative samples are obtained with regard to constructs such as age, race, and socio-economic status. Furthermore, generalisation to adolescents could be established by including participants from both socio-economic backgrounds that fall within the early and late adolescent life stages.

It is suggested that longitudinal research studies be conducted to assess the long-term effects of socio-economic status on perceived social support, resilience and risk behaviour. This would also be beneficial in considering change in the variables over time. Additionally, semi-structured interviews from a qualitative perspective could be utilised in an attempt to curb intentional bias and ensure that questionnaires were fully understood. Finally, questionnaires could be made available in participants' home languages (predominantly Afrikaans and Setswana) to ensure that they are comprehendible and answered accurately.

Contributions of this Study

Despite the abovementioned limitations, this study can contribute to the existing knowledge base concerning socio-economic status, perceived social support, resilience and risk behaviour in adolescents within the South African context. The findings in this study can be utilised to create interventions / psycho-education programmes in which parents and teachers may be educated about the aforementioned factors. Furthermore, future researchers can build on these findings and add to the body of literature addressing the mitigation of risk behaviour among South African learners.

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Appendix A

Questionnaires

Appendix B

Approval letter from the Department of Education

Appendix C

Ethical Clearance from the University of the Free State