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PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Masters Research Report

The Relationship between Risk-Taking Behaviour and Perceived Stress in Male, Affluent Adolescents and the Protective Effects of Perceived Parenting Style and Resilience Potential

By

Jennifer King

809462

Supervised by Adri Vorster

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A research report submitted in partial fulfilment for the degree

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in the

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Abstract

International research has recently identified youth from a high socioeconomic status (SES) backgrounds as the "new at risk group," who engage in increased risk-taking behaviour as a means to relieve stress. In South Africa, there seems to be little research on both the stress levels and risk-taking behaviours of affluent adolescents, or the variables that play a role in minimising these concerns.

The primary objective of the study was to investigate the relationship between perceived levels of stress and levels of risk-taking behaviour in male affluent adolescents. Males have been identified as the population most likely to engage in risk-taking behaviour, thus this study focused on this demographic. In light of international research, which identified parenting style and resilience as two important protective factors that minimise risk-taking behaviour, these variables were also investigated. Thus, the study additionally examined the relationships between perceived parenting style and level of risk-taking behaviour; perceived parenting style and resilience potential and between resilience potential and perceived stress. In addition, it explored the role of resilience potential and parenting style as possible moderating variables in the relationship between stress and risk-taking. Parametric correlation analysis and linear regressions were calculated to determine the association and relationship between the variables. In addition, moderated multiple regression analysis were conducted. Participants in the study were 59 male adolescents who attend a prominent private school in Johannesburg.

Correlation analysis indicated that there is a significant positive association between authoritative (father and combined) parenting styles and resilience potential (r = .368, p

= .004*; r* = .364*, p* = .005*,* respectively). Additionally, regression analysis indicated a significant, positive relationship between these same variables; results pertaining to fathers authoritative style indicated a strong relationship, $F_{1,57} = 8.923$ where $p = .004 < .05$, $t_{1,57} = 5.017$ where $p = .004 < .05$, $\beta = .727$, while a moderate relationship was indicated for combined authoritative style, $F_{1,57} = 8.721$ where $p = .005 < .05$, $t_{1,57} = 2.672$ where $p = .005 < .05$, $\beta = .501$. A significant negative association was found between resilience potential and perceived stress ($r = -.574$, $p = .000$). Furthermore, a significant, weak, negative equation was found between perceived resilience potential and perceived stress, $F_{1,57} = 24.325$ where $p = .000 < .05$, $t_{1,57} = -4.932$ where $p = .000 < .05$, $\beta = -.331$. Correlation analysis indicated a low to moderate, positive correlation between perceived stress and risk taking behaviour ($r = .369$, $p = .004$), while regression analysis indicated a significant, weak to moderate, positive regression equation between perceived stress and risk-taking, $F_{1,57} = 8.977$ where $p = .004 < .05$, $t_{1,57} = 2.996$ where $p = .004 < .05$, $\beta = .37$. Thus, the results of this study indicate that father's authoritative parenting and combined overall household authoritative style is associated with increased resilience potential. Increased resilience potential is in turn associated with reduction in perceived levels of stress, which resultantly is associated with reduced risk-taking behaviour.

Keywords: perceived stress, resilience potential, perceived parenting style, risk-taking behaviour, affluent, socioeconomic status, South Africa

Index of Abbreviations: socioeconomic status (SES), The 3rd National Youth Risk Behaviour Survey 2011 (2011 NYRBS), South African Audience Research Foundation (SAARF), Living Standards Measure (LSM), South African Revenue Service (SARS) Parental Authority Questionnaire (PAQ), Connor-Davidson Resilience Scale (CD-RISC) and the Perceived Stress Scale (PSS)

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Lastly, I am grateful to the staff at the participating school, thank you for all your effort and support through the data collection process. In addition to all of the participants, thank you for spending a lengthy period of time completing questionnaires. Your participation is appreciated.

Declaration

I, Jennifer Sarah King, declare that this research report is my own, unaided work. It is submitted for the degree of Master of Arts in Educational Psychology by Coursework and Research Report at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at this or any other university.

Sign: _____

Date: _____

Dedication

Firstly for my parents; your strength, support, wisdom and guidance mean more than you know.

To my grandparents, Mary and Douglas, who brag about my achievements to anyone willing to stand still long enough to listen.

Lastly for my cousin Justine, your strength, courage and determination are inspiring. I admire your fighting spirit and am blessed to know someone so courageous.

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CHAPTER ONE: INTRODUCTION

1.1. Introduction

International research has identified that youth from high socioeconomic status (SES) backgrounds are the "new at risk group" (Koplewicz, Gurian, & Williams, 2009) who have been found to engage in risk-taking behaviour as a means of relieving stress (Luthar, 2013; Luthar & Barkin, 2012). As a result, international research studies are increasingly focussed on investigating and addressing the issues faced by this population, as well as the factors that help reduce their high stress levels. However, in South Africa, there seems to be little research on the risk-taking behaviours of adolescents from high-SES families or the variables that play a role in minimising their daily stressors and tendency to engage in risky behaviour.

As far as protective factors are concerned, international research has shown that parenting style and resilience are two important factors that reduce risk-taking behaviour. Characteristics of resilience such as hardiness, self-esteem, social support, optimism, and positive affect are important factors that protect adolescents from engaging in risk-taking behaviour (Steinhardt & Dolbier, 2008; Zimmerman, 2013). In addition, parenting style is also a pivotal protective factor that moderates risk-taking behaviour in adolescents; parental monitoring, clear boundaries, high level of parental involvement and a mutually affectionate parent-child relationship are some of the factors that seem to play a key role (Boyer, 2006; Bronte-Tinkew, 2006; Huebner & Howell, 2003; Kuppens, Grietens, Onghena, & Michiels, 2009; Lau & Yuen, 2013; Leather, 2009). Although extensive research has been carried out on both resilience and parenting and their association with

risk-taking in adolescence, international research has only recently begun to investigate their impact on affluent youth. As mentioned, there is little South African research on high-SES youth as a whole. In addition, at the time of writing this report there were no published research findings on parenting and resilience and its effects on risk-taking in South African high-SES youth.

For this reason, the primary aim of this research project was to investigate the relationship between perceived level of stress and level of risk-taking behaviour in adolescents from high-SES families. In addition, it focused on the two main variables, resilience and parenting style, which potentially act as protective factors against the pressures that these adolescents experience and the risky behaviours they engage in to manage their stressors. Furthermore, as indicated by numerous research studies, males are more likely to engage in risk-taking behaviour (Alberts, Elkind, & Ginsberg, 2006; Byrnes, Miller, & Schafer, 1999; Harris & Jenkins, 2006), thus this study focused on male adolescents.

1.2. Rationale

Affluent youth seem to be more vulnerable than they were in previous generations (Luthar, 2013). They have stereotypically been seen as a "low risk" population, as it was assumed that they were no different to the vastly researched middle-class (Luthar, 2003; Luthar & Latendresse, 2005). However, international research has shown that they have significant difficulties in adjustment and socialisation, which places them in the "high risk" category (Luthar, 2003). Recent research has shown that high-SES youth may be more distressed than other youth and in fact show increased prevalence of depression and

anxiety and higher incidents of engagement in risky behaviours, such as substance use, cheating, stealing, vandalism and eating disorders (Luthar, 2013; Luthar & Barkin, 2012). Engagement in risky behaviours such as these can have long-term negative consequences for the adolescents' development and long-term costs (Luthar, 2013) on their families and the country as a whole. For instance, substance abuse has negative effects on the developing brain and body and can impair current and future cognitive functioning and coping ability (Luthar, 2013). Similarly, increased stress and depressive episodes have short-term and long-term effects and can impact both physiological and psychological wellbeing (Luthar, 2013).

Although in recent years international researchers have begun addressing the needs of this population group, to date little research has been conducted internationally (Koplewicz et al., 2009) and in South Africa almost no research has been undertaken. However, as indicated, this population is increasingly at risk (Koplewicz et al., 2009) and ignoring the issues of affluent youth is ill advised. It is thus vital that this matter be explored in more depth, especially when taking into consideration that although this group is rich in resources they rarely receive treatment and intervention until they are in academic or legal trouble (Koplewicz et al., 2009).

From the perspective of gender, males have been identified, across a number of domains, as being more likely to engage in risk-taking behaviours (Alberts et al., 2006; Byrnes et al., 1999; Harris & Jenkins, 2006) and are more likely to ignore the dangers associated with risk (Byrnes et al., 1999; Gullone & Moore, 2000). It has been suggested that they have a tendency to misjudge the consequences of risk-taking behaviour and are more

susceptible to risk-taking when status and hierarchy can be established amongst other males (Cohen & Prinstein, 2006). South African data on gender and risk-taking suggests that illicit drug use is more common amongst South African males, as opposed to females (Peltzer, Ramlagan, Johnson, & Phaswana-Mafuya, 2010). Furthermore, results from the 3rd South African National Youth Risk Behaviour Survey 2011 (2011 NYRBS), which is one of the most extensive South African surveys on youth behaviour, has indicated that males are generally more susceptible to risk-taking behaviours than their female counterparts (Reddy et al., 2013).

International research has shown that resilience is an important protective factor for at risk youth, as it assists them in avoiding negative behaviours such as substance abuse and delinquency (Fergus & Zimmerman, 2005; Zolkoski & Bullock, 2012). These behaviours are often associated with excessive stress in adolescence (Luthar, 2013). Resilience also allows children to cope with life's changes more effectively (Mandleco & Peery, 2000) and helps them to succeed despite adversity (Zolkoski & Bullock, 2012). Mandleco and Peery (2000) found that children who tend towards normal development under stress and adversity have some of the characteristics commonly associated with resilience; the ability to maintain control and competence in difficult circumstances and the ability to seek help and assume responsibility for their actions. These factors make resilience a potentially vital attribute for South African high-SES adolescents, specifically related to reducing their levels of stress and thus reducing risk-taking behaviours.

Similar to resilience, international research has also indicated that parenting and parenting styles are important factors that both reduce the stress experienced by youth

and the manner in which these adolescents deal with their stressors. For instance, parental monitoring, which is considered a key factor in parenting and parenting style (Berk, 2009), is an important predictor of substance abuse in high-SES adolescents (Luthar & Barkin, 2012). Luthar and Barkin (2012), found that adolescents who believed their parents would respond with lax consequences were more prone to high level of substance usage. Additionally, they established that this population group showed a marked increase in drinking and getting drunk. Binge drinking seemed to be commonplace and "getting wasted" appeared to be a peer norm (Luthar, 2013).

In addition, attachment theorists further suggest that parents provide the security upon which protective factors such as resilience are built. They assert that a supportive environment allows children to learn about stressors and teaches them how to cope with stress successfully (Swanson, Valiente, Lemery-Chalfant, & Caitlin O'Brien, 2011). This makes parenting not just a protective factor in itself, but also a factor that potentially develops other protective mechanisms like resilience.

For these reasons, while the main aim of this research was to investigate the relationship between levels of stress and risk-taking behaviour, it also looked at the potential protective influence of resilience and parenting style and examined how these variables influence and potentially protect against increased levels of stress and increased risk-taking behaviour.

1.3. Aim of the Research Study

The primary aim of this research project was to investigate the relationship between perceived level of stress and level of risky behaviour in adolescents from high-SES

families. It also investigated the relationship between resilience potential and perceived level of stress. Furthermore, it explored the role of resilience potential as a moderating variable in the relationship between levels of stress and risk-taking behaviour in the sample. It also investigated the relationship between perceived parenting style and level of risky behaviour and the relationship between perceived parenting style and resilience potential. In addition, it explored the role of parenting style as moderating variable in the relationship between levels of stress and risk-taking behaviour.

1.4. Research Questions

1.4.1 Is there a relationship between perceived levels of stress and risk-taking behaviour in male, high-SES adolescents?

1.4.2 Is there a relationship between resilience potential and level of perceived stress in male, high-SES adolescents?

1.4.3 Does increased resilience potential have a moderating effect on the relationship between levels of stress and risk-taking behaviour in a sample of high-SES adolescents?

1.4.4 Is there a relationship between perceived parenting style and risky behaviour in male, high-SES adolescents?

1.4.5 Is there a relationship between perceived parenting style and resilience potential in male, high-SES adolescents?

1.4.6 Does parenting style have a moderating effect on the relationship between levels of stress and risk-taking behaviour in a sample of high-SES adolescents?

1.5. Important Concepts Outlined in the Research

Certain main concepts are important to this research report, as they are the key factors that are discussed and investigated in this study. For the purposes of this study, these concepts are outlined as follows.

1.5.1. Affluent Youth

The concept of affluence and high socioeconomic status (SES) are used interchangeably and are defined in both economic terms and in terms of social status (Baker, 2014). From a social perspective SES is defined in terms of access to resources, which appears to be a definition universally agreed upon by most social scientists (Baker, 2014; Bornstein & Bradley, 2014; Kominski et al., 2012). This is explored in more detail in Chapter 2. The economic definition of high-SES links to the social perspective, as those with more access to economic recourses will have more access to other recourses as well ("Living Standards Measure", 2016). Those who fall in or above the income bracket of above R631 000 per annum, which according to the South African Revenue Service places them at or above the approximate mean of the current second highest tax bracket (R550 101 – R701 300) (2015) will thus be defined as having a high-SES. From the perspective of this study, affluent or high-SES youth / adolescents are children between the ages of 13-18 years of age whose families fall within this income bracket.

1.5.2. Perceived Stress

Perceived stress is another important variable and is understood as the feelings of pressure to excel and achieve that are often experienced, in excess, by high-SES

adolescents (Luthar, 2013; Randall, Bohnert, & Travers, 2015; Travers, Bohnert, & Randall, 2013). This pressure increases distress and personal levels of stress (Luthar, 2003; Luthar & Barkin, 2012), often causes increase in anxiety and depression (Luthar & D'Avanzo, 1999) and can play out in a variety of risk-taking behaviours (Luthar, 2013).

1.5.3. Risk-taking behaviours

Risk-taking behaviours are understood as behaviours that include an element of risk for the individual undertaking the behaviour. In addition, these behaviours are understood as actions that may place others, who are exposed to the individual, at personal risk. Behaviours such as alcohol and substance abuse, cheating, stealing, vandalism, self-harm and early onset sexual risk-taking or sexual promiscuity have been identified by international research as the core risk-taking behaviours undertaken by affluent adolescents (Brook, Morojele, Zhang, & Brook, 2006; Luthar, 2003, 2013; Luthar & Barkin, 2012; Luthar & Sexton, 2004; Skeer, McCormick, Normand, Buka, & Gilman, 2009).

1.5.4. Resilience Potential

Within the context of this study the term resilience potential refers to the intrapersonal and interpersonal characteristics, such as self-esteem, self-reliance, self-regulation and internal locus of control (Agaibi & Wilson, 2005; Armstrong, Birnie-Lefcovitch, & Ungar, 2005; Fergus & Zimmerman, 2005; Killian, 2004; Mandleco & Peery, 2000; Rutter, 1987; Zolkoski & Bullock, 2012), that are often defined as resilience (Mandleco & Peery, 2000). From the perspective of this research these characteristics are not seen as resilience itself, but as characteristics that simply indicate the individual's potential to

exhibit resilience under stress. These characteristics are identified as the protective factors that help buffer the effects of stress and difficult life circumstances (Dumont & Provost, 1999; Fergus & Zimmerman, 2005). Possessing some or all of these characteristics thus increases the individual's potential to show resilience under stress. Resilience is defined as those have the desired personality characteristics that are used as tools to reach a positive outcome and "bounce back" from adversary.

1.5.5. Parenting Style

Parenting style has been conceptualised using Baumrind's (1966) theory. He identified three parenting styles, authoritative, permissive and authoritarian, which are the three parenting styles used in this study. His theory is still seen as relevant today as it, or a variation it, has been used by the majority of studies conceptualising parenting style to date (Turner, Chandler, & Heffer, 2009). *Authoritative parents* have been identified as accepting, warm, sensitive and adaptive; they are involved with their children and grant appropriate autonomy and exert age appropriate control (Alegre, 2011; Berk, 2009; Marsiglia, Walczyk, Buboltz, & Griffith-Ross, 2007; Turner et al., 2009). *Authoritarian parents* are much less accepting and use much more coercive control to gain compliance (Berk, 2009). They are excessively demanding and tend to lack warmth and affection (Marsiglia et al., 2007). *Permissive parents* tend to exert little control over their children and use minimal discipline in parenting; they have little or no rules for their children and rarely hold them accountable for their actions (Berk, 2009; Turner et al., 2009).

1.6. Outline of the Report

Chapter One of this research report introduces the research topic and outlines the aims, research questions and rationale of the study. Chapter Two includes a review of the literature pertaining to stress and risk-taking behaviour in adolescents, with particular reference to these variables in high-SES, male adolescents. In addition, it reviews literature pertaining to the protective effect of parenting and parenting style and resilience on risk-taking behaviour. In Chapter Three the research methodology in terms of procedure, sampling, data collection and analysis are discussed. Chapter Four presents a detailed record of the results and Chapter Five discusses of the results of the study. In Chapter Six the strengths, limitations and recommendations for future research in this area are presented. In addition, conclusions are presented in this final chapter.

CHAPTER TWO: REVIEW OF RELATED LITERATURE AND STUDIES

2.1. Introduction

A literature review is an essential first step when undertaking a research project (Vom Brocke et al., 2009). It in essence summarises the subject field and aims to guide the research process, uncovers sources that are relevant to the topic and unearths variables that have bearing on the research question (Terre Blanche, Durrheim, & Pianter, 2006)As past research is explored, gaps within the literature will emerge that will assist the researcher in directing the investigation towards an underexplored area within the desired topic (Terre Blanche et al., 2006). This helps to ensure that research is not simply a repetition of previous work and directs the researcher to an area that will offer a valuable contribution to the existing body of research on the subject matter (Vom Brocke et al., 2009). In addition, the process of literature review assist the researcher in refining the research problem by identifying a theoretical framework (Terre Blanche et al., 2006). This framework reveals the interrelatedness of variables upon which hypothesis and research questions can be derived and refined (Terre Blanche et al., 2006).

Thus, the purpose of this literature review is to present the key variables under investigation; feelings of stress, resilience, parenting style and adolescent risk-taking behaviour. In addition, it will also present the theoretical model which will guide the study and more specifically the analysis of the data. The literature review will look at past research that has been conducted in the field from an international and South African perspective and identify the gaps that this study proposes to investigate.

2.2. Defining High-SES Groups

At a basic level SES is the measure of both the economic and social status of an individual (Baker, 2014). Social scientists do not fully agree on the exact definition of SES (Bornstein & Bradley, 2014), as some assert that SES needs to be measured by looking at education, income and occupation (Baker, 2014), while others include factors such as neighbourhood and school resources, as well as cultural and capital resources (Kominski et al., 2012). There seem to be a sense of agreement however in terms of access to resources. This access, or lack of access is one of the main defining characteristics of SES, almost universally (Baker, 2014; Bornstein & Bradley, 2014; Kominski et al., 2012) and for this reason it is the definition of SES used in this research.

Using this understanding makes the South African Audience Research Foundation's (SAARF) Living Standards Measure (LSM) a useful tool when establishing SES, as it uses access to resources as its method of identifying the standard of living experienced by South Africans. The LSM was created in the late 80s and is the marketing research tool most widely used in Southern Africa ("Living Standards Measure", 2016). It was designed to segment the South African market, not just in economic terms but also in terms of social status. The measure groups people according to their living standards, using criteria such as ownership of household appliances, vehicles and technological devices, as well as degree of urbanisation and access to services (Martins, 2012; "Living Standards Measure," 2016). From 2001 the LSM has divided the South African population into 10 groups; group 1 being the lowest and group 10 being the highest. It further divides each group within itself into high and low status ("Living Standards

Measure", 2016). In 2014 SAARF identified that only 2.9% of the population fitted into the LSM 10-high group; this group was identified to have an average household income of R42 170 per month, which translates to just over R506 000 per annum ("South African Audience Research Foundation: Audience Research and Segmentation Tools", 2014).

In a 2011 study the UNISA Beuro of Market Research, (2011) identified that only 1.9% of the South African population were in the income bracket of above R500 000 per annum. This placed them at or above the approximate mean of the second highest tax bracket (R455 001 - R580 000) at that time ("Budget Pocket Guide", 2011). Applying a standard 6% increase in salaries would identify that the current equivalent population would fall in or above the income bracket of R631 000 per annum. This, according to the South African Revenue Service, places them at or above the approximate mean of the current second highest tax bracket (R550 101 – R701 300) (2015). The assumption has been made that the tax brackets for South Africa follow the gross earning of the population and are linked to the growth of the economy. For this reason high-SES will be considered as any family that falls in or above the household income bracket of R631 000 per annum. Although this is essentially an economic definition, this economic bracket from the perspective of the LSM would then ensure that members of these families have access to the resources as defined in the LSM for group 10-high. Those that fall into group 10-high would have access to the basic resources such as a flushing toilet and running hot water, that are applicable to lower groups, but would also have access to more complex resources such as motor vehicles, home security, mobile phones, home theatre systems and other technological devices that significantly impact lifestyle (“South African Audience Research Foundation Segmentation Tools”, 2012).

2.3. Understanding Risk and Stress in High-SES Groups

High-SES adolescents are under tremendous pressure to achieve (Luthar, 2013; Randall et al., 2015; Travers et al., 2013) and are often overscheduled with extramural activities (Luthar & Sexton, 2004), which has a great deal of impact on their anxiety and levels of stress. They are often pressurised to excel in numerous academic and extracurricular pursuits in order to increase their future academic prospects, which decreases their leisure time and adds to their distress (Luthar, 2003). International research has shown that this pressure is one of the factors that places affluent adolescents at a higher behavioural risk in domains such as substance abuse and rebellious rule breaking behaviours, such as cheating and stealing (Luthar, 2013; Luthar & Barkin, 2012). In an international study investigating the shift of heroin use from inner-city youth to suburban youth, participants indicated stress, at home and school, as the precipitating events culminating in their initial heroin use (Luthar & Sexton, 2004). Similar research comparing inner-city youth to high-SES youth found that by the 12th grade it is the high-SES and not the low-SES youth who show the highest use of marijuana, inhalants and tranquilizers (Luthar, 2003). This in part may be related to the fact that alcohol and illicit drugs are more available to this group because of their affluence and access to resources. Humensky (2010) for instance found that the population of college students who have more money available to them engage in greater alcohol and illicit substance use.

In South Africa there is a lack of research related to the substance using behaviours of high-SES youth. However, it is important to understand that within the South African context substance abuse and misuse appears to be a common concern. Children are

becoming substance users at an increasingly young age and substance abuse has become an epidemic that has increased moral decay, crime and violence in the country (Magadze & Roelofse, 2012). Alcohol use in children and young adolescents is becoming increasingly concerning, as early onset alcohol use has been associated with increased risk of future alcohol problems and illicit drug use (Iwamoto & Smiler, 2013). According to the United Nations Office on Drugs and Crime (UNODC) (2002) South Africa has been identified as the largest market for illicit drugs in Southern Africa; they identified that this is partly due to the affluence within the region. In a subsequent report the UNODC (2004) highlighted a research study conducted on primary school children in Cape Town. This study indicated that the average age of first drug use was 12.1 years. They additionally reported that 20% of primary school children and 45% of high school children have experimented with drugs while 32% of the high school children were still using drugs. Subsequent research in the Western Cape, conducted with grade 8-10 learners, indicated that 66% of learners reported using alcohol at some point. One third reported early onset of alcohol use (before age 13) and at least 10% reported use on a weekly basis (Morojele et al., 2013). In addition, their research also showed that 23.6% of learners frequently used cannabis and 52% of these reported high use in the last year.

Internationally, affluent adolescents have shown a marked increase in anxiety and depression (Luthar & D'Avanzo, 1999). Research has indicated that, in relation to national norms, they experience anxiety, depression and somatic symptoms twice as often as their peers (Luthar, 2013). After six teenagers committed suicide in a space of three years a New Jersey psychologists indicated that the tragedies reflected emotional problems derived from the stress and pressure to perform (Luthar & Sexton, 2004). A

young female who had attempted suicide echoed this sentiment and indicated that she felt overwhelmed by the amount she had to accomplish and believed that many of her cohort felt excessive and overwhelming pressure to succeed at school and go to college (Luthar & Sexton, 2004). Unfortunately this population only seem to receive clinical treatment once they are failing school, find themselves in trouble with the law (Koplewicz et al., 2009) or have attempted suicide (Luthar & Sexton, 2004). This, according to Koplewicz et al. (2009), may be related to the fact that although they show signs and symptoms of emotional difficulties, their relative wealth is seen as a form of protection and they are thus not refereed to clinical services. In addition, they have identified that parents may attempt to intervene themselves, in stead of consulting a professional and at times the stigma of requiring mental health services interferes with help seeking.

The 2011 NYRBS reported that almost one quarter of South African learners indicated feelings of sadness or hopelessness in the past six months and had ceased some of their regular activities for more than a two-week period. They noted that 17.6% had contemplated suicide, 15.6% had experienced suicidal ideation, where they had come up with a plan for committing suicide, and 31.5% had attempted suicide at least once (Reddy et al., 2013). Suicide and depression have been identified as current concerns for South African youth and "constitute a major public health problem" (Schlebusch, 2012a, p. 178). On average, suicide constitutes 9.5% of all non-natural deaths in South African children (Schlebusch, 2012b). Furthermore, in the last 15 years, according to the South African Depression and Anxiety Group, there has been a 50% increase in the suicide rate for children aged 10-14 years (2016).

Internationally it has been shown that crippling anxiety and depression often plays out in theft and "random acts of delinquency" such as petty theft and vandalism (Luthar, 2013, p. 2). Furthermore, it has been argued that some of the most destructive vandals reside in affluent communities (Luthar & Sexton, 2004). In their research, Luthar and Sexton (2004) report acts of vandalism which include an affluent teenager who stole a plane and subsequently toilet papered a stadium during a high school football game; another who torched a vehicle which set fire to a nearby residence and burned it to the ground. They also reported that a gang, comprised of affluent teenagers, was charged with attempted murder in 2003 after they repeatedly punched a young man and threw a rock at his head. Vandalism and delinquency have also been identified as an area of concern from a South African context (De Wet, 2004; Lai et al., 2013; Morojele et al., 2013). Although there is limited data on this subject, research suggest that delinquency may be due to the fact that South African adolescents are developing in the post-Apartheid era where social and economic changes are vast and racial discrimination and violence are rampant (Lai et al., 2013). As far as vandalism is concerned, research into vandalism in schools indicates that the most prominent school vandals are male learners attending high school, between 14 and 19 years of age (De Wet, 2004). The Survey on Substance Use, Risk Behaviour and Mental Health Amongst Grade 8-10 learners in schools in the Western Cape Province, identified that 14.2% of all learners and 19.7% of male learners had been involved in a physical fight during the previous year (Morojele et al., 2013). The same survey identified that 15% of all learners and 17.8% of male learners had been threatened by a gang, additionally 12% of all learners and 17.5% of male learners reported that they had been part of a gang in their life time (Morojele et al., 2013). Furthermore, results from the

2011 NYRBS indicated that 34.6% of South African male adolescents had been involved in a physical fight in the past 6 months and a significant proportion of males over females reported carrying a weapon in the past month.

In terms of other risk-taking behaviours, sexual promiscuity and early onset of sexual activity is also a serious concern in South Africa. Many adolescents embark on sexual activity before they are ready for the emotional and physical implications. In a cross sectional study conducted in KwaZulu Natal it was found that most teenagers become sexually active in adolescence and that sex with numerous partners was fairly frequent among South Africa youth (Harrison et al., 2010). Research has shown that the potential for risky sexual behaviour significantly increases in conjunction with substance use, as adolescents are more likely to be involved in voluntarily or involuntarily sexual activity when drugs are used in social situations; this indicates the mutually influential nature of risk-taking behaviours (Brook, Morojele, et al., 2006; Skeer et al., 2009). South African researchers have additionally begun to investigate the relationship between HIV and substance use (Wechsberg et al., 2008) and have found that perception of personal risk is reduced when a person is intoxicated, additionally women who use substances are less likely to insist on safe sex (Wechsberg et al., 2008). Substance use has also been shown to increase high-risk behaviour such as sex with multiple partners (Wechsberg et al., 2008), which is concerning especially in a South African context where unsafe heterosexual sex has been identified as the primary method of HIV transmission for more than a decade (Lamptey, 2002; Zuma, Rehle, Onoya, & Moyo, 2016).

It is important to note that the South African research discussed in this section does not specifically refer to research conducted into the high-SES population, as these statistics are largely unavailable. The statistics presented do however highlight the prominent difficulties amongst South African youth in general, which contextualises the risk-taking behaviours experienced by South African youth and may be indicative of the difficulties experienced amongst affluent youth as well.

2.4. Understanding Gender and Risk

Research shows that across many domains males are more likely to engage in risk-taking behaviour than females (Alberts et al., 2006; Byrnes et al., 1999; Harris & Jenkins, 2006). This might be related to the fact that males are generally considered to be sensation seeking, which has been known to increase the likelihood of risk-taking behaviour (Romer, 2010). Males are more likely than females to take risks, even when the danger of risk-taking is apparent, and have been found to have increased incidents of arrests for criminal behaviour and substance use (Byrnes et al., 1999; Gullone & Moore, 2000). In addition, they express more overt aggression (Cohen & Prinstein, 2006; Romer, 2010), are more susceptible to gambling and take greater risks with their health (Harris & Jenkins, 2006). Furthermore, they have been found to be less likely to obey the rules of the road and are three times more likely to be involved in fatal car accidents (Harris & Jenkins, 2006).

There is some research to suggest that males judge the potential consequences of risk-taking behaviour as less severe than their female counterparts and seem to enjoy risk-taking behaviours more than females (Harris & Jenkins, 2006). These factors may

contribute to male's higher levels of engagement in risk-taking behaviour. They are also more susceptible to pressure around status and hierarchy, which may influence the behaviour they are willing to engage in, in order to achieve such status (Cohen & Prinstein, 2006). Research into adolescents' personal fable and the development of an imaginary audience indicate that the development of the personal fable, which is known to peak in adolescence, is strongly correlated to cognitive-social immaturity and thus engagement in risk-taking behaviours (Alberts et al., 2006). Research has also shown that males are particularly vulnerable to the effects of the personal fable (Alberts et al., 2006) and are thus more likely to engage in risk-taking.

South African statistics on gender differences in risk-taking indicate that cannabis consumption, although changing, is a predominantly male practice (Peltzer et al., 2010). This study also identified that male adolescents are more prone to engaging with substances such as inhalants, cocaine, mandrax, sedatives and substance that they termed "club drugs" (Peltzer et al., 2010, p. 8). The 2011 NYRBS indicated significant gender differences in rates of alcohol, cannabis and other illicit drug use, as well as significant differences in sexual risk-taking and reckless driving. Their report indicated that males were more likely to engage in all of the afore mentioned behaviours (Reddy et al., 2013).

2.5. Understanding Resilience

Resilience has been called the ordinary magic of childhood (Masten, 2011) and one of the "great puzzles of human nature" (Coutu, 2002, p. 2). It allows children and adults alike to "bounce back" (Dong, Nelson, Shah-Haque, Khan, & Ablah, 2013) and to cope with life circumstances and events that would inhibit or disable another. Resilience has also been

defined as the process by which a person overcomes adverse circumstances (Fergus & Zimmerman, 2005) and as a set of personality characteristics or traits held by an individual (Agaibi & Wilson, 2005; Mandleco & Peery, 2000; Rutter, 1987; Zolkoski & Bullock, 2012). A more holistic definition would in essence merge all of these elements, indicating that resilient children have the desired personality characteristics that are used as tools to help them go through the process of bouncing back from adversary to reach a positive outcome.

2.5.1. Measuring Resilience Potential

When researchers use personality characteristics alone as a measure of resilience in children their research target population very often have no indicated history of stressors (Alvord & Grados, 2005; Armstrong et al., 2005; Coutu, 2002; Hetherington, 1989; Masten et al., 1999; Theron & Theron, 2010; Zolkoski & Bullock, 2012), and their resilience measures are often measures of what would more appropriately be called "resilience potential." Possessing the required components of a phenomenon or item does not guarantee that you possess the phenomenon or item in question. For example, if you possess sugar, flower, eggs and butter you possess the potential for a cake, but not the actual cake. To turn these items into a cake requires putting the ingredients through a process of "stress." Likewise, children may possess the "ingredients" or tools required for being resilient, but the act of coping with a trauma or risk is fundamental to assessment and pronouncement that a child possesses a certain level of resilience.

Armstrong et al. (2005) were correct in saying that stresses added the energy to a child mastering a certain event. In addition, almost by definition resilience is the ability to cope

with a traumatic event, therefore the stressor or trauma must have occurred in order to pronounce someone as resilient. Ben-Zur and Reshef-Kfir (2003) concur with this idea and assert that to be classed as resilient "one must be exposed to risk and respond successfully" (p. 137). Just like a high IQ score is not a guarantee that a child will perform well in scholastic standardised tests, but it is a good predictor of a child's potential to perform well, measuring that someone possesses the characteristics of resilience will be a good predictor of resilience potential and is thus considered very useful.

2.5.2. Attributes of Children with Resilience Potential

Attributes or personality characteristics of resilience potential are in essence protective factors that help buffer the effects of stress and difficult life circumstances (Dumont & Provost, 1999; Fergus & Zimmerman, 2005). These protective, personal assets can be broken down into intrapersonal and interpersonal qualities (Mandleco & Peery, 2000). Intrapersonal characteristics include positive self-esteem, positive self-belief, self-reliance (Agaibi & Wilson, 2005; Fergus & Zimmerman, 2005; Killian, 2004; Mandleco & Peery, 2000; Rutter, 1987; Zolkoski & Bullock, 2012), the ability to self-regulate (Armstrong et al., 2005), self-efficacy, internal locus of control, self-awareness, self-understanding and the ability to be adaptable and open to change (Mandleco & Peery, 2000). Self-esteem has been found to be one of the key intrapersonal, protective characteristics, as the belief that one is worthy and competent has been linked to self-acceptance, self-respect as well as self-satisfactions and satisfaction with one's life

(Sharaf, Thompson, & Walsh, 2009). These qualities, according to Sharaf et al. (2009) enhance the ability to overcome stresses and arduous life circumstances.

Self-esteem has additionally been linked to internal locus of control. Those with high self-esteem have been found to have an increased belief in their own abilities to effect change in their lives, which in essence is the definition of internal locus of control (Luthar, 1991). Those with an internal locus of control possess better coping strategies and an increased ability to overcome adversity (Dumont & Provost, 1999).

Thus, we can identify that children with high levels of resilience potential are very "self" directed and have a strong belief in themselves and their abilities. Characteristics such as *self*-esteem, *self*-efficacy, *self*-reliance, *self*-confidence, *self*-regulation, *self*-awareness, *self*-control and *self*-understanding are the major intrapersonal features of children with a high resilience potential.

Interpersonal characteristics include altruism, sense of group identity, perception of personal resources and ability to find meaning in the trauma (Agaibi & Wilson, 2005; Mandleco & Peery, 2000). Mandleco and Peery (2000) also include traits such as being respectful to others (both peers and adults), cooperation, a willingness to listen, gentleness and accurate levels of social perception. In addition to personal assets, external resources such as family and social support are also key interpersonal characteristics of those with resilience potential (Fergus & Zimmerman, 2005; Sharaf et al., 2009).

2.6. Parenting and Parenting Styles

Research into parenting styles dates back to the work of Baumrind (1966, 1971). Baumrind (1971) found that there are three parenting features that differentiate an effective parenting style from a less effective style: 1) acceptance of the child and involvement in the child's life that creates an emotional parent-child connection, 2) control of the child that will promote mature behaviour and 3) autonomy granting that encourages self-reliance. Baumrind (1966) also identified three parenting styles: *authoritative*, *permissive* and *authoritarian*. Research has evidenced that authoritative parenting is associated with the best outcomes in terms of behavioural adjustment and other domains such as psychosocial ability and emotional wellbeing (Radziszewska, Richardson, Dent, & Flay, 1996). Furthermore, unengaged parenting can lead to misconduct, delinquency and substance use (Radziszewska et al., 1996).

Authoritative child rearing is widely accepted as the most effective style of parenting (Berk, 2009). Alegre (2011) did extensive research into parenting styles and found that children of authoritarian parents scored higher in resilience, amongst other positive attributes.

Authoritative parents show high acceptance and involvement, adaptive control techniques, appropriate autonomy granting and allow their children to learn from their mistakes (Berk, 2009; Marsiglia et al., 2007). They are warm, nurturing, sensitive and establish positive parent-child relationships, while exerting firm and reasonable control (Alegre, 2011; Berk, 2009; Turner et al., 2009). They utilise inductive reasoning, explain

the reason for rules (Marsiglia et al., 2007) and expect an appropriate maturity level from their children (Alegre, 2011; Berk, 2009).

Using this style of parenting helps children develop many of the self-directed characteristics that, as discussed, are related to increased resilience potential. Children of authoritative parents have good self-control and self-esteem, are cooperative and are responsive to parents' views (Berk, 2009). They are self-reliant and have more self-efficacy (Seifi, 2016), as they have been allowed to participate in the decision making process and have been given appropriate responsibility within the family (Maccoby, 1992).

Authoritarian child rearing practice is generally seen as less effective than the authoritative style. Authoritarian parents are identified as being less accepting and less involved in positive parenting techniques, as they tend towards coercive control to gain compliance (Berk, 2009). They are seen as excessively demanding and lack warmth and affection (Marsiglia et al., 2007). Their lack of autonomy granting does not afford children the opportunity to gain experience in the decision making processes and reduces their opportunity to become self-reliant. These children are generally less happy, have lower self-esteem and less self-control (Berk, 2009) in comparison to children from authoritative families, as they are not treated as valuable members of the team during decision making. In addition, children that have little control over their lives often fail to see that they are responsible for themselves and their actions (Marsiglia et al., 2007) and thus have limited self-awareness and self-reliance.

Despite this authoritarian parents are still characterised as involved parents and do monitor their children's activities, albeit excessively. Research has shown that parental monitoring is an important factor in reducing risk-taking behaviour in adolescence (Boyer, 2006; Bronte-Tinkew, 2006; Huebner & Howell, 2003; Kuppens et al., 2009; Lau & Yuen, 2013; Leather, 2009) and thus from this perspective authoritarian parents do participate in some child rearing practices that are seen to reduce risk-taking behaviour.

Permissive child rearing is characterised as a parenting style that is warm, but uninvolved. These parents make few demands and exert little control over their children because they are either incredibly permissive or just absent; they use minimal punishment and have little or no rules for their children (Berk, 2009; Turner et al., 2009). These children then tend to be disobedient and disruptive in nature and show more anti-social behaviour (Berk, 2009). When permissiveness is due to a lack of parental involvement there is also little parental attachment (Berk, 2009). As noted earlier, parental monitoring and appropriate control are important factors in raising children with high resilience potential, as it reduces the amount of risk a child is exposed to.

Parents with permissive parenting style raise children who are less likely to understand that they are responsible for their decisions and the consequences of these decisions. This is related to the fact that they are rarely held accountable for transgressing behavioural limits or overstepping boundaries (Marsiglia et al., 2007). Children of such parents are more likely to be participants in problematic behaviour and buckle more easily to peer pressure (Marsiglia et al., 2007). They do however have a relatively high self-esteem and are quite self-reliant, as they make most decisions on their own (Marsiglia et al., 2007).

Parents that nurture their children with authoritative parenting practices help them to develop a secure sense of self and teach them that they are valuable, worthy, capable individuals. These are the cornerstones of resilience potential. The converse is also true; where parents who fail to nurture self-belief, raise children that are at increased risk and find it more difficult to overcome adversity. Harsh punishment, overprotection, focus on unilateral obedience, discouragement of independence and failing to assist in problem solving are parenting practices that increase children's risk (Alegre, 2011; Fergus & Zimmerman, 2005; Killian, 2004).

2.7. Perceived Stress and Adolescent Risk-taking Behaviour: A Theoretical Model

The explanation of adolescent risk-taking behaviour is complex and both personal and contextual factors need to be considered in deriving this explanation (Jessor, 1992). Jessor (1992) appears to be the first person to incorporate person and situational variables into a model of risk-taking behaviour, while differentiating these variables into risk and protective factors. He utilised a person-situation interactionist perspective to inform the framework and derived the model from traditional epidemiology that was originally biomedical in nature. The social-psychological framework developed in this current study has been adapted from Jessor's (1992) model.

2.7.1. The Concept of Risk

Traditional biomedical epidemiology addressed the concept of risk from a perspective of morbidity or mortality, which in essence was solely related to physical health. In the last

20-25 years this concept has been expanded to include both *social environmental* and *behavioural* components (Jessor, 1992). The *social environmental* component gives attention to the risk factors from an environmental perspective; for example, when working with substance related issues the model looks at environmental factors such as the availability and accessibility of particular substances. It still however solely looks at the implications of substance use from a physical health perspective (Jessor, 1992; Jessor, Costa, Krueger, & Turbin, 2006; Sawyer et al., 2012).

Behavioural epidemiology has a social-psychological framework and is interested in the impact of risk-taking on adolescents' ability to accomplish developmental tasks and acquire essential skills. In addition it looks at the impact on fulfilment of social roles, self-actualisation and the general ability to prepare for the transition into adulthood (Jessor, 1992). It is concerned with the potential psychological consequences, such as guilt and anxiety that may arise from participation in risky behaviours (Jessor, 1992; Jessor et al., 2006). This psychosocial understanding of risk would, for example, still be concerned with the availability and accessibility of particular substances, but its focus in terms of outcome is concerned with the impact substance using behaviour would have on personal development, social adaptation and psychological consequences (Jessor, 1992; Jessor et al., 2006).

Although the risks to physical health are important, the interests of this current study are psychosocial in nature and thus the adapted model will solely focus on *behavioural* epidemiology and the behavioural components of risk, as opposed to Jessor's (1992) model that focused on both *social environment* and *behavioural* outcomes.

Jessor's (1992) model is additionally beneficial as it proposes a departure from the traditional focus when looking at risk-taking behaviour. Traditionally the focus has solely been on the negative costs of behaviour, while his adapted model recognises that that in addition to undesirable outcomes there can also be positive expectations for this behaviour, which can influence adolescent participation in these activities (Jessor, 1992). Positive expectations include ideas that participating in these behaviours will increase social acceptance, create a sense of autonomy and maturity (Jessor, 1992) and assist with the escape from stress and stressors (Luthar, 2013).

2.7.2. The Interconnectedness of Risk Factors

Jessor (1992) also postulated that there was an intra-individual covariation amongst risk behaviours that mutually impact each other and develop what he termed a "risk behaviour syndrome" (p. 379). This concept indicates that the strategy of looking at each risk-taking behaviour as an individual and isolated entity is perhaps less effective and resources are best spent looking at adolescents' risk behaviour from a more comprehensive and simultaneous perspective. This suggests that addressing the circumstances that give rise to the syndrome of collective risk-taking behaviour is where effort is best spent. His research has shown the interrelatedness of adolescent problem behaviours and supports the existence of organised patterns when looking at adolescent risk-taking behaviour. For example he noted in his longitudinal study that 61% of marijuana users were also sexually experienced; whereas the sexual experience of nonusers was only 18%. This echoes the research, discussed above, that indicated that sexual promiscuity and substance abuse are often interrelated (Brook, Morojele, et al., 2006; Skeer et al., 2009).

Furthermore, Thompson and Auslander (2007), guided by Jessor's theory, found a pattern of interrelatedness between risk factors and substance use amongst children in foster care. More specifically, their research found that children who had run away, were suspended / expelled, skipped school, fought with teachers, failed classes or repeated a grade had friends who misused alcohol regularly and/or friends who used recreational drugs such as marijuana. These children were subsequently more likely to use alcohol and marijuana themselves. Jessor (1992) postulated that perhaps the risk behaviours, although different in nature, served the same purpose to the adolescent and would therefore hold the same expectation of positive outcomes (Jessor, 1992). This then indicates that the adolescents' lifestyle is one of the underlying factors that precipitate participation in risky behaviour in general.

2.7.3. The Risk Factors for Risk-taking Behaviour

As noted earlier, Jessor's (1992) model looks at risk-taking behaviour from a psychosocial perspective and is interested in the outcomes and consequences of risk-taking behaviour. In addition, his model identified that risk-taking behaviour is not singular in nature, but in fact there can often be an interconnectedness of behaviours that have a recursive influence on each other. This then leads to the understanding that the *collective lifestyle* of the adolescent may be an underlying factor that creates the "risk" of risk-taking. This understanding directed Jessor (1992) to ask what "risk" factors, or "web of causation," a term Jessor adopted from MacMahon (1960), lead to this resulting risk-taking behaviour (Jessor, 1992).

Jessor (1992) proposed that a comprehensive social-psychological framework of the collective lifestyle should include four major explanatory domains: the social environment, perceived environment, personality and behaviour. These domains make up the "web of causation" that may result in risky behaviour. The research framework developed for the purposes of the current study simplifies the four explanatory domains into two domains: Environment and Personality, with Behaviour as an outcome. Jessor's (1992) identified behaviour as being both one of the components of the major explanatory domains while also identifying behaviour as the outcome of these domains. He proposed that behaviour as a domain included risk factors such as drunk driving and poor school performance and protective factors such as engagement in religious activities and involvement in school activities and clubs. From the perspective of this research study, the risk factors he postulated in fact fall within the parameters of behaviour as an outcome and the protective factors fall under the Environment domain. It is acknowledged that adolescents would need to choose to participate in these activities, which is behaviour related, but this involvement would be influenced by domains such as Environment and Personality. Thus, Behaviour was removed as an explanatory component. In addition, the domains Social Environment and Perceived Environment are interconnected and at times overlap one another and have thus been simplified into one domain, Environment.

This framework still illustrates, in a similar manner to Jessor's (1992) framework, the complexity in accounting for adolescent behaviour; each domain is a separate source of risk and has a direct effect on adolescent behaviour, while at the same time interactions

between the domains are particularly important and have reciprocal influence on each other.

2.7.4. Protective Factors

Protective factors also form part of Jessor's (1992) model and are essentially the variables that explain why some adolescents, who seem to be at high risk, do not actually succumb to risky behaviours or get less involved in these behaviours than their peers (Jessor, 1992). These factors are the variables that counteract and offer protection when there is risk exposure. Jessor (1992) postulated that the protective factors operate within each domain and their primary impact was domain specific, although he did recognise the impact across domains.

Fergus and Zimmerman (2005) in their resilience model identified two types of protective factors, which they termed promotive factors. They identified that these two factors, assets and resources, provided youth with both the individual and contextual attributes necessary for healthy development. They identified that assets are individual factors such as self-efficacy and self-esteem, attributes of resilience potential, and resources are factors such as parental support, mentors and youth programmes (Fergus & Zimmerman, 2005). Fergus and Zimmerman's (2005) model of protective factors has been incorporated into this research model, as both assets and resources, as protective factors, are seen to interact equally with the "web of causation" and moderate across domains.

Protective factors have an impact on each other and the presence or absence of one protective factor can influence the presence and strength of another. Protective models of resilience indicate that resilience attributes such as hardiness, self-esteem, social support,

optimism, and positive affect (Steinhardt & Dolbier, 2008) are seen as assets that affect the relationship between the risk factors in the collective lifestyle and risk-taking behaviour (Zimmerman, 2013). Resources, such as parents and parenting style, through parental involvement, monitoring and appropriate autonomy granting influence risk-taking behaviour (Boyer, 2006; Bronte-Tinkew, 2006; Chassin, Curran, Hussong, & Colder, 1996; Gervilla, Cajal, & Palmer, 2011). Additionally, parenting styles can stifle or promote the protective characteristics, such as self-esteem, social support, optimism, and positive affect (Sharaf et al., 2009; Steinhardt & Dolbier, 2008), mentioned above, which are key characteristics of resilience potential. In this way, parenting style is a protective factor in itself, but also has a positive influence on resilience as a protective factor.

In this model, illustrated in figure 2.7.4.1, protective assets fall under with the Personality domain of the collective lifestyle and resources for part of the Environmental domain.

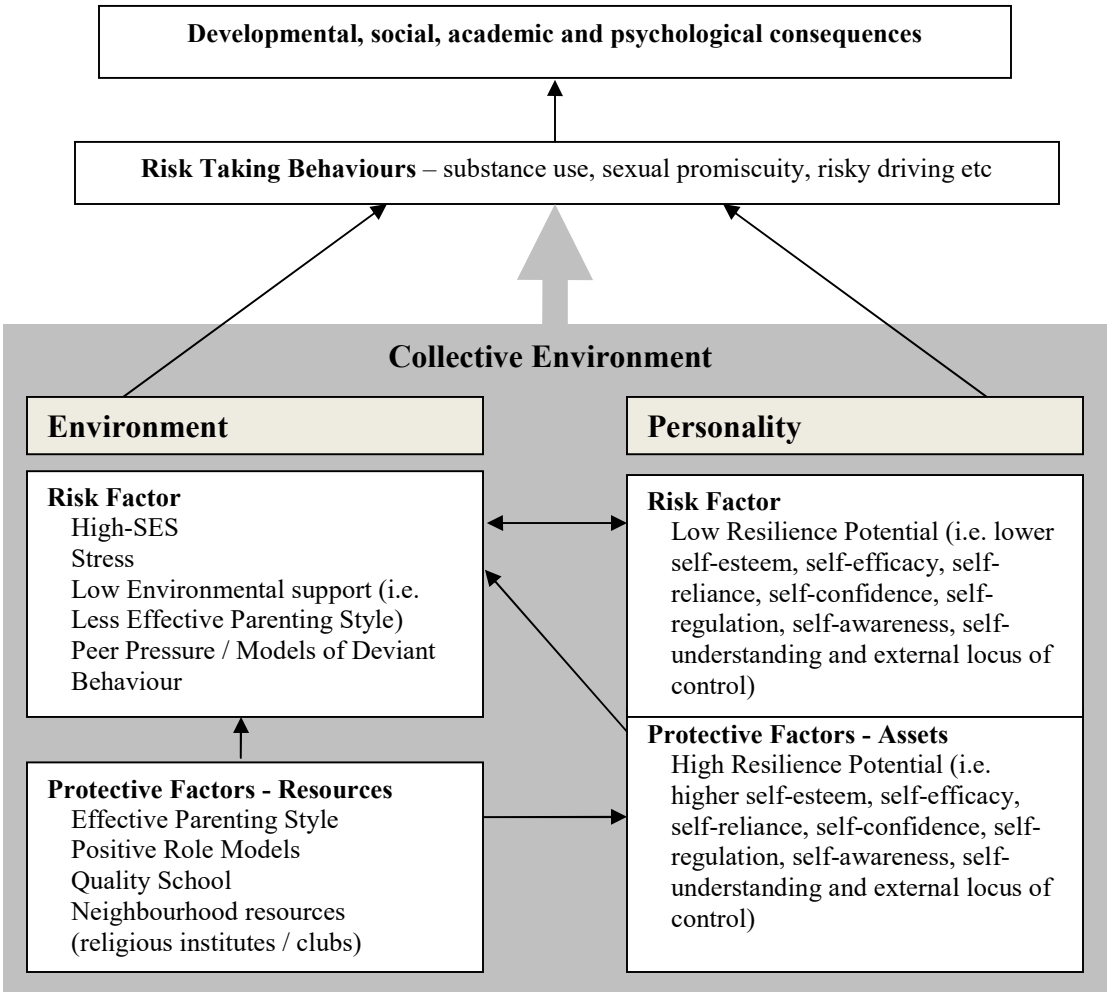


Figure 2.7.4.1. A conceptual framework for adolescent risk behaviour:
Risk and protective factors, risk-taking behaviours and risk consequences

2.8. The Impact of Parenting and Resilience on Risk-taking Behaviour

Self-respect, self-satisfaction and self-acceptance, all components of resilience potential, have been found to increase the ability to overcome stressful situations by reducing defeating thoughts and instilling a sense of competence under adversity (Sharaf et al., 2009). These factors, according to Sharaf et al. (2009) are a direct result of positive self-esteem, which is a key characteristic of those with higher resilience potential. Self-

esteem, according to Veselska et al. (2009) is an influential factor in physical and mental health and has been found to reduce risky behaviour, especially in boys who are more prone to externalising their feelings. Other protective factors, or personal assets, such as competence and self-efficacy have been found to assist youth in overcoming risk and adversity while environmental resources such as parental support, are significantly associated with reduction in risk-taking behaviours (Fergus & Zimmerman, 2005; Simantov, Schoen, & Klein, 2000). This in part may be due to the fact that parental attachment is strongly associated with positive self-perception and increases characteristics of resilience potential, such as self-esteem and self-efficacy (Sharaf et al., 2009).

A vast amount of research has been conducted into the correlation between parenting style and risk-taking behaviour, most of which agrees that parental warmth, appropriate parental monitoring and open communication is associated with lower risk-taking behaviours in adolescence (Boyer, 2006; Bronte-Tinkew, 2006; Huebner & Howell, 2003; Kuppens et al., 2009; Lau & Yuen, 2013; Leather, 2009). These attributes are primarily associated with an authoritative parenting style, which research suggest is the parenting style that is generally most effective in protecting against risk-taking behaviour. However, this research further suggest that authoritarian parenting also leads to decreased risk-taking, which could be attributed to the fact that authoritarian parents tend to display superior monitoring strategies (Boyer, 2006; Bronte-Tinkew, 2006), which have been strongly associated with decreased risk-taking behaviour (Boyer, 2006). In earlier studies of resilience, Rutter (1987) found that parental monitoring and control directed children towards more prosocial behaviour and reduced the rate of delinquent activities. In

addition parental monitoring, a component of both authoritative and authoritarian parenting, has been found to be a key factor in predicting future drug and alcohol use. According to Chassin et al. (1996) and Gervilla et al. (2011) adolescents who perceive their parents as less monitoring were more likely to be involved in substance abuse.

Research conducted by Stattin and Kerr (2000 as cited in Boyer, 2006) identified that self-disclosure is the most important predictor of reduced risk-taking behaviour. However, they postulated that the information parents attain may be more related to the openness of the parent-child relationship as opposed to strict monitoring. Their research suggests that children are more willing to self-disclose when they identify the parental relationship as open. Somewhat conversely, Bronte-Tinkew (2006) found that parental monitoring was more effective than communication in moderating sexual risk-taking behaviour, although they do strongly recognise the importance of communication in the parent-child relationship. Although research is conflicting with regards to the best methods used to obtain knowledge of adolescents activities, the basic understanding of most research agrees that parental knowledge significantly reduces risk-taking behaviour (Boyer, 2006).

Parental monitoring has also been identified as a protective factor from a different perspective, as it has been shown to reduce adolescent's association with deviant peers and increases their ability to withstand peer pressure (Brook, Brook, Morojele, & Pahl, 2006). As discussed, association with deviant peer groups has a significant impact on adolescent behaviour (Boyer, 2006) and increases incidents of risk-taking behaviour. Parenting style has also been associated with the general promotion of adolescent

wellbeing and it has been suggested that good parenting fosters the development of effective coping skills and enables adolescents to cope with frustrations, deal with anger and self-manage effectively (Leather, 2009).

Masten (2001) found that resilience in children occurs though "ordinary human adaptive processes" and concluded that "regulation of behaviour and interaction with caregivers and the environment" was crucial to the development of resilience (p 234). Quality of care giving is fundamental to a child's ability to adapt to adversity and parenting practices such as the formulation of clear boundaries, supervision, consistency, structure, discipline, parents' active involvement and clear communication are key to the development of resilience in children (Armstrong et al., 2005; Brook, Morojele at al., 2006). Parents that engage in problem solving with their children; who are warm, accepting and have reasonable expectations of mature behaviour, have children who feel good about themselves (Berk, 2009). Children and adolescents who receive stable and nurturing care are more able to cope with adversity (Agaibi & Wilson, 2005) and those who have good, mutually affectionate relationships with their parents have increased self-esteem and self-efficacy (Rutter, 1987), which are major characteristics of resilience potential.

Parents that accept children's displays of emotionality assist them in understanding their emotions and teach them how to self-regulate by assisting them to use these emotions to "behave in positive and efficient ways" (Alegre, 2011, p. 58). Further to this, Brody, Shannon, Forehand, and Armistead (2002) found that parents that were highly involved, supportive and who monitored their children positively, contributed to children's ability

to self-regulate. Self-regulation, as discussed, is a key characteristic of resilience potential.

Children with parents that are positive role models have more adaptive coping strategies and are more able to identify the consequences of risk-taking behaviour (Kritzas & Grobler, 2005). Furthermore, when children have a sense of usefulness and have been ascribed responsibilities in the home or community they tend to be more resilient than their counterparts. In addition, children that have realistic goals set for them and are motivated and supported to achieve these goals fare better through adversity (Killian, 2004). A sense of order in the home, establishment of positive rituals and celebrations, firm and appropriate child-parent boundaries and firm and consistent guidance are some of the practices found in resilient homes (Killian, 2004).

Although a significant amount of research has been conducted on the impact of parenting on risk-taking behaviour, only recently has international research begun to investigate the correlation between parenting and risk-taking in affluent adolescents. This research has primarily been conducted by Luthar and colleagues, who have, as discussed, identified that the parent-child relationship is key to the reduction of risk-taking behaviours (Luthar, 2003; Luthar & Goldstein, 2008; Luthar & Latendresse, 2005; Luthar & Sexton, 2004). They have identified factors such as parent's knowledge of adolescent's activities and perceived parental containment (Luthar & Goldstein, 2008), as key protective factors that aid in the reduction of risk-taking. To date no such research has been undertaken in the South African high-SES population.

2.9. The Impact of Resilience on Stress: Past Research

Adolescence is a critical period, as it is a time of maturation and development of physical, social and cognitive behaviour in preparation for adulthood (Dumont & Provost, 1999; Suo et al., 2013). This makes it a critical time for stress susceptibility, as stress during adolescence may have enduring consequences in later life (Suo et al., 2013). Emotional and psychological disorders have been strongly linked to the effects of stress (Dumont & Provost, 1999; Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011) and stress during adolescence has been associated with increased risk of mental health problems in adulthood (Suo et al., 2013). In addition, as discussed, stress has also been shown to have a strong relationship to risk-taking behaviour in adolescents.

Not all adolescents that experience stress have the same negative outcomes, which has lead researchers to investigate the variables that reduce stress related outcomes in both adolescents and adults. It has been shown that the presence of protective factors, such as "resilience", self-esteem, good interpersonal skills, internal locus of control and effective support systems seem to moderate the effects of stressors (Abolghasemi & Varaniyab, 2010; Dumont & Provost, 1999; Hjemdal et al., 2011; Luthar, 1991). Early research into stress and resilience indicated that children who have been identified as "resilient" have been shown to develop into well-adapted individuals (Dumont & Provost, 1999; Luthar, 1991), despite stressful life circumstances. Resilient adolescents were found to have more positive peer and parental relationships and increased active coping skills that aided them in developing normally in spite of their circumstances (Dumont & Provost, 1999). Children identified as resilient were also found to have an increased belief in their ability

to control their environment; this internal locus of control has been associated with increased ability to cope with stress and negative life events (Luthar, 1991). Luthar (1991) connected this finding to Seligman's (1972) theory of learned helplessness, which suggests that when people feel that they have no power to control what happens to them, they develop a passive stance that reduces their ability to cope. Conversely then the belief that life circumstances are controllable leads to active attempts to overcome adversity and thus overcome stressful events. Positive self-esteem has also been categorised as a protective factor associated with feelings of control and ability to adopt adaptive coping strategies under stress (Dumont & Provost, 1999). It is a major factor that seems to buffer the harmful effects of stress on health and wellbeing (Dumont & Provost, 1999).

More recent research conducted into a resilience intervention indicated that increased resilience lead to more positive self-esteem and positive affect (experiencing positive emotions that show good energy levels and enthusiasm), which then assisted with stress management when stress was perceived. It additionally reduced the amount of stress participants perceived themselves to experience under arduous circumstances (Steinhardt & Dolbier, 2008). This reduced perception of stress would thus increase one's coping ability.

Resilient individuals have also been characterised by more positive emotionality and optimism, which has been associated with better life satisfaction, stronger ability to cope with stressful life circumstances and the reduction of stress-related illness (Abolghasemi & Varaniyab, 2010; Southwick, Vythilingam, & Charney, 2005). In addition, life

satisfaction and resilience have been associated with avoidance of risk-taking behaviours in adolescents (Abolghasemi & Varaniyab, 2010).

Studies into trauma and Post Traumatic Stress Disorder (PTSD) have found that autonomy, self-esteem and self-confidence are protective factors that moderate the effects of trauma (Agaibi & Wilson, 2005). In addition, as Luthar (1991) indicated in terms of stress, internal locus of control has also been associated with reduction of PTSD symptoms (Agaibi & Wilson, 2005).

Characteristics of increased resilience potential, such as self-esteem, self-reliance, internal locus of control, perception of personal resources and positive relationships have been identified as important to reducing stress and increasing ability to cope with stressful life circumstances. Thus, resilience potential, as defined in this research, should assist in reduction of stress.

2.10. Conclusion

Affluent adolescents are evidently an under researched population in terms of levels of stress and risk-taking behaviour. It is apparent that, related to additional pressures to succeed and perform, their levels of stress are high, at least from an international perspective. In addition, because of these pressures, they seem to be engaging in risk-taking behaviours that are harmful and often dangerous to themselves and others. Although they are identified as a "new at risk" group, it is unclear if they are a population that are actually newly at risk, or if they have only recently been identified as at risk, even though their risk levels were historically high.

Research seems to suggest that positive self-directed characteristics, in particular self-esteem, increases adolescents' potential for resilience and thus decreases their participation in risk-taking behaviours, such as substance and alcohol abuse, cheating and stealing. Additionally parents' style of parenting has an impact on adolescents' resilience potential by fostering/not fostering the development of these positive, self-directed characteristics. Furthermore parenting practice acts as a protective factor that reduces adolescents' participation in risk-taking, mostly through the attribute of parental monitoring, but also related to the warmth of the parent-child relationship and parental involvement. Authoritarian parenting style appears to be the most beneficial in terms of protecting against risk-taking behaviour and fostering the positive self-directed characteristics of resilience potential. Authoritative parenting however, because of the increased parental monitoring component, has also been shown to protect against risk-taking behaviour.

CHAPTER THREE: RESEARCH METHODS

3.1. Introduction

As discussed in the previous chapter, high-SES adolescents are increasingly at risk of experiencing stress, which often results in risk-taking behaviour. Furthermore, resilience potential and parenting style appear to be important protective factors that have the potential to alleviate some of this behaviour. There is however a distinct lack of research on these factors, as related to high-SES adolescents in a South African context. Thus, it was the intention of this research to investigate the relationship between levels of perceived stress and risk-taking behaviour in South African male adolescents from high-SES backgrounds. Males have been identified as the population most likely to engage in risk-taking behaviour (Alberts et al., 2006; Byrnes et al., 1999; Harris & Jenkins, 2006), thus this study focused on this demographic. The study also explored the relationships between resilience potential and perceived stress, the relationship between perceived parenting style and level of risk-taking and the potential moderating effect of resilience potential on the relationship between levels of stress and levels of risk-taking. Furthermore, it assessed the relationship between perceived parenting style and level of risky behaviour and perceived parenting style and resilience potential. It additionally investigated the moderating effect parenting style on the relationship between stress and risk-taking.

The research methods used in this study will be outlined in this chapter. Firstly, the research design is outlined. The method of data collection and measuring instruments will then be delineated, followed the procedure for data collection, a description of the sample

and sampling strategy and method of data analysis. In addition, ethical considerations will be discussed.

3.2. Research Design

Scaled questionnaires were used to obtain data and statistical analysis was used to interpret the findings, thus we can say that a quantitative research method was used in this study (Terre Blanche et al., 2006). The data was used to identify the relationship between perceived stress and risky behaviour, between perceived parenting styles and risky behaviour, between parenting styles and resilience potential and between resilience potential and risky behaviour. The data analysis was also used to investigate the potential moderating effect of resilience potential and parenting style on the relationship between perceived stress and risk-taking behaviour. Quantitative analysis was chosen as the review of literature indicted, from an international perspective, that a number of important variables impact risk-taking behaviour in affluent adolescents. According to Terre Blanche et al. (2006) quantitative analysis is more appropriate when the important variables are known to the researcher, as is the case for this study. Qualitative analysis is more exploratory (Terre Blanche et al., 2006) in nature and is more suitable when there is a lack of knowledge regarding the important variables, which was not the case for this study.

This study is non-experimental in design, as none of the variables were manipulated during the study. It is also correlational as the data being collected was used to determine the extent of the relationship between quantitative variables (Johnson, 2001). This type of design was chosen as the primary of the aim of the study was to investigate the degree of

relationship between the research variables and to assess if this relationship was valid across a number of cases; this is a strength of correlational analysis (Whitley, Jr. & Kite, 2013). In addition, from an ethical perspective, correlational analysis was an appropriate method of data analysis, as is a passive research strategy that does not require the manipulation of variables (Whitley, Jr. & Kite, 2013). In this study it would have been unethical to manipulate some of the variables, such as the stress variable, for the purposes of research. In addition, although variables such as parenting style and resilience potential could be ethically manipulated through intervention, research would then be assessing the effects of the intervention (Salim, Mackinnon, Christensen, & Griffiths, 2008), which was not the aim of the current study.

3.3. Method of Data Collection

3.1.1 Measuring Instruments

3.3.1.1. Biographical Questionnaire

A biographical questionnaire was specifically designed for the purpose of the study and investigated variables such as name, age, grade, and languages spoken.

The questionnaire was originally designed to be completed by the participant's parents and included a question confirming the SES of the family. However, the deputy principal was not comfortable with this type of question being included and it was thus removed. The questionnaire could then be completed by the participants and was not distributed to the parents.

It was agreed that in relation to the school fees, only students whose families fall within,

or above, the designated SES bracket could afford to send their children to the particular school. It was then decided that the deputy principal would identify, post administration of research questionnaires, if any of the students received financial assistance. The questionnaires completed by these identified students would then be removed from the study. No such students were identified in the sample.

3.3.1.2. Measure of Parenting Style

The Parental Authority Questionnaire (PAQ) was designed by Buri (1989) to measure Baumrind 's (1966, 1971) three parenting styles. It is a 30 item questionnaire that yields scores for both mother and father in all three parenting styles: permissive, authoritative and authoritarian (Buri, 1989). The measure has been found to be appropriate, reliable and valid for administration to both male and female older adolescents and young adults (Buri, 1989).

Buri (1989) stated that PAQ has good internal consistency, measured by the Cronbach Alpha coefficient of .75 for mother's permissiveness, .85 for mother's authoritarianism, .82 for mother's authoritativeness, .74 for father's permissiveness, .87 for father's authoritarianism, and .85 for father's authoritativeness. The PAQ also has a high criterion and content validity (Buri, 1989).

In a more recent South African study Kritzas and Grobler (2005) used the PAQ to establish perceived parenting style in South African Grade 12 adolescents from an English medium school. They noted that the reliability coefficients and Cronbach Alpha values are highly reliable, especially considering there are only 10 items per scale. Turner et al. (2009) also used the PAQ to assess the influence of parenting styles in their study of

American college students. They indicated that the reliability coefficients for their study suggested good reliability for the three PAQ subscales and noted Cronbach Alpha values of: Authoritarian .87, Authoritative .81 and Permissive .76, which are similar to the values obtained for the original measure. Timpano, Keough, Mahaffey, Schmidt, and Abramowitz (2010) also used the PAQ in their study of college students in the United States of America, aged 17 - 24. Participants completed the PAQ in reference to their primary caretaker when they were a child. This study also indicated good internal consistency with Cronbach Alpha values of .88 –.92.

Although reliability and internal consistency has been established for the South African population Chronbach Alpha scores will be generated for this measure after data collection. See Chapter 4 for these results.

Administration and Scoring: This instrument uses as 5-point Likert Scale questionnaire where 1 = strongly disagree and 5 = strongly agree. This was administered to adolescents as a 30 statement self-report questionnaire using 10 statements per parenting style (Buri, 1989). The questionnaire was repeated, once to measure the mother's style and again for the father's. The questionnaires yielded 3 scores for each parent and the highest of the scores indicated the dominant parenting style. In addition, the scores for both parents, on all three styles were then combined to indicate an overall household style of parenting.

3.3.1.3. Measure for Risky Behaviour

Modified Risk Involvement and Perception of Risk and Benefit Questionnaire was developed by Ben-Zur and Reshef-Kfir (2003) and was based on a 19 items scale developed by Siegel et al. (1994) and the modified (26 item) version of the same test

created by Shapiro, Siegel, Scovill and Hays (1998).

The test yields three assessments: frequency of involvement in risk-taking behaviours during the last year, perception of extent of risk for each behaviour and perception of extent of benefit from each risk behaviour (Ben-Zur & Reshef-Kfir, 2003). Test reliabilities were .86, .62 and .63 respectively and internal reliabilities were .72, .87 and .70 respectively. For specific use in their study, the tests were translated into Hebrew and additional test-reliabilities were obtained, which will not be discussed here, as the original English version of the test is being used in this study.

Three months following the original administration, the test was re-administered yielding a test-retest correlation value of .76. In addition Ben-Zur and Reshef-Kfir (2003) administered a 4 item questionnaire measuring social daring. The correlation of this short scale and the risk involvement scale was .58 ($p = <.001$) (Ben-Zur & Reshef-Kfir, 2003).

Reliability has not been established in a South African context, but as the questionnaire specifically addressed the risk-taking behaviours identified as prevalent in high-SES adolescents (driving, health, drugs and lawbreaking) it was selected for this study. Item 26 was modified to ensure validity for a South African population. The item was changed from "Participating in trance parties" to "Going to nightclubs." Reliability and internal consistency was established by generating Chronbach Alpha scores after data collection. See Chapter 4 for these results.

Administration and Scoring: Items on each subtest were rated using a 5-point Likert Scale. For the subtest "Frequency of Behaviour in the Last Year" 0 = never and 4 = daily

or more. In the "Perception of Extent of Risk for Each Behaviour" 0 = no risk and 4 = high risk. For the "Perception of Extent of Benefit" subtest 0 = no benefit and 4 = high and significant benefit.

This study was specifically interested in actual risk-taking behaviour in the sample. Thus, although all subtests were administered, the subtest identifying frequency of involvement in risk-taking behaviours was the only subtest used for data analysis.

3.3.1.4. Measure of Resilience

The 25 item **Connor-Davidson Resilience Scale (CD-RISC)** was developed by Connor and Davidson (2003) to measure resilience. This measure uses a five-point Likert scale (0-5) with 5 reflecting greatest resilience and 0 lowest. It has been shown to possess sound psychometric properties that successfully identify those with greater and lesser characteristics of resilience (Connor & Davidson, 2003). The scale also demonstrates that resilience is modifiable with intervention (Connor & Davidson, 2003). The Cronbach Alpha for this test was .8 indicating high internal consistency; test-retest reliability was established using 24 subjects from different sub-groups which showed a high level of agreement with a correlation coefficient of .87 (Connor & Davidson, 2003).

The CD-RISC has been used in a South African study of 787 participants from high schools in Cape Town (Fincham, Altes, Stein, & Seedat, 2009). This study showed excellent internal consistency and yielded a Cronbach Alpha of .92 which is higher than the result for the original test. Although reliability and internal consistency has been established for the South African population Chronbach Alpha scores will be generated for this measure after data collection. See Chapter 4 for these results.

3.3.1.5. Measure of Stress

The Perceived Stress Scale (PSS) is a 10 item, self-report Likert scale designed to measure levels of psychological stress experienced by the test taker, where 0 = not true at all, 1 = rarely true, 2 = sometimes true, 3 = often true and 4 = true nearly all of the time. It was designed to assess feelings of being overwhelmed and being unable to control or predict life events. The scale is suitable for administration to high-school students and adults who have at least a junior high education (Grade 8) education (Terzian, Moore, & Nguyen, 2010).

Pau et al. (2007) utilised this questionnaire in their multinational study of undergraduate dental students. They found this scale was reliable in the South African context and it yielded a Cronbach Alpha of .87 in their South African study.

As the participants in this research are younger than the participants in the undergraduate study, reliability for the sample population was established by generating a Chronbach Alpha score after data collection. See Chapter 4 for these results.

3.2.1 Data Collection Procedure

The deputy principal of the selected private high school in Johannesburg was approached to obtain permission to carry out the research at the selected school (See Appendix A); written permission was obtained. For purposes of confidentiality this letter has not been included. Once ethical clearance was obtained from the University of the Witwatersrand Human Research Ethics Committee (Non-Medical) the parents received an email from the school which included the Parent Information Letter, outlining the purpose of the

study and the instruments that would be used (see Appendix B). Also included in this email was the parent consent form that parents could chose to complete should they be willing for their child to participate (see Appendix C). Email communication was chosen, as some of the students were boarding students and would not be able to take printed communication home. Approximately three hundred and fifty parents were contacted, via the school, and were asked to email their consent directly to the researcher, should they be willing for their child to participate. Forty-nine parents responded favourably, giving their consent. Once the emailed consent was received from the parents the learners received participant information letters (see Appendix D), that also outlined the aims of the study and their level of involvement. It clearly stated that participation was optional. The learners that agreed to participate completed assent forms (see Appendix E). Forty-three students assented to participate. In addition Matric students, who were 18 years of age were approached separately, as they are adults and could personally consent to participate. They received the same participant information letter that outlined the aims of the study and their level of involvement. It clearly stated that participation was optional. The learners that agreed to participate completed consent forms (see Appendix F). Sixteen of these students consented to participate. Once consent and assent was granted by all parties research commenced. Participants were asked to complete the online questionnaires in a group setting; they were informed that they could withdraw from the study at any time until they submitted their questionnaires.

In order to meet the homogenous, purposive sampling requirements for the study participants needed to meet specific SES criteria. By virtue of the school fees all students whose families paid full fees would meet the necessary criteria, however some students

who attend the school receive financial assistance. As recommended by the deputy principal, and to ensure learners were not stigmatised by exclusion based on their SES, the researcher allowed all learners with appropriate consent and or assent forms to participate in the research. The deputy principal then identified any learner who received financial assistance so they could then be disregard as participants. No such learners were identified in the sample.

3.4. Sample and Sampling

Non-probability, also called non-random, sampling techniques are typically used for quantitative research, as quantitative research is generally interested in specific phenomenon or individuals (Onwuegbuzie & Leech, 2007). It allows the researcher to obtain a sample from a specific group, thus maximising the understanding of the phenomenon or subset of individuals (Onwuegbuzie & Leech, 2007). Purposive sampling is one of the sampling techniques used in non-probability sampling (Terre Blanche et al., 2006); in this technique the researcher purposefully selects the group to be investigated based on the specific criteria necessary for the specific study (Onwuegbuzie & Leech, 2007; Terre Blanche et al., 2006). Convenience sampling forms part of purposive sampling, as availability and willingness to participate is still required from the members of the selected group (Terre Blanche et al., 2006). This technique was specifically selected for this study as it allowed the researcher to investigate the impact of the research variables on the specific population that was identified as the “at risk” group, namely affluent male adolescents.

Homogeneous sampling is the purposive, non-probability sampling technique used in this research. Homogeneous sampling aims to achieve a sample, where the characteristics of the sample are the same or similar (Onwuegbuzie & Leech, 2007). This method was chosen as the study specifically aimed to investigate male adolescents from families with a particular socioeconomic background.

The participants in this study were learners who attend an all-boys private school in the northern suburbs of Johannesburg. As mentioned previously, by virtue of the school fees the learners who attend this school come from affluent homes, as defined by the study. This population was targeted for this study as international literature indicated that children from high-SES families are at high risk for stress and thud externalising risky behaviours (see Chapter 2). In addition, the discussion of literature also indicated that males engage in risk-taking behaviour more frequently than females, thus SES and gender were criteria for participation.

To ensure that the participants could read and understand the questionnaires, which were administered in English, the participating school was also selected based on the medium of instruction. The medium of instruction at the participating school is English, although some of the participants are fluent in additional languages. Participants ranged in ages from 13 to 18 years of age. Age was selected as an exclusion criteria based on the review of literature which indicated adolescence as a particularly valuable stage of development and a specific time of stress susceptibility.

As this research used a homogenous sampling technique, in terms of limiting the sample by SES, gender and age, the research cannot be generalised to the entire population of

children in South Africa. A more random method of sampling would have increased the generalisability of the findings (Terre Blanche et al., 2006). In practice however obtaining random samples is time consuming and expensive and is generally not used in the social sciences (Terre Blanche et al., 2006).

3.5. Method of Data Analysis

Both descriptive and inferential statistics were used to analyse the data. Descriptive statistics in essence describes the data to make it more comprehendible to the researcher (Field, 2009). It looks at the distribution of the data in terms of frequency of distribution, range, variance and standard deviation to establish if the data is normally distributed and is thus representative of the population (Mueller, Schuessler, & Costner, 1977). Inferential statistics are used to analyse the data in order to draw conclusions about the population (Mueller et al., 1977). This type of data analysis allows the researcher confirm or reject predictions based on statistical analysis (Field, 2009). Data can be analysed inferentially using parametric or non-parametric methods. Parametric analysis assumes that data is normally distributed and thus can only be used for a normal data set (Field, 2009). If descriptive statistics indicate that data in not normally distributed then non-parametric data analysis procedures would be used (Field, 2009).

Based on the outcome of the descriptive statistics and the normal distribution of the variables within the population (See Chapter 4), a parametric correlation analysis was calculated to determine the relationship between the variables. In addition, simple and moderated multiple regression analysis were conducted.

The data derived from the CD-RISC, PAQ, Modified Risk Involvement and Perception of Risk and Benefit Questionnaire and PSS scores were subjected to the following analyses using the IBM Statistical Package for the Social Sciences version 22.0.0 (IBM SPSS)

- Reliability of the measures were confirmed by calculating the Cronbach's Alpha for each measure
- Means (M) and standard deviations (SD) were calculated for descriptive purposes
- Assessment of normality was explored
- Pearson correlation coefficients were calculated between the measures
- Simple regression and moderating multiple regression analysis were conducted

3.6. Ethical Considerations

Ethical conduct, from a research perspective, mainly encompasses the assurance of the welfare of participants, but also includes areas of scientific misconduct and plagiarism (Terre Blanche et al., 2006). As it is imperative that the welfare and dignity of participants be protected and placed above the interest of the research, ethical review is becoming standard practice for all research that includes human participants. It is generally required by all major universities in South Africa (Terre Blanche et al., 2006). Thus, ethical clearance for this study was obtained from the University of the Witwatersrand Human Research Ethics Committee (Non-Medical).

Informed consent is also imperative to ethical practice and is generally provided in writing (‘Code of Research Ethics’, 2016; Terre Blanche et al., 2006). To gain informed

consent the researcher should provide potential participants with clear information about the study, its risks and methods. Additionally they should clearly indicate the voluntary nature of participation and assert freedom to withdraw from the study ('Code of Research Ethics', 2016; Terre Blanche et al., 2006). Furthermore, where the research subjects are minors (under the age of 18) consent should be obtained in writing by either a parent, guardian, or custodian ('Code of Research Ethics', 2016). Thus, before the commencement of this research study a written information letter was provided to the participating school (See Appendix A) and written consent was received from the school. For purposes of confidentiality, this letter has not been included. In addition, prior to data collection, the participants' parents received an email, sent via the school. This email included a letter outlining the research purpose, conditions of the study, process of data collection (see Appendix B) as well as the consent form (see Appendix C). If parents consented for their child to participate in the research they were asked to email consent directly to the researcher. Learners with parental consent and learners over 18 years of age also received an information letter outlining the purpose of the research; conditions of the study and process of data collection (see Appendix D). Learners were informed that completion and submission of the online questionnaires would indicate their consent / assent to participate. They were also asked to complete assent / consent forms, depending of their age (see Appendix E & F, respectively). Learners and parents were made aware that participation was voluntary and that learners could withdraw from the study until all questionnaires had been submitted.

The Human Sciences Research Council of South Africa (2016) stipulates in its Code of Ethics that the identity of participants should be treated as confidential, unless the

participant agrees otherwise. Confidentiality was assured to participants and thus, once all consent forms were matched with the completed questionnaires all identifying information, including names were removed. This ensured that anonymity and confidentiality could be guaranteed in the publication of the final research report and any other publications or presentations that might arise from this. Thus, although anonymity could not be ensured in the completion of the questionnaires, as students were asked to provide their names so that the consent forms could be matched to the completed questionnaires, anonymity will be ensured in the publication of the final research report and any further publications or presentations. In addition, confidentiality was maintained at all times and only the researcher and her supervisor had access to the raw data. The research data is stored on a laptop that is password protected and in a password protected folder. It has also been stored on a private dropbox account that is password protected. All raw data is kept in a locked cupboard, with identifying features removed. All data will be destroyed after five years.

Research was conducted at a time and place that was convenient for the school and did not infringe on participants' academic education. Participants were not advantaged or disadvantaged by participating.

The research questions investigated parenting styles and risky psychological and behavioural components, which could have potentially elicited uncomfortable feelings. Participants were asked to consult their school psychologist if participation evoked any negative or uncomfortable feelings; again, they could also recuse themselves at any stage. Full details of the school psychologist were available to the students and were included in

the information sheet. The researcher discussed this with the school psychologist in advance and received her written consent to assist in this regard, prior to the inclusion of this information. For purposes of confidentiality this letter has been excluded.

The school, parents and children were advised that the research might be published in the form of a peer reviewed journal article and/or presented as part of a conference. A general feedback report will be provided to the school, which will not identify any specific students. The purpose of the feedback is to provide the school with a general understanding of the risks experienced by their students.

CHAPTER FOUR: RESULTS

The primary aim of this research project was to investigate the relationship between perceived level of stress and level of risk-taking behaviour in male adolescents from high-SES families. It also investigated the relationship between resilience potential and perceived level of stress and explored the role of resilience potential as moderating variable in the relationship between levels of stress and risk-taking behaviour in the sample. Additionally it investigated the relationship between perceived parenting style and level of risky behaviour, and the relationship between perceived parenting style and resilience potential. Further to this, it explored the role of perceived parenting style as a moderating variable in the relationship between levels of stress and risk-taking behaviour.

Level of perceived stress was assessed using the PSS, while resilience potential was measured using the CD-RISC. The PAQ was used to measure perceived parenting style and the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire measured risk-taking behaviours and beliefs. All variables were measured using Likert Scales and yielded results in interval scales of measurement.

4.1. Reliability of the Measures

Cronbach Alpha (α) scores were established for all the questionnaires used in this study. The Cronbach Alpha formulae, the most widely used measure of reliability (Tavakol & Dennick, 2011), was developed by Cronbach (1951) to predict reliability of a test by measuring internal consistency through calculating the "estimate of the correlation between two random samples of items from a universe of items" in the test (p. 1). Alpha

is expressed as a value ranging from 0 to 1. A low alpha is problematic and can occur if there are poor correlations between the items or if the test has a low number of questions, while a high alpha indicates that the test has good internal consistency (Tavakol & Dennick, 2011). If alpha is too high it may indicate that there are redundant items that in effect ask the same question (Tavakol & Dennick, 2011). There are varying theories regarding the acceptable vale for alpha, which range from .70 to .95 (Tavakol & Dennick, 2011). Tavakol and Dennick (2011) suggest that the maximum value for alpha should be .90.

The measure for risk, the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire, was reliable for all three subscales, although only the risk-taking behaviour was used in data analysis. The risk-taking behaviour subscale consisted of 27 items ($\alpha = .78$).

The measure for stress, the PSS, was found to be highly reliable (10 items; $\alpha = .88$) as was the measure for resilience potential, the CD-RISC (25 items; $\alpha = .88$). The PAQ, measuring parenting style, consisted of six subscales: three subscales for both fathers and mothers, with 10 items in each subscale. Reliability for all subscales is as follows: For fathers - authoritative ($\alpha = .80$), authoritarian ($\alpha = .87$) and permissive ($\alpha = .63$). For mother's - authoritative ($\alpha = .67$), authoritarian ($\alpha = .84$) and permissive ($\alpha = .76$). The results of these measures were combined to indicate the overall parenting style within the home, which increased the items per subscale to 20, the reliability of these measures is as follows: Authoritative ($\alpha = .76$), authoritarian ($\alpha = .86$) and permissive ($\alpha = .74$).

4.2. Demographic Synopsis of the Sample

The total sample consisted of 59 male participants, of which 48 (78%) were boarding students. The sample had a mean age of 16.34 years (*SD = 1.458*) and a mean grade of 10.42 (*SD = 1.476*). The age and grade distribution of the participants can be seen in figure 4.1 and 4.2.

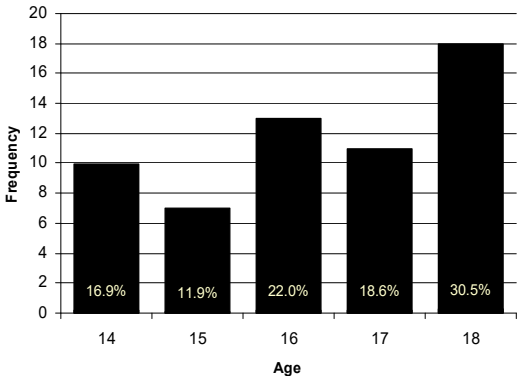


Figure 4.2.1. Age distribution of the participants

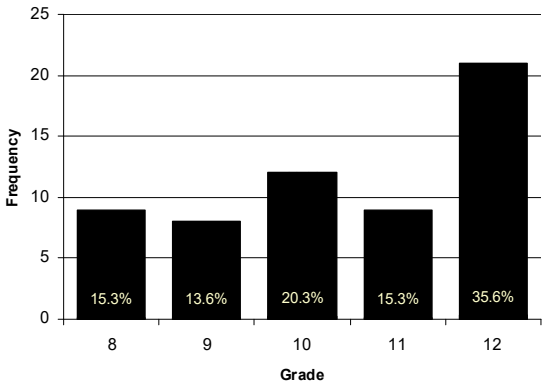


Figure 4.2.2. Grade distribution of the participants

All of the students indicated that English was either their first (L1) or second language (L2) (86.14% L1 and 13.6% L2). The frequencies of all first and second languages are indicated in Appendix L, Table L1.

4.3. Stress Levels of the Participants

Stress levels were measured using the PSS, where the maximum stress score is 40 and the minimum score is 0. The sample showed a mean stress level of 20.64 (*SD = 8.244*), which places them almost exactly in the middle of the stress range. The minimum score

for a single participant was 7, with a maximum score of 37 indicating a total range of 30. Participant's scores were further broken down into categories based on the level of their scores. Low scores, from 0-10 were obtained by 9 participants, medium scores (11-20) were found in 18 participants while 23 participants indicated moderate levels of stress (21-30) and 9 participants indicated high stress levels (31-40). See Appendix L, Table L2 for the mean stress scores on each item of the stress scale.

4.4. Levels of Risk-taking for the Participants

Levels of risk-taking were measured using the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire, which assessed risk on three different constructs; frequency of involvement in risk-taking behaviours during the last year, perception of extent of risk for each behaviour and perception of extent of benefit from each risk behaviour (Ben-Zur & Reshef-Kfir, 2003). The measure of risk-taking behaviour was the only measure used in data analysis. The highest score obtainable on each item was 4, with the lowest being 0. The highest obtainable score on all 27 items is thus 108, with the lowest being 0. The mean level of risk is indicated in the Table 4.1.

Table 4.1.
Participants Overall Levels of Risk-taking in the Last Year

Measure	*M*	*SD*	Range
Risk-taking behaviour	10.7	7.802	57

Although levels of risk were low overall, risk levels in certain behaviours were generally high. Data indicated that riding without seatbelts (*M* = 1.44, *SD* = 1.303), going to

nightclubs (*M* = 1.25*, SD* = 1.254), drinking alcohol (*M* = 1.12*, SD* = 1.068) and getting drunk *(M* = .83*, SD* = 1.003) as well as not studying for school exams *(M* = .93*, SD* = .926) as the five highest risk-taking behaviours that this population engage in, see Table L3 in Appendix L for the mean levels of risk-taking on each item in the measure.

4.5. Resilience Potential of the Participants

Resilience potential was measured using the 25 item CD-RISC. The highest score obtainable per individual participant was 100, with a lowest score of 0. The sample showed a mean resilience potential of 69.44 (*SD* = 13.617). The minimum score for a single participant was 38, with a maximum score of 95. See Appendix L, Table L4 for the mean scores on each item in the measure.

4.6. Perceived Parenting Style of the Participants

Perceived parenting style was measured using the PAQ, which provides scores for both mothers and fathers on all three parenting styles (10 questions per parenting style). Scores for mothers and fathers were then combined to indicate the dominant parenting style in the home. Of the 59 participants, 58 answered the questionnaires based on their biological parents' parenting practices. The highest score obtainable per parenting style was 50, with the lowest being 10. The authoritative style was the dominant style for Fathers, Mothers and the overall household (combined) style, followed by authoritarian and then permissive. These results are shown in Table 4.2.

Table 4.2.
Participants Perceived Parenting Style – Mean Scores

	Fathers			Mothers			Combined		
Style	*M*	*SD*	Range	*M*	*SD*	Range	*M*	*SD*	Range
Authoritarian	28.39	8.338	33	27.90	7.329	34	56.29	13.285	49
Authoritative	35.25	6.895	35	37.27	5.041	20	72.53	9.911	46
Permissive	24.66	5.030	28	25.29	6.134	29	49.95	9.763	48

4.7. Relationship between the variables

Pearson's correlation coefficients, simple regression analysis and moderating multiple regression analysis were used to determine the relationship between the variables.

4.7.1. Assumptions of Normality

As Pearson's correlation is a parametric statistical test certain assumptions of normality need to be met before the commencement of data analysis. First, the data needs to be at least an interval scale of measure, so as to accurately measure the linear relationship between the variables (Field, 2009). We can say that this is true of the dependant and independent variables of the study, as all variables were measured using Likert scales, which yield results in interval scales of measurement. Furthermore, it is assumed that the sample is normally distributed, normal distribution is required to establish the significance of the correlation. This is generally assumed, especially when the sample is larger than 30 or 40 (Field, 2009; Ghasemi & Zahediasl, 2012), which is true for this research sample. Normality of the data distribution also needs to be established. This was confirmed using histograms and Skewness and Kurtosis coefficients.

Skewness and Kurtosis coefficients indicate the spread of the distribution; Skewness indicates the symmetry of the distribution and Kurtosis the "pointiness" or "peakedness"

of the distribution (Ghasemi & Zahediasl, 2012; Kim, 2013). For a perfectly normal distribution values for Skewness and Kurtosis should be 0, however if the values fall within the range -1 to 1 the scores are considered to lie within the normal range (Pallant, 2003). All Skewness values for the PSS, CD-RISC and PAQ lie within the normal range. For the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire the Skewness values for two of the subscales, risky behaviour and perception of risk, were slightly above the normal range (Skewness coefficient = 1.030 & -1.306 respectively). The Kurtosis values for all the measures lie within the normal range, with the exception of the perception of risk subscale of the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire, which was above the normal range (Kurtosis coefficient = 1.540). See Table 3 for a full summary of Skewness and Kurtosis values.

Histograms were also used for visual confirmation of normality; histograms plot the observed values against their frequency, which indicates, via the shape of the curve, whether the distribution is normal. For data to be normal the curve should be perfectly bell shaped (Ghasemi & Zahediasl, 2012), however all data will deviate from normal in some regard, as was true for this research data. In addition, for normality to be indicated the range of the histogram should be two to three standard deviations either side of the mean. Histograms for the research data generally suggested that normality was reasonable; some slight abnormalities were noted for CD-RISC, Modified Risk Involvement and Perception of Risk and Benefit Questionnaire and the Mother's Authoritative and Mother's Permissive parenting subset of the PAQ. See Appendix I for the histograms of all data.

Table 4.3.
Normality indicators for the data

	Skewness Coefficient	Kurtosis Coefficient
PSS	.113	-.890
CD-RISC	-.447	-.232
PAQ – Father		
Authoritarian	.208	.717
Authoritative	-.519	.441
Permissive	.274	.850
PAQ – Mother		
Authoritarian	.029	-.389
Authoritative	.388	-.467
Permissive	.346	.182
PAQ – Combined		
Authoritarian	-.313	-.971
Authoritative	.153	.051
Permissive	.509	.697
Modified Risk Involvement and Perception of Risk and Benefit Questionnaire		
Risky Behaviour	1.03	.757
Perception of Benefit	-1.306	1.54
Perception of Risk	.968	.768

4.7.2. Assumptions for Linear Simple and Multiple Regressions

To run a linear simple regression or multiple regression additional assumptions need to be met. These assumptions include the assumption that the data should be measured at a continuous level, i.e. either interval or ratio levels of measurement. In addition, the variables must be normally distributed (Osborne & Waters, 2002). These two criteria have already been established under assumptions of normality for parametric statistics. In addition the following assumptions need to be met.

A linear regression analysis can only be run if the relationship between the dependant (DV) and independent variables (IV) is linear in nature (Field, 2009; Osborne & Waters, 2002). If the relationship is not linear the results of a linear regression will bias the relationship between the variables (Field, 2009; Osborne & Waters, 2002). Examination

of residual plots, according to Osborne and Waters (2002), is the preferred method of establishing linearity. For this sample all residual plots indicate linearity. Residual plots also indicate normality by indicating homogeneity of variance; variables should ideally be as close to the line as possible. Residual plots for this data are normal. See Appendix J for all residual plots.

For multiple regressions to be calculated there needs to be little or no collinearity between the IVs. If collinearity exists between the variables it is difficult to determine the individual importance of the predictor or IV (Field, 2009). Variance inflation factors (VIF) were generated to establish if collinearity existed between the variables; the VIF indicates the strength of the linear relationship between the variables (Field, 2009). Although there are no exact rules regarding the appropriate values for VIF values of < 10 are generally acceptable. In addition to VIF tolerance values were also generated, Values of < .2 generally indicate a serious concern (Field, 2009). Furthermore the Condition Index was assessed to ensure that there was no relationship between the variables, the Condition Index should be < 30 to ensure multicollinearity is not a concern (Hair, Anderson, Tatham, & Black, 1998). Multicollinearity was not a concern for model one of all moderated multiple regressions. It was however, a concern for model two of all moderated multiple regressions. See Table 9 in Appendix L for all Collinearity Statistics.

Data must also meet the assumption of homoscedasticity, this indicates that the relationship between the IV and the DV is the same across all values of the IV (Field, 2009; Osborne & Waters, 2002). If the variance of errors is different for different values of the IV, heteroscedasticity is indicated which can lead to distortion in the findings,

however slight heteroscedasticity has little effect (Osborne & Waters, 2002). Homoscedasticity can be investigated through visual examination of the plot of standard residuals, residuals should ideally be evenly scattered around 0 for homoscedasticity to be indicated. For the present study, this assumption was satisfied. See Appendix J residual plots.

In addition to the above, Cooks Distance and Leverage Values were plotted to test for outliers and influential points in all moderated, multiple regressions. The line of normal fit was drawn for Cooks Distance along the y axis by finding the point on the y axis where most observations were noted and multiplying by 3. All values beyond the line were considered outliers and should be removed for future analysis. The line of normal fit was then drawn on the x axis for the Leverage Values by calculating the equation 2p/n where p is the number of independent variables plus 1. All items beyond this point are considered influential points and should be removed for future analysis. All calculated moderated multiple regressions used risk-taking behaviour as the DV and stress as the IV.

See Table 4.4 for all influential points and influential outliers and Appendix K for Scatter plots of this data.

Table 4.4.
Influential Points and Influential Outliers for Moderated Multiple Regressions

Moderating Variable	Influential Points	Influential Outliers
Resilience Potential	9	1
Father's Authoritarian Style	9	1
Father's Authoritative Style	10	3
Father's Permissive Style	6	2
Mother's Authoritarian Style	7	1
Mother's Authoritative Style	8	1
Mother's Permissive Style	7	1
Combined Authoritarian Style	6	1
Combined Authoritative Style	7	1
Combined Permissive Style	5	2

Note: Risk-taking (DV) and Stress (IV)

4.7.3. Correlation Statistics

In order to determine the relationship between the variables Pearson correlation coefficients were conducted. A low to moderate, positive correlation was found between perceived levels of stress and levels of risk-taking behaviour in the sample (r = .369, p = .004), while a significant negative correlation was found between resilience potential and perceived levels of stress (r = -.574, p = .000). This relationship was moderate in strength. Contrary to expectations, the correlation between perceived parenting style and risk-taking behaviour yielded almost no significant results (see Table 4.5), except for a weak positive correlation between father's permissive style and level of risk-taking behaviour. The correlation between perceived parenting style and resilience potential indicated a significant positive correlation between parenting styles and resilience potential in the sample, for both authoritative father and authoritative combined type parenting styles. For full results see Table 4.6.

Table 4.5.
Pearson's Correlation Coefficients - Parenting Style and Risk-taking (N = 59)

	Authoritarian		Authoritative		Permissive	
	r	*p*	*R*	*P*	*r*	*p*
Fathers	*.098*	*.460*	*.088*	*.506*	*.261**	*.046*
Mothers	*-.133*	*.315*	*.158*	*.232*	*-.152*	*.249*
Combined	*-.012*	*.928*	*.142*	*.284*	*-.230*	*.079*

*Note: * = Correlation is significant p = < .05, ** = Correlation is significant p = < .01*

Table 4.6.
Pearson's Correlation Coefficients - Parenting Style and Resilience (N = 59)

	Authoritarian		Authoritative		Permissive	
	r	*p*	*R*	*P*	*r*	*p*
Fathers	*.049*	*.715*	*.368***	*.004*	*-.197*	*.134*
Mothers	*-.013*	*.925*	*.213*	*.105*	*-.078*	*.560*
Combined	*.024*	*.859*	*.364***	*.005*	*-.150*	*.256*

*Note: * = Correlation is significant p = < .05, ** = Correlation is significant p = < .01*

4.7.4. Regression Analysis

Linear regressions were calculated to allow for a more in-depth understanding of the relationship between the variables. Regression analysis can be used to test for interactional effects between two or more IVs on a single DV (Baron & Kenny, 1986). They can additionally be used to identify the moderating or mediating effects of variables. For moderating multiple regressions Baron and Kenny (1986) recommend that the IVs, including the moderating variables, should be individually regressed with the DV prior to the calculation of the moderated multiple regression. Thus, simple linear regressions were calculated between the variables before moderating multiple regressions were calculated. The results of the linear regressions additionally allowed for more in-depth interpretation of the relationship between the variables.

A significant regression equation was found between perceived stress and risk-taking behaviour indicating a significant, weak to moderate, positive relationship between the variables, $F_{1,57} = 8.977$ where $p = .004 < 0.05$, $t_{1,57} = 2.996$ where $p = .004 < .05$, $\beta = .37$. Results indicate that stress accounts for 13.9% of the variance in risk-taking behaviour, $R^2 = 13{,}9\ \%$.

Confidence intervals indicate that we can be 95% confident that the mean will always lie between .166 and .582, 95% CI [.166, .582]. Confidence intervals specify what the true population value is most likely to be based on the limit at either end of the interval (Cumming, 2013). The difference between this lower confidence interval and upper confidence interval is minimal in this model showing that measure for stress is significant and relatively representative of the population.

A significant regression equation was also found between perceived resilience potential and stress indicating a significant, weak, negative relationship between the variables, $F_{1,57} = 24.325$ where $p = .000 < .05$, $t_{1,57} = -4.932$ where $p = .000 < .05$, $\beta = -.331$. Results indicate that resilience potential accounts for 29.9% of the variance in stress, $R^2 = 29{,}9\%$.

Results indicate that we can be 95% confident that the mean will always lie between -.466 and -.197, 95% CI [-.466, -.197]. Again, the difference between this lower confidence interval and upper confidence interval is minimal indicating that the measure is significant and relatively representative of the population.

A simple linear regression was also calculated to predict risk-taking behaviour based on resilience potential. The regression equation was insignificant, $p = .633 > .05$. In addition, resilience potential only has a 0.4% impact on risk-taking behaviour, $R^2 = .4\%$. Furthermore there is a value of no effect between the lower confidence interval and upper confidence interval, 95% CI [-.188, .115] which additionally indicates that the results are not significant (Attia, 2005).

In light of these results and in relation to the results of correlational analysis which indicate a significant negative association between resilience potential and stress and a significant positive relationship between stress and risk, the question arose: Is the relationship between stress and risk-taking behaviour a relationship in its own right, or is it moderated by resilience potential? To answer this question a moderated multiple regression was calculated to check if resilience potential had a moderating effect on the relationship between perceived stress and risk-taking behaviour. Model One is a significant model, $F_{2,56} = 5.465$ where $p = .007 < .05$. In this model there is a significant,

moderate, positive relationship between stress and risk-taking behaviour, $t_{2,56} = 3,265$ where $p = .002 < .05$, $\beta = .45$. In addition, we can be 95% confident that the mean will always lie between .174 and .728, 95% CI [.174, .728]. The difference between this lower confidence interval and upper confidence interval is minimal indicating that measure for stress is significant and relatively representative of the population. Resilience potential however is not a significant predictor, $p = .182$. This is further supported by the fact that there is a value of no effect between the lower confidence interval and upper confidence interval 95% CI [-.055, .281]. These results are not surprising given that linear regressions indicated similar results for both variables independently.

The relationship between the IV's (stress and resilience potential) only account for 16.3% of the variance in the DV (risk-taking behaviour), $R^2 = 16,3\%$. This suggests that over 83% of the variance in risk-taking can be explained by more than just stress (which was identified as the primary working variable in this model) and the marginal impact of resilience potential.

Model Two is not a statistically significant model, $p = .245$, suggesting that resilience potential does not act as a moderator. In addition $R^2 = 18,4\%$ which indicates that the interaction effect between stress and resilience potential only affects risk-taking behaviour by 2.1% which is negligible. Thus, indicating that the relationship between stress and risk-taking behaviour is not moderated by resilience potential.

This then suggests that the relationship between these three variables is linear in nature, where increased resilience potential reduces stress and reduced stress leads to a decrease in risk-taking behaviour.

The regression equations calculated to predict risk-taking behaviour based on parenting style were largely insignificant, except for the regression equation between father's permissive style and risk-taking behaviour which indicated a significant, moderate, negative relationship between the variables, $F_{1,57} = 4.163$ where $p = .046 < .05$, $t_{1,57} = -2.040$ where $p = .046 < .05$, $\beta = -.405$. However, the results indicate that father's permissive style accounts for 6.8 % of the variance in risk-taking behaviour, $R^2 = 6{,}8$ %. This is not a high percentage making the results almost negligible, as more than 93% of the variance can be attributed to one or more additional variables. In addition, although there is not a value of no effect between the lower confidence interval and upper confidence interval the lower interval is close to zero, 95% CI [-.802, -.008]. Regression equations for all other parenting styles (fathers' authoritarian, fathers' authoritative, mothers' authoritarian, mothers' authoritative, mothers' permissive, combined authoritarian, combined authoritative and combined permissive) and risk-taking behaviour were insignificant as all *p* values > .05 and all confidence intervals had a value of no effect. See Table L6, Appendix L for a table of these results.

The regression equations calculated to predict resilience potential behaviour based on parenting style indicated a significant, strong, positive relationship between parenting styles and resilience potential for authoritative father, $F_{1,57} = 8.923$ where $p = .004 < .05$, $t_{1,57} = 5.017$ where $p = .004 < .05$, $\beta = .727$ and a significant, moderate, positive relationship for authoritative combined style $F_{1,57} = 8.721$ where $p = .005 < .05$, $t_{1,57} = 2.672$ where $p = .005 < .05$, $\beta = .501$. The results indicate that father's authoritative style accounts for 13.5 % of the variance in resilience potential, $R^2 = 13.5$ % and combined authoritative style accounts for 13.3% of the variance in resilience potential, $R^2 = 13.3\%$.

Results indicate that we can be 95% confident that the mean for father's authoritative style will always lie between .240 and 1.214, 95% CI [.240, 1.241] and the mean for combined authoritative style will always lie between .169 and .368, 95% CI [.1690, .368]. Again, the difference between this lower confidence interval and upper confidence interval is minimal indicating that the measure is significant and relatively representative of the population. Regression equations for all other parenting styles (fathers' authoritarian, fathers' permissive, mothers' authoritarian, mothers' authoritative, mothers' permissive, combined authoritarian and combined permissive) and resilience potential were insignificant as all p values > .05 and all confidence intervals had a value of no effect. See Table L7, Appendix L for a table of these results.

In light of these results and in relation to the results of correlational analysis that indicate a significant positive association between authoritative father's and combined type parenting styles, additional questions arose regarding the relationship between the variables. In addition, in light of the findings already discussed that suggest a linear relationship between resilience potential, stress and risk-taking behaviour the question regarding exact relationship between parenting style and these variables arose. Is parenting style a fourth linear variable in this relationship, or does it have a moderating effect on the relationship between stress and risk-taking behaviour? To answer this question a moderated multiple regression was calculated to determine the moderating effect of parenting style on the relationship between perceived stress and risk-taking behaviour. These regressions were calculated using stress as the IV and risk-taking behaviour as the DV. Then all 9 subtypes of parenting style (Father's Style – Authoritarian, Authoritative, Permissive, Mother's Style – Authoritarian, Authoritative,

Permissive and Combined Style – Authoritarian, Authoritative, Permissive) were independently used as the moderating variable.

Model One was a significant model for all nine regressions (see Tables L12, L15, L18, L21, L24, L27, L30, L33 & L36 in Appendix L for F and *p* values). Additionally Model One for all regressions indicated a significant, positive relationship between stress and risk-taking behaviour (see Tables L13, L16, L19, L22, L25, L28, L31, L34 & L37 in Appendix L for t, *p*, β values for each regression). Furthermore, the difference between the lower confidence interval and upper confidence interval was minimal for stress in all nine cases, indicating that measure for stress is significant and relatively representative of the population (see Table 39, Appendix L for 95% CI values for each regression). In all cases, except father's permissive style, there was no significant relationship between parenting style and risk-taking (see Tables L13, L16, L19, L22, L25, L28, L31, L34 & L37 in Appendix L for t, *p*, β values for each regression). In the case of father's permissive style t 2,56 = 3,418 where $p = .016 < .05$, β = -.476, which indicates a significant, moderate, negative relationship between permissive style and risk-taking behaviour. The relationship between the IV's (stress and each parenting style independently) only accounts for between 13.6% and 22.9% of the variance in the DV (risk-taking behaviour) (see Tables L12, L15, L18, L21, L24, L27, L30, L33 & L36 in Appendix L for R^2 values for each regression).

Model Two is not a statistically significant model for all nine regressions (see Tables L12, L15, L18, L21, L24, L27, L30, L33 & L36 in Appendix L for all *p* vales), suggesting that parenting style does not act as a moderator. In addition, the R^2 values,

which indicate that the interaction effect between stress and parenting style only affects risk-taking behaviour by a marginal percentage (see Tables L12, L15, L18, L21, L24, L27, L30, L33 & L36 in Appendix L for R^2 values for each regression). Thus, indicating that the relationship between stress and risk-taking behaviour is not moderated by parenting style. This then suggests that perceived parenting style is another linear variable in the relationship between resilience potential, level of stress and level of risk-taking behaviour.

4.8. Conclusion

The reliability analysis presented in this Chapter indicates that the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire, the CDI-RISC and the PSS are statistically reliable. In addition, the PAQ was generally reliable although Cronbach Alpha scores were slightly low for two of the subscales: permissive subscale for fathers ($\alpha = .63$) and the authoritative subscale for mothers ($\alpha = .67$).

The results of this chapter indicate that there is a significant positive relationship between perceived stress and risk-taking behaviour for this population. In addition, a significant negative relationship was found between resilience potential and perceived stress. A significant positive relationship was indicated between authoritative father and authoritative combined type patenting styles and resilience potential. Furthermore, a weak positive correlation was found between father's permissive style and level of risk-taking behaviour. Linear regression also indicated a weak, positive relationship between these variables, although the impact of father's permissive style less than 7%. The statistical analysis of the relationship between parenting styles and levels of stress yielded

no significant results. In addition, there was no significant relationship noted between resilience potential and risk-taking behaviour. Results of moderated multiple regressions indicated that resilience potential and parenting styles did not moderate the relationship between levels of stress and levels of risk-taking.

These results are discussed in the Chapter to follow.

CHAPTER FIVE: DISCUSSION

5.1. Introduction

This study investigated the relationship between perceived stress and levels of risk-taking behaviour in affluent male adolescents. In addition, it investigated the relationship between resilience potential and perceived levels of stress in the sample. It also investigated the role of resilience potential as moderating variable in the relationship between levels of stress and risk-taking behaviour. The relationship between perceived parenting style and risk-taking behaviour was also investigated, as well as the relationship between perceived parenting style and resilience potential. Furthermore, it examined the moderating effect of perceived parenting style on the relationship between stress and risk-taking behaviour.

This chapter presents a discussion of the key findings from the results of the correlational and regression analysis. The results are discussed in light of the research questions and the theoretical framework that informed the research design. The theoretical framework underpinning this research was adapted from Jessor's (1992) model and incorporates Fergus and Zimmerman's (2005) model of protective's factors. In this model the collective lifestyle of the adolescent is seen as incorporating both the underlying factors that potentially create the "risk" of risk-taking behaviour and the protective factors (assets and resources) that potentially protect adolescents from engaging in risk-taking. The collective lifestyle is divided into two domains, Environmental and Personal. The framework in its simplest terms suggests that an increase in protective factors positively affects the lifestyle of the adolescent that ultimately leads to the reduction in risk-taking

behaviour. The converse is also true, where the lack of protective factors would have a negative effect on the adolescent's lifestyle and thus increases the risk of adolescent's engaging in risk-taking behaviour. Additionally, Personal and Environmental risk factors increase the likelihood of risk-taking.

5.2. The Relationship between Perceived Levels of Stress and Risk-taking Behaviour

Recorded levels of perceived stress in this sample indicated that the mean stress level fell almost exactly in the middle of the stress range, this was surprising considering international research indicated adolescents from high-SES families were under a significant amount of pressure and experienced a significant amount of stress (Luthar, 2003, 2013; Randall et al., 2015; Travers et al., 2013). However, research into the developmental changes in adolescence has indicated that stress is significantly higher in early adolescence and begins to decline in later adolescence (Seiffge-Krenke, Aunola, & Nurmi, 2009). This has in part been attributed to the fact that as adolescents develop cognitively they develop better strategies to cope and are better equipped to manage their mood and levels of stress (Arsenio & Loria, 2014). In this current study over 71% of the participants were 16 – 18 years of age, which in relation to these findings may have impacted their levels of stress. From a different perspective, although mean stress levels were lower than expected, more than half the participants indicated moderate to high levels of perceived stress, indicating that many of the participants do in fact experience significant levels of stress.

The key findings with regard to stress were 1) the correlation that identified that stress was positively associated with levels of risk-taking and 2) the linear and multiple

regression analysis that identified increased stress as significantly impacting risk-taking behaviour. The results indicate that stress is not the lone variable that results in risk-taking behaviour, but that it is a significant contributor to levels of risk-taking. This was an unsurprising result that concurs with the review of literature from international studies (see Luthar, 2013; Luthar & Barkin, 2012). In addition, this result is in line with the theoretical framework that identified stress as one of the Environmental variables that contributed to increased risk taking behaviour. As discussed in Chapter 2, levels of stress have been found to be one of the contributing environmental factors that increase behavioural risks, such as cheating, stealing, substance use and random acts of delinquency (Luthar, 2013; Luthar & Barkin, 2012; Luthar & Sexton, 2004).

The present study indicated that riding without seatbelts, going to nightclubs, drinking alcohol and getting drunk, as well as not studying for school exams as the five highest risk-taking behaviours that this population engage in. The finding that drinking alcohol and getting drunk is a behaviour more commonly engaged in is concurrent with international findings that suggests affluent adolescents generally engage in increased alcohol consumption (Humensky, 2010). In addition it is in line with South African research, conducted in the Western Cape, that indicated alcohol consumption as being prevalent in South African youth (see Morojele et al., 2013). .

Marijuana and other illicit substance use, also indicated as prevalent amongst international affluent youth (Humensky, 2010; Luthar, 2013; Luthar & Barkin, 2012), were found to be less prevalent in this study. This is surprising considering South African research has indicated a prevalence of substance use, especially marijuana use, amongst

South African youth (Morojele et al., 2013; Reddy et al., 2013). It must be noted that this research was not conducted on affluent adolescents specifically, and thus may not be a true reflection of the substance using habits of this population. In addition, peer influence, an environmental risk factor, has been shown to be increasingly influential in adolescents substance using habits (Iwamoto & Smiler, 2013; Kelly et al., 2012; Simons-Morton & Chen, 2006). The results in this study may indicate that the sample of adolescents have reduced exposure to peers that promote substance using habits, although more research needs to be conducted in this area. Peer influence will be discussed in more depth in the following section.

Furthermore, research has indicated that a lack of anonymity reduces the truthfulness of participants answers to self-reports of a sensitive nature (Ong & Weiss, 2000; Vainio, 2013). It must then be considered that although confidentiality was assured, the lack of anonymity during data collection may have influenced the participants' willingness to answer truthfully with regards to their use of illegal substances. Thus the results of questions relating to substance use may not be a true reflection of participant's substance using habits.

Behaviours such as cheating and stealing, identified by international research as prevalent risk behaviours in affluent adolescents (Luthar, 2013), were also not as prevalent in this study. In fact, they ranked amongst the lowest of the risk-taking behaviours that this population engaged in. As discussed, lack of anonymity may have influenced participants' willingness to be forthcoming regarding these activities, which may have legal or academic consequences. Furthermore, looking at stealing, little research has been

conducted into the reasons that affluent adolescents engage in this specific risk-taking behaviour, although Luthar (2013) suggests that it is simply a thrill seeking behaviour used to relieve pressure. In addition, as 78% of the adolescents in the current study are boarding students they may not have as much opportunity to engage in this type of thrill seeking behaviour, as they may be quite stringently monitored (see Kabiru & Orpinas, 2009). This will be discussed in more depth under the influence of parenting style on risk-taking behaviour.

The overall result regarding perceived stress and risk-taking behaviours appears to be congruent with international findings. What seems to differ in these results is simply the types of risk-taking behaviours these adolescents chose to engage in.

5.3. The Relationship between Resilience Potential and Level of Perceived Stress

The significant relationship found between resilience potential and perceived stress was in line with literature as outlined in Chapter 2. Literature indicated that characteristics of resilience potential, such as positive self-esteem, internal locus of control, positive affect and self-control act as protective factors against the increased feelings of stress under pressure (see Abolghasemi & Varaniyab, 2010; Agaibi & Wilson, 2005; Dumont & Provost, 1999; Hjemdal et al., 2011), which is in line with the findings of this study. In addition, these findings are in line with the theoretical framework (see Chapter 2) that suggests resilience potential is an asset and protective factor that aids stress reduction by increasing the ability cope with arduous life circumstances.

As discussed, the PSS was designed to assess feelings of being overwhelmed and being unable to control or predict life events. The results of the PSS indicated that feeling out of

control was one of the most prevalent feelings that culminated in increased levels of stress in the participants. Items such as "felt that you were unable to control the important things in your life" and "being angered because of things that were outside of your control" ranked fourth and second highest respectively. In addition, unexpected events ranked third highest in the scale. As the review of literature indicated, feelings of self-control and the belief that circumstances are within ones control are characteristics of resilience potential, which have been found to protect against increased stress (Dumont & Provost, 1999; Mandleco & Peery, 2000). Thus, feeling that one's life is not within ones control could lead to feelings of stress, as found in this study.

As discussed previously, the mean stress level recorded in this study indicated that in general the participants fell within the middle of the stress range, which was surprising. This may be explained by the mean level of resilience potential that was relatively high within the sample. As found in this study, resilience has a significant negative correlation with levels of stress and thus a sample with higher resilience scores would be expected to have lower stress levels.

5.4. The Moderating effect of Resilience Potential on the relationship between Perceived Stress and Risk-taking Behaviour

A moderated multiple regression was calculated to establish if resilience potential had a moderating effect on the positive relationship between stress and risk-taking behaviour. The question regarding the potential moderating relationship arose from both the review of literature and the results in the current study that identified 1) the positive relationship between stress and risk-taking behaviour and 2) the negative relationship between

resilience potential and stress. Although results have indicated that decreased stress predicts a reduction in risk-taking, the question arose with regards to the exact nature of causation. Does reduced stress itself cause a reduction in risk-taking, or is stress in fact moderated by resilience potential? The results of the moderated multiple regression indicated that resilience potential does not moderate the relationship between stress and risk-taking. This leads us to see the relationships between these variables simply in their linear terms, where increased resilience potential is associated with reduced stress and the reduction of stress is associated with decreased risk-taking behaviour, as seen in both correlational analysis and linear regression calculations. This linear understanding is consistent with the theoretical framework and review of literature (see Chapter 2), which indicated a linear relationship between these variables.

5.5. The Relationship between Perceived Parenting Style and Risk-taking Behaviour

Almost no significant relationship was found between perceived parenting style and risk-taking behaviour, except for a weak negative correlation between permissive fathers and risk-taking behaviour. This result is surprising considering the review of literature which indicated parental monitoring, the attribute mostly associated with reduction in risk-taking behaviour (Boyer, 2006; Bronte-Tinkew, 2006; Rutter, 1987), is not associated with permissive style of parenting (Berk, 2009; Turner et al., 2009).

No relationship was found between fathers, mothers or combined overall authoritative styles and reduction of risk-taking behaviour in this study. This finding is contrary to the review of literature, which indicated that authoritative parenting style, categorised by warmth, parental monitoring and effective communication, is a positive environmental

factor and protective resource associated with reduction in risk-taking (Boyer, 2006; Bronte-Tinkew, 2006; Huebner & Howell, 2003; Kuppens et al., 2009; Lau & Yuen, 2013; Leather, 2009). In addition, no relationship was found between authoritarian fathers, mothers or combined overall authoritarian style and risk-taking. Again this is contrary to literature explored in Chapter 2, which acknowledges the relationship between authoritarian styles and reduction of risk-taking behaviour, mostly because of the heightened monitoring strategies displayed by authoritarian parents (Boyer, 2006; Bronte-Tinkew, 2006).

This finding, regarding parenting style, may be related to the demographic of the sample where 78% of the participants were boarding students and thus the boarding master's style of "parenting" may be relatively influential. There has however been very little research into the impact of boarding school or the influence of boarding "parents" on adolescents in general and even less on the influence related to risk-taking. In early research conducted with boarding students Bronfenbrenner (1970) postulated that children are more likely to resist social pressure if they have more than one social influence. He believed that divergent influences decreased the need to conform by increasing the awareness within the child that everyone cannot be pleased all of the time. Deviation from pressure thus does not cause as much anxiety or jeopardise children's sense of security (Bronfenbrenner, 1970), which reduces the need to conform to peers risk-taking behaviours. His research investigated children in boarding schools who had little contact with their families and thus boarding students were classed as children with only one influence. This is not necessarily the case with the participants in this research, who do have more contact with their families. Thus boarding school can be classed as an

additional socialising influence and protective environmental factor. From this perspective, the additional socialising agent, the boarding master, could have positively influenced the participant's environment and thus reduced their level of risk-taking. This influence may have superseded or at least reduced the direct protective influence of parents in this sample.

More recent research in Kenya found that because the researched students spent the school term away from their parents, the school environment was of greater influence and thus parental influence was minimised (Kabiru & Orpinas, 2009). The participants in this research generally have more contact with their parents than the students in the Kenyan study; however, the boarding master does have more impact during their school week, which may reduce the protective impact of positive parenting style. The Kenyan research indicated that sexual activity amongst boarding students is comparatively less than that of day school students, indicating that risk-taking, at least in terms of sexual risk, is lessened by boarding school attendance. Their research postulated that although there is a less adult to child ratio in boarding school, students may in fact be monitored more stringently in a boarding school setting than children living at home with working parents who are less available (Kabiru & Orpinas, 2009). As discussed, monitoring is one of the primary protective factors that reduces risk-taking behaviour, and thus the additional monitoring of boarding students, by the boarding master, may be the overarching protective influence.

Peer pressure could also play a more significant role in influencing risk-taking behaviour during adolescence. Adolescence is a stage of development where establishing a sense of

group belonging is crucial, thus adolescents are often more susceptible to adopting the peer values and norms found in their environment, which could impact their risk-taking habits (Kelly et al., 2012; Trucco, Colder, & Wieczorek, 2011). Furthermore, adolescents are often afforded more freedom and autonomy, thus the peer group can often become the primary source of influence (Trucco et al., 2011). At this stage peer opinions often hold more weight than those of parents or adults (Albarracín, Kumkale, & Johnson, 2004). In support of this, research into early sexual debut and sexual risk-taking indicates that, especially in males, peer pressure is one of the leading causes of early onset risky sexual activity (Brook, Morojele, et al., 2006).

Substance abuse has also been highly correlated to peer influence, as adolescents who associate with substance using peers are more likely to become involved with substance use themselves (Iwamoto & Smiler, 2013; Kelly et al., 2012; Simons-Morton & Chen, 2006). This may be due to the increased availability of substance, but is also credited to the fact that substance use becomes more normative in such an environment (Simons-Morton & Chen, 2006). College students who perceived their cohort group as heavy drinkers reported heavier drinking themselves (Neighbors, Lee, Lewis, Fossos, & Larimer, 2007). Additionally, a longitudinal study of 13 - 25 year olds indicated that perceived peer alcohol and marijuana use increased the subjects own use of these two substances in a relatively short period of time (D'Amico & McCarthy, 2006).

Although literature and research, as outlined in Chapter 2, has indicated the importance of the impact of parenting on risk-taking behaviour, the influence of the boarding master

and heightened peer influence during adolescence may have superseded parental influence in this research population.

5.6. The Relationship between Perceived Parenting Style and Resilience Potential

Authoritative parenting style was positively associated with resilience potential, which was an expected result based on the literature review in Chapter 2 that indicates authoritative parenting is a protective resource that increases assets such as self-esteem, internal locus of control, self confidence and competence (Dumont & Provost, 1999; Luthar, 1991; Sharaf et al., 2009). Interestingly this correlation was only indicated for fathers' authoritative parenting and the combined overall household authoritative style. Mothers' parenting style showed no relationship to resilience potential, which was unexpected, considering that much of the research into parenting style is based on mothers' style and then inferred to fathers (Simons & Conger, 2007). In fact, research into fathers' parenting style and its impact on characteristics of resilience potential is quite scarce. According to Bögels and Phares (2008) this may be due to the fact that the role of fathers is often ignored by researchers, as mothers are seen as spending more time with their children and are thus seen as more important in the child rearing process. There is, as asserted by Bögels and Phares (2008), no evidence to support that quantity of involvement is linked with desirable incomes, which suggest that quality of involvement may be more important.

Taris and Bok (1997) have in fact found that a loving and caring paternal upbringing increased internal locus of control, while similar parenting practices by mothers resulted in the opposite. As discussed in Chapter 2, locus of control is an important characteristic

of resilience potential (see Dumont & Provost, 1999). Thus, fathers may be more influential assets from this perspective, which may have contributed to the findings of this study. In addition, self-esteem, a sense of self confidence and feelings of competence are also key characteristics of resilience potential (see Luthar, 1991; Sharaf et al., 2009). Dutsch, Servis, and Payne (2001) found that fathers who participated in the emotional side of parenting raised children with higher self-esteem. In fact the positive development of self-esteem has been related to paternal parenting where fathers, characterised by warmth, involvement, attachment and support, all characteristics of authoritative parenting, were found to be active participants in child rearing (Dutsch et al., 2001). Father-adolescent relatedness, as opposed to maternal relatedness, has also been shown to be a predictor or self-esteem and a sense of personal competence in adolescents (Bögels & Phares, 2008). Competence and sense of personal control over life circumstances has additionally been related to fathers' parenting style according to Taris and Bok (1997).

Furthermore secure father-infant relationships, as opposed to mother-infant relationships have been shown to increase security in adolescence and has been associated with the reduction of anxiety and increased sociability (Bögels & Phares, 2008). Taking all of this into account there is evidence to suggest that parental influence may be more a more important asset in promoting the characteristics found in children and adolescents with resilience potential. It must also be considered that this result may be related to the sample population of the study, which was exclusively male. Research has shown that fathers relationship and attachment to male children is often more influential than mother's attachment (Roelofs, Meesters, ter Huurne, Bamelis, & Muris, 2006). However,

little research has specifically been conducted into fathers' influence over male children's development of the characteristics of resilience potential.

5.7. The Moderating effect of Parenting Style on the relationship between Perceived Stress and Risk-taking Behaviour

A moderated multiple regression was calculated to establish if parenting style had a moderating effect on the positive relationship between stress and risk-taking behaviour. The question regarding the potential moderating relationship arose from both the review of literature and the results in the current study that identified 1) the linear negative relationship between resilience potential and stress and the positive relationship between stress and risk-taking behaviour 2) the positive relationship between father's and combined authoritative parenting style and resilience potential.

Although results have indicated that father's and combined authoritative parenting style predicts increased resilience potential, the question arose with regards to the exact nature of causation. Is parenting style the fourth variable in the linear relationship between resilience, stress and risk-taking or does it act as a moderator in the relationship between levels of stress and levels of risk-taking?

The results of this study indicated that parenting style did not moderate the relationship between stress and risk-taking behaviour. This leads us to see parenting style as a fourth linear variable in the relationship between resilience potential, level of stress and level of risk taking behaviour. Thus, from the current study, father's authoritative parenting and combined overall household authoritative style is associated with increased resilience potential, which is in turn associated with reduction in levels of stress, which resultantly

is associated with reduced risk-taking behaviour. See Figure 5.7.1 for a diagrammatic representation of the relationship between these variables.

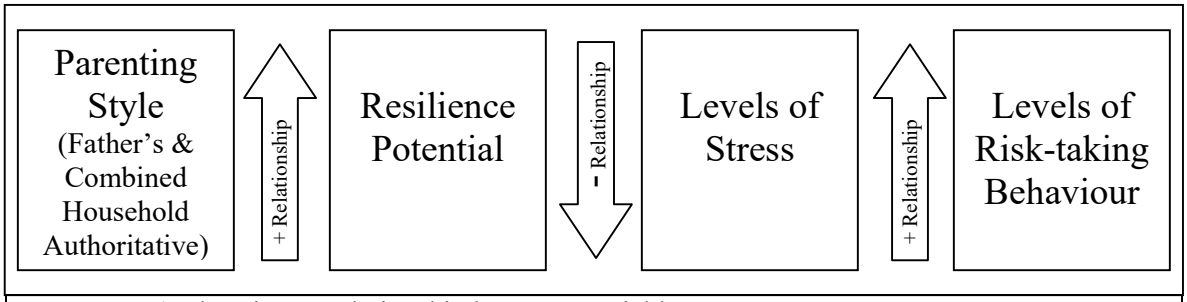


Figure 5.7.1. The Linear Relationship between Variables

Considering this, although parenting style was shown to have no direct impact on levels of risk-taking, it appears to have an indirect influence though it's positive association with resilience potential and resilience potential's association with the reduction of stress and resulting decrease in risk-taking behaviour.

This linear relationship is in line with the theoretical framework that informed this research, as highlighted in Figure 5.8.1.

5.8. Conclusion

As discussed, in line with previous research the results of this study indicate that levels of stress are a significant contributor to increased levels of risk-taking behaviour in affluent adolescents. Additionally the relationship between increased resilience potential and the reduction stress has been well established. Furthermore, the relationship between authoritarian parenting style and the increase in levels of resilience potential is also in line with international research. However, the finding that fathers' and overall combined authoritarian style affected resilience potential, while mothers' authoritarian style had no

effect was surprising. Also surprising were the results which indicated a lack of association between parenting style and level of risk-taking behaviour. As discussed, these results may be related to the demographic of the population who were primarily boarding students. In addition, the results may be inductive of the overarching influence or peer pressure or other variables during adolescence. The finding that parenting style did not moderate the relationship between stress and risk-taking was in line with the review of literature and the theoretical framework of this study. The findings of this study, in terms of the theoretical framework have been highlighted in Figure 5.8.1.

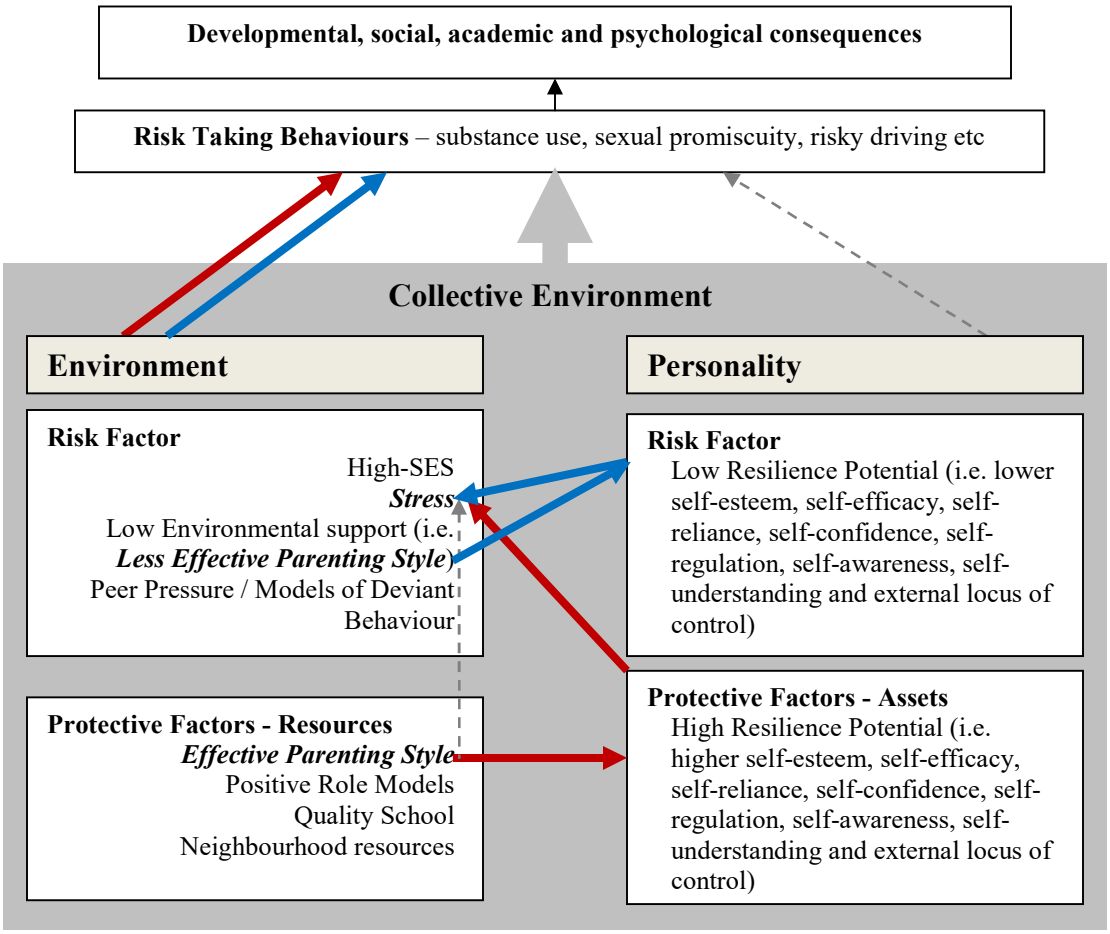


Figure 5.8.1. Research Results as related to the Theoretical Model

Note:

Red Lines Indicate: *Authoritarian - father and combined style is associated with increased resilience potential, which is associated with a reduction of stress, which is further associated with a reduction in risk-taking behaviour.*

Blue Lines Indicate: *Less effective parenting, style is associated with decreased resilience potential, which is associated with a increased of stress, which is further associated with an increase in risk-taking behaviour.*

Dotted Grey Lines Indicate: *Relationships that were not indicated by this study (i.e. Parenting style was found to have no direct impact on levels of stress and resilience potential was not found to have any direct impact on risk-taking behaviour)*

CHAPTER SIX: CONCLUSION, STRENGTHS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

6.1. Introduction

At the outset of this research project this study aimed to investigate the relationship between levels of stress and levels of risk-taking behaviour in affluent male adolescents. It also aimed to investigate the potential protective factors, parenting style and resilience potential, which had been shown, from and international perspective, to have a protective impact on the risk-taking behaviours undertaken by this population. The research thus investigated the relationship between resilience potential and levels of stress, and the potential moderating effect of resilience potential on the relationship between stress and risk-taking behaviour. Further to this it investigated the relationship between parenting style and levels of risk-taking and parenting style and levels of resilience potential. Additionally, it investigated if parenting style acted as a moderator to the relationship between levels of stress and levels of risk-taking behaviour.

6.2. Summary

From a South African perspective affluent adolescents are an under researched population as a whole, but more specifically in terms of their levels of stress and levels of risk-taking behaviour. International research has indicated that this population increasingly engages in risk-taking behaviours as a means of relieving stress (Luthar, 2013; Luthar & Barkin, 2012). Additionally, access to resources, which allows easier access to drugs, alcohol, fast cars etc, seems to be an additional variable the leads to increased risk-taking (Humensky, 2010).

International research has begun to investigate the protective factors that assist in reducing the level of risk-taking undertaken by this population. Characteristics of resilience potential, such as self-esteem, self-efficacy and internal locus of control have been identified as protective factors that assist in decreasing risk-taking behaviours (Abolghasemi & Varaniyab, 2010; Dumont & Provost, 1999; Hjemdal et al., 2011; Luthar, 1991; Mandleco & Peery, 2000). In addition, parenting practices and specific parenting styles are seen as protective assets that have been associated with increased resilience potential and reduced risk-taking behaviours (Boyer, 2006; Bronte-Tinkew, 2006; Chassin et al., 1996; Fergus & Zimmerman, 2005; Gervilla et al., 2011; Jessor, 1992; Sharaf et al., 2009; Steinhardt & Dolbier, 2008).

Authoritarian parenting style is the parenting style most associated with a reduction in risk-taking behaviour. This is mostly attributed to parental monitoring, but is also related to the high levels of parental warmth and involvement, as well as appropriate autonomy granting characterised by this style of parenting (Boyer, 2006; Bronte-Tinkew, 2006; Huebner & Howell, 2003; Kuppens et al., 2009; Lau & Yuen, 2013; Leather, 2009). Authoritative parenting is also associated with reduction is risk-taking. This style of parenting is largely characterised by excessive control and monitoring (Alegre, 2011; Berk, 2009), which may have a constructive impact on levels of risk-taking, but may have other negative consequences.

Based on these finding this study set out to investigate the relationship between levels of perceived stress in South African affluent adolescents and the level of risk-taking behaviour these adolescents engage in. The findings of the study indicate that the sample

of adolescents experience a moderate level of stress. Stress is an environmental risk factor associated with engagement in risk-taking behaviour (Luthar, 2013; Luthar & Barkin, 2012). Levels of stress are not available for adolescents of other SES brackets in South Africa and thus comparative investigation could not be undertaken to establish the significance of their stress levels as related to their peers. Further investigation in needed in this area.

The study further investigated the relationship between levels of resilience potential and levels of stress and found that increased resilience potential was a protective factor associated with reduced levels of stress. Resilience potential however is not a variable that moderated the relationship between levels of stress and levels of risk-taking. The impact of these variables are more linear in nature and simply stated, increased resilience potential is associated with reduced stress which is in turn associated with a reduction in risk-taking behaviours.

The study also investigated the relationship between fathers', mothers' and combined over household parenting style and risk-taking behaviour. Overall, no significant relationship was found, except for a weak negative association between permissive fathers and risk-taking behaviour. This was a surprising result, considering the review of literature which indicated parenting style as a significant protective factor as far as risk-taking behaviour is concerned. Results however may be associated with the high number of boarding students who participated in the study and the potential overarching influence of the boarding house "parent" on this group.

The relationship between parenting style and resilience potential was also investigated. Results indicated that authoritative parenting style was positively associated with resilience potential, which is in line with past research on this topic. Interestingly this relationship was only indicated for fathers' authoritative parenting and combined overall household authoritative style. Mothers' parenting style showed no relationship to resilience potential, which was unexpected.

The study also investigated the possibility that parenting style acted not simply as a fourth linear variable in the relationship between resilience potential, levels of stress and levels of risk-taking behaviour, but potentially acted as a moderator in the relationship between levels of stress and levels of risk-taking. Result indicated that parenting style had no moderating effect on this relationship, thus indicating that it simply acts as a fourth linear variable, as outlined in the theoretical framework. Considering this result, although parenting style was shown to have no direct impact on levels of risk-taking, it appears to have an indirect influence on risk-taking behaviour though its positive association with resilience potential.

The contributions of this study simply scratch the surface of the gaps in the research from a South African context. It is clear that levels of stress significantly contribute to levels of risk-taking behaviours in high-SES adolescents. Stress however is not the only contributing variable and much investigation is needed into the additional variables that impact risk-taking behaviour, some of which have been outlined in the theoretical framework that informed this study. These variables require more investigation and will be disused under recommendations for further research.

6.3. Strengths and Contribution of the Research

This study makes a significant contribution to the body of literature on this topic. As mentioned, research on stress levels and risk-taking behaviour has not been conducted using this population in South Africa. This has left a significant gap in the body of literature, which this research will begin to close. In addition, although there is a body of literature related to resilience and parenting style and its impact on risk-taking in affluent adolescents, most of the research has been conducted by Luthar and colleagues, who have only explored these variables from an international perspective (Ansary & Luthar, 2009; Luthar, 1991, 2003, 2013; Luthar & Barkin, 2012; Luthar, Cicchetti, & Becker, 2000; Luthar & D'Avanzo, 1999; Luthar & Goldstein, 2008; Luthar & Latendresse, 2005; Luthar, Sawyer, & Brown, 2006; Luthar & Sexton, 2004; Suchman & Luthar, 2000). This study thus contributes to the body of research from a South African perspective.

In addition, the study offers value and benefit to the participating school by providing feedback on the levels of stress experienced by their student and the specific risk-taking behaviours that students engage in. This would enable the school to explore interventions and programmes that target these specific risks.

In terms of methodological rigour, participants were assessed using instruments that have proved to be both valid and reliable. The PAQ is a long standing measure of parenting style that was developed by Buri (1989). At the time of development it was found to be appropriate, reliable and valid for administration to both male and female older adolescents and young adults (Buri, 1989). In addition this measure has been used in more current research, both internationally and in South Africa, where good reliability

scores have been obtained (Kritzas & Grobler, 2005; Turner et al., 2009). The Modified Risk Involvement and Perception of Risk and Benefit Questionnaire is a more recently developed measure that showed good reliability in terms of both Cronbach Alpha scores and test-retest reliability (Ben-Zur & Reshef-Kfir, 2003). The CD-RISC was also shown to be reliable and showed both high internal consistency and test-retest reliability (Connor & Davidson, 2003). In addition, it was used in a large South African study and showed excellent internal consistency (Fincham et al., 2009). The PSS also showed good internal consistency and reliability from a South African context (Pau et al., 2007). Further to this, before data analysis commenced reliability was established for all measures using Cronbach Alpha scores.

6.4. Limitations of the Research

For the study a sample of 59 adolescent males was used. Although the sample was sufficient for this study it may not sufficiently represent the total population of high-SES males in South Africa and thus results many not be generalisable to the entire population of high-SES male South Africans. According to Terre Blanche et al. (2006) a specific sampling ratio needs to be met in order to achieve a high degree of accuracy in statistical analysis. This ratio depends of the total size of the population, the larger the sample the smaller the ratio. Unfortunately there are no statistics on the population size of high-SES males adolescents in South Africa, so accurate sample size could not be calculated according to this ratio. The number of participants in this study however is insufficient to meet the requirements of even a small population.

The sample population consisted of primarily boarding students, which may have influenced the results related to parenting style. As discussed in Chapter 5, children and adolescents who attend boarding school have an additional and sometimes more powerful external protective influence which may have minimised the impact of parenting style in this sample (Bronfenbrenner, 1970; Kabiru & Orpinas, 2009). In addition, because of restricted living conditions, boarding students may not have access or opportunity to engage in certain risky behaviours, for example opportunity sexual risk-taking of a heterosexual nature is limited in a single sex school such as the sample school. Thus, reports on risk-taking may be minimised by lack of opportunity and not lack of willingness to participate in risk-taking behaviours.

In addition, although confidentiality was guaranteed the participants were required to provide their names when completing the questionnaires. Not offering anonymity in data collection has been shown to increase the chances that the truth is concealed (Vainio, 2013), especially when participants are required to complete self-reports of a sensitive nature (Ong & Weiss, 2000), such as the Modified Risk Involvement and Perception of Risk and Benefit Questionnaire. This lack of anonymity many have influenced the participants responses. In an attempt to counteract this effect the researcher did explain that all identifying features would be removed from all data before the commencement of data analysis.

6.5. Suggestions for Future Research

As many of the participants were boarding students, which may have impacted the results in terms of parenting style and its impact, it is suggested that this study be replicated with

a population of high-SES adolescents that are day schooled. In addition, it is recommended that the sample size be increased in order to increase external validity.

It may also be valuable to replicate this study with a female population. Although research, as discussed in Chapter 2, has shown that males are more at risk than females, girls are by no means immune to risk-taking behaviour. In fact Iwamoto & Smiler (2013) found that masculine norms, which have a positive impact of male drinking habits, are beginning to impact the drinking habits of adolescent girls who attempt to fit in with the boys by "drinking like a guy." As discussed, increased alcohol use has been associated with the increase in sexual risk-taking behaviours, which have specific impacts and risks for females.

In terms of boarding students, South African research is scarce regarding the impact of boarding school and the impact of boarding house "parents" on high-SES adolescents' development. Future research in this area may be beneficial, specifically related to the resulting impact on levels of stress, risk-taking and resilience potential.

As discussed in Chapter 5, peer pressure may an environmental risk factor that has a significant impact on adolescents' levels of risk-taking behaviour. Further investigation into the impact of peer pressure on high-SES adolescent and its resulting effect on risk-taking behaviour would be beneficial and will add to the limited body of research on this subject. In addition, although this research established the levels of stress and levels of risk-taking in the high-SES sample, future research into investigating the comparative levels of stress in high-SES, middle class and low-SES adolescent populations may be useful in determining the highest "at risk group" from a South African context.

Furthermore, this research identified through the review of literature that elevated stress levels in high-SES adolescents increased levels of anxiety and depression. As there is little to no research conducted on these variables on this population in South Africa, investigation into the relationship between stress and levels of depression and anxiety in this population would be worthwhile. An investigation into the protective influence of neighbourhood and community resources and their resulting effect on resilience potential, stress and risk-taking would also be beneficial.

6.6. Conclusion

The theoretical model underpinning this research identifies that within the adolescent's collective environment there are both risk factors, which increase the likelihood of risk-taking behaviour and protective factors, which potentially buffer or offer protection against the effect of the risk factors and resulting risk-taking behaviour. The scope of this study investigated parenting style, which is seen as either an environmental risk or protective asset, depending on the specific style of the parent. It additionally investigated resilience potential, which when low is seen as a personal risk factor. High resilience potential is seen as a personal asset that offers protection against some of the risk variables. These two variables, parenting and resilience were chosen as international research identified them as the key factors relating to levels of stress and levels of risk-taking in adolescents. This research identified that these variables play a significant role in the relationship between levels of stress and levels of risk-taking behaviour in affluent adolescents. It was identified that authoritative parenting style, specifically related to fathers and combined household style, had a significant, positive impact on resilience

potential. Increased resilience potential was associated with lower levels of stress, which was in turn associated with lower risk-taking behaviour.

As mentioned, there is still a significant gap in South African research into affluent adolescents as a whole and more specifically into the factors that increase their levels of stress and levels of risk-taking. Additional investigation is needed to determine the impact of these variables.

REFERENCES

Abolghasemi, A., & Varaniyab, S. T. (2010). Resilience and perceived stress: predictors of life satisfaction in the students of success and failure. *Procedia - Social and Behavioral Sciences*, (5), 748–752. doi:10.1016/j.sbspro.2010.07.178

Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and Resilience: A Review of the Literature. *Trauma, Violence, & Abuse*, *6*(3), 195–216. doi:10.1177/1524838005277438

Albarracín, D., Kumkale, G. T., & Johnson, B. T. (2004). Influences of social power and normative support on condom use decisions: a research synthesis. *CHIP Documents*, *16*(6), 700–723. doi:10.1080/09540120412331269558

Alberts, A., Elkind, D., & Ginsberg, S. (2006). The Personal Fable and Risk-Taking in Early Adolescence. *Journal of Youth and Adolescence*, *36*(1), 71–76. doi:10.1007/s10964-006-9144-4

Alegre, A. (2011). Parenting Styles and Children's Emotional Intelligence: What do We Know? *The Family Journal*, *19*(1), 56–62. doi:10.1177/1066480710387486

Alvord, M. K., & Grados, J. J. (2005). Enhancing Resilience in Children: A Proactive Approach. *Professional Psychology: Research and Practice*, *36*(3), 238–245. doi:10.1037/0735-7028.36.3.238

Ansary, N. S., & Luthar, S. S. (2009). Distress and academic achievement among adolescents of affluence: A study of externalizing and internalizing problem behaviors and school performance. *Development and Psychopathology*, *21*(1), 319–341. doi:10.1017/S0954579409000182

Armstrong, M. I., Birnie-Lefcovitch, S., & Ungar, M. T. (2005). Pathways Between Social Support, Family Well Being, Quality of Parenting, and Child Resilience: What We Know. *Journal of Child and Family Studies*, *14*(2), 269–281. doi:10.1007/s10826-005-5054-4

Arsenio, W. F., & Loria, S. (2014). Coping with Negative Emotions: Connections with Adolescents' Academic Performance and Stress. *The Journal of Genetic Psychology*, *175*(1), 76–90. doi:10.1080/00221325.2013.806293

Attia, A. (2005). Why should researchers report the confidence interval in modern research. *Middle East Fertility Society Journal*, *10*(1), 78–81.

Baker, E. H. (2014). Socioeconomic Status, Definition. *The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society*, 2210–2214. doi:10.1002/9781118410868.wbehibs395

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173.

Baumrind, D. (1966). Effects of Authoritative Parental Control on Child Behavior. *Child Development*, *37*(4), 887–907.

Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology*, *4*(1p2), 1–103.

Ben-Zur, H., & Reshef-Kfir, Y. (2003). Risk taking and coping strategies among Israeli adolescents. *Journal of Adolescence*, *26*(3), 255–265. doi:10.1016/S0140-1971(03)00016-2

Berk, L. E. (2009). *Child Development* (Eighth Edition). Boston: Pearson International.

Bögels, S., & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: A review and new model. *Clinical Psychology Review*, *28*(4), 539–558. doi:10.1016/j.cpr.2007.07.011

Bornstein, M. H., & Bradley, R. H. (2014). *Socioeconomic Status, Parenting, and Child Development*. Abingdon, United Kingdom: Routledge.

Boyer, T. (2006). The development of risk-taking: A multi-perspective review. *Developmental Review*, *26*(3), 291–345. doi:10.1016/j.dr.2006.05.002

Brody, G. H., Shannon, D., Forehand, R., & Armistead, L. (2002). Unique and protective contributions of parenting and classroom processes to the adjustment of African American children living in single-parent families. *Child Development*, *73*(1), 274–268.

Bronfenbrenner, U. (1970). Reaction to social pressure from adults versus peers among Soviet day school and boarding school pupils in the perspective of an American sample. *Journal of Personality and Social Psychology*, *15*(3), 179.

Bronte-Tinkew, J. (2006). The Father-Child Relationship, Parenting Styles, and Adolescent Risk Behaviors in Intact Families. *Journal of Family Issues*, *27*(6), 850–881. doi:10.1177/0192513X05285296

Brook, D. W., Brook, J. S., Morojele, N. K., & Pahl, K. (2006). Predictors of drug use among South African adolescents. *Journal of Adolescent Health*, *38*(1), 26–34.

Brook, D. W., Morojele, N. K., Zhang, C., & Brook, J. S. (2006). South African Adolescents: Pathways to Risky Sexual Behavior. *AIDS Education and Prevention*, *18*(3), 259–272. doi:10.1521/aeap.2006.18.3.259

Buri, J. R. (1989). An Instrument for the Measurement of Parental Authority Prototypes. Presented at the Sixry-first annual meeting of the Midwestern Psychological Association, Chicago.

Byrnes, J. P., Miller, D. C., & Schafer, W. D. (1999). Gender Differences in Risk Taking: A Meta-Analysis. *Psychological Bulletin*, *125*(3), 367–383.

Chassin, L., Curran, P. J., Hussong, A. M., & Colder, C. R. (1996). The relation of parent alcoholism to adolescent substance use: a longitudinal follow-up study. *Journal of Abnormal Psychology*, *105*(1), 70.

Code of Research Ethics. (2016). Retrieved from http://www.hsrc.ac.za/en/about/research-ethics/code-of-research-ethics

Cohen, G. L., & Prinstein, M. J. (2006). Peer contagion of aggression and health risk behavior among adolescent males: An experimental investigation of effects on public conduct and private attitudes. *Society for Research in Child Development*, *77*(4), 967–983.

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76–82. doi:10.1002/da.10113

Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, *80*(5), 46–56.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334.

Cumming, G. (2013). Confidence Intervals and the New Statistics. American Psychological Association Education Directorate. Retrieved from http://www.apa.org/education/ce/confidence-intervals.pdf

D'Amico, E. J., & McCarthy, D. M. (2006). Escalation and Initiation of Younger Adolescents' Substance Use: The Impact of Perceived Peer Use. *Journal of Adolescent Health*, *39*(4), 481–487. doi:10.1016/j.jadohealth.2006.02.010

De Wet, C. (2004). The extent and causes of learner vandalism at schools. *South African Journal of Education*, *24*(3), 206–211.

Dong, F., Nelson, C., Shah-Haque, S., Khan, A., & Ablah, E. (2013). A Modified CD-RISC: Including Previously Unaccounted for Resilience Variables. *Kansas Journal of Medicine*, *6*(1), 11–20.

Dumont, M., & Provost, M. A. (1999). Resilience in adolescents: Protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence*, *28*(3), 343–363.

Dutsch, F. M., Servis, L. J., & Payne, J. D. (2001). Paternal Participation in Child Care and Its Effects on Children's Self-Esteem and Attitudes Toward Gendered Roles. *Journal of Family Issues*, *22*(8), 1000–1024.

Fergus, S., & Zimmerman, M. A. (2005). Adolescent Resilience: A Framework for Understanding Healthy Development in the Face of Risk. *Annual Review of Public Health*, *26*(1), 399–419. doi:10.1146/annurev.publhealth.26.021304.144357

Field, A. (2009). *Discovering Statistics Using SPSS* (Third Edition). London, England: SAGE.

Fincham, D. S., Altes, L. K., Stein, D. J., & Seedat, S. (2009). Posttraumatic stress disorder symptoms in adolescents: risk factors versus resilience moderation. *Comprehensive Psychiatry*, *50*(3), 193–199. doi:10.1016/j.comppsych.2008.09.001

Gervilla, E., Cajal, B., & Palmer, A. (2011). Quantification of the influence of friends and antisocial behaviour in adolescent consumption of cannabis using the ZINB model and data mining. *Addictive Behaviors*, *36*(4), 368–374.doi:10.1016/j.addbeh.2010.12.007

Ghasemi, A., & Zahediasl, S. (2012). Normality Tests for Statistical Analysis: A Guide for Non-Statisticians. *International Journal of Endocrinology and Metabolism*, *10*(2), 486–489. doi:10.5812/ijem.3505

Gullone, E., & Moore, S. (2000). Adolescent risk-taking and the five-factor model of personality. *Journal of Adolescence*, *23*(4), 393–407. doi:10.1006/jado.2000.0327

Hair, J. F., Anderson, R. E., Tatham, B. J., & Black, W. C. (1998). Advanced Diagnostics for Multiple Regression Analysis. In *Multivariate Data Analysis* (5th ed.). New Jersey: Pearson Prentice Hall Publishing. Retrieved from http://academic.csuohio.edu/kneuendorf/c63113/hand26A.pdf

Harris, C. R., & Jenkins, M. (2006). Gender Differences in Risk Assessment: Why do Women Take Fewer Risks than Men? *Judgment and Decision Making*, *1*(1), 48–63.

Harrison, A., Smit, J., Hoffman, S., Nzama, T., Leu, C.-S., Mantell, J., … Exner, T. (2010). Gender, peer and partner influences on adolescent HIV risk in rural South Africa. *Sexual Health*, *9*(2). doi:10.1071/SH10150

Hetherington, E. M. (1989). Coping with Family Transitions: Winners, Losers, and Survivors. *Society for Research in Child Development*, *60*(1), 1. doi:10.2307/1131066

Hjemdal, O., Vogel, P. A., Solem, S., Hagen, K., & Stiles, T. C. (2011). The relationship between resilience and levels of anxiety, depression, and obsessive-compulsive symptoms in adolescents. *Clinical Psychology & Psychotherapy*, *18*(4), 314–321. doi:10.1002/cpp.719

Huebner, A. J., & Howell, L. W. (2003). Examining the relationship between adolescent sexual Risk-Taking and perceptions of monitoring, communication, and parenting styles. *Journal of Adolescent Health*, *33*(2), 71–78. doi:10.1016/S1054-139X(03)00141-1

Humensky, J. L. (2010). Are adolescents with high socioeconomic status more likely to engage in alcohol and illicit drug use in early adulthood? *Substance Abuse Treatment, Prevention, and Policy*, *5*(1), 1.

Iwamoto, D. K., & Smiler, A. P. (2013). Alcohol Makes You Macho and Helps You Make Friends: The Role of Masculine Norms and Peer Pressure in Adolescent Boys' and Girls' Alcohol Use. *Substance Use & Misuse*, *48*(5), 371–378. doi:10.3109/10826084.2013.765479

Jessor, R. (1992). Risk behavior in adolescence: A psychosocial framework for understanding and action*1. *Developmental Review*, *12*(4), 374–390. doi:10.1016/0273-2297(92)90014-S

Jessor, R., Costa, F. M., Krueger, P. M., & Turbin, M. S. (2006). A developmental study of heavy episodic drinking among college students: the role of psychosocial and behavioral protective and risk factors. *Journal of Studies on Alcohol*, *67*(1), 86–94. doi:10.15288/jsa.2006.67.86

Johnson, B. (2001). Toward a new classification of nonexperimental quantitative research. *Educational Researcher*, *30*(2), 3–13.

Kabiru, C. W., & Orpinas, P. (2009). Factors associated with sexual activity among high-school students in Nairobi, Kenya. *Journal of Adolescence*, *32*(4), 1023–1039. doi:10.1016/j.adolescence.2008.08.001

Kelly, A. B., Chan, G. C. K., Toumbourou, J. W., O'Flaherty, M., Homel, R., Patton, G. C., & Williams, J. (2012). Very young adolescents and alcohol: Evidence of a unique susceptibility to peer alcohol use. *Addictive Behaviors*, *37*(4), 414–419. doi:10.1016/j.addbeh.2011.11.038

Killian, B. (2004). Risk and Resilience. In *A generation at risk? HIV/AIDS, vulnerable children and security in Southern Africa* (pp. 33–63). Southern Africa: Institute for Security Studies.

Kim, H.-Y. (2013). Statistical notes for clinical researchers: assessing normal distribution using skewness and kurtosis. *Restorative Dentistry & Endodontics*, *38*(1), 52. doi:10.5395/rde.2013.38.1.52

Kominski, R. A., Levin, H. M., Lucas, S. R., Morgan, S. L., Spencer, M. B., & Chapman, C. (2012). *Improving the Measurement of Socioeconomic Status for the National Assessment of Educational Progress: A Theoretical Foundation*.

Koplewicz, H. S., Gurian, A., & Williams, K. (2009). The Era of Affluence and Its Discontents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *48*(11), 1053–1055. doi:10.1097/CHI.0b013e3181b8be5c

Kritzas, N., & Grobler, A. A. (2005). The relationship between perceived parenting styles and resilience during adolescence. *Journal of Child & Adolescent Mental Health*, *17*(1), 1–12. doi:10.2989/17280580509486586

Kuppens, S., Grietens, H., Onghena, P., & Michiels, D. (2009). Measuring Parenting Dimensions in Middle Childhood. Multitrait-Multimethod Analysis of Child, Mother, and Father Ratings. *European Journal of Psychological Assessment*, *25*(3).

Lai, M. H., Graham, J. W., Caldwell, L. L., Smith, E. A., Bradley, S. A., Vergnani, T., … Wegner, L. (2013). Linking Life Skills and Norms With Adolescent Substance Use and Delinquency in South Africa. *Journal of Research on Adolescence*, *23*(1), 128–137. doi:10.1111/j.1532-7795.2012.00801.x

Lamptey, P. R. (2002). Reducing heterosexual transmission of HIV in poor countries. *British Medical Journal*, *324*(7331), 207.

Lau, W. W. F., & Yuen, A. H. K. (2013). Adolescents' risky online behaviours: The influence of gender, religion, and parenting style. *Computers in Human Behavior*, *29*(6), 2690–2696. doi:10.1016/j.chb.2013.07.005

Leather, N. C. (2009). Risk-taking behaviour in adolescence: a literature review. *Journal of Child Health Care*, *13*(3), 295–304. doi:10.1177/1367493509337443

Luthar, S. S. (1991). Vulnerability and resilience: A study of high-risk adolescents. *Child Development*, *62*(3), 600.

Luthar, S. S. (2003). The culture of affluence: Psychological costs of material wealth. *Child Development*, *74*(6), 1581–1593.

Luthar, S. S. (2013). The problem with rich kids. *Psychology Today*, *87*, 62–69.

Luthar, S. S., & Barkin, S. H. (2012). Are affluent youth truly 'at risk'? Vulnerability and resilience across three diverse samples. *Development and Psychopathology*, *24*(2), 429–449. doi:10.1017/S0954579412000089

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*(3), 543–562.

Luthar, S. S., & D'Avanzo, K. (1999). Contextual factors in substance use: A study of suburban and inner-city adolescents. *National Institute of Health*, *11*(4), 845–867.

Luthar, S. S., & Goldstein, A. S. (2008). Substance use and related behaviors among suburban late adolescents: The importance of perceived parent containment. *Development and Psychopathology*, *20*(02). doi:10.1017/S0954579408000291

Luthar, S. S., & Latendresse, S. J. (2005). Children of the Affluent. Challenges to Well-Being. *Current Directions in Psychological Science*, *14*(1), 49–53. doi:10.1111/j.0963-7214.2005.00333.x

Luthar, S. S., Sawyer, J. A., & Brown, P. J. (2006). Conceptual Issues in Studies of Resilience: Past, Present, and Future Research. *Annals of the New York Academy of Sciences*, *1094*(1), 105–115. doi:10.1196/annals.1376.009

Luthar, S. S., & Sexton, C. C. (2004). The high price of affluence. *Advances in Child Development and Behavior*, *32*, 125.

Maccoby, E. E. (1992). The role of parents in the socialization of children: An historical overview. *Developmental Psychology*, *28*(6), 1006.

Magadze, T. O., & Roelofse, C. J. (2012). A comparative analysis of Substance abuse amongst grade 11 and 12 learners in selected secondary schools in the Thohoyandou area of Limpopo, South Africa. *Internal Security*, *4*(1), 181–195.

Mandleco, B. L., & Peery, C. J. (2000). An organizational framework for conceptualizing resilience in children. *Journal of Child and Adolescent Psychiatric Nursing*, *13*(3), 99–112.

Marsiglia, C. S., Walczyk, J. J., Buboltz, W. C., & Griffith-Ross, D. A. (2007). Impact of Parenting Styles and Locus of Control on Emerging Adults' Psychosocial Success. *Journal of Education & Human Developmen*, *1*(1).

Martins, J. H. (2012). Market segmentation of the consumer market in South Africa. *International Retail and Marketing Review*, *8*(1), 61–74.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, *56*(3), 227–238. doi:10.1037//0003-066X.56.3.227

Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology*, *23*(2), 493–506. doi:10.1017/S0954579411000198

Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology*, *11*(1), 143–169.

Morojele, N., Meyers, B., Townsend, L., Pluddmann, A., Carney, T., Petersen Williams, P., … Nkosi, S. (2013). *Survey on Substance Use, Risk Behaviour and Mental Health Amongst Grade 8-10 learners in Schools in the Western Cape Province, 2011*. Cape Town, South Africa: South African Medical Research Council.

Mueller, J. H., Schuessler, K. F., & Costner, H. L. (1977). *Statistical reasoning in Sociology* (3RD ed.). Boston: National Criminal Justice Reference Service.

Neighbors, C., Lee, C. M., Lewis, M. A., Fossos, N., & Larimer, M. E. (2007). Are social norms the best predictor of outcomes among heavy-drinking college students? *Journal of Studies on Alcohol and Drugs*, *68*(4), 556.

Ong, A. D., & Weiss, D. J. (2000). The impact of anonymity on responses to sensitive questions1. *Journal of Applied Social Psychology*, *30*(8), 1691–1708.

Onwuegbuzie, A. J., & Leech, N. L. (2007). A Call for Qualitative Power Analyses. *Quality & Quantity*, *41*(1), 105–121. doi:10.1007/s11135-005-1098-1

Osborne, J., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research & Evaluation*, *8*(2), 1–9.

Pallant, J. (2003). *SPSS survival manual: a step-by-step guide to data analysis using SPSS for Windows (Versions 10 and 11) ; [applies to SPSS for Windows up to Version 11]* (Reprinted). Buckingham, England: Open Univ. Press.

Pau, A., Rowland, M. L., Naidoo, S., AbdulKadir, R., Makrynika, E., Moraru, R., … Croucher, R. (2007). Emotional intelligence and perceived stress in dental undergraduates: a multinational survey. *Journal of Dental Education*, *71*(2), 197–204.

Peltzer, K., Ramlagan, S., Johnson, B. D., & Phaswana-Mafuya, N. (2010). Illicit Drug Use and Treatment in South Africa: A Review. *Substance Use & Misuse*, *45*(13), 2221–2243. doi:10.3109/10826084.2010.481594

Pocket Tax Guide, Budget 2011. (2011). South African Revenue Service. Retrieved from http://www.treasury.gov.za/documents/national%20budget/2011/guides/Budget%20Pocket%20Guide%202011.pdf

Radziszewska, B., Richardson, J. L., Dent, C. W., & Flay, B. R. (1996). Parenting Style and Adolescent Depressive Symptoms, Smoking, and Academic Achievement: Ethnic, Gender, and SES Differences. *Journal of Behavioral Medicine*, *19*(3).

Randall, E. T., Bohnert, A. M., & Travers, L. V. (2015). Understanding affluent adolescent adjustment: The interplay of parental perfectionism, perceived parental pressure, and organized activity involvement. *Journal of Adolescence*, *41*, 56–66. doi:10.1016/j.adolescence.2015.03.005

Reddy, S., James, S., Sewpaul, R., Sifunda, S., Ellahebokus, A., Kambaran, N., & Omardien, R. (2013). *Umthente Uhlaba Usamila - The 3rd South African National Youth Risk Behaviour Survey 2011* (p. 164). Cape Town: South African Medical Research Council.

Roelofs, J., Meesters, C., ter Huurne, M., Bamelis, L., & Muris, P. (2006). On the Links Between Attachment Style, Parental Rearing Behaviors, and Internalizing and Externalizing Problems in Non-Clinical Children. *Journal of Child and Family Studies*, *15*(3), 319–332. doi:10.1007/s10826-006-9025-1

Romer, D. (2010). Adolescent Risk Taking, Impulsivity, and Brain Development: Implications for Prevention. *Developmental Psychobiology*, 263–276. doi:10.1002/dev.20442

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, *57*(3), 316-331.

South African Audience Research Foundation: Audience Research and Segmentation Tools. (2014, December). Retrieved from http://www.saarf.co.za/LSM/SAARF%20LSM%20Descriptors%20-%20AMPS%202015AB.zip

Salim, A., Mackinnon, A., Christensen, H., & Griffiths, K. (2008). Comparison of data analysis strategies for intent-to-treat analysis in pre-test–post-test designs with substantial dropout rates. *Psychiatry Research*, *160*(3), 335–345. doi:10.1016/j.psychres.2007.08.005

Sawyer, S. M., Afifi, R. A., Bearinger, L. H., Blakemore, S.-J., Dick, B., Ezeh, A. C., & Patton, G. C. (2012). Adolescence: a foundation for future health. *The Lancet*, *379*(9826), 1630–1640.

Schlebusch, L. (2012a). Suicidal behaviour. In *Van Niekerk, A., Suffla, S., Seedat, M., Ratele, K., Eds. Crime, Violence and Injury in South Africa: Enabling Child Safety* (pp. 178–194). Tygerberg, South Africa: Medical Research Council–University of South Africa.

Schlebusch, L. (2012b). Suicide prevention: a proposed national strategy for South Africa. *African Journal of Psychiatry*, *15*(6). doi:10.4314/ajpsy.v15i6.56

Seiffge-Krenke, I., Aunola, K., & Nurmi, J.-E. (2009). Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development*, *80*(1), 259–279.

Seifi, M. (2016). The effects of parenting styles on students' self-efficacy. *International Journal of Humanities and Cultural Studies (IJHCS)*, *1*(1), 2193–2200.

Seligman, M. E. (1972). Learned helplessness. *Annual Review of Medicine*, *23*(1), 407–412.

Shapiro, R., Siegel, A. W., Scovill, L. C., & Hays, J. (1998). Risk-taking patterns of female adolescents: What they do and why. *Journal of Adolescence*, *21*(2), 143–159.

Sharaf, A. Y., Thompson, E. A., & Walsh, E. (2009). Protective Effects of Self-Esteem and Family Support on Suicide Risk Behaviors among At-Risk Adolescents: Suicide Risk Behaviors among At-Risk Adolescents. *Journal of Child and Adolescent Psychiatric Nursing*, *22*(3), 160–168. doi:10.1111/j.1744-6171.2009.00194.x

Siegel, A. W., Cousins, J. H., Rubovits, D. S., Parsons, J. T., Lavery, B., & Crowley, C. L. (1994). Adolescents' Perceptions of the Benefits and Risks of Their Own Risk Taking. *Journal of Emotional and Behavioral Disorders*, (2), 89–98.

Simantov, E., Schoen, C., & Klein, J. D. (2000). Health-Compromising Behaviors: Why Do Adolescents Smoke or Drink? Identifying Underlying Risk and Protective Factors. *Archive Paediatric Adolescent Medication*, *154*(10), 1025–2033.

Simons, L. G., & Conger, R. D. (2007). Linking Mother-Father Differences in Parenting to a Typology of Family Parenting Styles and Adolescent Outcomes. *Journal of Family Issues*, *28*(2), 212–241. doi:10.1177/0192513X06294593

Simons-Morton, B., & Chen, R. S. (2006). Over time relationships between early adolescent and peer substance use. *Addictive Behaviors*, *31*(7), 1211–1223. doi:10.1016/j.addbeh.2005.09.006

Skeer, M., McCormick, M. C., Normand, S.-L. T., Buka, S. L., & Gilman, S. E. (2009). A prospective study of familial conflict, psychological stress, and the development of substance use disorders in adolescence. *Drug and Alcohol Dependence*, *104*(1–2), 65–72. doi:10.1016/j.drugalcdep.2009.03.017

South African Audience Research Foundation. (2016). Retrieved 6 October 2016, from http://www.saarf.co.za/lsm/lsms.asp

South African Audience Research Foundation Segmentation Tools. (2012, February). South African Audience Research Foundation. Retrieved from http://www.saarf.co.za/lsm-presentations/2012/LSM%20Presentation%20-%20February%202012.pdf

South African Depression and Anxiety Group. (2016). Retrieved 11 October 2016, from http://www.sadag.org/index.php?option=com_content&view=article&id=1840&Itemid=153

South African Revenue Service. (2015). [South African Tax]. Retrieved 22 April 2016, from http://www.sars.gov.za/Tax-Rates/Income-Tax/Pages/Rates%20of%20Tax%20for%20Individuals.aspx

Southwick, S. M., Vythilingam, M., & Charney, D. S. (2005). The Psychobiology of Depression and Resilience to Stress: Implications for Prevention and Treatment*. *Annual Review of Clinical Psychology*, *1*(1), 255–291. doi:10.1146/annurev.clinpsy.1.102803.143948

Steinhardt, M., & Dolbier, C. (2008). Evaluation of a resilience intervention to enhance coping strategies and protective factors and decrease symptomatology. *Journal of American College Health*, *56*(4), 445–453.

Suchman, N. E., & Luthar, S. S. (2000). Maternal addiction, child maladjustment and socio-demographic risks: implications for parenting behaviors. *Addiction*, *95*(9), 1417–1428.

South African Audience Research Foundation: Audience Research and Segmentation Tools. (2014, December). Retrieved from http://www.saarf.co.za/LSM/SAARF%20LSM%20Descriptors%20-%20AMPS%202015AB.zip

Suo, L., Zhao, L., Si, J., Liu, J., Zhu, W., Chai, B., … Luo, Y. (2013). Predictable chronic mild stress in adolescence increases resilience in adulthood. *Neuropsychopharmacology*, *38*(8), 1387–1400.

Swanson, J., Valiente, C., Lemery-Chalfant, K., & Caitlin O'Brien, T. (2011). Predicting Early Adolescents' Academic Achievement, Social Competence, and Physical Health From Parenting, Ego Resilience, and Engagement Coping. *The Journal of Early Adolescence*, *31*(4), 548–576. doi:10.1177/0272431610366249

Taris, T. W., & Bok, I. A. (1997). Effects of Parenting Style Upon Psychological Well-being of Young Adults: Exploring the Relations Among Parental Care, Locus of Control and Depression. *Early Child Development and Care*, *132*(1), 93–104. doi:10.1080/0300443970132010008

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53–55. doi:10.5116/ijme.4dfb.8dfd

Terre Blanche, M., Durrheim, K., & Pianter, D. (2006). *Research in Practice* (Second). Cape Town, South Africa: The University of Cape Town Press.

Terzian, M., Moore, K. A., & Nguyen, H. N. (2010). Assessing Stress in Children and Youth: A Guide for Out-of-school Time Programme Practitioners. *Child Trends*, *22*. Retrieved from http://www.childtrends.org/wp-content/uploads/2010/10/Child_Trends-2010_10_05_RB_AssessingStress.pdf

Theron, L. C., & Theron, A. M. C. (2010). A critical review of studies of South African youth resilience, 1990-2008. *South African Journal of Science*, *106*(252), 1–8.

Thompson, R. G., & Auslander, W. F. (2007). Risk factors for alcohol and marijuana use among adolescents in foster care. *Journal of Substance Abuse Treatment*, *32*(1), 61–69. doi:10.1016/j.jsat.2006.06.010

Timpano, K. R., Keough, M. E., Mahaffey, B., Schmidt, N. B., & Abramowitz, J. (2010). Parenting and Obsessive Compulsive Symptoms: Implications of Authoritarian Parenting. *Journal of Cognitive Psychotherapy*, *24*(3), 151–164. doi:10.1891/0889-8391.24.3.151

Travers, L. V., Bohnert, A. M., & Randall, E. T. (2013). Brief report: Adolescent adjustment in affluent communities: The role of motivational climate and goal orientation. *Journal of Adolescence*, *36*(2), 423–428. doi:10.1016/j.adolescence.2012.11.009

Trucco, E. M., Colder, C. R., & Wieczorek, W. F. (2011). Vulnerability to peer influence: A moderated mediation study of early adolescent alcohol use initiation. *Addictive Behaviors*, *36*(7), 729–736. doi:10.1016/j.addbeh.2011.02.008

Turner, E. A., Chandler, M., & Heffer, R. W. (2009). The influence of parenting styles, achievement motivation, and self-efficacy on academic performance in college students. *Journal of College Student Development*, *50*(3), 337–346.

UNISA Burro of Market Research. (2011). *Personal Income Estimates for South Africa*. Retrieved from http://www.unisa.ac.za/contents/faculties/ems/docs/BMR_info_blurp_407.pdf

United Nations Office on Drugs and Crime. (2002). *South Africa: Country Profile on Drugs and Crime*. Retrieved from http://www.unodc.org/pdf/southafrica/country_profile_southafrica.pdf

United Nations Office on Drugs and Crime. (2004). *South Africa guidelines abuse prevention. Conducting Effective Substance Abuse Prevention Work Among the Youth in South Africa*. Retrieved from http://www.unodc.org/pdf/southafrica/south_africa_guidelines_abuse_prevention.pdf

Vainio, A. (2013). Beyond research ethics: anonymity as ‘ontology’, ‘analysis’ and ‘independence’. *Qualitative Research*, *13*(6), 685–698. doi:10.1177/1468794112459669

Veselska, Z., Geckova, A. M., Orosova, O., Gajdosova, B., van Dijk, J. P., & Reijneveld, S. A. (2009). Self-esteem and resilience: The connection with risky behavior among adolescents. *Addictive Behaviors*, *34*(3), 287–291. doi:10.1016/j.addbeh.2008.11.005

Vom Brocke, J., Simons, A., Niehaves, B., Riemer, K., Plattfaut, R., & Cleven, A. (2009). Reconstructing the giant: On the importance of rigour in documenting the literature search process. (Vol. 9, pp. 2206–2217). Presented at the European Conference on Information Systems, Verona, Italy: Univeritat Liechtenstein.

Wechsberg, W. M., Luseno, W., Riehman, K., Karg, R., Browne, F., & Parry, C. (2008). Substance Use and Sexual Risk Within the Context of Gender Inequality in South Africa. *Substance Use & Misuse*, *43*(8–9), 1186–1201. doi:10.1080/10826080801918247

Whitley, Jr., B. E., & Kite, M. E. (2013). *Principles of Research in Behavioral Science* (Third). New York: McGraw-Hill.

Zimmerman, M. A. (2013). Resiliency Theory: A Strengths-Based Approach to Research and Practice for Adolescent Health. *Health Education & Behavior*, *40*(4), 381–383. doi:10.1177/1090198113493782

Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*, *34*(12), 2295–2303. doi:10.1016/j.childyouth.2012.08.009

Zuma, K. K., Rehle, T., Onoya, D., & Moyo, S. (2016). New insights into HIV epidemic in South Africa: Key findings from the National HIV Prevalence, Incidence and Behaviour Survey, 2012. *African Journal of AIDS Research*, *15*(1), 67–75. doi:10.2989/16085906.2016.1153491

APPENDIX A: Principal Information Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

School Information Form

Dear Principal

My name is Jennifer King. I am a current student at the University of the Witwatersrand and am studying towards obtaining my Masters degree in Educational Psychology. In fulfilment of my dissertation, I am conducting research. The research area of focus is the relationship between perceived parenting styles, resilience, perceived stress and risk-taking behaviour in affluent adolescents. Internationally, affluent adolescents have been identified as the new "at risk" group, but there has been almost no research conducted in this area in South Africa. I hope that my study will serve to contribute to the South African and international body of research and encourage additional research in a South African context.

I would like to invite your learners to participate in this study. Participation in this study will require learners complete four assessments; the Parental Authority Questionnaire (20 minutes), Modified Risk Involvement and Perception of Risk and Benefit Questionnaire (10 minutes), Connor-Davidson Resilience Scale (5 minutes) and the Perceived Stress Scale (10 minutes). The assessments and questionnaire will take approximately ***45 minutes to complete in total***, and the sessions will take place on the school premises during school hours so as not to disrupt the routine school-time of any participants. I will ensure fair administration and scoring of the tests. The questionnaire and tests will not be seen by any person at the school at any time and will only be processed by my supervisor and myself. Learners' responses will only be looked at in relation to all other responses. They may choose to refuse to answer any questions they would prefer not to and they may choose to withdraw from the study at any time. All information collected will be treated confidentially. There are no direct risks or benefits attached to participating in this study.

If you consent for the learners to participate in the study we will also require consent from the learners' parents and the learners themselves. Parental consent can be emailed to the parents directly, or a hard copy that can be sent home with students. Once parental consent and student consent/assent has been received they will be asked to complete the questionnaires as carefully and honestly as possible. The administration of the questionnaire and tests will be administered at a time that is most convenient for you, the staff and learners in order not to jeopardise any

academic time. A feedback letter will be provided to the school once I have analysed the results. Please note that because participation is anonymous and confidential, no information about the learners' individual performance scores will be disclosed. In addition the research might be published in the form of a peer reviewed journal article and/or presented as part of a conference, again no information about the learners' individual scores will be disclosed and no identifying features will be used.

Your consent for the learners to participate in this study would be greatly appreciated. The research will be conducted under the auspices of the University of the Witwatersrand and the Ethics Committee, in order to ensure that the rights of the participants are protected. If you choose to grant permission for the requested study to take place at your school please fill in your details on the form below. Please do not hesitate to contact me should you require more information. I can be contacted telephonically at 083 399 9197 or via email at jennifer_sarah_king@hotmail.com

Kindest Regards

Jennifer King
M.Ed Student Psychologist
jennifer_sarah_king@hotmail.com

Academic Supervisor
Adri Vorster
adri.vorster@wits.ac.za

APPENDIX B: Legal Guardian Information Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Legal Guardian Information Form

Dear Sir/Madam

My name is Jennifer King. I am a current student at the University of the Witwatersrand and am studying towards obtaining my Masters degree in Educational Psychology. In fulfilment of my dissertation, I am conducting research. The research area of focus is the relationship between perceived parenting styles, resilience, perceived stress and risk-taking behaviour in affluent adolescents. Internationally, affluent adolescents have been identified as the new "at risk" group, but there has been almost no research conducted in this area in South Africa. I hope that my study will serve to contribute to the international body of research in area and encourage additional research in a South African context.

If you consent for your child to participate in this research they will then be asked to give their assent to participate in the study. If they assent they will then be asked to complete four questionnaires; Parental Authority Questionnaire (20 minutes), Modified Risk Involvement and Perception of Risk and Benefit Questionnaire (10 minutes), Connor-Davidson Resilience Scale (5 minutes) and the Perceived Stress Scale (10 minutes). The assessments and questionnaire will take approximately 45 minutes to complete in total, and the sessions will take place on the school premises during school hours so as not to disrupt the routine school-time of any participants. I will ensure fair administration and scoring of the tests. The questionnaire and tests will not be seen by any person at the school at any time and will only be processed by my supervisor and myself. Learners' responses will only be looked at in relation to all other responses. Learners may choose to refuse to answer any questions they would prefer not to and they may choose to withdraw from the study at any time. All information collected will be treated confidentially. There are no direct risks or benefits attached to participating in this study.

If you consent for your child to participate in the study, they will be asked to complete the questionnaire and tests as carefully and honestly as possible. The administration of the questionnaire and tests will be administered at a time that is most convenient for the school and learners in order not to jeopardise any academic time. Please note that because participation is confidential no information about the learners' individual scores will be disclosed. A general

feedback report will be provided to the school, which will not identify any specific students. The purpose of the feedback is to provide the school with a general understanding of the risks experienced by their students. In addition the research might be published in the form of a peer reviewed journal article and/or presented as part of a conference, again no information about the learners' individual scores will be disclosed and no identifying features will be used.

Your consent for your child to participate in this study would be greatly appreciated. Please do not hesitate to contact me should you require further information. Should your child experience any distress after participating in the study the school psychologist, (name was included), who is available on the school premises, will be available to assist them. (Psychologist's name) can be contacted on (email address was included).

The research will be conducted under the auspices of the University of the Witwatersrand and the Ethics Committee, in order to ensure that the rights of your child are protected. If you choose to grant permission for your child to participate in the study, please complete the enclosed forms and return them to me via email at jennifer_sarah_king@hotmail.com. Please do not hesitate to contact me should you require more information. I can be contacted telephonically at 083 399 9197 or via email at jennifer_sarah_king@hotmail.com

Kindest Regards

Jennifer King
M.Ed Student Psychologist
jennifer_sarah_king@hotmail.com
083 399 9197

Academic Supervisor
Adri Vorster
adri.vorster@wits.ac.za
011 717 4554

APPENDIX C: Legal Guardian Consent Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Legal Guardian Consent Form

I, (parent/guardian full name), consent for (child's full name) to be involved in the study where perceived parenting style, levels of stress, risk-taking behaviour and resilience will be assessed by Ms Jennifer King for the study as explained above.

I understand that:

- The nature and purpose of the study has been explained to me
- Participation in this study is completely voluntary
- No negative consequences will result if the participant decides to withdraw or if any participant chooses to decline their participation
- That the participant may refuse to answer any questions he/she would prefer not to
- The participant may withdraw from the study until all questionnaires have been handed over to the researcher
- No information that may identify the participant will be included in the research report and the participant's responses will remain confidential
- There are no direct risks or benefits for participation in this study

Full Name Signed Date

I (the respondent) am acting in the capacity as the child's (please select one below):

Mother ☐ Father ☐ Legal Guardian ☐

Thank you for consenting for your child to participate

Please email this consent for, ***using your child's name as the subject line*** to Jennifer King
research.wits.risk@gmail.com

APPENDIX D: Participant Information Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Participant Information Form

Dear Learner

My name is Jennifer King. I am a current student at the University of the Witwatersrand and am studying towards my Masters degree in Educational Psychology. To get my degree I need to conduct research and write a thesis on this research. My research is going to look at parenting styles, resilience, stress and risk-taking behaviour in affluent adolescents. I am interested in this topic because affluent adolescents have internationally been recognised as an "at risk" group, but there has been almost no research on this topic in South Africa.

If you would like to participate in this study you will be asked to complete four questionnaires. These questionnaires will assess your perception of your parent's parenting style, your views on risk-taking behaviour, your personal resilience and levels of personal stress. The assessments and questionnaire will take about 45 minutes to complete. The sessions will take place at your school, during school hours so we do not disrupt your school routine.

As a trained researcher, I will make sure that the questionnaires are scored correctly. ***Your answers to the questionnaires will not be seen by any person at the school at any time and will only be seen by my supervisor and myself.*** You may choose to refuse to answer any questions you would prefer not to and you may choose to remove yourself from the study at any time, until questionnaires have be submitted. All information collected will be treated confidentially and your personal information and answers to the questionnaires will not be shared with anyone. Because all your information will be confidential, I will not be able to tell you any information about your individual scores.

There are no risks or benefits to participating in this study. If you choose to participate, you will be asked to complete the questionnaire and tests as honestly and carefully as possible, and your participation would be greatly appreciated.

If you are concerned about anything after participating in the study the school psychologist, (name was included), will be available to talk to you. (Psychologist's name) is available on a daily basis on your school premises for consultation. She can also be contacted on (email address was included).

A general feedback report will be given to the school, which will not identify any specific students. The reason for the feedback is to give the school with an understanding of the risks their students face. This research might be published in a peer reviewed journal article and/or presented as part of a conference, again no information about the participants' individual scores will be revealed and no identifying features will be used.

The research will be conducted under the approval of the University of the Witwatersrand and the Ethics Committee, to make sure that your rights as participants are protected. Learners that choose to participate in the study will be given a chance to complete the online questionnaire forms on the school premises. If you agree to participate, please complete the attached assent form and return it to me.

Please feel free to contact me if you need more information. I can be contacted on 083 399 9197 or via email at jennifer_sarah_king@hotmail.com

Kindest Regards

Jennifer King
M.Ed Student Psychologist
jennifer_sarah_king@hotmail.com
083 399 9197

Academic Supervisor
Adri Vorster
adri.vorster@wits.ac.za
011 717 4554

APPENDIX E: Participant Assent Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Participant Assent Form

(To be included as part of the electronic questionnaires)

I _____ (full name) hereby assent (agree) to participate in the study with Ms Jennifer King and understand that by completing as handing in this document I am giving my assent (agreement) to participate in this study.

I understand that:

- Participation in this study is voluntary
- I may refuse to answer any questions I would prefer not to
- I can withdraw from the study at any time until all questionnaires have been handed over to the researcher
- No information that may identify me will be included in the research report and my responses will remain private (confidential)
- There are no direct risks or benefits for participation in this study

_____ _____ _____

Full Name Signed Date

APPENDIX F: Participant Consent Form

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Participant Consent Form

I _____ (full name) hereby consent to my participation in the study with Ms Jennifer King and understand that by completing as submitting these questionnaires I am giving my consent/assent to participate in this study.

I understand that:

- Participation in this study is voluntary
- I may refuse to answer any questions I would prefer not to
- I can withdraw from the study at any time until all questionnaires have been handed over to the researcher
- No information that may identify me will be included in the research report and my responses will remain private (confidential)
- There are no direct risks or benefits for participation in this study

Full Name Signed Date

APPENDIX G: Biographical Questionnaire

PSYCHOLOGY
THE SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT (SHCD)

Private Bag 3, Wits, 2050 • Tel: 011 717 4541 • Fax: 011 717 4559 • E-mail: psych.SHCD@wits.ac.za

Biographical Questionnaire

Your Age: _____ years _____ months

Grade: _____

Gender: Male ☐ Female ☐

Home Language: _____

Second Language: _____

Other Languages: _____

APPENDIX H: Tests to be used

Connor-Davidson Resilience Scale (CD-RISA)

Please **circle** the number that applies to how **you have personally felt *in the last month:***
0 = not true at all, 1 = rarely true, 2 = sometimes true, 3 = often true, 4 = true nearly all of the time

Able to adapt to change	0	1	2	3	4
Close and secure relationships	0	1	2	3	4
Sometimes fate or God can help	0	1	2	3	4
Can deal with whatever comes	0	1	2	3	4
Past success gives confidence for new challenges	0	1	2	3	4
See humorous side of things	0	1	2	3	4
Coping with stress strengths	0	1	2	3	4
Tend to bounce back after an illness or hardship	0	1	2	3	4
Things happen for a reason	0	1	2	3	4
Best effort no matter what	0	1	2	3	4
You can achieve your goals	0	1	2	3	4
When things look hopeless, I don't give up	0	1	2	3	4
Know where to turn for help	0	1	2	3	4
Under pressure, focus and think clearly	0	1	2	3	4
Prefer to take the lead in problem solving	0	1	2	3	4
Not easily discouraged by failure	0	1	2	3	4
Think of self as strong person	0	1	2	3	4
Make unpopular or difficult decisions	0	1	2	3	4
Can handle unpleasant feelings	0	1	2	3	4
Have to act on a hunch	0	1	2	3	4
Strong sense of purpose	0	1	2	3	4
In control of your life	0	1	2	3	4
I like challenges	0	1	2	3	4
You work to attain your goals	0	1	2	3	4
Pride in your achievements	0	1	2	3	4

Modified Risk and Involvement and Perception of Risk and Benefit Questionnaire

Please **circle** the value that **most applies** to your behaviour in the last year, your perception on risk for each behaviour and your perception of benefit for each behaviour.

	Frequency of behaviour in the last year ***0=never 4=daily or more***	Perception of extent of risk for each behaviour ***0=no risk 4=high risk***	Perception of extent of benefit ***0=no benefit 4=high and significant benefit***
Ridding with a drunk driver	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Drinking alcohol	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Getting drunk	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Riding a motorcycle	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Smoking marijuana (Item changed from original item "Smoking grass")	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Using drugs (except marijuana)	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Sex without condoms	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Shoplifting	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Driving after drinking	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Riding without seatbelts	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Smoking cigarettes	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Accepting a ride from a stranger	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Handling weapons	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Avoiding eating	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Throwing up on purpose	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Driving over the speed limit	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Involvement in physical fights	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Not studying for school exams	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Cheating on school exams	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Sex without contraceptives	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Stealing money from parents	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Running away from home	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Holding one's breath	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Going to nightclubs (Item changed from "Participating in trance parties")	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Playing road roulette	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Smelling glue	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4
Sex with more than one partner in the same period	0 1 2 3 4	0 1 2 3 4	0 1 2 3 4

Parental Authority Questionnaire (PAQ) Pertaining to Fathers

Instructions: For each of the following statements, circle the number on the 5 point scale (1-strongly disagree, 5 = strongly agree) that best indicates how that statement applies to you and your father/father figure. Try to read and think about each statement as it applies to you and your father during your years growing up at home. There are no right or wrong answers, so don't spend a lot of time on any of them. We're looking for your overall impression regarding each statement. Be sure not to omit any items.

My answers in this questionnaire relate to my: (circle the appropriate option)

Biological Father	Stepfather	Paternal Caregiver

1.	While I was growing up my father felt that in a well-run home children should have their way in the family as often as the parents do.	1	2	3	4	5
2.	Even if his children didn't agree with her my father felt that it was for out own good if we were forced to conform to what he though was right.	1	2	3	4	5
3.	Whenever my father told me to do something when I was growing up, he expected me to do it immediately without asking any questions.	1	2	3	4	5
4.	As I was growing up, once my family policy had been established, my father discussed the reasoning behind the policy with the children in the family.	1	2	3	4	5
5.	My father always encouraged verbal give-and-take whenever I felt that the family rules and restrictions were unreasonable.	1	2	3	4	5
6.	My father always felt that what children needed is to be free to make up their own minds and to do what they wan to do, even if this does not agree with what their parents might want.	1	2	3	4	5
7.	As I was growing up my father did not allow me to question any decision that he had made.	1	2	3	4	5
8.	As I was growing up my father directed the activities and decisions of the children in the family through reasoning and discipline.	1	2	3	4	5
9.	My father has always felt that more force should be used by parents in order t get their children to behave the way they are supposed to.	1	2	3	4	5
10.	As I was growing up my father did ***NOT*** feel that I needed to obey rues and regulations of behaviour simply because someone in authority had established them.	1	2	3	4	5
11.	As I was growing up I knew what my father expected of me in the family, but I also felt free to discuss the expectations with my father when I felt that they were unreasonable.	1	2	3	4	5
12.	My father felt that wise parents should teach their children early just who is boss in the family.	1	2	3	4	5
13.	As I was growing up, my father seldom gave me expectations and guidelines for my behaviour.	1	2	3	4	5
14.	Most of the time, as I was growing up, my father did what the children in the family wanted when making family decisions.	1	2	3	4	5
15.	As the children in my family were growing up, my father constantly gave us correction and guidance in rational and objective ways.	1	2	3	4	5
16.	As I was growing up my father would get very upset if I tried to disagree with him.	1	2	3	4	5
17.	My father feels that most problems in society would be solved if parents would ***NOT*** restrict their children's activities, decisions and desires as they are growing up.	1	2	3	4	5
18.	As I was growing up my father let me know what behaviours he expected of me, and if I didn't meet those expectations, he punished me.	1	2	3	4	5
19.	As I was growing up my father allowed me to decide most things for myself without a lot of direction from him.	1	2	3	4	5
20.	As I was growing up my father took the children's opinions into consideration when making family decisions, but he would not decide for something simply because the children wanted it.	1	2	3	4	5
21.	My father did ***NOT*** see himself as responsible for directing and guiding my behaviour as I was growing up.	1	2	3	4	5
22.	My father had clear standards of behaviour for the children in our home as I was growing up, but he was willing to adjust those standards to the needs of each of the individual children in the family.	1	2	3	4	5
23.	My father gave me direction for my behaviour and activities as I was growing up and he expected me to follow his direction, but he was always willing to listen to my concerns and to discuss that direction with me.	1	2	3	4	5
24.	As I was growing up my father allowed me to form my own point of view on family matters and he generally allowed me to decide for myself what I was going to do.	1	2	3	4	5
25.	My father has always felt that the most problems in society would be solved if we could get the parents to strictly and forcibly deal with their children when they do not do what they are supposed to do as they are growing up.	1	2	3	4	5
26.	As I was growing up my father often told me exactly what he wanted me to do and how he expected me to do it.	1	2	3	4	5
27.	As I was growing up my father gave me clear direction for my behaviours and activities, but he was also understanding when I disagreed with him.	1	2	3	4	5
28.	As I was growing up my father did ***NOT*** direct the behaviours, activities and desires of the children in the family.	1	2	3	4	5
29.	As I was growing up I knew what my father expected of me in the family and he insisted that he conform to my expectations simply out of respect for his authority.	1	2	3	4	5
30.	As I was growing up, if my father made a decision in the family that hurt me, he was willing to discuss that decision with me and to admit if he had made a mistake.	1	2	3	4	5

Parental Authority Questionnaire (PAQ) Pertaining to Mothers

Instructions: For each of the following statements, circle the number on the 5 point scale (1-strongly disagree, 5 = strongly agree) that best indicates how that statement applies to you and your mother/ mother figure. Try to read and think about each statement as it applies to you and your mother during your years growing up at home. There are no right or wrong answers, so don't spend a lot of time on any of them. We're looking for your overall impression regarding each statement. Be sure not to omit any items.

My answers in this questionnaire relate to my: (circle the appropriate option)

Biological Mother	Stepmother	Maternal Caregiver

31.	While I was growing up my mother felt that in a well-run home children should have their way in the family as often as the parents do.	1	2	3	4	5
32.	Even if his children didn't agree with him my mother felt that it was for out own good if we were forced to conform to what he though was right.	1	2	3	4	5
33.	Whenever my mother told me to do something when I was growing up, he expected me to do it immediately without asking any questions.	1	2	3	4	5
34.	As I was growing up, once my family policy had been established, my mother discussed the reasoning behind the policy with the children in the family.	1	2	3	4	5
35.	My mother always encouraged verbal give-and-take whenever I felt that the family rules and restrictions were unreasonable.	1	2	3	4	5
36.	My mother always felt that what children needed is to be free to make up their own minds and to do what they wan to do, even if this does not agree with what their parents might want.	1	2	3	4	5
37.	As I was growing up my mother did not allow me to question any decision that he had made.	1	2	3	4	5
38.	As I was growing up my mother directed the activities and decisions of the children in the family through reasoning and discipline.	1	2	3	4	5
39.	My mother has always felt that more force should be used by parents in order t get their children to behave the way they are supposed to.	1	2	3	4	5
40.	As I was growing up my mother did ***NOT*** feel that I needed to obey rues and regulations of behaviour simply because someone in authority had established them.	1	2	3	4	5
41.	As I was growing up I knew what my mother expected of me in the family, but I also felt free to discuss the expectations with my mother when I felt that they were unreasonable.	1	2	3	4	5
42.	My mother felt that wise parents should teach their children early just who is boss in the family.	1	2	3	4	5
43.	As I was growing up, my mother seldom gave me expectations and guidelines for my behaviour.	1	2	3	4	5
44.	Most of the time, as I was growing up, my mother did what the children in the family wanted when making family decisions.	1	2	3	4	5
45.	As the children in my family were growing up, my mother constantly gave us correction and guidance in rational and objective ways.	1	2	3	4	5
46.	As I was growing up my mother would get very upset if I tried to disagree with her.	1	2	3	4	5
47.	My mother feels that most problems in society would be solved if parents would ***NOT*** restrict their children's activities, decisions and desires as they are growing up.	1	2	3	4	5
48.	As I was growing up my mother let me know what behaviours he expected of me, and if I didn't meet those expectations, he punished me.	1	2	3	4	5
49.	As I was growing up my mother allowed me to decide most things for myself without a lot of direction from her.	1	2	3	4	5
50.	As I was growing up my mother took the children's opinions into consideration when making family decisions, but he would not decide for something simply because the children wanted it.	1	2	3	4	5
51.	My mother did ***NOT*** see himself as responsible for directing and guiding my behaviour as I was growing up.	1	2	3	4	5
52.	My mother had clear standards of behaviour for the children in our home as I was growing up, but he was willing to adjust those standards to the needs of each of the individual children in the family.	1	2	3	4	5
53.	My mother gave me direction for my behaviour and activities as I was growing up and he expected me to follow his direction, but he was always willing to listen to my concerns and to discuss that direction with me.	1	2	3	4	5
54.	As I was growing up my mother allowed me to form my own point of view on family matters and he generally allowed me to decide for myself what I was going to do.	1	2	3	4	5
55.	My mother has always felt that the most problems in society would be solved if we could get the parents to strictly and forcibly deal with their children when they do not do what they are supposed to do as they are growing up.	1	2	3	4	5
56.	As I was growing up my mother often told me exactly what he wanted me to do and how he expected me to do it.	1	2	3	4	5
57.	As I was growing up my mother gave me clear direction for my behaviours and activities, but he was also understanding when I disagreed with him.	1	2	3	4	5
58.	As I was growing up my mother did ***NOT*** direct the behaviours, activities and desires of the children in the family.	1	2	3	4	5
59.	As I was growing up I knew what my mother expected of me in the family and he insisted that he conform to my expectations simply out of respect for his authority.	1	2	3	4	5
60.	As I was growing up, if my mother made a decision in the family that hurt me, he was willing to discuss that decision with me and to admit if he had made a mistake.	1	2	3	4	5

Perceived Stress Scale – 10 item version (PSS - 10)

The questions in this scale ask you about your feelings and thoughts during the last month .

In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

(Response values: 0=never, 1=almost never, 2=sometimes, 3=fairly often; 4=very often)

In the last month, how often have you:

1) Been upset because of something that happened unexpectedly?	0	1	2	3	4
2) Felt that you were unable to control the important things in your life?	0	1	2	3	4
3) Felt nervous and ―stressed‖?	0	1	2	3	4
4) Felt confident about your ability to handle your personal problems?	0	1	2	3	4
5) Felt that things were going your way?	0	1	2	3	4
6) Found that you could not cope with all the things that you had to do?	0	1	2	3	4
7) Been able to control irritations in your life?	0	1	2	3	4
8) Felt that you were on top of things?	0	1	2	3	4
9) Been angered because of things that were outside of your control?	0	1	2	3	4
10) Felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

APPENDIX I: Histograms

Histograms for Research Questionnaires



Figure I1 Histogram for the CD-RISC

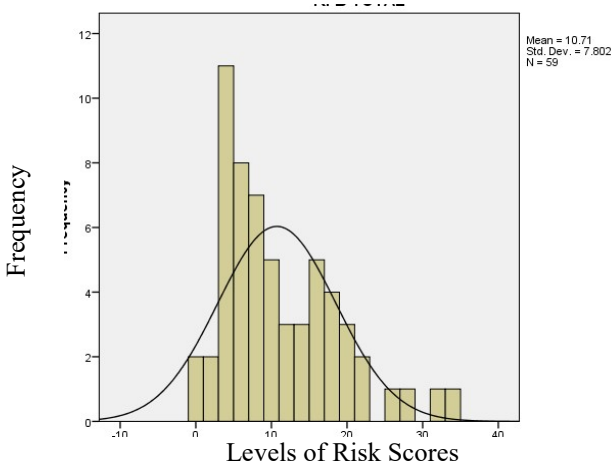


Figure I2 Histogram for The Modified Risk and Benefits Questionnaire

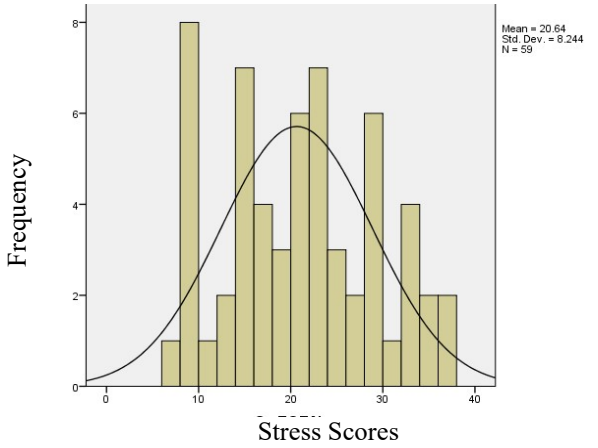


Figure I3 Histogram for the PSS

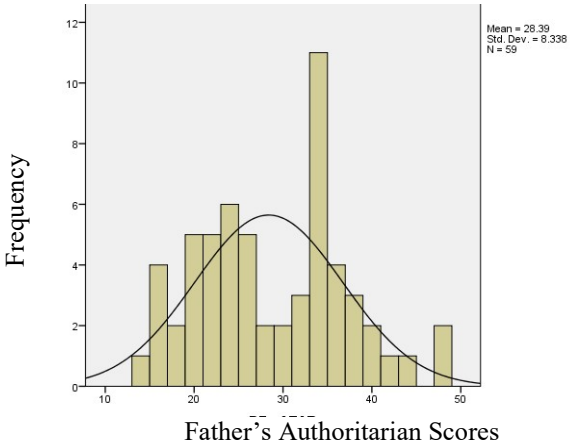


Figure I4 Histogram for the PAQ – Father Authoritarian

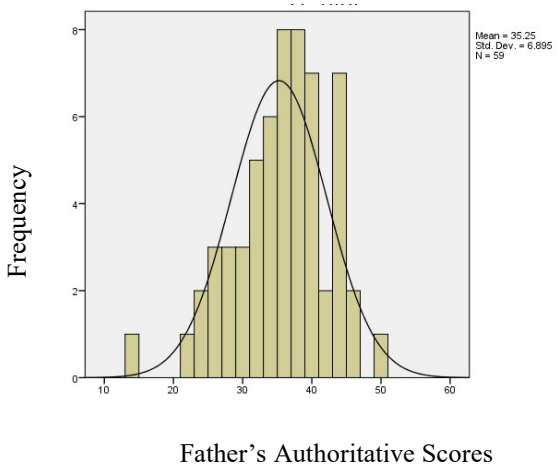


Figure I5 Histogram for the PAQ – Father Authoritative

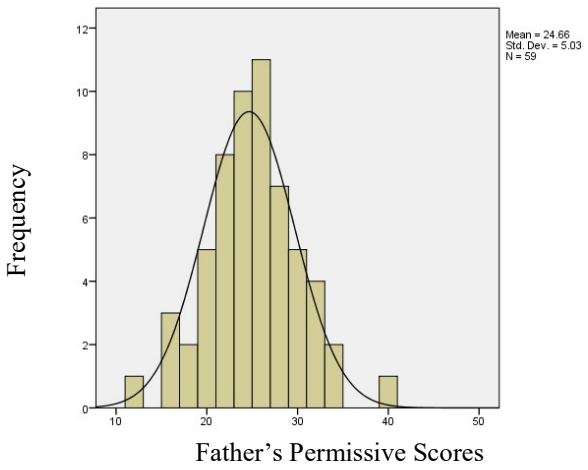


Figure I6 Histogram for the PAQ – Father Permissive

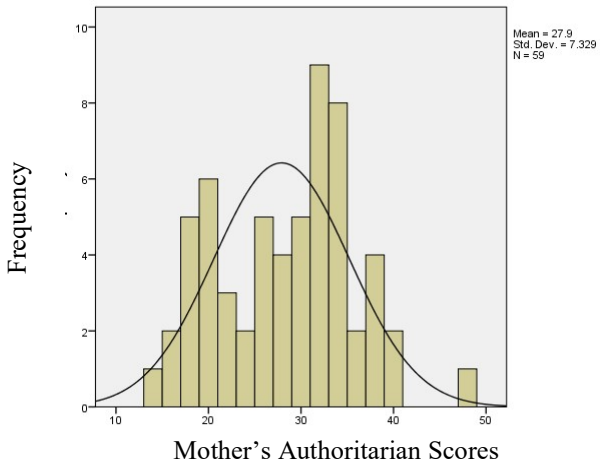


Figure I7 Histogram for the PAQ – Mother Authoritarian

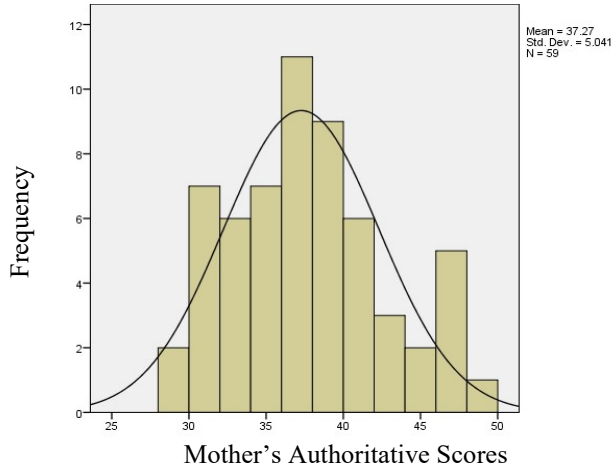


Figure I8 Histogram for the PAQ – Mother Authoritative

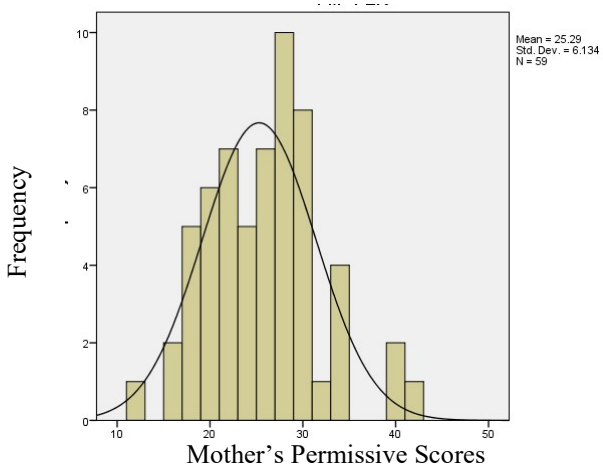


Figure I9 Histogram for the PAQ – Mother Permissive

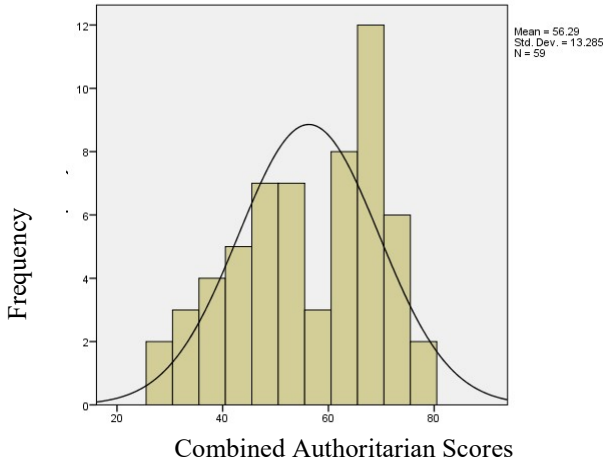


Figure I10 Histogram for the PAQ – Combined Authoritarian

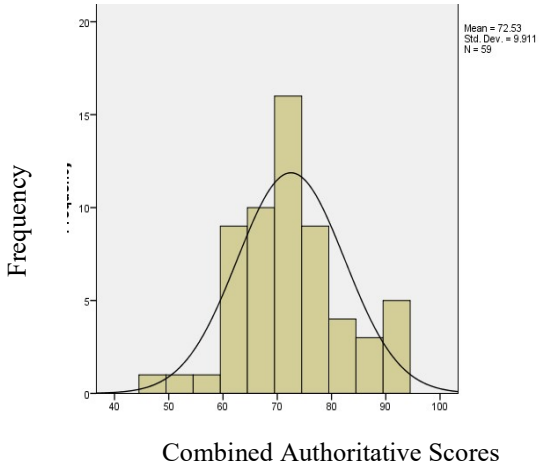


Figure I11 Histogram for the PAQ – Combined Authoritative

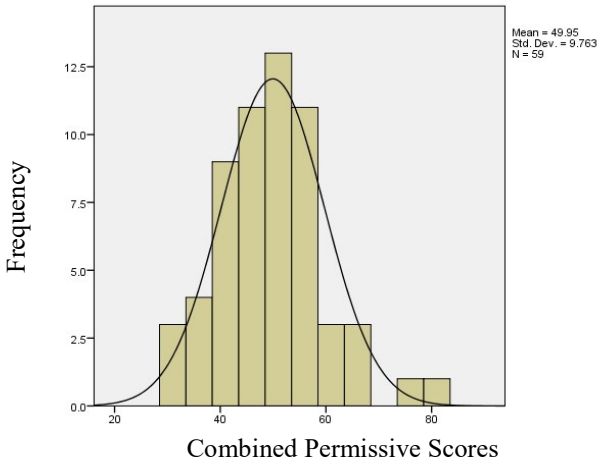


Figure I12 Histogram for the PAQ – Combined Permissive

Histograms for Moderated Multiple Regressions

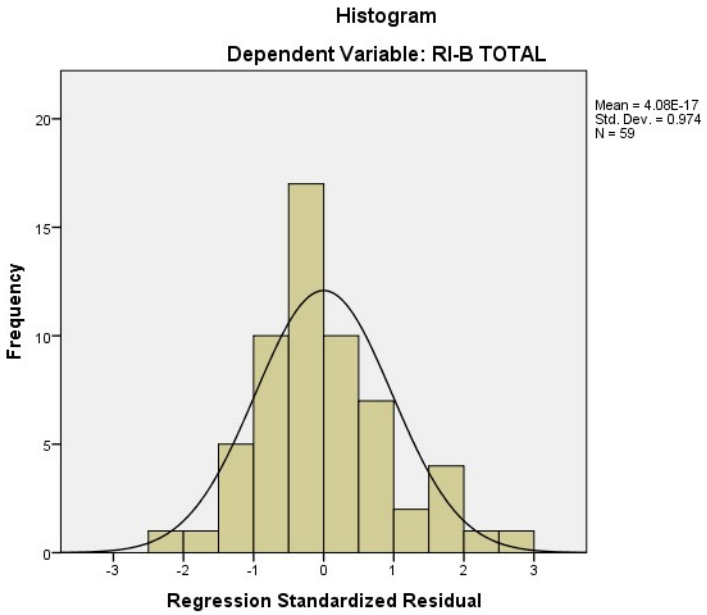


Figure 113 Histogram with Resilience Potential (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

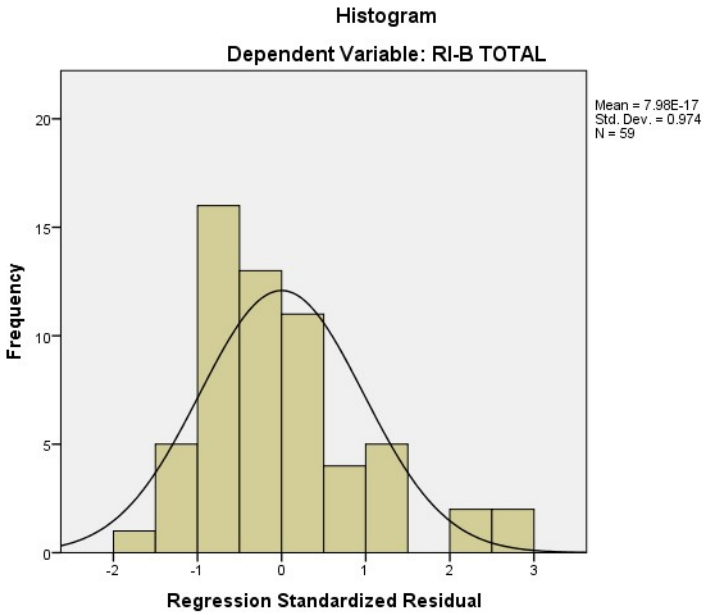


Figure 114 Histogram - Father's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

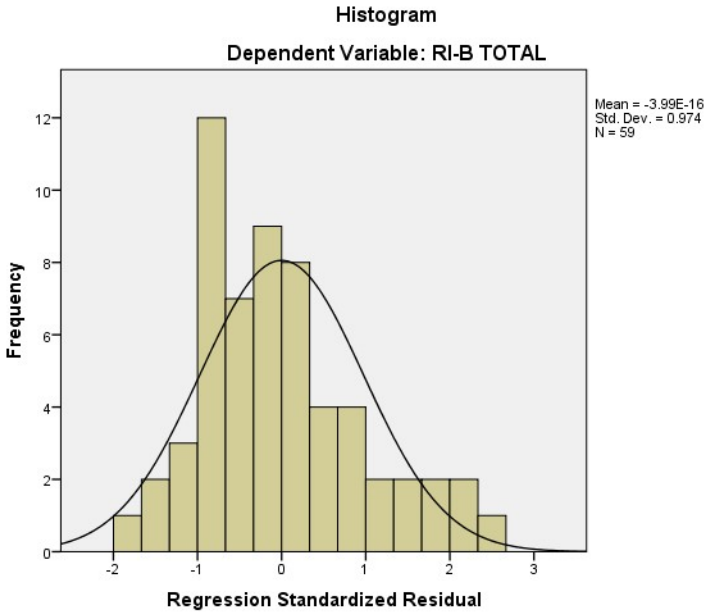


Figure 115 Histogram - Father's Authoritative (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

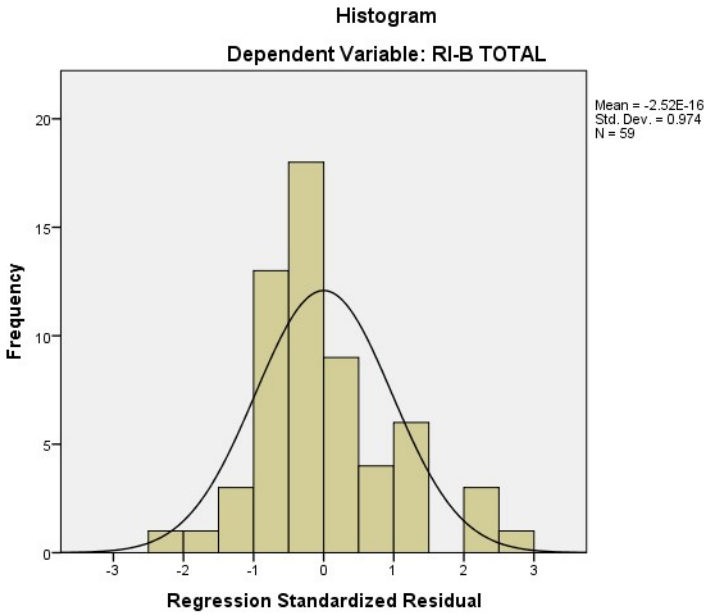


Figure 116 Histogram - Father's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

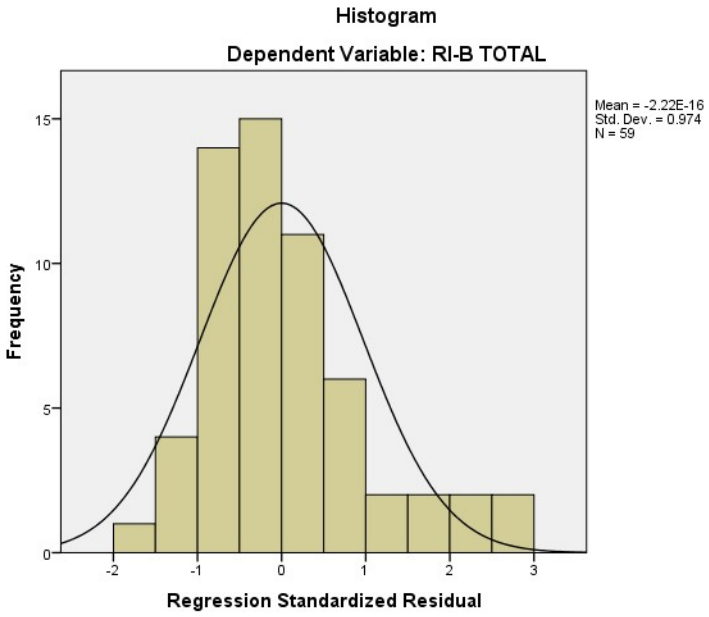


Figure 117 Histogram - Mother's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

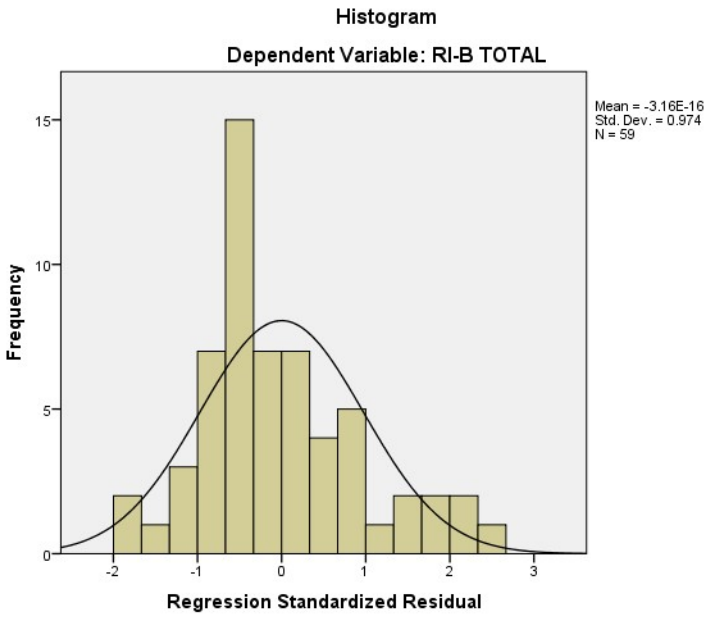


Figure I18 Histogram - Mother's Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

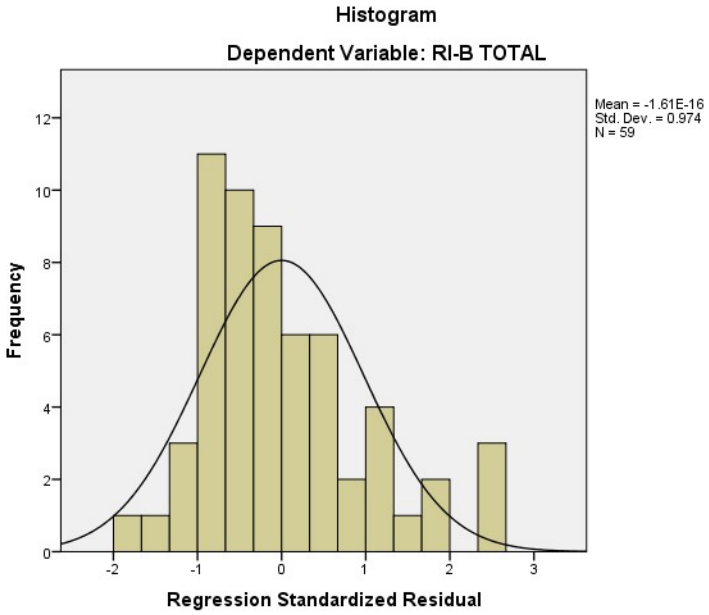


Figure I19 Histogram - Mother's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

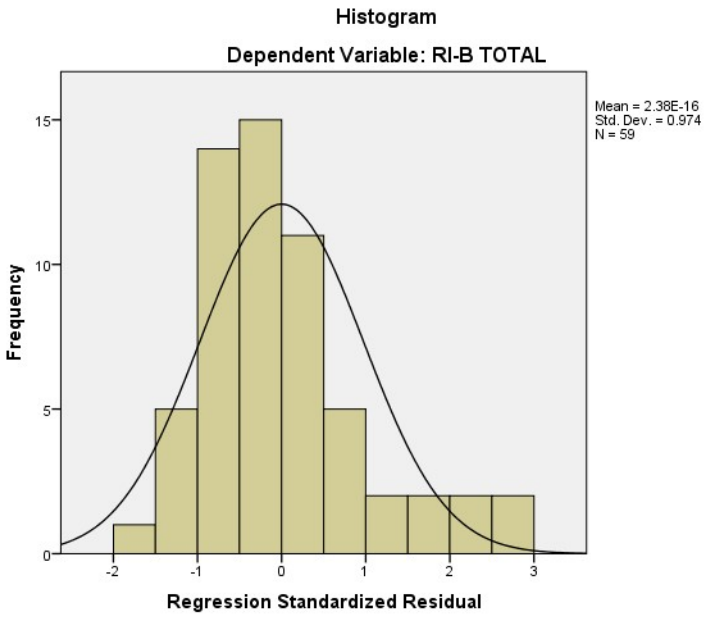


Figure I20 Histogram - Combined Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

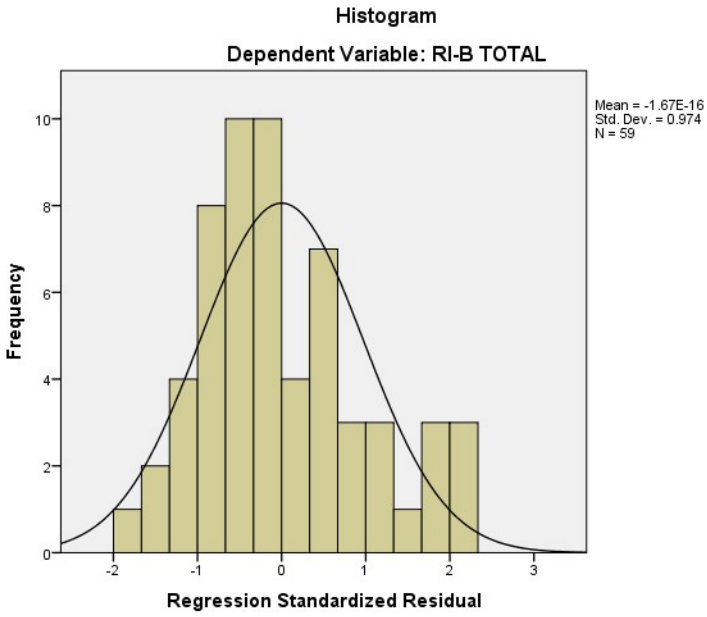


Figure I21 Histogram - Combined Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

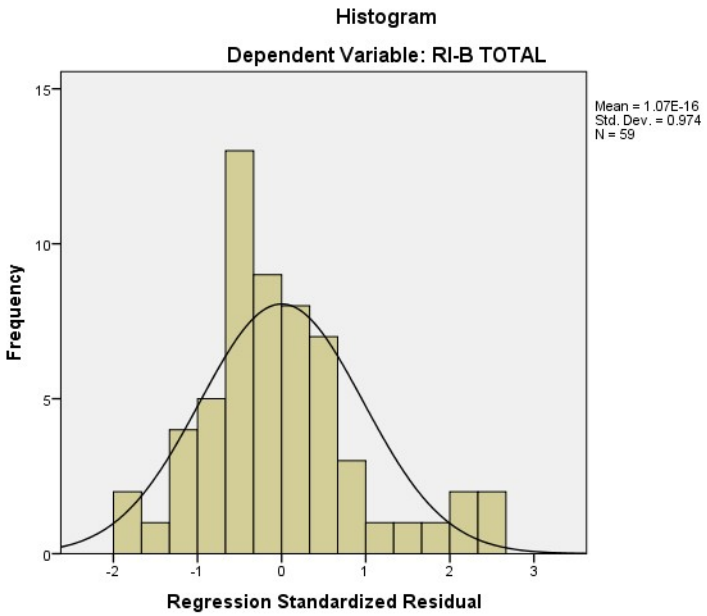


Figure I22 Histogram - Combined Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

APPENDIX J: Residual Plots

Residual Plots for the Research Questionnaires

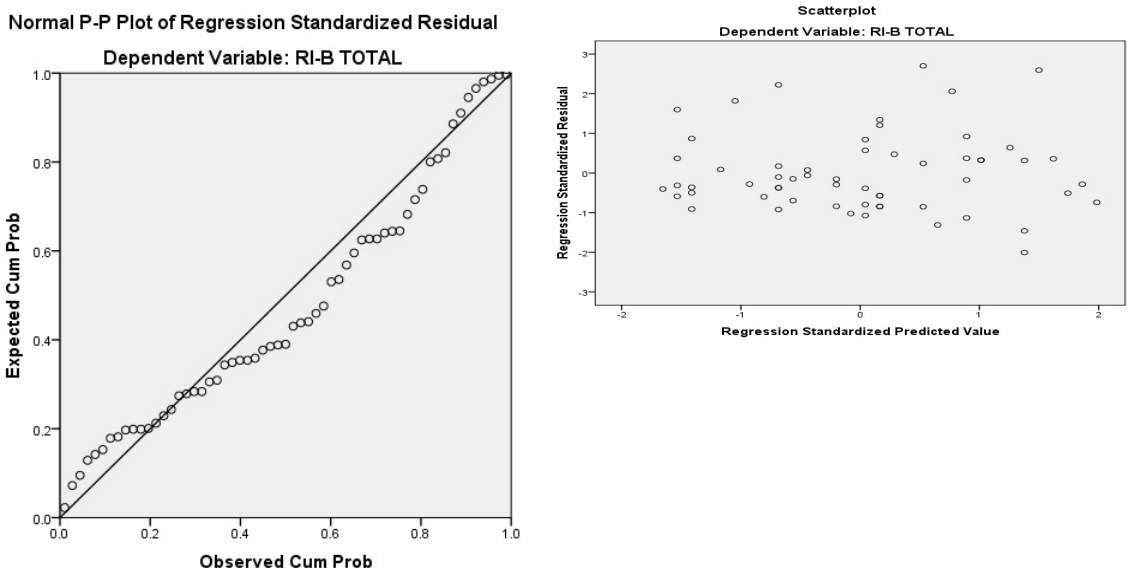


Figure L1 Residual Plots - Perceived Stress (IV) predicting Risk-taking (DV)

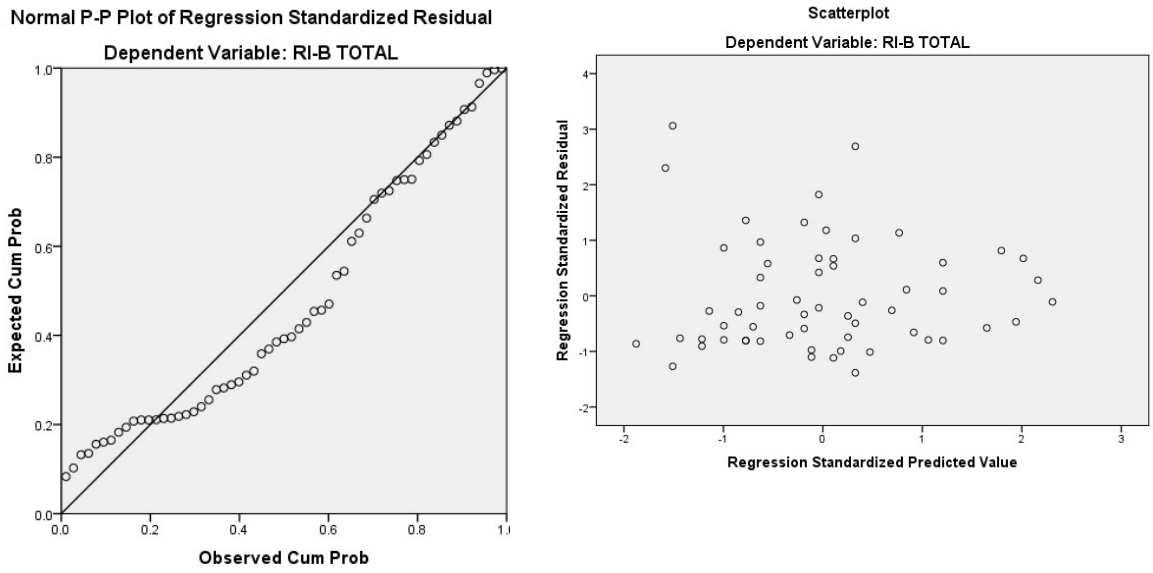


Figure L2 Residual Plots - Resilience Potential (IV) predicting Risk-taking (DV)

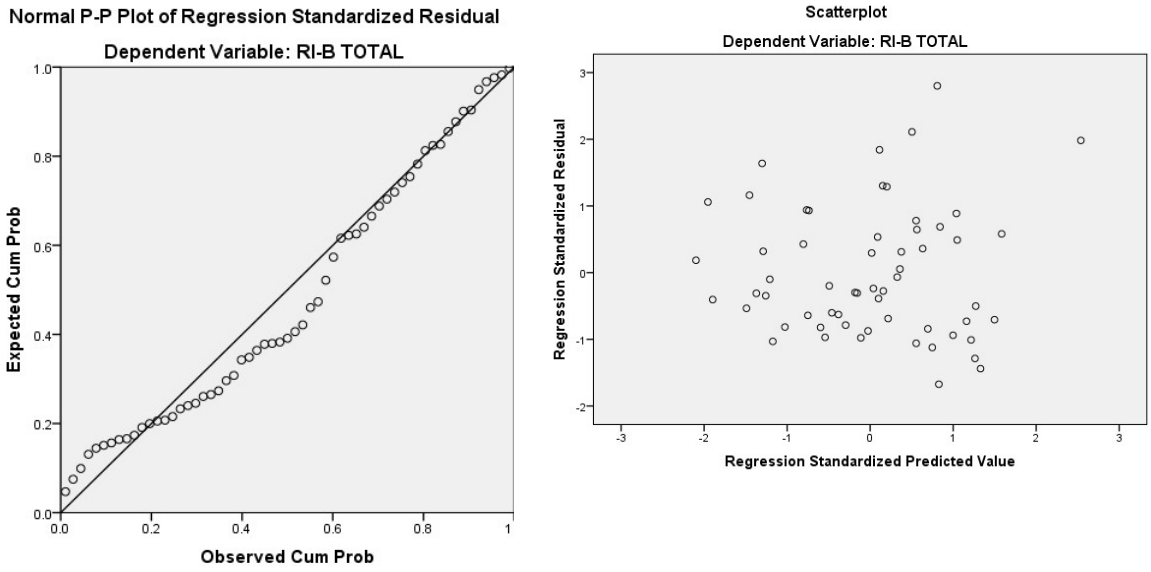


Figure L3 Residual Plots - Father's Parenting Style (IV) predicting Risk-taking (DV)

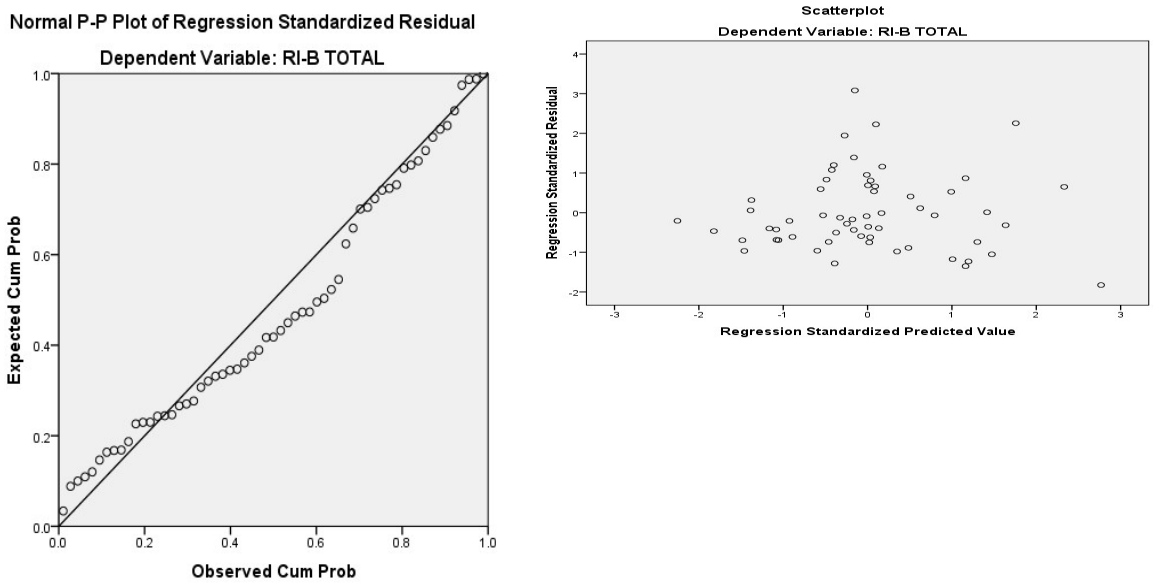


Figure L4 Residual Plots - Mother's Parenting Style (IV) predicting Risk-taking (DV)

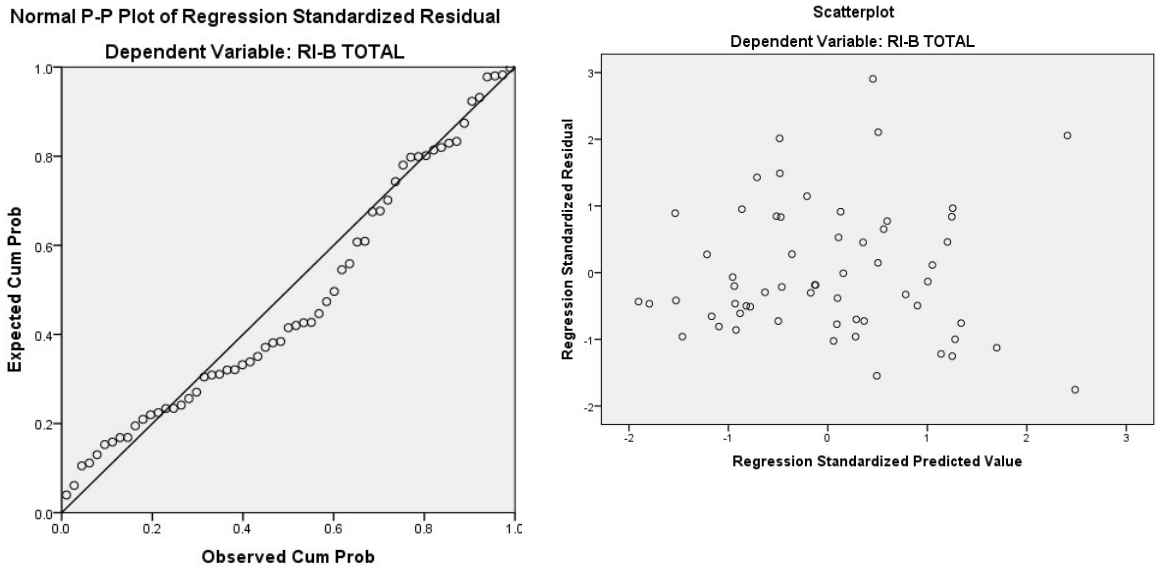


Figure L5 Residual Plots - Combined Parenting Style (IV) predicting Risk-taking (DV)

Residual Plots for Moderated Multiple Regressions

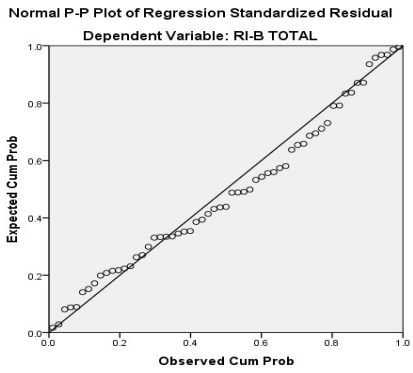


Figure L6 Residual Plots - Resilience Potential (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

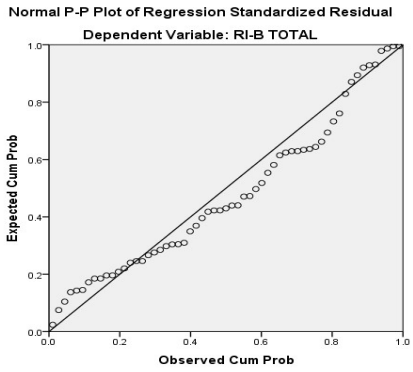


Figure L7 Residual Plots - Father's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

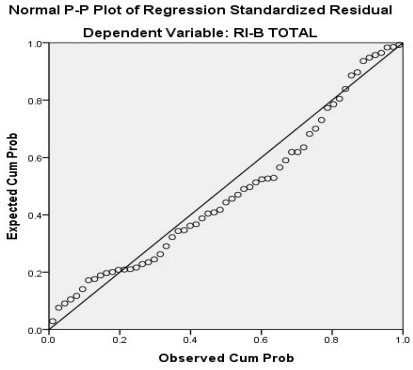


Figure L8 Residual Plots - Father's Authoritative (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

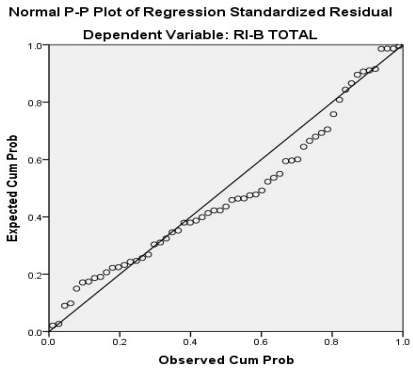


Figure L9 Residual Plots - Father's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

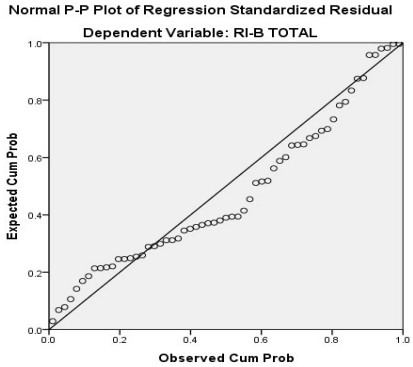


Figure L10 Residual Plot - Mother's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

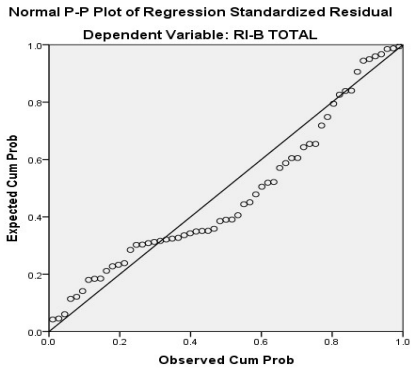


Figure L11 Residual Plot - Mother's Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

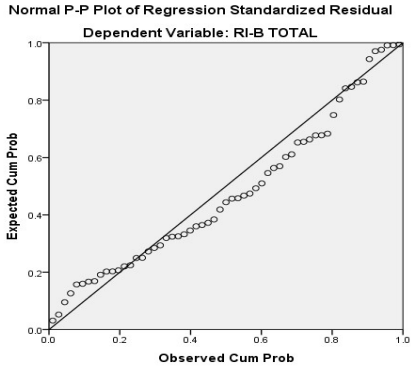


Figure L12 Residual Plot - Mother's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

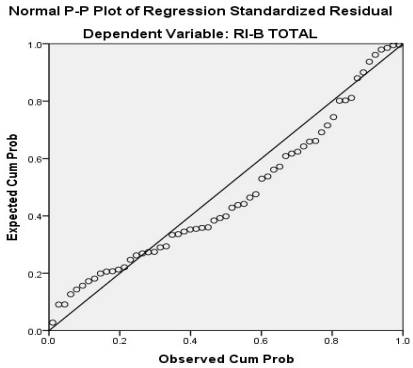


Figure L13 Residual Plot - Combined Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

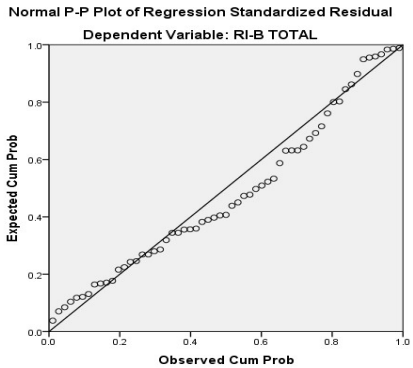


Figure L14 Residual Plot - Combined Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

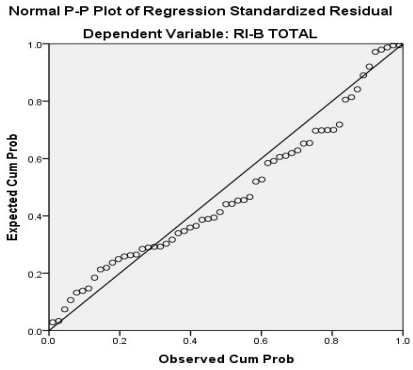


Figure L15 Residual - Combined Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

APPENDIX K: Cooks Distance and Leverage Value Scatter Plots

Scatter Plots with Outliers and Influential points for Moderated Multiple Regressions

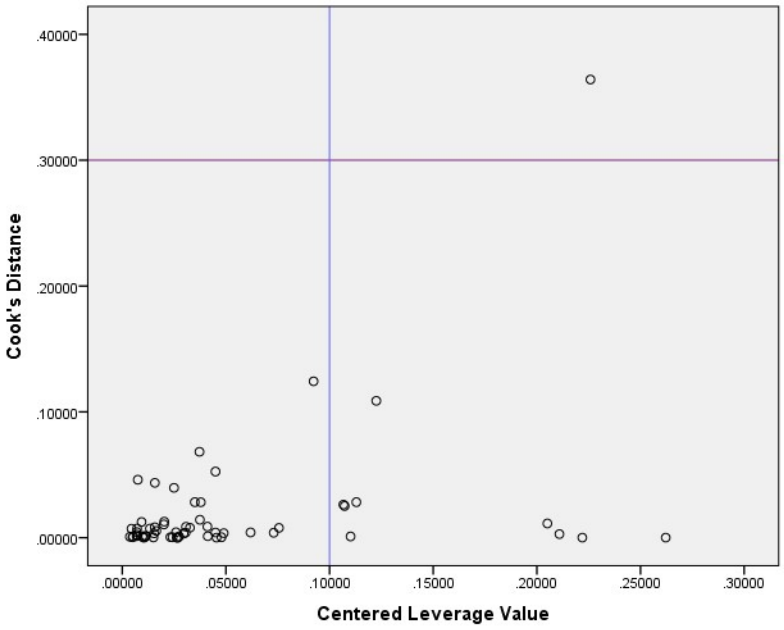


Figure K1 Scatter Plot - Resilience Potential (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

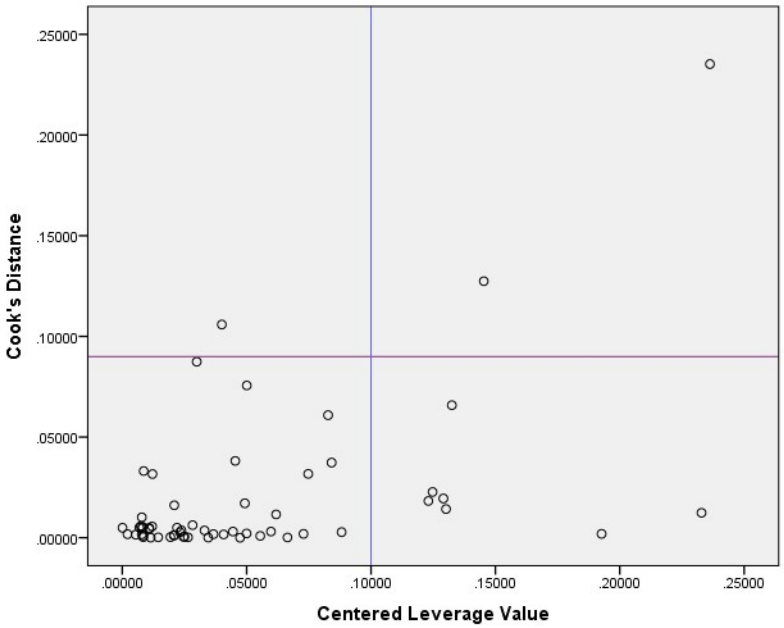


Figure K2 Scatter Plot - Father's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

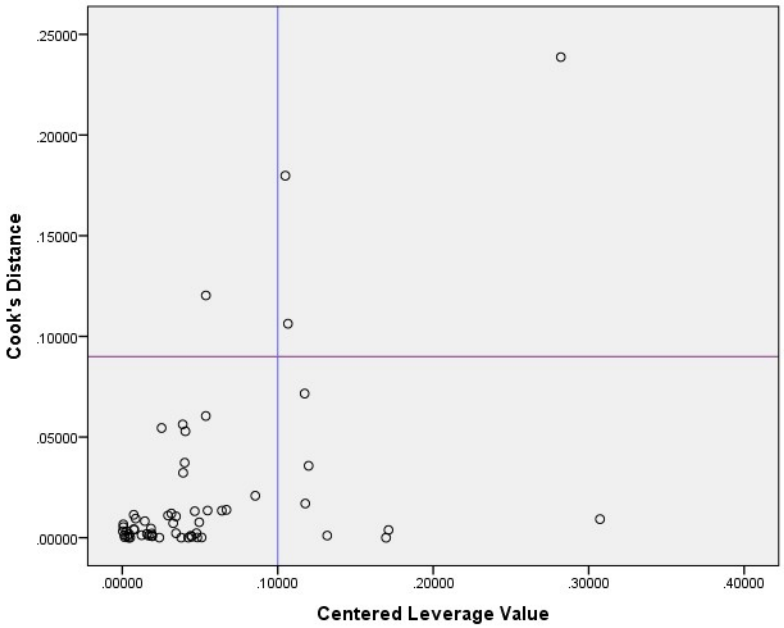


Figure K.3 Scatter Plot - Father's Authoritative (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

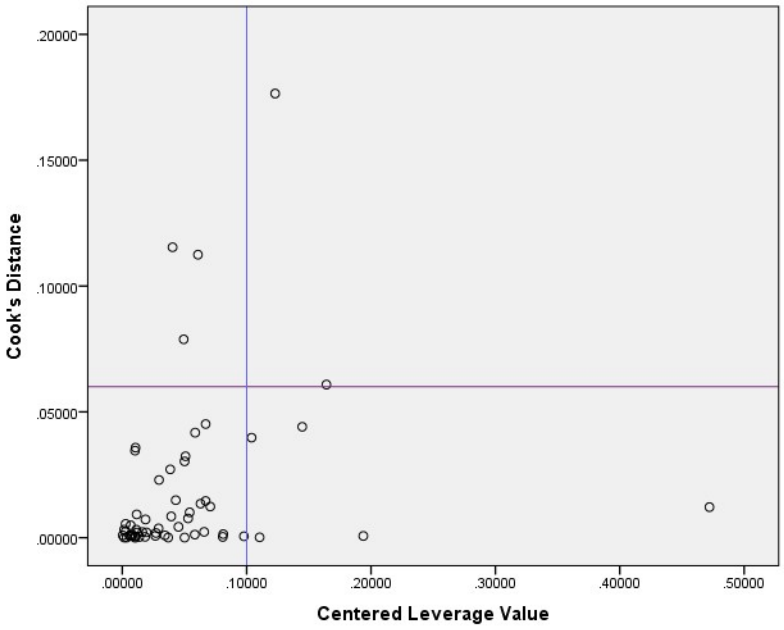


Figure K4 Scatter Plot - Father's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

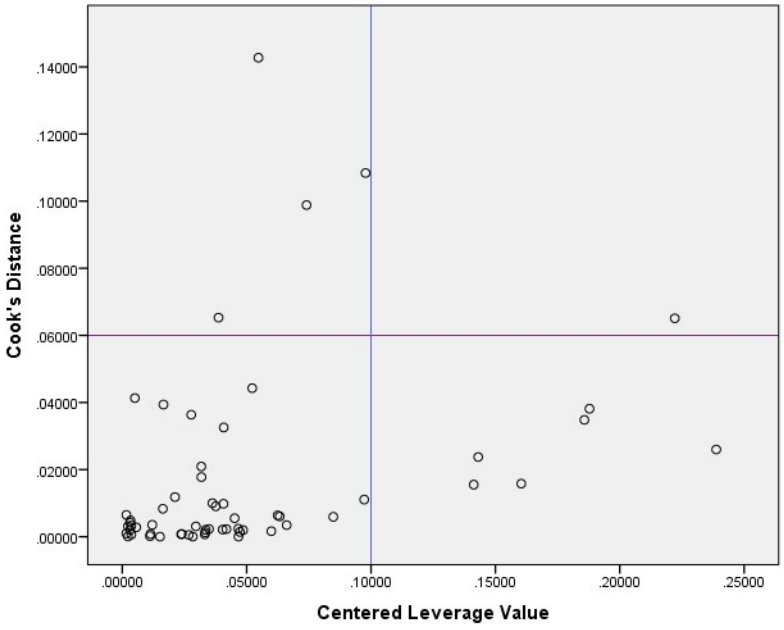


Figure K5 Scatter Plot - Mother's Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

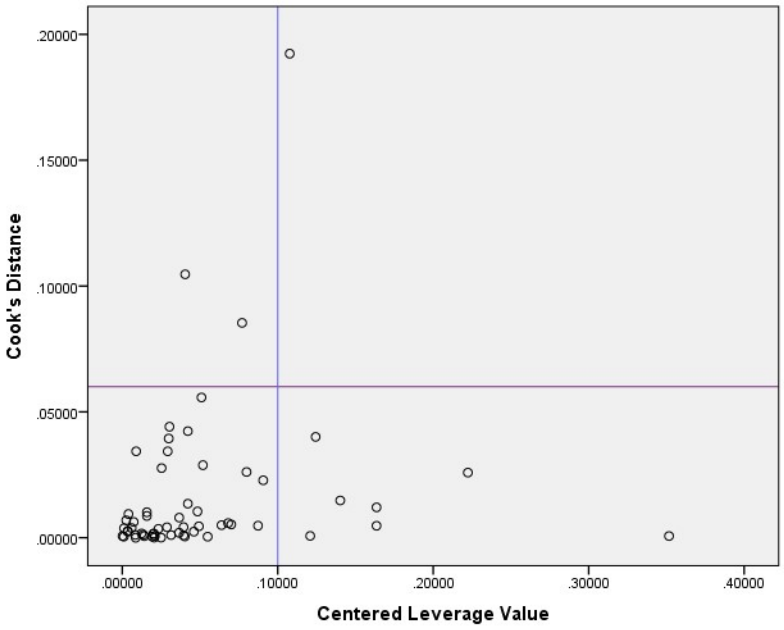


Figure K6 Scatter Plot - Mother's Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

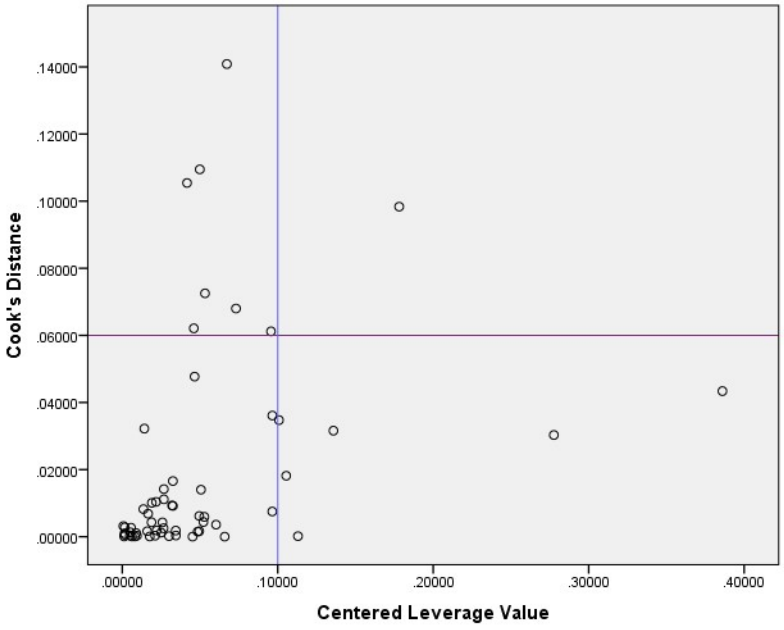


Figure K7 Scatter Plot - Mother's Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

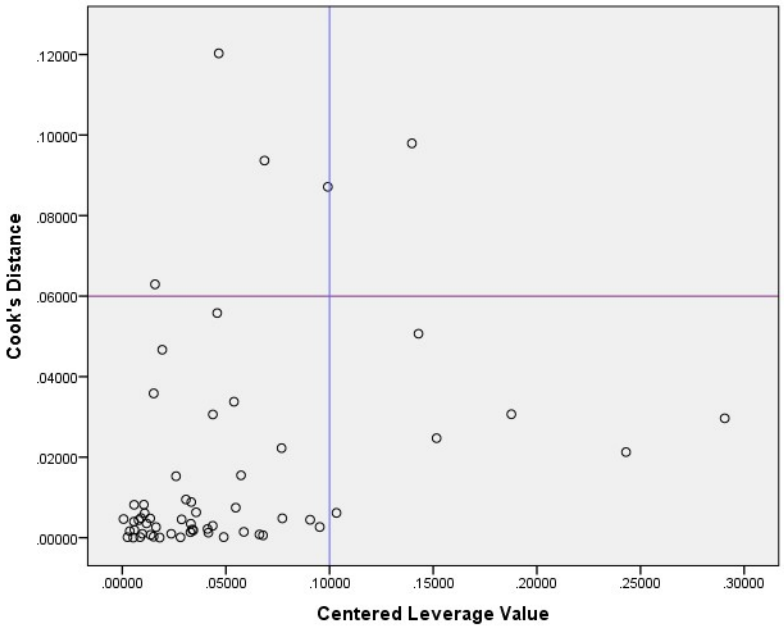


Figure K8 Scatter Plot - Combined Authoritarian Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

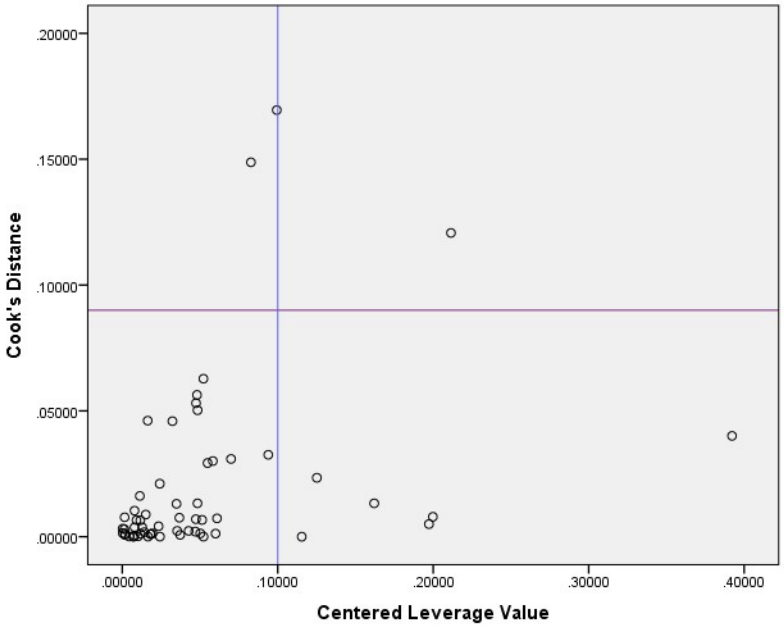


Figure K9 Scatter Plot - Combined Authoritative Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

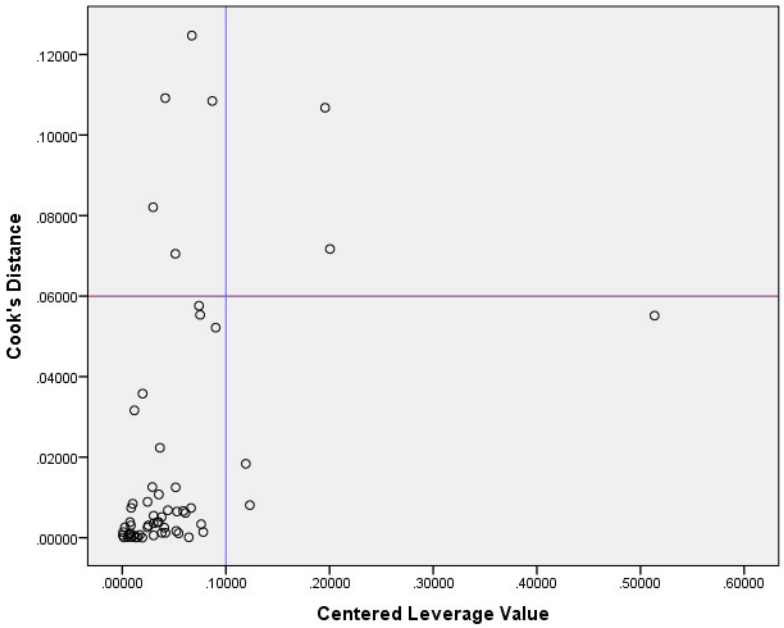


Figure K10 Scatter Plot - Combined Permissive Style (MV)

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

APPENDIX L: Data Tables

Table L1
Participants First and Second Language

	First Language *(N = 59)*		Second Language *(N = 59)*	
	f	(%)	*f*	(%)
Eng	51	(86.4)	8	(13.6)
Afrikaans	5	(8.5)	38	(64.4)
Mandarin	1	(1.7)	0	(.0)
Sepedi	1	(1.7)	0	(.0)
French	1	(1.7)	0	(.0)
Shona	0	(.0)	1	(1.7)
Zulu	0	(.0)	1	(1.7)
None	0	(.0)	11	18.6

Table L2
Participants Stress Scores on Each Item

	Perceived Stress Scale		
Item	*M*	*SD*	Range
Been upset because of something that happened unexpectedly?	2.22	1.161	4
Felt that you were unable to control the important things in your life?	2.20	1.297	4
Felt nervous and stressed‖?	2.85	1.157	4
Felt confident about your ability to handle your personal problems?	1.47	1.120	4
Felt that things were going your way?	1.90	1.170	4
Found that you could not cope with all the things that you had to do?	1.98	1.182	4
Been able to control irritations in your life?	1.92	1.193	4
Felt that you were on top of things?	1.59	1.146	4
Been angered because of things that were outside of your control?	2.46	1.088	4
Felt difficulties were piling up so high that you could not overcome them?	2.05	1.455	4

Table L3
Participants Risk Scores on Each Item

	Risky Behaviour		
Item	*M*	*SD*	Range
Ridding with a drunk driver	.27	.552	2
Drinking alcohol	1.12	1.068	3
Getting drunk	.83	1.003	3
Riding a motorcycle	.58	1.276	4
Smoking marijuana	.29	.744	3
Using drugs (except marijuana)	.17	.497	3
Sex without condoms	.07	.365	2
Shoplifting	.03	.183	1
Driving after drinking	.07	.314	2
Riding without seatbelts	1.44	1.303	4
Smoking cigarettes	.46	.988	4
Accepting a ride from a stranger	.15	.448	2
Handling weapons	.58	.986	4
Avoiding eating	.29	.696	3
Throwing up on purpose	.08	.337	2
Driving over the speed limit	.73	1.172	4
Involvement in physical fights	.54	.795	3
Not studying for school exams	.93	.926	3
Cheating on school exams	.03	.183	1
Sex without contraceptives	.03	.260	2
Stealing money from parents	.14	.392	2
Running away from home	.08	.337	2
Holding one's breath	.37	.786	4
Going to nightclubs	1.25	1.254	4
Playing road roulette	.02	.130	1
Smelling glue	.05	.289	2
Sex with more than one partner in the same period	.10	.578	4

Table L4

Participants Resilience Scores on Each Item

	CD-RISC		
Item	*M*	*SD*	Range
Able to adapt to change	3.00	1.000	4
Close and secure relationships	2.95	1.024	4
Sometimes fate or God can help	1.92	1.500	4
Can deal with whatever comes	2.85	.943	4
Past success gives confidence for new challenges	3.37	.869	3
See humorous side of things	3.10	.959	4
Coping with stress strengths	2.47	1.104	4
Tend to bounce back after an illness or hardship	3.12	.984	4
Things happen for a reason	2.24	1.343	4
Best effort no matter what	2.86	.991	4
You can achieve your goals	3.20	.961	4
When things look hopeless, I don't give up	2.93	.868	3
Know where to turn for help	2.73	1.112	4
Under pressure, focus and think clearly	2.51	1.104	4
Prefer to take the lead in problem solving	2.80	1.126	4
Not easily discouraged by failure	2.51	1.073	4
Think of self as strong person	2.97	1.114	4
Make unpopular or difficult decisions	2.59	.912	3
Can handle unpleasant feelings	2.75	1.044	4
Have to act on a hunch	2.34	.940	4
Strong sense of purpose	2.32	1.265	4
In control of your life	2.47	1.194	4
I like challenges	2.97	1.033	4
You work to attain your goals	3.07	.944	3
Pride in your achievements	3.41	.949	4

Table L5
Collinearity Statistics for Moderated Multiple Regressions

	Tolerance	VIF	Condition Index
Resilience Potential (MV)			
Model One	.701	1.427	17.726
Model Two	.059	16.855	55.043
Father Authoritarian (MV)			
Model One	.999	1.001	9.133
Model Two	.054	18.689	35.987
Father Authoritative (MV)			
Model One	.979	1.021	13.636
Model Two	.029	34.752	59.908
Father Permissive (MV)			
Model One	.987	1.013	12.210
Model Two	.024	42.360	61.721
Mother Authoritarian (MV)			
Model One	1.000	1.000	10.143
Model Two	.048	20.803	40.637
Mother Authoritative (MV)			
Model One	.993	1.007	18.674
Model Two	.016	62.399	77.441
Mother Permissive (MV)			
Model One	.997	1.003	10.594
Model Two	.034	29.614	48.359
Combined Authoritarian (MV)			
Model One	1.000	1.000	10.973
Model Two	.047	21.091	41.493
Combined Authoritative (MV)			
Model One	.980	1.021	18.817
Model Two	.020	50.169	73.293
Combined Permissive (MV)			
Model One	.992	1.009	12.747
Model Two	.024	41.019	60.958

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L6
Significance values for Linear Regressions - Parenting Style (IV), Risk-taking (DV)

Style	Fathers			Mothers			Combined		
	p	95% CI		*p*	95% CI		*p*	95% CI	
		LL	UL		LL	UL		LL	UL
Authoritarian	.460	-.155	.339	.422	-.442	.138	.928	-.163	.149
Authoritative	.506	-.199	.339	.232	-.161	.605	.284	-.095	.381
Permissive	.046*	-.802	-.008	.249	-.527	.140	.079	-.390	.022

*Note: * = significant p = < .05*

Table L7
Significance values for Linear Regressions – Parenting Style (IV), Resilience (DV)

Style	Fathers			Mothers			Combined		
	p	95% CI		*p*	95% CI		*p*	95% CI	
		LL	UL		LL	UL		LL	UL
Authoritarian	.715	-.353	.512	.925	-.516	.470	.859	-.248	.296
Authoritative	.004*	.240	1.214	.105	-.125	1.275	.005*	-.169	.364
Permissive	.134	-1.238	.170	.560	-.756	.415	.256	-.575	.156

*Note: * = significant p = < .05*

Table L8
Model Summary of Moderated Regression - Resilience (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	16.3%	5.465	2	56	.007
Model 2	18.4%	1.379	1	55	.245

a. Predictors: (Constant), RESILIENCE, STRESS

b. Predictors: (Constant), RESILIENCE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L9
Coefficients of Moderated Regression - Resilience (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	-6.446	-.826	.412
	Stress	.451	3.265	.002
	Resilience	.113	1.350	.182
Model 2	(Constant)	9.609	.611	.544
	Stress	-.193	-.341	.734
	Resilience	-.105	-.517	.607
	Mod	.009	1.174	.245

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L10
ANOVA of Moderated Regression - Resilience (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	576.523	2	288.261	5.465	.007[b]
	Residual	2953.579	56	52.742		
	Total	3530.102	58			
2	Regression	648.771	3	216.257	4.128	.010[c]
	Residual	2881.330	55	52.388		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), RESILIENCE, STRESS

c. Predictors: (Constant), RESILIENCE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L11
Confidence Intervals for Moderated Multiple Regressions with Resilience (MV)

	Model 1		**Model 2**	
	95% CI		95% CI	
	LL	UL	LL	UL
Resilience Potential	.174	.728	-1.326	.940
Stress	-.055	.281	-.514	.303
Mod			-.006	.024

Table L12
Model Summary of Moderated Regression - Father Authoritarian Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	14.3%	4.685	2	56	.013
Model 2	14.9%	.334	1	55	.566

a. Predictors: (Constant), FATHER AUTHORITARIAN, STRESS

b. Predictors: (Constant), FATHER AUTHORITARIAN, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L13
Coefficients of Moderated Regression - Father Authoritarian Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	1.295	.314	.755
	Stress	.346	2.957	.005
	Father Authoritarian	.080	.690	.493
Model 2	(Constant)	-3.524	-.378	.707
	Stress	.569	1.413	.163
	Father Authoritarian	.251	.789	.433
	Mod	-.008	-.578	.566

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L14
ANOVA of Moderated Regression - Father Authoritarian Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	506.034	2	253.017	4.685	.013[b]
	Residual	3024.067	56	54.001		
	Total	3530.102	58			
2	Regression	524.295	3	174.765	3.198	.030[c]
	Residual	3005.807	55	54.651		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), FATHER AUTHORITARIAN, STRESS

c. Predictors: (Constant), FATHER AUTHORITARIAN, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L15
Model Summary of Moderated Regression - Father Authoritative Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	15.7%	5.197	2	56	.009
Model 2	19.7%	2.801	1	55	.100

a. Predictors: (Constant), FATHER AUTHORITATIVE, STRESS

b. Predictors: (Constant), FATHER AUTHORITATIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L16
Coefficients of Moderated Regression - Father Authoritative Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	-2.672	-.453	.652
	Stress	.369	3.143	.003
	Father Authoritative	.164	1.166	.249
Model 2	(Constant)	21.836	1.386	.171
	Stress	-.680	-1.067	.291
	Father Authoritative	-.494	-1.186	.241
	Mod	.028	1.674	.100

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L17
ANOVA of Moderated Regression - Father Authoritative Style (MV)

ANOVAa						
Model		*SS*	df	*MS*	F	*p*
1	Regression	552.608	2	276.304	5.197	.009b
	Residual	2977.493	56	53.170		
	Total	3530.102	58			
2	Regression	696.896	3	232.299	4.510	.007c
	Residual	2833.206	55	51.513		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), FATHER AUTHORITATIVE, STRESS

c. Predictors: (Constant), FATHER AUTHORITATIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L18
Model Summary of Moderated Regression - Father Permissive Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	22.9%	8.313	2	56	.001
Model 2	26.4%	2.648	1	55	.109

a. Predictors: (Constant), FATHER -PERMISSIVE, STRESS

b. Predictors: (Constant), FATHER -PERMISSIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L19
Coefficients of Moderated Regression - Father Permissive Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	14.557	2.960	.005
	Stress	.382	3.418	.001
	Father Permissive	-.476	-2.597	.012
Model 2	(Constant)	38.240	2.493	.016
	Stress	-.528	-.926	.358
	Father Permissive	-1.459	-2.314	.024
	Mod	.038	1.627	.109

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L20
ANOVA of Moderated Regression - Father Permissive Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	808.124	2	404.062	8.313	.001[b]
	Residual	2721.977	56	48.607		
	Total	3530.102	58			
2	Regression	933.139	3	311.046	6.588	.001[c]
	Residual	2596.963	55	47.218		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), FATHER PERMISSIVE, STRESS

c. Predictors: (Constant), FATHER PERMISSIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L21
Model Summary of Moderated Regression - Mother Authoritarian Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	15.2%	5.035	2	56	.010
Model 2	15.3%	.013	1	55	.909

a. Predictors: (Constant), MOTHER AUTHORITARIAN, STRESS

b. Predictors: (Constant), MOTHER AUTHORITARIAN, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L22
Coefficients of Moderated Regression - Mother Authoritarian Style (MV)

Coefficients				
		β	t T	*p*
Model 1	(Constant)	7.338	1.629	.109
	Stress	.347	2.983	.004
	Mother Authoritarian	-.136	-1.039	.303
Model 2	(Constant)	8.401	.813	.420
	Stress	.299	.675	.503
	Mother Authoritarian	-.176	-.473	.638
	Mod	.002	.114	.909

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L23
ANOVA of Moderated Regression - Mother Authoritarian Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	538.016	2	269.008	5.035	.010[b]
	Residual	2992.086	56	53.430		
	Total	3530.102	58			
2	Regression	538.728	3	179.576	3.302	.027[c]
	Residual	2991.373	55	54.389		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), MOTHER AUTHORITARIAN, STRESS

c. Predictors: (Constant), MOTHER AUTHORITARIAN, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L24
Model Summary of Moderated Regression - Mother Authoritative (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	17.2%	5.812	2	56	.005
Model 2	18.1%	.625	1	55	.433

a. Predictors: (Constant), MOTHER AUTHORITATIVE, STRESS

b. Predictors: (Constant), MOTHER AUTHORITATIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L25
Coefficients of Moderated Regression - Mother Authoritative Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	-7.757	-1.011	.316
	Stress	.364	3.152	.003
	Mother Authoritative	.294	1.556	.125
Model 2	(Constant)	5.703	.305	.761
	Stress	-.336	-.376	.708
	Mother Authoritative	-.060	-.123	.903
	Mod	.018	.790	.433

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L26
ANOVA of Moderated Regression - Mother Authoritative Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	606.774	2	303.387	5.812	.005[b]
	Residual	2923.328	56	52.202		
	Total	3530.102	58			
2	Regression	639.603	3	213.201	4.057	.011[c]
	Residual	2890.499	55	52.555		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), MOTHER AUTHORITATIVE, STRESS

c. Predictors: (Constant), MOTHER AUTHORITATIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L27
Model Summary of Moderated Regression - Mother Permissive Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	16.6%	5.563	2	56	.006
Model 2	17.1%	.321	1	55	.573

a. Predictors: (Constant), MOTHER PERMISSIVE, STRESS

b. Predictors: (Constant), MOTHER PERMISSIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L28
Coefficients of Moderated Regression - Mother Permissive Style (MV)

Coefficients				
		β	T t	*p*
Model 1	(Constant)	8.876	1.935	.058
	Stress	.358	3.093	.003
	Mother Permissive	-.219	-1.412	.164
Model 2	(Constant)	2.413	.196	.845
	Stress	.643	1.245	.219
	Mother Permissive	.039	.080	.936
	Mod	-.011	-.566	.573

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L29
ANOVA of Moderated Regression - Mother Permissive Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	585.151	2	292.575	5.563	.006[b]
	Residual	2944.951	56	52.588		
	Total	3530.102	58			
2	Regression	602.233	3	200.744	3.771	.016[c]
	Residual	2927.869	55	53.234		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), MOTHER PERMISSIVE, STRESS

c. Predictors: (Constant), MOTHER PERMISSIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L30
Model Summary of Moderated Regression - Combined Authoritarian Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	13.6%	4.421	2	56	.016
Model 2	13.8%	.083	1	55	.774

a. Predictors: (Constant), COMBINED AUTHORITARIAN, STRESS

b. Predictors: (Constant), COMBINED AUTHORITARIAN, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L31
Coefficients of Moderated Regression - Combined Authoritarian Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	4.062	.840	.405
	S – TOTAL	.349	2.972	.004
	PC – ATAR	-.010	-.137	.892
Model 2	(Constant)	1.315	.123	.903
	S – TOTAL	.478	1.033	.306
	PC – ATAR	.040	.212	.833
	Mod	-.002	-.288	.774

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L32
ANOVA of Moderated Regression - Combined Authoritarian Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	481.350	2	240.675	4.421	.016[b]
	Residual	3048.751	56	54.442		
	Total	3530.102	58			
2	Regression	485.941	3	161.980	2.927	.042[c]
	Residual	3044.160	55	55.348		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), COMBINED AUTHORITARIAN, STRESS

c. Predictors: (Constant), COMBINED AUTHORITARIAN, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L33
Model Summary of Moderated Regression - Combined Authoritative Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	17.5%	5.925	2	56	.005
Model 2	20.4%	2.049	1	55	.158

a. Predictors: (Constant), COMBINED AUTHORITATIVE, STRESS

b. Predictors: (Constant), COMBINED AUTHORITATIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L34
Coefficients of Moderated Regression - Combined Authoritative Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	-8.379	-1.078	.286
	Stress	.376	3.238	.002
	Combined Authoritative	.156	1.618	.111
Model 2	(Constant)	15.765	.850	.399
	Stress	-.756	-.946	.348
	Combined Authoritative	-.165	-.675	.502
	Mod	.015	1.431	.158

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L35
ANOVA of Moderated Regression - Combined Authoritative Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	616.552	2	308.276	5.925	.005[b]
	Residual	2913.550	56	52.028		
	Total	3530.102	58			
2	Regression	721.203	3	240.401	4.707	.005[c]
	Residual	2808.898	55	51.071		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), COMBINED AUTHORITATIVE, STRESS

c. Predictors: (Constant), COMBINED AUTHORITATIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L36
Model Summary of Moderated Regression - Combined Permissive Style (MV)

Model Summary[c]					
		Change Statistics			
	R^2	F	df1	df2	*p*
Model 1	20.6%	7.282	2	56	.002
Model 2	20.9%	.158	1	55	.692

a. Predictors: (Constant), COMBINED -PERMISSIVE, STRESS

b. Predictors: (Constant), COMBINED -PERMISSIVE, STRESS, Mod

c. Dependent Variable: RISK

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L37
Coefficients of Moderated Regression Combined Permissive Style (MV)

Coefficients				
		β	t	*p*
Model 1	(Constant)	13.656	2.627	.011
	Stress	.372	3.290	.002
	Combined Permissive	-.213	-2.228	.030
Model 2	(Constant)	19.458	1.256	.215
	Stress	.136	.224	.824
	Combined Permissive	-.331	-1.061	.294
	Mod	.005	.398	.692

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L38
ANOVA of Moderated Regression - Combined Permissive Style (MV)

ANOVA[a]						
Model		*SS*	df	*MS*	F	*p*
1	Regression	728.582	2	364.291	7.282	.002[b]
	Residual	2801.519	56	50.027		
	Total	3530.102	58			
2	Regression	736.621	3	245.540	4.834	.005[c]
	Residual	2793.480	55	50.791		
	Total	3530.102	58			

a. Dependent Variable: RISK

b. Predictors: (Constant), COMBINED -PERMISSIVE, STRESS

c. Predictors: (Constant), COMBINED -PERMISSIVE, STRESS, Mod

Note: Risk-taking Behaviour is the DV and Perceived Stress is the IV

Table L39
Confidence Intervals for Moderated Multiple Regressions - Parenting Style (MV)

	Model 1		Model 2	
	95% CI		95% CI	
	LL	UL	LL	UL
Regression 1				
Father Authoritarian	-.152	.312*	-386	.887*
Stress	.112	.581	-.238	1.357*
Mod			-.035	.019*
Regression 2				
Father Authoritative	-.118	.445*	-1.330	.341*
Stress	.134	.604	-1.956	.597*
Mod			-.006	.062*
Regression 3				
Father Permissive	-.843	-.109	-2.722	-.195
Stress	.158	.606	-1.671	.614*
Mod			-.009	.084*
Regression 4				
Mother Authoritarian	-.398	.126*	-.920	.569*
Stress	.144	.581	-.588	1.185*
Mod			-.030	.034*
Regression 5				
Mother Authoritative	-.084	.672*	-1.034	.914*
Stress	.133	.595	-2.125	1.454*
Mod			-.028	.065*
Regression 6				
Mother Permissive	-.531	.092*	-.927	1.004*
Stress	.126	.589	-.392	1.678*
Mod			-.051	.029*
Regression 7				
Combined Authoritarian	-.156	.136*	-.338	.418*
Stress	.114	.585	-.450	1.406*
Mod			-.019	.014*
Regression 8				
Combined Authoritative	-.037	.350*	-.653	.324*
Stress	.143	.608	-2.357	.845*
Mod			-.006	.036*
Regression 9				
Combined Permissive	-.404	-.021*	-.956	.294*
Stress	.146	.599	-1.078	1.349*
Mod			-.019	.029*

*Note * = value of no effect*