FATHER-SON RELATIONSHIP QUALITY AND ASSOCIATED ADOLESCENT RISKS

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ABSTRACT

International research over the past two decades has advanced knowledge in the study of fathers and the protective role they play in the prevention of adolescent risk behaviours. Studies have often investigated parental relationships and their influence on adolescent risk behaviours but rarely the specific role of the adolescents' relationships with their fathers or father figures in prevention of risk behaviour. Three main hypotheses were investigated: first, that the theoretically aligned dimensions of relationship quality would be nomogically validated; second, that there would be little significance difference in the dimensions of relationship quality across groupings of father residential status; and third, that the quality of the father-son relationship is a stronger predictor of risk behaviour than father's residential status (whether the adolescent lived with the father or not), or whether the "father" is a biological father or not. Three samples of adolescents were included: a father-resident group (biological fathers reside in the adolescents' homes) (N = 196); a non-resident group (biological fathers live elsewhere) (N = 72); and a father figure group (no contact with biological father) (N = 58). The school-based sample of 331 participants all resided in a low-income area of Cape Town. Risk behaviours were investigated using the Problem Oriented Screening Instrument for Teenagers (POSIT). Human Immunodeficiency Virus (HIV) risk behaviour was assessed on a POSIT sub-scale designed specifically for South Africa, the POSIT HIV/STD Risk

Subscale. Paternal relationship quality was measured by the Acceptance subscale of the revised Child Report of Parent Behavior Inventory, the Child-Parent Communication Apprehension Scale for Use with Young Adults, and a measure of paternal quality contact time that was developed for this study. After conducting a factor analysis the Paternal Quality Contact Time Scale was found to have three factors: the father's availability, activities engaged in together, and the motivation of the son to spend time with his father (including the son's enjoyment of the time spent). This provides an extension to past conceptualizations of father-son contact which commonly assessed only the amount of time and activities engaged in. The dimensions of paternal relationship quality were found to be strongly associated. Linear regressions showed that father-son communication was the stronger predictor of risk behaviours when compared to father residential status. Paternal communication was a predictive factor for mental health risk, negative family relations, educational under-attainment, aggressive and violent behaviour and HIV/STD risk behaviours for adolescent boys. These findings confirm that fathers play an important protective role with regard to the development of adolescent risk behaviours. They also confirm that paternal relationship quality plays a more significant role, specifically the dimension of communication between them, than whether fathers live with their sons or are biologically related to them. The findings suggest a need to address the issues of building relationships between at-risk youth and their fathers (be they biological fathers or father figures) through community and clinical interventions.

DECLARATION

I declare that *Father-son relationship quality and associated adolescent risks* is my own work, and that it has not been submitted before for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Lynn Avril Hendricks

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Date: 12 November 2009

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CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND

One in every five persons in the world, 1.2 billion in number, is a young person between the ages of 15-24 years and is in a transitional phase moving from adolescence into adulthood (Population Reference Bureau, 2009). The current population of 1.1 billion young people living in less developed countries is expected to rise for the next 30 years (Population Reference Bureau, 2009). There are 25 635 900 children are under the age of 19 in South Africa and young men between the ages of 15-19 years are more than 2.5 million in number (Statistics South Africa, 2009).

Social awareness, particularly of the difficulties young men are facing in our society, has increased. Newspapers, police reports, government interventions and other media documenting misdemeanours by and against young men are apparent. This has contributed to the renewed interest in the attitudes and lives of young men, some of whom are facing dire circumstances.

There are clear differences between how males and females negotiate the period of adolescence and risk-taking behaviours, with boys engaging in more dangerous risk-taking behaviours. Global homicide rates in 2000 showed rates for males were three times more likely than females and highest in the 15-19 years category (Reddy et al., 2003). Boys are more at risk than girls for unsafe sexual practices, multiple sex partners, substance abuse (Parry et al., 2004) and all forms of criminal and anti social

behaviour. For South Africa, completed suicide rates, consistent with global trends, report 4.7 male suicides for every female suicide (Reddy et al., 2003, p. 38).

Parry et al. (2002), in an epidemiological study of alcohol, found higher harmful drinking patterns among high school students, in two South African cities - Durban and Cape Town, than studies of representative samples in Australia, North America, and Europe, which revealed that 30% to 40% of young people are binge drinkers (Australian Institute of Health and Welfare, 2002; Federal, Provincial and Territorial Advisory Committee on Population Health, 1999).

The challenges adolescent boys face in the wake of the transitional phase of adolescence is apparent. A closer look at the correlates associated with adolescent boys and their risk behaviours is critical in the examination of this issue. Correlates of adolescent risk taking behaviour have been shown to be living in households or communities with lower socio-economic status (Ramirez-Valles, Zimmerman & Newcomb, 1998; Upchurch, Aneshensel, Sucoff & Levi-Storms, 1999; Brandt, Ward, Dawes, & Flisher, 2005; de Visser, Rissel, Smith, & Richters, 2006), negative peer influences (Keren & Hasida, 2007; Ward, Martin, Theron & Distiller, 2007; Ward & Bakhuis, 2009) and weak parental relationships (Amato, 1997; Hawkins & Dollahite, 1997; Howard, Cross, Li & Huang., 1999; Brotherson, Yamamoto & Acock, 2003; Luchetti, Powers & Love, 2002; Caldwell et al., 2004).

The wealth of research on fatherhood suggests that the father-son relationship has a significant effect on the child's development and well-being (Amato, 1997; Andry,

1960; Biller, 1993; Doherty, Kouneski & Erikson, 1998; Hawkins & Dollahite, 1997; Richter & Morell, 2006). The quality of the father-son relationship has been found to have an effect on the child's health-promoting (Caldwell et al., 2004) as well as risk behaviours (Howard, et. al., 1999). Past research reports that children who do not have a positive paternal relationship may be more likely to be involved in risk behaviours such as drug and alcohol use, academic under-achievement and delinquency (Brotherson et al., 2003).

This study broadens the perimeter of risk factors most commonly studied (smoking, alcohol abuse and HIV risk) to include substance use and abuse, mental health status, family relations, peer relations, educational status, social skills, leisure and recreation, violent and aggressive behaviour and HIV risk. The protective factor for these risks, relationship quality, was measured through three specific constructs: contact (Hofferth & Sandberg, 2001; Amato, 1997), connection (Brotherson et al., 2003; Barber & Olsen, 1997; Hawkins & Dollahite, 1997) and communication (Luchetti et al., 2002).

First in the triad of father-son relationship quality, contact, can be defined as the amount of time the father and son spend together, the frequency of interactions and the quality of interactions (Hofferth & Sandberg, 2001). Strong meaningful bonds are more likely to be created through shared activities, which require spending time together. Second, father-son relationships are significantly influenced by communication quality. Many studies have been conducted on the negative impacts of parent-child communication (Luchetti et al., 2002). One significant factor in

family communication is the amount of anxiety felt while communicating. Only a few have studied communication anxiety in parent-child relationships; and even fewer in father-son dyads specifically. Third, Barber and Olsen (1997) identify a sense of connection in the parent-child relationship as one of the significant factors that provides for the continual development of the child and his well-being. Connection, in this study, was defined as the emotional attachment within the father-son relationship (Harris, Furstenburg & Marmer, 1998).

A father, who has a 'quality relationship' with his son, as defined by this research, is a father who is available to his son, engages in activities with his son, and his son enjoys the time they spend together. He also communicates openly with his son and shares an emotional connection. He may or may not live with the child's mother, and he may or may not be a biological father of the adolescent boy.

A father who is not the biological father of the adolescent boy is referred to in this study as a father figure. Father figure types explored in this study included adoptive fathers, step-fathers, older brothers, uncles, and an open 'other' category. The majority of guardians who did not give permission for their son to participate in the study did so because the adolescent had no contact with his biological father and did not feel comfortable with the research topic. The 'other' category therefore may have been indicated by those who did not have any father figure in their lives. Eight participants chose this category[1]. Preliminary analyses were conducted to compare

[1] Refer to Chapter Five for results of ANOVA comparing types of father figures across father-son contact, communication and connection.

the types of father-figures across levels of father-son contact, communication and connection before grouping all the types under the category of father figure.

Most research concerning paternal relationships investigates the father's or mother's experiences and rarely that of the adolescent (Milkie, Simon & Powell, 1997). Research that has investigated adolescents' perspectives suggests that they may be considerably different to their fathers' reports of interaction and that parents tend to make incorrect assumptions about what their children think or feel (Belle, 1999; Sixsmith & Knowles, 1996). Larson (1993, p. 17) found father's guesses of the level of their children's happiness as having 'little relevance to what the child was feeling'. Fathers reported spending a considerably larger amount of time with their adolescent sons than reported by the adolescents themselves (Larson, 1993; Larson & Richards, 1991).

The thesis thus seeks to derive knowledge about the father-son relationship from a primary source, the adolescent son. The influences of the quality of his relationship with his father or father figure and their residential status on the adolescent's behavioural, social and health risks are the foci of this study.

1.2. RATIONALE OF STUDY

International and local studies reveal alarmingly high rates of adolescent risk behaviours, some potentially life threatening. However, there are few local studies that investigate the correlates of adolescent social and health risk behaviours. Even fewer focus on paternal relationship quality, which has consistently been shown to be

an important support base for boys, during adolescence. Attention is also given to the fathers' residential status and whether this impacts on both the relationship with his son and his sons' risk behaviours. This necessitated the investigation into the influences of paternal relationship quality and father residential status on adolescent risk outcomes in South Africa.

1.3. SIGNIFICANCE OF STUDY

This study sought to explore current conceptualizations of the dimensions of father-son relationship quality and to look at the role of the paternal relationship in the development of the adolescent son. This study simultaneously investigates three aspects of relationship quality: contact, communication apprehension and connection. Finding no sufficient measure of father-son contact in the literature, a measure was developed and tested in this study. The protective role that paternal relationship quality plays in a wide range of adolescent risk behaviours is explored as well as the effect that father residential status has on the father-son relationship quality.

1.4. RESEARCH AIMS

The purpose of this study is to examine the effect of father-son relationship quality (as perceived by the son) on specific health, social and behavioural outcomes of the adolescent son. The primary aims of the study are as follows:

(i) to explore father-son contact, communication and connection as dimensions of relationship quality.

(ii) to determine whether there is a statistically significant relationship between father residential status and father–son relationship quality.

(iv) to investigate whether positive paternal relationship quality will explain more of the variance in adolescent risk outcomes than father residential status.

1.5. RESEARCH QUESTION

Based on the aims of the study, as stipulated above, the following research question was formulated: Do the dimensions of father-son relationship quality (contact, connection and communication) statistically explain more of the variance in risk outcomes than father residential status for adolescent high school males?

1.6. RESEARCH HYPOTHESES

Hypothesis I

Father-son contact, communication and connection are significantly related to each other and may be understood as dimensions of father-son relationship quality.

Hypothesis II

Biological fathers and father figures will not differ significantly in contact, communication and connection with their adolescent sons but compared with biological fathers, father figures will demonstrate lower quality interactions with their sons.

Hypothesis III

Each of the dimensions of father-son relationship quality will have a significant effect on adolescent risk outcomes.

Hypothesis IV

Boys with *non-resident fathers, resident fathers* or *father*-figures will exhibit equal risk outcomes.

Hypothesis V

The dimensions of father-son relationship quality have a greater effect on risk outcomes than *father residential status*.

1.7. OVERVIEW OF CHAPTERS

In this introductory chapter the context of the study was introduced, along with the significance of the study, the research aims, questions, hypotheses and key constructs of the study.

In the following chapter relevant literature will be examined. The focus will be specifically on how paternal relationship quality impacts on adolescent behaviour. Relationship quality will be examined through its dimensions of contact, connection and communication. Risk behaviours explored in this study and its prevalence rates amongst South African youth will be examined. An overview of the mediating effect of father residential status on paternal relationship quality and adolescent risk factors will be provided. Further to that, Lamb's (1997) model of positive paternal

involvement, which is used to draw conceptual linkages from the relationship quality, between the father and son, and specific adolescent sons' behavioural, social and health outcomes will be discussed.

Chapter Three will outline the research methodology of the study, including the research design, sampling method, validity and reliability of the measuring instruments, data collection and data analysis. The analysis of the pilot study and its application to the main study will be explained. The ethics appraisal of the study is provided within this chapter.

Chapter Four presents the study instruments and provides detailed insight into the father-son contact measure as well as the internal consistency of all measures in the study sample. A detailed look at data screening procedures will also be provided.

In Chapter Five the sample characteristics, the key findings of this study, including descriptive statistics (mean and standard deviation, correlations and cross-tabulations) and regression analysis will be presented.

The sixth and the final chapter will provide a discussion of the results obtained in this study and the contributions the study can make to knowledge production in this field. Limitations will be discussed and recommendations for future research will be made.

CHAPTER TWO

REVIEW OF THE LITERATURE

2.1. INTRODUCTION

This chapter will provide a review of the literature relevant to the research in the area of father-son relationships and to the specific aspects of the relationship that are under scrutiny in this study. The objective is to examine previous research methodologies and results, and identify their implications for the current study.

The literature review will begin with the conceptualizations and theories that provide a framework for this study. Next, a description of the period of adolescence and the difficulties of this transitional developmental phase for boys will be discussed. Following this the importance of paternal relationship quality and the role it plays in protecting adolescent boys from risk behaviours is explored. Subsequently, the fathering dimensions of contact, communication and connection are explained in depth and relevant findings that link these dimensions to paternal relationship quality are presented. Next the influence of biological fatherhood and residence status of fathers or father figures on the 'father-son' relationship on adolescent risk behaviours are presented. The final section of the literature review will identify the significance of the current study and areas in which it has an impact.

2.2. THEORIES OF PATERNAL RELATIONSHIPS

A three-fold model of paternal involvement was formulated by Lamb, Pleck, Charnov, and Levine (1985) and included the constructs *engagement*, *availability*

and *responsibility*. Further improvement of this tripartite model moved its focus from father-child characteristics to the assessment of specific activities that the father and child could engage in together (Brotherson et al., 2003; McBride, 1990; Radin, 1994). Pleck (1997) refers to this movement as the difference between paternal involvement and *positive paternal involvement*. Most research concerning paternal relationships investigates the father's or mother's experiences and rarely that of the adolescent (Milkie et al., 1997). Research that has investigated adolescents' perspectives suggests that they may be considerably different to their fathers' reports of interaction and that parents tend to make incorrect assumptions about what their children think or feel (Belle, 1999; Sixsmith & Knowles, 1996). Lamb (1997) suggests that the critical point of assessing positive paternal involvement in terms of relationship quality between father and child is through evaluating the child's perception of the relationship.

Theories pertaining to fathers and children have progressed towards a focus on contextual factors and specific dimensions of paternal relationships (Brotherson et al., 2003). Some theoretical models are broad and highlight external influences (Parke, 1996; Doherty et al., 1998) on the paternal relationship and give little attention to the dynamics of the relationship itself. Lamb (1997) suggests that studies of paternal involvement often ignore the emotional quality of paternal relationships. Brotherson et al. (2003) points out that the quality of paternal relationships 'deserves serious attention as a mediating factor in how fathers influence child outcomes' (p. 192).

Lamb's threefold model of 'positive paternal involvement' is similar to Dollahite, Hawkins, and Brotherson's (1997) model which is built on Erikson's (1959) lifespan model of development. This theory of 'generative fathering' proposes that fathers have an ethical obligation to meet the needs of the next generation. Dollahite et al. (1997) presents 'relationship work' as one of the four key areas (ethical work, developmental work, relationship work and stewardship work) fathers should be involved in.

Pleck (1997) has suggested that 'positive paternal involvement' may be the essence of what many have conceptualized as 'generative fathering' (p. 102). Specific patterns of Lamb's positive paternal involvement that link to satisfying the elements of relationship work are identified as connection and communication between the father and child (Dollahite et al., 1997; Brotherson et al., 2003). The 'relationship work' model proposes conceptual constructs that represent specific dimensions of paternal relationships and additionally suggests that children will benefit from this type of involvement.

Lamb's tripartite model of positive paternal involvement and elements of relationship work of the generative fathering model overlap and allow for a further development in the theoretical conceptualization of a *quality paternal relationship*. This study further develops Lamb's tripartite model by additionally taking into account the motivation the child feels to spend time with his father and the satisfaction or enjoyment of the time spent together while the father is engaged with his child.

Therefore, a quality paternal relationship can be defined through its dimensions of contact (availibility, engagement and satisfaction), communication and connection. This new model proposed by this thesis draws conceptual linkages between aspects of father involvement, dimensions of paternal relationship and children's outcomes. Using these concepts as a theoretical framework, this thesis explores the significance of these concepts and their effect on father-child relationship quality and, subsequently, adolescent outcomes.

2.3. ADOLESCENCE AND RISK-TAKING BEHAVIOURS

Capuzzi and Gross (2000, p. 9) suggest that adolescence is a period of 'emerging' behaviours that have been developing through the lifetime of the young person:

> "At risk includes all youth regardless of age. All young people have the potential for the development of at-risk behaviours…All young people may move in and out of at-riskness depending on personal, social, educational, and family dynamics. No one can be excluded".

The turbulent period of adolescence has perplexed many parents and even adolescents themselves. Adolescence is not a precisely defined age range within the lifespan but rather a period of transition that may vary by individual. The relatively continuous growth experienced during childhood is rapidly increased and may be overwhelming for some. Adolescence is characterized as a time of emotional turmoil (Fleming & Englar-Carlson, 2008). Although a few theorists dispute the inevitability of the 'storm and stress', many still associate adolescence with vulnerability and a

highly emotionally charged phase of life. Steinberg (1996) identifies several transitions that occur in adolescent young men: physiological development, cognitive development, the formation of the masculinity identity and the development of behavioural patterns in their social context, whether risk-filled or not.

The study of adolescent risk taking behaviours gained momentum in the 1980s when it became evident that mortality and morbidity during this period was behavioural in origin (Igra & Irwin, 1996). Risk behaviours can directly or indirectly compromise adolescent well-being and result in negative outcomes for young people. Jessor (1998) defines risk behaviours as a consideration of 'risk factors for personally or socially or developmentally undesirable outcomes' (p. 2). Risk behaviours are external manifestations and increases adverse consequences for the individual, which 'can be short term or long term and can occur in the biological, social or psychological domains' (Flisher, 2007, p 111; de Visser et al., 2006).

Three studies with nationally representative samples have documented risk factors and behaviours among South African adolescents (Shisana & Simbayi, 2002; Reddy et al.,2003; Pettifor et al., 2004).

The Nelson Mandela/HSRC Study of HIV/AIDS (Shisana & Simbayi, 2002) was a HIV/AIDS household-based survey. Data was elicited from all participants, including a sub-sample of youth (15-24 years), regarding their sexual practices and HIV testing of oral fluid was carried out. The results of this study suggested that, for

boys, prevalence of HIV was 4.7 per cent for the 15 to 18 year age group and 16.1% were paternal orphans[2].

A survey with similar findings to Shisana and Simbayi (2002) was conducted by Pettifor et al. (2004) in 2003, with a national sample of 11 904 youth who were between the ages of 15 to 24 years. Assessments were done face to face to obtain information regarding HIV knowledge, sexual behaviour, contraceptive use and perceived risk. HIV risk was reported to increase with age. Pettifor et al. (2004) found that 31% of boys were significantly more likely to report sex under the influence of alcohol as compared to 15% of girls and drug use was also more common among boys than girls (18% vs. 3%)

Reddy et al. (2003) conducted the first national *South African Youth Risk Behaviour Survey (YRBS)* which was based on the instrument used in the Youth Risk Behaviour Surveillance System in the United States. Students in grades 8 to 11 from 23 schools per province were assessed regarding risk behaviours in several domains including violence, behaviours related to substance abuse, sexual behaviour, physical activity and suicide risk. Reddy et al. (2003) reported significantly more males than females had carried a knife in the past month (26% vs. 11%) or involved in physical aggressive acts (37% vs. 25%). During the six months preceding this survey 18% of males reported being involved in a gang. In a comparative study Reddy, Resnicow, Omardien and Kambaran (2007) looked at the prevalence rates and correlates of substance abuse among high schools students in South Africa and the United States

[2] Paternal orphans refer to children who have lost a father to death.

using data from the South African 2002 YRBS (Reddy et al., 2003) and the United States 2003 YRBS (Centers for Disease Control and Prevention, 2004). Rates of alcohol and marijuana use were lower among South African students than US students but higher for rates of illicit hard drug use (Reddy et al., 2007). In South Africa, being female was a protective factor against tobacco, alcohol and marijuana use.

Adolescents who are at risk for one type of behaviour are generally at risk for others negative behaviours (Jessor, Collins & Jessor, 1972; MacDonald, 1999; Reid, Lynskey & Copeland, 2000). Durant's, Knight's and Goodman's (1997) findings suggests that adolescents who engaged in more aggressive and delinquent behaviour were more likely to use substances, engage in more risky sexual behaviour, and report more mental health symptoms and problems with peer and family relationships. The study of adolescent risk behaviours has often been confined to behaviours that become normative, such as tobacco use, alcohol use and early sexual debut, as the adolescent progresses in their life course. This study, like work by Elizabeth Rahdert (1991) and others (Durant et al., 1997), used the POSIT to enlarge the perimeter around risk factors to be inclusive of substance abuse, mental health, educational under-attainment, negative family relations, negative peer relations, social skills, leisure time, aggressive and delinquent behaviour, and HIV risk. Risk factors promote risk behaviours and affect the well being of adolescents.

The challenges adolescent boys face during the transitional phase of adolescence are apparent. A closer look at the correlates associated with adolescent boys' risk

behaviours is critical in the examination of this issue. Correlates of adolescent risk taking behaviour have shown to be living in households or communities with lower socio-economic status (Ramirez-Valles et al., 1998; Upchurch et al., 1999; Brandt et al., 2005; de Visser et al., 2006) and negative peer influences (Keren & Hasida, 2007; Ward et al., 2007; Ward & Bakhuis, 2009). Peer relationships are important in the lives of adolescents and serious consideration should be given to the impact of the paternal relationship on male adolescents. The literature highlights the significant effect of weak parental relationships (Amato, 1997; Hawkins & Dollahite, 1997; Howard et al., 1999; Brotherson et al., 2003; Luchetti et al., 2002; Caldwell et al., 2004) on adolescent risk behaviours.

2.4. PATERNAL RELATIONSHIP QUALITY

International research with regard to father-son relationships has increased dramatically in the last two decades (Caldwell et al., 2004; Hawkins & Dollahite, 1997; Lamb, 1981, 1997; Regnerus & Luchies, 2006). Past and contemporary research on fatherhood suggests that the quality of the father-son relationship has a significant effect on the child's development and well-being (Amato, 1997; Andry, 1960; Biller, 1993; Doherty et al., 1998; Hawkins & Dollahite, 1997; Richter & Morell, 2006). Boys with a quality paternal relationship may be able to better negotiate the turbulent period of adolescence.

Paternal relationship quality can be defined through its dimensions that have been shown to be influential on the risk-taking behaviours of adolescent boys, these are:

Contact (Amato, 1997), connection (Brotherson et al., 2003; Hawkins & Dollahite, 1997) and communication (Luchetti et al., 2002).

2.4.1. Paternal Contact

This thesis defined Paternal Contact as the amount of time the father and son spend together, the availability of the father, activities engaged in, the motivation for the son to spend time with his father and the enjoyment of their time spent together.

Most literature has focused on the frequency of contact, with more recent work focusing on issues such as the parenting behaviours of father and the context of parent child contact (Amato & Gilbreth, 1999).

Earlier research examining the relationship between contact and the child's well-being has been based on small observational studies (Marsiglio, 1995). In a study of family time and emotion with a sample of 55 young adolescents from two Chicago suburbs (Larson, 1993; Larson & Richards, 1991) fathers reported to be spending time with their sons, however, most were merely in the vicinity of their sons and did not have direct interaction. Additionally, mothers were present most of the time that the father and son reported being together. Echoing findings of similar studies paternal contact was found to be minimal and usually took place in a recreational or leisurely manner.

Lower levels of contact with parents are expected as the child ages and adolescence is a transitory period with the basic aim of individuation and separation from parents (Constantine, 1987). Newer data, however, indicates that adolescents negotiate a

sense of autonomy and incorporate values that are central to their parents rather than making a discreet break from their families (Donenberg, Paikoff & Pequegnat, 2006). This advocates for holistic study of paternal relationships - both the quantity and the quality of paternal contact and other dimensions.

The quantity versus the quality of contact has been a topic of debate amongst social researchers and policy makers, especially concerning children whose parents are divorced or separated. Often quality of the time has taken precedence over the quantity (Welsh, Buchanan, Flouri & Lewis, 2004). Although quality is crucial to the adolescent's wellbeing, insufficient quantity is often associated with poor quality. Quantity and quality can therefore affect each other and can have interaction effects (Burgess, 2008). Almedia, Wethington and McDonald (2001) found that fathers who spent more time with their children were more likely to engage in supportive interactions with their children. Adolescents want a close, sensitive relationship with their fathers and the time used to cultivate these qualities is important.

This study broadens further the conceptualizations of paternal contact from the father and son being in the vicinity of one another or having minimal contact to the availability of the father, activities engaged in and the motivation of the son to spend time with his father, including his enjoyment of the time spent. These three aspects of paternal contact; availability, engagement and time enjoyment and motivation; cannot stand on their own; rather, it is the interaction of these dimensions that explain quality paternal contact time. The underlying assumption of the motivation and enjoyment of time experienced by the son as a dimension of paternal contact

comes from literature on marriage (Gottman, 1979; Schaap, 1984). The premise is that boys who experienced pleasure from and looked forward to spending time with their fathers have a good paternal relationship.

In a qualitative study in Finland, Taanila, Laitinen, Moilanen and Jarvelin (2002) found that children with non-residential fathers who had frequent contact but an emotionally distant father were more likely to exhibit behaviour problems. Contact alone is not a predictor of a quality paternal relationship but rather allows for time for the father to communicate with his son and develop an emotional connection, which all serve as protective factors against adolescent risk behaviours.

2.4.2. Paternal Communication

Many studies have been conducted on the negative impacts of parent-child communication (Luchetti et al., 2002). One significant factor in family communication is the amount of anxiety felt while communicating. This has a significant effect on the quality of the relationship. According to Luchetti et al. (2002, p. 110), "When a young adult's communication apprehension restricts the amount, accuracy, completeness, clarity, content, and honesty of his or her communication in parent-child interactions, the relationship between these family members is restricted". Research into the area of communication apprehension in relationships has grown over the years. Studies have explored communication anxiety in marital partners (Floyd & Morman, 1998; Powers & Hitchinson, 1979); physician-patient (Ayres, Cobly-Rotell, Wadleigh & Hopf, 1996) and superior-subordinate (Lee, 1998). Only a few have studied communication anxiety in parent-

child relationships; and even fewer in father-son dyads specifically. Of those that have, most studies have focused on parent-child communication in relation to sex (Miller, Norton, Fan & Christopherson, 1998; Ream & Savin-Williams, 2005).

Speaking frequently about sex between parents and children has been shown to decrease the likelihood of early sexual debut for the adolescent (East, 1996; Miller, Benson, & Galbraith, 2001) while others report no relationship (Chewning & Koningsveld, 1998; Rodgers, 1999); a few even reported a positive correlation between parent-child communication and riskier sexual behaviour in adolescents (Miller et al., 2001). Studies focusing on parent communication are usually focused around sexual behaviours and little is known about the effect of paternal communication with sons and other adolescent risk outcomes.

2.4.3. Paternal Connection

Connection can be defined as the emotional attachment within the father-son relationship. Harris et al. (1998, p. 203) suggest that this emotional "dimension of paternal involvement reflects the affective quality of the relationship as perceived by the adolescent". Barber and Olsen (1997) identify a sense of connection in the parent-child relationship as one of the significant factors that provides for the continual development of the child and their well-being. Paterson, Field and Pryor (1994, p. 580) suggest that "optimal outcomes (are) associated with an attachment relationship that is characterized by a confidence in the accessibility and responsiveness to the caregiver".

Sons are actively seeking to form bonds with their fathers (Johnson, 2006). They have a need to be emotionally connected to their fathers and the knowledge that their fathers are always accessible. Lamb (1997) has summarized, "Many of the studies dealing with paternal influences show that the closeness of the father-child relationship is a crucial determinant of the father's impact on child development and adjustment" (p. 7). Previous research has focused on connection as the amount of time spent with the child (Brotherson et al., 2003) or the emotional attachment of the father in the context of the mother's emotional attachment (Paterson et al., 1994). Little research has been conducted on the nature of the connection between the father and son and the effects of the relationship on the son's risk behaviours.

2.5. FATHER'S BIOLOGICAL AND RESIDENTIAL STATUS

Paternal relationship quality may not be as significantly affected by the residential status of the father if the time and effort are made to nurture it. The assessment of paternal–adolescent relationships has not kept pace with the changes that have occurred in family constellations. Biological fathers having a quality relationship with their sons may be the ideal but societal circumstances are such that a large percentage of young men live without access to their biological fathers (due to death, divorce or living great distances apart). Approximately 35% of children in South Africa are being taken care of by someone other than their biological parents (Shisana, Richter & Simbayi, 2004).

In a study of 340 Xhosa students (Anderson, Kaplan, Lam & Lancaster, 1999) results showed that resident biological fathers may spend more time with their children

because of proximity than non-residential fathers. Munsch, Woodward and Darling (1995) compared perceptions of relationship quality of adolescents who resided with their biological fathers and those who lived apart from the fathers. Findings suggested that although residential status affected the likelihood of the father being considered important in the life of the child, the general quality of the relationship did not differ by residential status.

A father's physical presence in the home is only one manifestation of a father's presence in a child's life (Mott, 1990). Some young men reside with their biological fathers but do not gain value from that relationship as the father may be detached or emotionally distant. Others may not reside with their fathers and still a few have no access to their biological fathers (Shisana et al., 2004). These young men are looking to other men to fulfil their fathers' role. Father figures can also provide a quality relationship that may protect young men from certain risk behaviours.

Flouri (2007), using data from 435 fathers of adolescent children, found associations between resident biological fathers', non-resident biological fathers' and father figures' involvement and children's total difficulties, prosocial behaviour, emotional symptoms, conduct problems and peer relations. Flouri (2007) found no effect for non-resident biological fathers and when compared with resident biological fathers, father figures reported more conduct problems in children. The study showed that compared to their peers with biological resident fathers, adolescents with father figures were perceived to be at higher risk of behaviour problems (Flouri, 2007).

The effect of father residential status on paternal relationship quality and adolescent risk outcomes are the focus of this study. Based on the literature, this study posits that residential status of the biological father will have an effect on adolescent risk behaviours, and that the dimensions of paternal relationship quality will have a greater effect.

2.6. CONCLUSION

This chapter provided clear conceptual linkages from the relationship quality between the father and son and specific adolescent sons' behavioural, social and health outcomes as a background to this study. The perimeter of risk behaviours was extended and the significance of paternal relationship quality and father residential status examined in the literature.

The following chapter will provide an overview of the methodology of this current study and detailed descriptions of the measures used to investigate the study hypotheses.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. INTRODUCTION

In this chapter the selection of an appropriate research design located within the quantitative paradigm will be discussed. A description of the population and methods of sample selection, determination of sample size and representivity of the study sample to the study population are given. Measures used in this research, data collection procedures and data analysis techniques are also presented. Ethical standards and considerations employed in the investigation of research hypotheses are described as a conclusion to this chapter.

3.2. RESEARCH DESIGN

A continuing debate amongst social researchers is that of research methodology. Pretorius (2007) suggests that the term methodology refers to the *modus operandi* of doing the research. The purpose of empirical research is to answer questions about human behaviour using a scientific method. A variety of methods and techniques are used in empirical research and vary according to the tasks they perform. Methods of research can be categorized into three broad methodological paradigms; the quantitative, the qualitative and the action research paradigm (Babbie & Mouton, 2005). While the qualitative paradigm has been linked to phenomenology and action research framed in metatheories, the quantitative paradigm embraces positivism.

Auguste Comte, the father of positivism, suggested that the positivist framework embed scientific claims in empirical evidence (Pickering, 1993; Shariff, 1995). Burns

(2000, p. 8) states that "the main strengths lie in precision and control. Control is achieved through the sampling and design; precision through quantitative and reliable measurement". An early positivist, Paul Lazarsfeld (1964) described four basic steps necessary for concepts to be translated into empirical indices and which should be ascribed to by all social researchers: (1) an initial imagery of the concept, (2) specifications of dimensions, (3) the selection of observable indicators, and (4) the combination of indicators and indices. Therefore, within the phenomenon of fatherhood, by recognizing the existence of the theoretical constructs a link can be drawn to observable measurements through operational definitions and the selection of relevant indicators. A quantitative approach was best suited to measure the indicators or dimensions of relationship quality and their associations to adolescent risk behaviours. Considering time and financial constraints, a cross-sectional survey design, using a non-probability cluster sampling approach, was deemed the best design to investigate the hypotheses of this research study.

Cross-sectional research assesses subjects at a single point in their lives. Risk of attrition or maturation is little to none and this type of design allows for the study of a larger sample quickly and feasibly. Causality is often difficult to determine in cross sectional research as data is collected only at one point in time. Notwithstanding this shortcoming, the variables being measured in this study are 'long-term' variables and not easily altered overnight. For instance, father-son relationship quality is a latent variable accrued over time. Also the measures of adolescent risk behaviours are retrospective in nature and little would change about the way past behaviours actually exhibit other than the possible influences of social desirability on the

reporting of these behaviours by the participants themselves. Long term variables are stable and therefore amendable to measurement in a cross-sectional study because they do not easily fluctuate. The two possible threats are those located in the act of measurement itself: social desirability and response bias. These threats are common when collecting personal information from participants that may make them feel vulnerable or in the minority (Babbie & Mouton, 2005). The researcher was aware that this may have occurred. To help avoid the negative influence of social desirability on the data, confidentiality and anonomynity were emphasized prior to administering the surveys to participants.

Survey research is one of the oldest and most frequently used methods of observation in social science research. Surveys may be used for exploratory, explanatory or descriptive purposes and may be seen as the best available method to the researcher interested in collecting original data for a population that is too large to observe. A review article in the *South African Journal of Sociology* (Van Staden & Visser, 1991) identified surveys as the most common 'types of study'. However, in South Africa, researchers have to be especially careful as South Africa has a diverse array of cultures and contexts. Surveys used to determine the attitudes, beliefs or behaviours of respondents can be particularly challenging. The sample selection and the development of culturally and contextually valid and reliable instruments are at the crux of the research design. Instruments were carefully selected based on their theoretical underpinnings and statistical reporting of previous studies. Prior to proceeding with the analyses and hypotheses testing each instrument was carefully screened and tested for internal consistency within the South African youth sample.

3.3. SAMPLING

Cluster sampling was used to recruit a school-based sample drawn from the Grade 11 learner population in a previously disadvantaged community in Cape Town. Cluster sampling involves the sampling of 'entire natural groups' rather than individuals. The principle of randomness is maintained and allows a research design manageable by the researcher, especially when the population is spread widely across geographical areas (Burns, 2000, p. 90). Although not as reliable as simple random or stratified sampling, cluster sampling is often the only possible approach (Melville & Goddard, 1996, p. 33). The efficiency of cluster sampling depends on the size and quantity of the clusters used; one or two large clusters are likely to increase sampling error whereas a large number of small clusters could lead to simple random sampling (Burns, 2000, p. 91) from the population.

According to Neuman (2006, p. 224) a population refers to a "concretely specified large group of many cases that the researcher chooses to focus on…from which a researcher draws a sample and to which results from the sample are generalized". This grade level was chosen because it includes a wide age range, and the intention was to include as wide an age range as possible, given that it was not financially feasible to sample learners in all grade levels. Learners in Grade 11 generally have an age dispersion of 16 – 19 years. The population from which the sample was drawn consisted of 783 Grade 11 male learners who were enrolled in public schools in Cape Town in 2008 (Western Cape Education Department, 2008).

Given the population size of 783 grade eleven males the sample size was calculated using two key factors of Cochran's (1977) formula: 1.) The margin of error willing to be accepted in the study and 2.) the alpha level, which is the willingness to accept that the true margin of error exceeds the acceptable margin of error (Bartlett, Kotrick & Higgins, 2001). Based on the Cochran (1977) model, and using both categorical and continuous variables, the alpha level was set at .05, the level of acceptable error at 5% and the standard deviation of the scale was estimated as .5 as illustrated in Equation 1 (Cochran, 1977). Bartlett et al. (2001) suggest a value of 1.96 in each tail for the selected alpha level of .025.

Equation 1: Sample Size Estimation

$$N_0 = \frac{(1.96)^2 (.5) (.5)}{(.05)^2} = 384$$

Therefore, for a population of 783, the required sample size was 384 when using both continuous and categorical variables. However, since the sample size exceeded 5% of the population (783*.05 = 39), Cochran's (1977) correction formulae was used. The calculations are presented in Equation 2:

Equation 2: Cochran's Correction for Sample Size

$$N_1 = \frac{N_0}{(1 + N_0 / \text{Population})} = \frac{(384)}{(1 + 384/783)} = 258$$

This calculation resulted in a minimum returned sample size of 258 learners.

A list of 13 public high schools in one school district in Cape Town was obtained from the Western Cape Education Department's Education Management Information System (EMIS) website (Western Cape Education Department, 2008). The high schools were located in eight different areas of the school district and a representative school was randomly selected from each area. If there were more than two schools in the area, one school was randomly selected from that area (this occurred three times). The principals of two of randomly selected schools refused any type of research at their schools as they were having internal crises at the time. Fortunately, these schools were able to be replaced by another school from their respective areas.

The principals of the final sample of eight schools provided their verbal permission (see Appendix A) for the research to be conducted at their schools and this allowed all their Grade 11 male learners an equal chance of participating in the study. This procedure yielded a sample of 523 learners. Over sampling was necessary as it was expected that not all learners would return their parental consent letters (see Appendix B) or their own assent forms (see Appendix B). A total of 351 learners returned their parental consent letters, with permission to participate in the study, and their informed assent form and were recruited into the study. Boys were immediately removed from the sample if an unsigned consent form was returned to the researcher ($N = 19$).

On the day of data collection, 17 learners were absent from their school and therefore did not participate in the research even though they returned consent and assent

forms and this reduced the study sample to 334 learners. During the data collection process three learners, at three different schools, chose not to complete the questionnaires. These learners were excused from the venue without any penalty.

The final sample used for the data analyses and hypothesis testing was 331 learners with a mean age of 16.62 years (15 years – 19 years, SD = .93).

3.4. MEASURES

The instruments used in this study were four self-administered measures, completed in a school classroom setting and only reflected the perceptions of the participants and not that of their families. Self-administered questionnaires can survey many participants at the same time and may be administered in a variety of locations. The most important advantage to using self-administered questionnaires is the assurance of anonymity and this helps the respondent be honest in their answers (Bless & Higson–Smith, 2000, p. 109). The added advantages of this method include easier standardization and low strain on time and finances whilst reaching larger proportions of the population (Bless & Higson–Smith, 2000, p. 109). The researcher was present at the time of administration and according to Mitchell and Jolley (1996, p. 442), "a major advantage to having the investigator present is that the investigator can clarify questions for the respondent. In addition, the investigator's presence encourages the participants to respond".

Five instruments, as presented below, were included in this research.

(i) The demographic questionnaire (see Appendix D)

(ii) The Father-Son Quality Contact Time Scale (FS-QCTS) (see Appendix E);

(iii) the Child–Parent Communication Apprehension Scale for Use With Young Adults (CPCA-YA; Lucchetti et al., 2002) (see Appendix F);

(iv) the 10-item Acceptance Subscale from the 30-item revision of the Child Report of Parent Behavior Inventory (CRPBI; Barber 1996; Schaefer, 1965) (see Appendix G);

(v) and the Problem Orientated Screening Instrument for Teenagers (POSIT; Radhert, 1991) which included the Human Immunodeficiency Virus (HIV) Risk Behaviour subscale that was developed in South Africa as an addition to the POSIT (Jamara et al., 2006) (Appendix H).

Three (the CPCA–YA, the CRPBI Acceptance Subscale and the POSIT) of the five measures were developed in the United States and had performed well when reviewing measures of internal consistency. With the exception of the revised POSIT, none had previously been translated into Afrikaans or isiXhosa. For the purposes of this study the CPCA–YA and the CRPBI Acceptance Subscale were translated into Afrikaans, the language of some of the learners, and the translation checked by back translation. The FS-QCTS measure was developed for the purpose of this study and details of the statistical analyses of the measure will be provided in Chapter Four.

3.4.1. Demographic Questionnaire

The *demographic questionnaire* collected information regarding the age, race, socio-economic status, residential status of biological mother and father, marital status of parents and relationship to father figure if there was no biological father present (see Appendix D). The demographic questionnaire collected information on both descriptive and theoretical variables. The variables are described below:

Age was measured in years and participants reported their current age at the time of the study.

Race was used as a descriptor variable and not a theoretical variable and therefore was not used as a part of the analyses. During the Apartheid years all South Africans were classified in accordance with the Population Registration Act of 1950 into 'racial groups'. The provision of services occurred across these racially segregated lines and the disproportionate provision of services led to inequalities (McIntyre, 2000). Although some advocate for the removal of race as a variable in research, it addresses these inequalities and provides a platform to give the reader a better understanding of the study sample. The race of the participant was not required to be reported and in no way does the author subscribe to these classifications.

Socio-economic Status was measured using a 5-point Likert scale ranging from 1 (No food money) to 5 (Money for luxury goods and extra things). This method of measurement was appropriate to use as most participants would not have knowledge of their actual household income.

Parent's Marital Status was used as a descriptor variable. Participants could report their parents as Married, Divorced, Never Married or Separated.

Mother Residential Status and *Father Residential Status* were used as dichotomous items with participants either reporting 'Yes' or 'No' to "Do you live with your biological mother?" and "Do you live with your biological father?" respectively. The variables were used in the statistical analyses of the study. The residential status of the biological parents of the adolescent boy was important to the interpretation of the study findings.

Father Residential Status was further disaggregated into three categories: Biological Resident Father, Biological Non-Resident Father and Father Figure for boys with no biological father present in their lives. This was done by transposing the *Father Residential Status* item and the *Relationship to Father* item. The study hypotheses weigh heavily on this variable: the importance of relationship quality and father residential status in protecting adolescent boys from risk behaviours are the focus of this study.

3.4.2. Father-Son Quality Contact Time Scale

Paternal contact was measured using the Father-Son Quality Contact Time Scale (F-S, QCTS; see Appendix E), which was developed for the purpose of this study. A review of the available literature gave no evidence of an existing measure to assess father-son contact holistically. A holistic approach to measuring contact would involve the assessment of availability of the father and time spent together, activities

engaged in between father and son, and the son's desire to spend time with his father. Most instruments measured only physical contact, not interaction time; or only activities engaged in. This study includes a crucial part of the construct of father-son contact; the motivation of the son to spend time with his father and the sons' enjoyment of the time spent; an area almost entirely ignored in previous research.

The response format of the scale required learners to circle the number corresponding to the answer they chose. One question (Over the past month did your father and you…) which assessed activities participated in over the past month had multiple selections and learners checked as many as applied to them. One other question "How often do you see your father?" used reverse scoring. The highest possible score calculated for this measure is 38, with higher scores representing more *quality contact time* between the father and the son.

A factor analysis was conducted in this measure to test the dimensionality and internal consistency. The results of the analyses conducted on this measure are presented in the following chapter, Chapter Four.

3.4.3. The Child–Parent Communication Apprehension Scale for Use with Young Adults

Paternal communication was measured using the Child–Parent Communication Apprehension Scale for Use with Young Adults (C-PCA, YA; Lucchetti et al., 2002) (see Appendix F). This scale investigates a young adult's apprehensions about engaging in communication with his or her parents. Luchetti et al. (2002) indicated

that the 12-item C-PCA, YA measure was a reliable measure and reported Cronbach's reliability coefficient to be equal to .90 for boys reporting about their fathers. The scale uses a 5-point Likert-type response pattern from 1 (strongly disagree) to 5 (strongly agree). Higher scores relate to less communication apprehension experienced by the son when talking with his father. The highest score attainable on this measure totalled a value of 44. Four questions (question 31, 33-35) used reverse order scoring.

3.4.4. Revised CRPBI Acceptance Subscale

Paternal connection was measured using the 10-item Acceptance subscale (see Appendix G) from the 30-item revision of the Child Report of Parent Behaviour Inventory (CRPBI; Barber, 1996; Schaefer, 1965). The measure was originally developed for use of both male and female children reporting on both parents behaviours. Adolescents rated each parent on a 3-point Likert-like scale from 1 (Not like him) through 3 (A lot like him). Sample items include: "makes me feel better after talking over my worries with him" and "enjoys doing things with me". The 10-item sub-scale reported an average alpha of .89 when used in a cross national study conducted in nine countries (Barber, Stolz & Olsen, 2005; Stolz et al., 2004). Alphas ranged from .86 for South Africa high school learners to .93 for American learners (Bradford et al., 2003).

3.4.5. Problem Oriented Screening Instrument for Teenagers

Adolescent risk behaviours were measured using the Problem Oriented Screening Instrument for Teenagers (POSIT), developed by Elizabeth Rahdert (1991) in the

United States, for the assessment and referral of adolescents exhibiting risk behaviours upon admission into a clinical setting.

The POSIT consists of 139 yes/no questions which are sub-divided into 10 sub-scales: Substance Abuse (17 items), Physical Health (10 items), Mental Health (22 items), Family Relationships (11 items), Peer Relationships (10 items), Educational Status (26 items), Social Skills (11 items), Leisure and Recreation (12 items), Aggressive Behaviour and Delinquency (16 items), and Vocational Status (18 items). The validity of the POSIT subscales has been tested in a number of studies, and while internal consistency and other validity tests have varied in strength, most have found good reliability and validity results (Knight, Goodman, Pulerwitz, & Durant, 2001; Melchior, Rahdert & Huba, 1994; McLaney, Del Boca & Babor, 1994).

The U.S. scoring system included two empirically-based cut-off scores that indicate low, medium, or high risk for each of the problem areas (Radhert, 1991). This study used the scores as continuous variables as the cut-off scores were developed in the US and may not have been suitable for the South African context. No special qualifications were necessary to administer POSIT and administration time takes 20-25 minutes. The POSIT may be scored in approximately 2-5 minutes when using the scoring templates placed over the paper and pencil version.

A South African study using the POSIT (Plüddemann, Flisher, McKetin, Parry, Lombard, 2009) used a representative sample of the Grade 8, 9 and 10 students in the Southern Educational District in Cape Town. The POSIT was translated into South

African English, Afrikaans and isiXhosa. Reliability analysis showed good results for some of the POSIT scales, while others were less satisfactory. The Cronbach's alpha values were good for: Substance Use/Abuse – 0.86, Mental Health – 0.80, Aggressive Behaviour – 0.75, and Educational Status – 0.72, somewhat low for Family Relationships – 0.67, Physical Health – 0.61 and Peer Relationships – 0.53, but poor for Social Skills – 0.30 and Leisure/Recreation – 0.10.

Subsequently, an HIV/STD risk-of-exposure screen (Rahdert, Young, & Langenbucher, 2005; Young & Rahdert, 2000), also configured to the same prototype as the POSIT (Rahdert, 1991) was developed. The scale estimate of internal consistency was .78 (Rahdert et al., 2005) and was added as the eleventh problem area on the POSIT (Rahdert, 1991). Piloting of this measure was conducted in South Africa and a final 12-item measure was developed for use in a South African sample. English, Afrikaans and Xhosa versions of the POSIT HIV/STD scale was found to be internally consistent (alpha=.80) for the entire sample and alphas ranging from .77 to .83 across languages (Jamara et al., unpublished manuscript).

The selected subscales of the POSIT used for this study consisted of 131 items. Domains included: Substance Abuse, Physical Health, Mental Health, Negative Family Relations, Negative Peer Relationships, Educational Under-Attainment, Social Skills, Leisure and Recreation, Aggressive Behaviour and Delinquency and HIV/STD Risk Behaviour. The Vocational Status subscale was omitted as the sample was attending high school and most learners do not work at regular jobs.

3.4.6. Pilot of Procedure and Research Measures

All measures were piloted at one high school in Cape Town to assess the time it would take to complete the questionnaires and if there were any questions that were difficult to understand or ambiguous. The questionnaire contained practice questions on the first page (see Appendix C) that would help the learners accustom themselves to the different response formats.

A feedback session was conducted after all learners had completed the questionnaires. Learners were asked which questions they felt were most difficult and which were easier and the majority mentioned that the questions were easy to understand. However, three learners felt that the instructions provided by the researcher should be more explicit, specifically as to how to complete the different types of question with their varying response formats (check box, circle number and yes or no questions). Since they did get clarification from the researcher during the administration of the measures and this was sufficient, no adjustments were made to the measures. Learners took approximately thirty minutes to one hour to complete the questionnaires[3].

3.5. PROCEDURE

Permission was requested from the Western Cape Education Department to conduct the study at the eight selected schools. Once permission was given by the Education Department the principals were contacted and appointments were made for individual face-to-face meetings. The meeting served as a briefing session about the

[3] Questionnaires of the leaners at the pilot study school were included in the main sample analyses and hyopotheses testing as no changes were made to the questionnaires following the pilot study.

study with the aim of acquiring verbal consent from the principal. Consent was required from principals, parents and learners as the data collection took place during school hours with minors.

The schools provided class registers for all grade eleven learners with the male learners clearly indicated. All male grade eleven learners then received a letter explaining the aims and procedure of the research (see Appendix B), together with a parental/guardian consent and informed consent form, which was to be returned and sealed in the provided unmarked envelope.

Times, venues and dates to conduct the research were made with either the principal or the grade coordinator. Most schools used their halls and others used larger classrooms. Learners were all seated at individual desks and completed the questionnaires at the same time. Once all learners were seated, the questionnaires and stationery pack (containing a pen, pencil, eraser, ruler and sharpener), were distributed. Participants were informed at the beginning of the study that the stationary packs were not barter for a completed questionnaire and they were allowed to keep the packs even if they did not complete the questionnaires.

The researcher then affirmed consent and assent procedures, reminded the participants that participation was voluntary, explained the various type of questions and the response formats in the questionnaires, and stressed the importance of honesty as all the questionnaires where anonymous and information strictly confidential. In an effort to reduce reporting inconsistencies, prevalent when

collecting self report data on sexual activities, an explanation of how the results would be used to improve the lives of the participants and other youth was stressed (Palen, Smith, Caldwell, Flisher, Wegner & Vergnani, 2008).

On completing the questionnaires, participants dropped their questionnaires into a box and signed a register confirming that they had taken part in the study. All questionnaires were coded, scored and captured. All data analysis was performed in the Statistical Package for the Social Sciences (SPSS) version 17 (SPSS, 2009).

3.6. DATA ANALYSIS

The major tools of statistical data analysis were descriptive statistics; correlation statistics; reliability analysis using Cronbach's co-efficient alpha; measures of validity, including factor analysis; multiple analyses of variance (MANVOA); and linear regression.

3.6.1. Descriptive Statistics

Descriptive statistics were used to describe the sample characteristics. Descriptive statistics provide a description of the data through percentages, modes, means, frequency distribution, kurtosis, standard error of the mean and standard deviations (Bohrnstedt & Knoke, 1988, p. 492). Descriptive statistics entail the use of tables, graphs and numerical techniques to condense and summarise data (Burns, 2000, p. 43).

3.6.2. Correlation

The most common correlation coefficient is *Pearson product-moment correlation coefficient*, commonly symbolized as *r*. The Pearson correlation can range from -1.00 to +1.00. A score closer to negative or positive 1.00 is an indication of stronger relationship and the positive and negative signs provide information about the direction of the relationship. Correlation was used to assess the association and the strength of the relationship between the dimensions of relationship quality (paternal contact, connection and communication).

3.6.3. Reliability

Assuming that what is being measured does not change, a measure is considered reliable if it repeatedly and consistently produces the same results. One of the specific methods involved in the assessment of reliability is *internal consistency* reliability (Burns, 2000, p. 341; Cozby, 2001, p. 94). Internal consistency estimates the reliability of an instrument administered to a group of people on one occasion.

Two indicators of internal consistency are *split–half* reliability and Cronbach's *α* (Cronbach, 1951). Cronbach's α is a more efficient mathematical equivalent of the average of all possible split-half estimates (Burns, 2000, p.343). Cronbach's α was chosen to measure the internal consistency for the study instruments due to the limited access to learners and the efficacy of using it as a method of reliability. For internal consistency, an α of 0.70 and above is desirable (Santos, 1999) and the item-total correlation should be between 0.20–0.80, as higher than 0.80 is an indication of a redundant item (de Wit, Pouwer, Gemke, Delemarre-van der Waal & Snoek, 2007).

The internal consistency of each measure used in this study is presented in, the following chapter, Chapter Four.

3.6.4. Validity

The validity of an instrument is established when the instrument is shown to measure what it intended to measure (Cozby, 2001, p. 96). Validity may be measured through a variety of methods with the simplest method being that of face validity. *Face* validity is the principle that the measure appears to reflect the construct being measured. However, this is not sufficient to conclude that a measure is valid as appearance is not a good indicator of accuracy. Foxcroft and Roodt (2005) assert that a more stringent way of measuring validity would be to use the methodology of *construct* validity. Another type of validity is *nomological* validity, which is defined as 'the degree to which predictions from a theoretical network containing the concept under scrutiny are confirmed' (Netemeyer, Bearden & Sharma, 2003, p. 13). It uses correlation to evaluate the degree to which measures that are theoretically related are also empirically related.

3.6.5. Factor Analysis

Factor analysis was used for assessing the validity of the Paternal Quality Contact Time Scale. It is a 'statistical technique for analysing the interrelationships of variables' (Foxcroft & Roodt, 2005, p. 35). The objective is to determine the dimensions of a set of variables. By doing so the common variance between the dimensions are identified and variables that are moderately to highly correlated with each other are grouped together to form a factor (Burns, 2000, p. 272).

3.6.6. Multivariate Analysis of Variance

Multivariate Analysis of Variance (MANOVA) is an extension of the Analysis of Variance (ANOVA). ANOVA also called the F-test, is a statistical method for comparing two or more groups in terms of another variable and testing the significance of the observed differences (Pretorius, 2007, p. 214). A MANOVA is applicable when there is 'one independent variable with more than two levels and several dependant variables' (Pretorius, 2007, p. 299). An important aspect of a measuring instrument is that of its variance (Huysamen, 1980). If each person obtained the same score on a test, this would yield zero variance, and the test would be of no use as it would not be able to discriminate between individuals who have varying amounts of the attributes being measured. The effect of father residential status on the dimensions of contact, communication and connection were evaluated using a MANOVA.

3.6.7. Post Hoc Tests

Because of the number of analyses that typically occur in an MANOVA, post hoc tests were used to expose Type I and Type II errors that may have occurred during the analyses. Type I error is the mistake of falsely rejecting the null hypothesis when it is true (Burns, 2000, p. 117). However, sometimes the significance level has been set too high and the risk of falsely accepting the null hypothesis is more than probable. In this instance, there would be a risk of possibly committing a Type II error (Burns, 2000, p. 116).

A number of post hoc tests have been developed that attempt to minimize Type I error and the statistical power of multivariate analyses. The most commonly used post hoc tests include the *Bonferonni Correction*, the *Scheffé* test, and the *Tukey honestly significant difference (HSD)* test (Meyers, Gamst & Guarino, 2006, p. 427).

The *Bonferonni Correction* is a multiple-comparison correction, used when several dependent or independent statistical analyses are being performed simultaneously. To reduce the possibility of a lot of spurious positives the alpha level is lowered to account for the number of comparisons being performed. The adjustment entails dividing the alpha level (usually .05) by the number of dependent variables (Meyers et al., 2006, p. 373). The *Scheffé* test is a conservative procedure which conducts 'a simultaneous pairwise comparison of all means using the *F* distribution' (Meyers, et al., 2006, p. 427). Similarly, the Tukey HSD considers all pairwise comparisons but uses the standard error of the mean and the range distribution (Meyers et al., 2006).

3.6.8. Multiple Linear Regression

The data presented contains multiple continuous independent variables (namely, father–son contact, father–son communication apprehension and father–son connection) and multiple continuous dependant variables (all sub-categories measured on the POSIT). Multiple regression involves several variables on one side of the equation, which combine to form one single predictor variable and a single variable on the other side. The highest correlation is sought between the predictor variable and the single variable (Tabachnick & Fidell, 1996, p.195). It is therefore a method of investigating the individual and collective contributions of several

independent variables on the dependant variable (Pretorius, 2007, p. 253). Multiple regressions were used to investigate the effect of father-son relationship quality and father residential status on adolescent risk outcomes.

3.7. ETHICS APPRAISAL

The word ethics finds it roots in the Greek word *ethos* which means a person's character or disposition. Ethics is not only a person's character but also how one treats others. Ethical decisions were made throughout the research process from initial planning stages to final reporting of the results. An intricate balance between the production of meaningful results and the responsibility to respect participants' rights (Goodwin, 1995) was maintained throughout the research process.

The study entailed administering questionnaires to Grade 11 male learners in Cape Town. Permission was sought from school principals to ask learners for their voluntary participation in completion of anonymous questionnaires. In conducting ethical research, the welfare and the rights of all participants must be protected (Terre Blanche & Durrheim, 1999). The participants were fully informed about the nature of research, its area of inquiry, the aims and objectives of the study, as well as the intended procedure (Terre Blanche & Durrheim, 1999). They were informed as to who may have access to the data (e.g. research supervisors) and what their intentions would be with the findings. It was stressed that participation was free and voluntary, the questionnaires they completed would remain anonymous and they had the freedom to leave the study at any point, without any penalty, if they wished to do so.

Due to the content and nature of the questions, active consent was acquired from parents and learners, prior to questionnaire administration at the schools. The consent and assent forms stressed that they understood that:

(i) The learner participated voluntarily in the study;

(ii) The learner was able to leave the study at any time;

(iii) The learner was not coerced to participate; and

(iv) All information provided would be anonymous and be held in the strictest confidence by the researcher.

Scott-Jones (2000) advises that researchers need to find a balance between the responsibility for the welfare of participants and the concern for scientific reliability. Voluntary participation is threatened when it comes to vulnerable groups such as children, students, patients, military personnel, or prisoners; as well as in individuals that have very low social status, are uneducated, or unfamiliar with social research (Mouton, 2005). Learners may have felt pressurized to enrol into the study by the peers or teachers and were therefore requested to obtain parental consent and to additionally provide their informed consent or assent, depending on their age. A learner could exclude himself from the study, even when receiving parental consent, by not signing his portion of the reply slip or stating on the slip that he refused to participate. The reply slips were returned in the provided unmarked envelopes and only the researcher had knowledge of those who had or had not given consent to participate.

Questionnaires were only administered to those who had completed both portions (parent and learner) of the reply slip. The principal was informed as to the names of the learners who were to complete the questionnaires on the day of administration, for the purpose of relocating those learners to a venue, prepared specifically for the study. The rooms contained desks or tables spread apart so that learners could complete their questionnaires privately to maintain participant confidentiality. Learners were asked not to write their name or the name of their school on the questionnaires. On completion, the learners immediately dropped their questionnaires into a box so that no association could be made between learner and questionnaire.

Before commencement of the study it was decided that boys who might approach the researcher with personal issues as a result of completing or not completing the questionnaire would be referred to counsellors at the University of the Western Cape. There were no participants who made such requests and therefore no referrals were made during the study.

After data collection, ethical responsibilities were upheld in the data analysis and reporting of the findings. Goodwin (1995) states that the main forms of scientific fraud are plagiarism and data falsification. Data falsification comes in many forms: an entire study may be discarded because it did not come out in the expected way; researchers may create their own data sets; some data may be distorted or absent to improve results; or missing data may be generated by speculation (Goodwin, 1995). No changes were made to the observations of learners responses in the study or to the

data set, unless prompted by data screening and cleaning techniques. Plagiarism is the deliberate capturing of someone else's ideas and presenting them as your own (Goodwin, 1995). Any source that was consulted in the writing up of this research, whether it was used directly (through a quote) or indirectly (Mouton, 2005) has been acknowledged.

Brief reports based on the findings of this research were made available to the principals. These reports did not contain the names of the schools which participated nor was the data disaggregated by school. A copy of the thesis will also be made available to the Western Cape Education Department, as per the requirement for receiving permission to conduct research within the schools.

3.8. CONCLUSION

This chapter presented the research methodology of this study. A detailed account of the research design, sampling procedures, and ethics upheld in this study was provided. Data analysis techniques which are used in Chapter Four and Chapter Five are explained and the importance of the relevant techniques in testing the study hypotheses validated. The selection of study instruments was substantiated by their proven usefulness in previous studies.

The next chapter will evaluate the psychometric properties of the study instruments and confirm their statistical power on the study sample.

CHAPTER FOUR

PSYCHOMETRIC PROPERTIES OF THE MEASURES AND STUDY VARIABLES

4.1. INTRODUCTION

This chapter presents the psychometric properties of the measures and the data screening procedures used to evaluate the study variables. Data screening was done in two phases: First, the preliminary screening of the data and then, using only the final study instruments (as determined by internal consistency analyses), data screening procedures commenced further to include analysis of means, standard deviation, skewness and kurtosis.

4.2. DATA SCREENING PHASE 1

The data was screened using the frequencies analytical function and descriptive statistics function in SPSS to ensure that there were no anomalies, missing or incorrectly inputted data.

Screening of the descriptive statistics of the categorical variables (Mother Residential Status, Socio-Economic Status and Father Residential Status) revealed no code violations or input errors. No missing values were detected for the variables except Socio-Economic Status which had 13 missing variables. List wise deletion was used when including the variable Socio-Economic Status in the analysis.

A scan of the descriptive statistics of the continuous variables resulted in the identification of 5 cases with missing data for three or more of the study instruments.

These cases were excluded from further analyses. The second phase of the data screening procedures is presented after the psychometric properties of the measures.

4.3. PSYCHOMETRIC PROPERTIES OF MEASURES

The reliability of the study instruments[4] was measured using a two-step process. First, a measurement's inter-item corrected correlation totals were screened and items with correlations less than 0.20 were not included in the data analysis as those items are generally "considered to be the minimum acceptable discrimination value to use when it comes to item selection" (Foxcroft & Roodt, 2005, p. 53). Item-total correlation can be performed between the score on an item and performance on the total measure. Positive and negative item-total correlations differentiate between those who do well and poorly on a measure and items with poor discriminatory powers respectively (Foxcroft & Roodt, 2005, p. 53). Second, the internal consistency of the measures was assessed using Cronbach's coefficient alpla (α).

Measures used in this study included: The Father-Son Quality Contact Time Scale (FS-QCTSS) (see Appendix E for a list of items); the Child–Parent Communication Apprehension Scale for Use With Young Adults (CPCA-YA) (Lucchetti et al., 2002) (see Appendix F); the revised CRPBI Acceptance Subscale (Barber, 1996; Schaefer, 1965) (see Appendix G); and the Problem Orientated Screening Instrument for Teenagers (POSIT) (Rahdert, 1991) with the recently developed supplementary HIV Risk Behaviour subscale (Jamara, et al., 2006) (see Appendix H).

[4] Students had the choice of answering the measures in English or Afrikaans as these were both available. All participants indicated that they preferred to answer the measure in English.

4.3.1. F-S, QCTS

An exploratory factor analysis, using a principal components extraction method and a varimax rotation, of the 14-item self-report *Father-Son Quality Contact Time Scale* was conducted to reveal the scale components and to affirm that the factor structure was consistent with the theoretical basis from which the scale was developed.

As a precursor to the factor analysis, the data was screened by examining the descriptive statistics of each item, the inter-item correlations and possible univariate assumption violations. From this initial assessment variable pairs were found to be bivariate normally distributed and all cases independent of one another. Because of the large sample size, the variables-to-cases ratio was adequate.

Table 1

KMO and Bartlett's Test – F-S, QCTS

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Bartlett's Test of Sphericity	Approx. Chi-Square	1072.257
	Df	91.000
	Sig.	.000

Table 1 presents the Kaiser-Meyer-Olkin measure of sampling adequacy equalling .855, indicating that the present data was suitable for principle components analysis. Bartlett's test of sphericity was significant ($p < .01$), indicating satisfactory correlation between the variables to proceed with the analysis.

The factor analysis proceeded and using the Kaiser-Guttman retention criterion of eigenvalues greater than 1.0, a three-factor solution provided the clearest extraction. The three factors, which accounted for 53% of the total variance of the *Father-Son Quality Contact Time total,* were identified. They were named following the recommendations of Comrey and Lee (1992) and Rummel (1970) in which sorted factor weights in excess of .65 were used to label and interpret each factor. The three-factor model and item factor loadings are presented in Appendix I.

Babbie and Mouton (2005, p. 473) state that the generation of factors 'has no reference to the meaning of the variables, only to their empirical associations'. This fact must be taken into account when evaluating results of a factor analysis. They further assert that two criteria must be taken into account when generating factors. First, a factor must explain a larger portion of the *variance* found in the study variables. Second, every factor must be relatively independent of other factors (Babbie and Mouton, 2005, p. 473). Independence of factors for the *Father-Son Quality Contact Time Scale* is presented in Table 2.

Factor 1: *Time and Availability* (eigenvalue = 4.91) accounted for 35% of the variance and had seven items; Factor 2: *Activities* (eigenvalue = 1.3) accounted for 9.4% of the variance and had four items; and Factor 3: *Enjoyment and Motivation* (eigenvalue = 1.2) accounted for 8.7% of the variance and had three items.

Table 2

Factor Loadings from the Principal Components Analysis with Varimax Rotation of F-S, QCTS Items

Items	Time and Availability	Activities	Enjoyment and Motivation
My father and I do chores or projects around the house together	**.772**	.056	.157
Over the past month did your father and you do a project together?	**.765**	.027	.006
My father is always available to speak to me when I need him	**.630**	.366	.230
How often do you see your father?	**.595**	.281	-.173
My father and I participate in hobbies and activities together	**.545**	.229	.408
I can call my father at any time of day if I need to speak to him	**.530**	.278	.341
Over the past month did your father and you play a sport together?	**.483**	.245	.172
Over the past month did your father and you go out together?	.143	**.751**	.148
Over the past month did your father and you eat together?	.318	**.695**	-.150
Over the past month did your father and you watch a movie Together?	.230	**.631**	.139
Over the past month did your father and you spend time together?	.061	**.554**	.152
I wish my father and I spent more time together	.023	-.071	**.790**
Do you look forward to spending time with your father?	.104	.445	**.637**
I enjoy spending time with my father	.443	.258	**.593**

Note. Factor Loadings > .45 are in boldface.

Next, the inter-item total correlations of the measure of father-son contact examined and no items with correlations lower than 0.20 were evidenced (see Appendix K for list of items and their inter-item correlations). Cronbach's α indicated a relatively high estimate of internal consistency (α = .819) for the whole scale. The results of the factor analysis and the internal consistency analyses indicate the father-son contact measure to be suitable for use amongst adolescents (15-19 years).

4.3.2. C-PCA, YA

It was evident, according to the inter-item correlation (*r*) statistic, that negatively phrased questions did not perform well on the scale: 'I'm afraid to come out and tell my father exactly what I mean' (*r* = -.003); 'I am tense when developing in depth conversations with my father' (*r* = -.003); 'I feel strained when anticipating talks with my father' (*r* = .010); 'In casual conversation I feel tense and must guard what I say' (*r* = -.043). However, dimensions that were measured by the questions deleted were measured by similar remaining questions that were phrased differently. Table 3 presents the four negatively phrased items that were removed, as well as the similar items measuring the same dimensions. Items were reversed scored before calculating any statistics.

Table 3

Deleted Negatively Phrased Questions

Item	Scale if item deleted		**Corrected Item-Total *r***
	Mean	Variance	
6. *I'm afraid to come out and tell my father exactly what I mean*	*35.2104*	*39.310*	*-.003*
11. I have no fear in telling my father exactly how I feel*	34.7134	34.144	.334
8. *I am tense when developing in depth conversations with my father*	*35.0701*	*39.594*	*-.003*
3. I am comfortable in developing intimate conversations with my father*	35.2439	32.631	.494
9. *I feel strained when anticipating talks with my father*	*35.3049*	*39.583*	*.010*
4. I look forward to talks with my father*	34.7348	31.755	.596
10. *In casual conversation I feel tense and must guard what I say*	*35.2866*	*39.948*	*-.043*
5. Even in casual conversation I don't have to guard what I say*	35.0488	35.612	.252

Note. Negatively phrased questions that were not included in the analyses are italized
*Similar remaining question measuring the same dimension as the deleted question.

After the four items were deleted the revised 8-item measure reliability analysis of the C-PCA, YA produced a high level (Santos, 1999) of internal consistency (Cronbach's α = .809), which is consistent with previously reported reliability coefficients (Lucchetti et al., 2002) (see Appendix K).

4.3.3. Revised CRPBI Acceptance Subscale

All of the items scored well over the *r* = 0.20 criterion, ranging from .577 -.760, and therefore none were excluded from the hypothesis testing. Reliability analysis indicates a high level (Santos, 1999) of internal consistency (Cronbach's = .920) for the measure of father-son connection, which is consistent with previously reported

reliability coefficients (Barber & Olsen, 1997; Schaefer, 1965). Table 4 presents the results of the reliability analysis of the measure.

Table 4

Item-total Statistics for Revised CRPBI Acceptance Subscale

Item: My father is someone who….	Scale if Item Deleted		Corrected Item-Total *r*	Squared Multiple *r*	α if Item Deleted
	Mean	Variance			
1. Makes me feel better after talking over my worries with him	18.7859	28.580	.659	.492	.915
2. Smiles at me very often	18.7248	28.783	.604	.408	.918
3. Is able to make me feel better when I am upset	18.8349	27.543	.735	.582	.910
4. Enjoys doing things with me	18.7064	27.607	.742	.576	.910
5. Cheers me up when I am sad	18.8410	27.128	.760	.598	.909
6. Gives me a lot of care and attention	18.7187	27.632	.741	.602	.910
7. Makes me feel like the most important person in his life	18.8532	27.475	.740	.589	.910
8. Believes in showing his love for me	18.6881	27.332	.752	.590	.909
9. Often praises me	18.8563	28.712	.577	.389	.919
10. Is easy to talk to	18.6697	28.068	.688	.503	.913

4.3.4. POSIT

4.3.4.1. Substance Abuse Risk Subscale

The 17-item Substance Abuse subscale presented one item, "Do you get into trouble because you use drugs or alcohol at school?" that exhibited an inter-tem total correlation of .189 (see Appendix L for list of items). This item was excluded from any further analysis.

The revised 16-item measure of Risk for Substance Abuse yielded a relatively high estimate of internal consistency (Cronbach's $\alpha = .810$).

4.3.4.2. Physical Health Risk Subscale

The initial analyses of the 10-item Physical Health subscale presented four items that did not meet the .20 cut-off of the inter-item correlation (r) (see Appendix M for list of items). The lowest being "Have you ever had sex with someone who injected illegal drugs?" ($r = 0.116$), followed by "Have the whites of your eyes ever turned yellow?" ($r = 0.157$), "Have you ever had sex without using a condom?"($r = 0.175$) and "Do people pick on you because of the way you look?" ($r = 0.181$).

Even when deleting items with inter-item total correlations less than .20 a low internal consistency was found (Cronbach's $\alpha = .514$). This subscale was removed from any further analysis.

4.3.4.3. Mental Health Risk Subscale

The 22-item Mental Health Risk subscale had three items did not meet the inter-item

correlation criteria of .20 (see Appendix N for list of items) and were not included in the analysis: “Have you been absent from school for 5 or more than 5 days in the past year?” (*r* =.187); “Have you ever had sex with someone who injected illegal drugs?” (*r* =.144) and “Do you have so much energy you don’t know what to do with it?” (*r* =.137).

The revised 19-item measure of Mental Health Risk yielded a relatively good internal consistency (Cronbach’s α = .770).

4.3.4.4. Negative Family Relations Risk Subscale

The 11-item measure of Negative Family Relations risk had item-total correlations ranging from the lowest .047 to the highest .436 (see Appendix O for list of items). One item “Do your parents or guardians have rules about what you can and can’t do?” (*r* =.047) was discarded during the screening of inter-item total correlations.

A higher internal consistency of .710 was found for the revised 10-item Family Risk subscale compared to the somewhat low alpha value (*r* =.670) found in Plüddemann et al. (2006).

4.3.4.5. Negative Peer Relations Risk Subscale

The Negative Peer Relations Risk subscale consisted of 10 items, four of which were discarded because the inter-item total correlations were less than .20 (see Appendix P for list of items). These items were: “Do your parents or guardians like your friends?” (*r* =.179); “Do you feel alone most of the time?” (*r* =.120); “Are most of

your friends younger than you?" (r = 0.48) and "Are most of your friends older than you?" (r = 0.33).

The reliability of the revised 6-item Negative Peer Relations Risk subscale was somewhat low (Cronbach's α = .626) and the subscale was therefore not used further in the study.

4.3.5.6. Educational Under-Attainment Risk Subscale

The Educational Under-Attainment Risk Subscale is the largest subscale of the POSIT and has 26 items (see Appendix Q). Six items were evidenced with low item-total correlations. These included: "Have you ever read a book cover to cover for your own enjoyment?" (r =.052); "Do you have so much energy you don't know what to do with it?" (r =.120); "Are you good at talking your way out of trouble?" (r =.121); "Are you a good reader?" (r =.165); "Do you get good marks in some subjects and fail others?" (r =.166) and "Have you ever been told you are hyperactive?" (r =.183).

Reliability analysis indicated a relatively high estimate of internal consistency (Cronbach's α = 0.740) for the revised 20-item Educational Under-Attainment risk subscale.

4.3.5.7. Social Relations Risk Subscale

The Social Relations Risk subscale included 11 items (See Appendix R), only two of which were above the inter-item total correlation of 0.20: "Do people your own age

like and respect you?" (r =.252) and "Do you enjoy doing things with people your own age?" (r =.264). Due to unsatisfactory findings for inter-item correlations the entire subscale was excluded from any further analysis.

4.3.5.8. Leisure and Recreation Risk Subscale

Similarly to the Social Relations Risk subscale, the 12-item Leisure and Recreation subscale (see Appendix S), performed very poorly. Only 4 out of the 12 items were just above the 0.20 inter-item total correlation parameter. These items included: "Do you participate in team sports?" (r =.247); "Do you want to be a member of any organized group, team or club?" (r =.233); "Do you usually exercise or do activities to keep fit for a half-hour or more at least once a week?" (r =.211) and "Do you have a hobby that you are really interested in?" (r =.201).

Consistent with previous findings for this subscale in South Africa (Plűddemann et al., 2006), reliability analysis indicated a poor level of internal consistency (Cronbach's α = .490) and was therefore not used in the hypotheses testing.

4.3.5.9. Aggressive Behaviour and Delinquency Risk Subscale

The Aggressive Behaviour and Delinquency subscale (see Appendix T) evidenced only one item, "Do you brag?", with a low inter-item total correlation (r =.147). This item was therefore deleted.

Reliability analysis indicated a good internal consistency for the Aggressive Behaviour and Delinquency subscale (Cronbach's α = .716).

4.3.5.10. HIV/STD Risk Subscale

No items on the supplementary HIV Risk behaviours subscale (see Appendix U) were found to have inter-item total correlations lower than 0.20. The lowest evidenced item "During the past two weeks have you used any drugs other than alcohol to get high?" yielded an inter-item total correlation of .279.

Reliability analysis indicated a high internal consistency for the HIV Risk subscale (Cronbach's $\alpha = .791$), consistent with previous results (Jamara et al., 2006).

4.4. DATA SCREENING PHASE 2

Next[5], the frequencies analytical function was used in SPSS to investigate the skewness and kurtosis for each continuous variable that would be used in the analysis. These variables included Contact, Communication, Connection, Substance Abuse Risk, Mental Health Risk, Negative Family Relations Risk, Education Under-Attainment Risk, Aggression and Violent Behaviour Risk and HIV/STD Risk behaviours.

The data was investigated for univariate and multivariate outliers that might influence the hypothesis testing. Outliers can be defined as cases with extreme values on a single variable (univariate) or on a combination of variables (multivariate) (Meyers et al., 2006, p. 64).

[5] Phase 2 of the data screening procedures commenced once all study instruments psychometric properties had been analysed.

Univariate outliers were detected by investigating the extreme values output and the stem and leaf plots. Stem-and-leaf plots indicated that Contact, Connection, Mental Health Risk and Aggression and Violent Behaviour Risk had no univariate outliers. Communication (n = 3), Negative Family Relations Risk (n = 2), Educational Under-Attainment Risk (n = 1) and HIV/STD Risk behavior (n = 2) had a few outliers. The Substance Abuse Risk variable had 9 extreme cases as candidates for deletion. Five cases were identified with missing values for either three or more of the study instruments. Cases with outliers (N = 17) were not included in the analyses from this point.

After inspecting the data for any univariate outliers an assessment for multivariate outliers was conducted by computing the Mahalanobis distance statistic D^2, which measures the multivariate distance between each case and the multivariate mean or centroid (Meyers et al., 2006, p. 67). Variables (N = 10) were evaluated with the *Table of Critical Values* for chi-square at a stringent alpha level set at $p < .001$. Therefore, any case with a Mahalanobis distance value equal to or greater than 29.588 was considered a multivariate outlier, of which none were found.

The assumption of normality is critical to hypotheses testing. To address the issue of normality the skewness and the kurtosis of the variables were examined. When one or more of these assumptions are violated statistical results may become biased or distorted (Meyers et al., 2006, p. 67). The data appeared to be sufficiently normally distributed for the Contact variable which was associated with a negative skewness (-.440) and negative kurtosis (-.532) and for the variable Communication which was

associated with a positive skewness (.446) and a negative kurtosis (-.293). Skewness and kurtosis values within the +1.0 and -1.0 range are generally considered acceptable for analysis (Meyers et al., 2006, p. 88). Results are presented in Table 5.

Table 5

Skewness and Kurtosis of Continuous Study Variables

Continuous Variables	Skewness	Kurtosis
Father–Son Contact	-.440	-.532
Father–Son Communication	.446	-.293
Father–Son Connection	-.298	-1.004
Substance Abuse Risk	1.135	.354
Mental Health Risk	.660	-.153
Negative Family Relations Risk	.669	-.129
Educational Under-Attainment Risk	.238	-.459
Aggressive Behaviour and Delinquency	.308	-.456
HIV/STD Risk Behaviours	.431	-.685

Two variables did not satisfy these criteria: The Connection variable was associated with a negative skewness and a negative kurtosis. The Substance Abuse Risk variable exhibited a positive skewness and a positive kurtosis. These two variables (Connection and Substance Abuse Risk) were therefore good candidates for transformation using the square root function (Osborne, 2002). The transformation successfully decreased the skewness and kurtosis values of Connection (-.507, -.791) and the new values fell within the +1.00 and -1.00 parameter (Appendix K).

However, the Substance Abuse Risk variable continued to display an extreme negative kurtosis (.221, -1.192). The Substance Abuse Risk subscale was therefore removed from all hypothesis testing.

4.5. CONCLUSION

The internal consistencies of the measures, after any items with inter-tem correlations less than .20 were deleted, were found to be high for the Father-Son Quality Contact Time Scale, the Child–Parent Communication Apprehension Scale for Use with Young Adults, and the CRPBI Acceptance Subscale. The revised POSIT subscales had varying results of reliability analysis. Using Cronbach's alpha as a measure of internal consistency values were high for the following subscales: Substance Abuse, Mental Health, Negative Family Relations, Educational Under-Attainment, Aggressive and Delinquency and the South African HIV/STD risk behaviour subscale. These findings, with the exception of the Negative Family Relations Risk subscale, which performed well in this study, are similar to Plüddemann et al (2006) findings: they reported good Cronbach's alphas for only the Substance Use/Abuse – 0.86, Mental Health – 0.80, Aggressive Behaviour – 0.75, and Educational Status – 0.72 subscales. Conversely, the Physical Health, Negative Peer Relations, Social Relations and Leisure and Recreation subscales were not found to be internally consistent and were excluded from further analyses. Data screening procedures showed the Substance Abuse scale to have extremely negative kurtosis and this POSIT subscale was excluded from hypotheses testing.

As a conclusion to this chapter the means, standard deviations and internal consistencies of the final study instruments are presented in Table 6.

Table 6

Means, Standard Deviations, Items and Cronbach's Alpha Values of Final Study Measures-Arranged by Cronbach's Alpha

Scale	Range observed (Range possible)	Mean	SD	Alpha	No. of Items
Parent-Adolescent Connection	10-30 (0-30)	20.865	5.843	.920	10
Father-Son Quality Contact Time Scale	0-31 (0-38)	16.613	7.347	.819	14
Child-Parent Communication Apprehension Scale	8-39 (0-44)	26.202	6.414	.800	8
POSIT Subscales:	Higher scores indicate more risk for POSIT				
HIV/STD Risk Behaviour	0-26 (0-26)	8.184	5.287	.791	13
Mental Health Risk	0-32 (0-38)	11.480	7.094	.770	19
Educational Under-Attainment	0-36 (0-40)	13.939	7.055	.742	20
Aggressive Behaviour and Delinquency	0-27 (0-30)	12.274	6.006	.716	15
Family Relations Risk	0-20 (0-20)	6.450	4.431	.710	10

The following chapter, Chapter Five, presents the sample characteristics and the results of the hypotheses testing using the measures validated in this chapter.

CHAPTER FIVE

RESULTS

5.1. INTRODUCTION

The focus of this chapter is on presentation of sample demographics and the findings from the investigation of the five study hypotheses. Results of the hypothesis testing are presented through inferential statistics in the form of correlation, MANOVA and multiple regression analysis.

5.2. SAMPLE CHARACTERISTICS

Frequency tables are often a 'convenient way to summarize the obtained values for variables that contain a small number of different values of attributes' (Meyers, *et al*., 2006, p. 45). Table 7 and Table 8 present a description of the sample's (N = 331) individual characteristic variables and parents' characteristics, respectively, as a frequency tables.

Age: Although the 16-year-old participants dominated the group (*n* =157, 47.4%), 17-year-olds were not far behind (n = 97, 29.3%). They were followed by 18-year-olds (*n* = 44, 13.3%), and a few 15-year-olds (*n* = 19, 5.7%), who were turning 16 in that year, and some 19-year-olds (*n* = 14, 4.2%). The sample reported a mean age of 16.62 years (range = 15-19 years, SD = .93).

Race[6]*:* The majority of the sample reported to be 'coloured' (*N* = 253, 77.6%) and 16.9% (*N* = 55) reported to be 'black', 3 learners (.9%) reported to be 'white' and 7 (2.1%) learners did not report their race.

Table 7

Individual Characteristics of Participants

Demographic Variables	Values	Total	Percentage
Age	15 Years	19	5.7
	16 Years	157	47.4
	17 Years	97	29.3
	18 Years	44	13.3
	19 Years	14	4.2
	Total	331	100.0
Race	Black	56	16.9
	Coloured	256	77.3
	Indian	8	2.4
	White	3	.9
	Other	4	1.2
	Missing	4	1.2
	Total	331	100.0
Social Economic Status	Money for food and clothes or less	77	23.6
	Money for important things, luxuries and more	249	76.4
	Total	326	100.0

Socio-economic Status: Prior to collapsing the Socio-Economic Status variable from five categories into two there were a range of socio-economic levels in the sample. Four (1.2%) participants reported that they were living in poverty with no food money at all; twelve other learners (3.7%) had money for food but not for clothes,

[6] This descriptor variable was not part of the analyses as explained in Chapter Three.

while 61 (18.7%) learners could afford both food and clothes. On the other end of the scale 42.9% (n = 140) had the most important things including a few luxury goods and 29.4% (n = 96) had money for luxury goods and extra things.

Table 8

Characteristics of Participants' Parents

Demographic Variables	Values	Total	Percentage
Parents' Marital Status	Married	203	61.3
	Divorced	58	17.5
	Never Married	36	10.9
	Separated	26	7.9
	Missing	8	2.4
	Total	331	100.0
Mother Residential Status	Yes	287	86.7
	No	44	13.3
	Total	331	100.0
Father Residential Status	Biological Resident father	199	60.1
	Biological Non-Resident father	73	22.1
	Father Figure	59	17.8
	Total	331	100.0
Relationship to father	Biological	272	82.2
	Adopted	4	1.2
	Step-father	21	6.3
	Older Brother	12	3.6
	Uncle	14	4.2
	Other	8	2.4
	Total	331	100.0

Parents' Marital Status: A greater proportion of the sample had parents who were currently married (n = 199, 61%). Other parents were either divorced (n = 57, 17.5%), never married (n = 36, 11%) or separated (n = 26, 8%).

Mother Residential Status: Less than an eighth of the sample (n = 44, 13.5%) did not reside with their biological mothers. A great proportion of learners lived with both their biological parents (n = 181; 64.2%). However, this does not imply that their parents are married as they may be spending alternate weekends with each parent. 29 (65.9%) of learners who did not live with their biological mothers did not live with their biological fathers either.

Father Residential Status: More than half of the sample (n = 196, 60.1%) had a biologically resident father, 22.1% (n = 72) a biological non-resident father and 17.8% (n = 58) had no contact with their biological father but had a father figure.

Relationship to father: A more detailed look at the persons who are fulfilling the role of father, when there was no biological father, to adolescent young men provides some interesting insight. The father figures, of the 17.8% (n = 59) of boys who did not have contact with their biological fathers, included step-fathers (n = 21, 6.3%), uncles (n = 14, 4.2%), older brothers (n = 12, 3.6%), adoptive fathers (n = 4, 1.2%) and other men not specified by the learners (n = 8, 2.4%). Careful interrogation into the comparisons of means of contact, communication and connection between the adolescents (who had no contact with their biological fathers) and their father figures presented no significant ($p < 0.01$) difference between groups for contact (p = .122), communication (p = .210) and connection (p = .035), when using a one-way ANOVA. These father figures were therefore grouped together for hypotheses testing when compared to biological resident father and biological non-resident father groups.

5.3. TESTING OF THE HYPOTHESES

5.3.1. Hypothesis I

The first hypothesis predicted that father-son contact, communication and connection would be correlated as dimensions of father-son relationship quality.

Correlation was used to assess *nomological validity* between the dimensions of relationship quality (paternal contact, connection and communication). It was confirmed that the measures of father-son connection, communication and contact were not only theoretically related but also empirically related as well (see Table 9).

Table 9

Inter-correlations of the Dimensions of Paternal Relationship Quality

	Contact	Communication
Communication	.516***	
Connection	.699***	.612***

Note. N=309; **. Correlation is significant at the 0.001 level (2-tailed).

Moderate to high inter-correlations were evidenced for the three distinct dimensions of father-son relationship quality. The father-son connection measure was significantly positively related with the measures of father-son contact (r = 0.699; p < .001) and father-son communication (r = 0.612; p < .001). Communication (lower scores on this measure were indicative of higher communication apprehension) were positively associated with contact (r = .516; p < .001).

The results of the correlation analyses indicated that the theoretically aligned, father son connection, communication and contact were all significantly related dimensions of father-son relationship quality. The null hypothesis was rejected as sufficient evidence was presented when measuring father-son connection, communication and contact, male adolescents are in fact reporting aspects of their relationships with their fathers.

5.3.2. Hypothesis II

The second hypothesis proposed that the residential status of the father would have a significant effect on the dimensions (contact, communication and connection) of relationship quality.

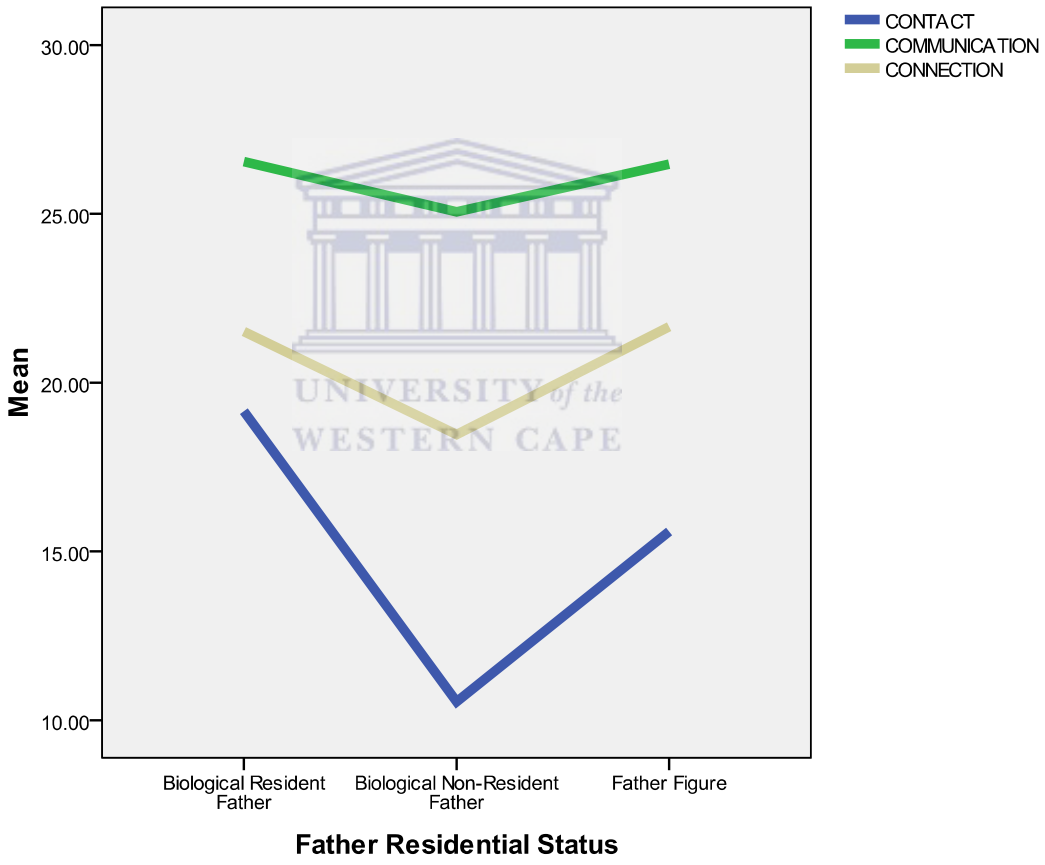
Father Residential Status had three categories: Biological Residential Father (n = 196), Biological Non-Residential Father (n = 72) and Father Figure (n = 58). The effect of father residential status on the dimensions of contact, communication and connection – as presented in Hypothesis I - were evaluated using a Multivariate Analysis of Variance (MANOVA) with a post hoc *Scheffé* test, assuming equal variance, by comparing means using the F distribution at the 0.5 level of significance.

The means and standard deviations for the different relationship quality variables by father residential status groups were calculated. An initial evaluation of the means across groups (see Figure 1) indicates a generally low variance in relationship quality with regards to father residential status, with the exception of father-son contact.

Father-son contact varied across the groupings of father residential status: boys who had biological residential fathers (μ = 19.14; SD = 5.92) had more quality contact time than boys with father figures (μ =15.58; SD = 7.01) and boys with biological non-residential fathers (μ = 10.54; SD = 7.44).

Figure 1

Dimensions of Relationship Quality across Groupings of Father Residential Status



Father-son communication apprehension had similar means for boys who had biological residential fathers (μ = 26.54; SD = 6.18) and boys with biological non-residential fathers (μ = 26.46; SD = 6.97). Boys with biological non-residential

fathers (μ = 25.05; SD = 6.51) evidenced more communication apprehension than compared to the aforementioned groups.

Similarly, father-son connection was similar for boys who had biological residential fathers (μ = 21.51; SD = 5.40) and boys with biological non-residential fathers (μ = 21.65; SD = 6.12). Boys with biological non-residential fathers (μ = 18.45; SD = 6.18) had lower levels of connection with their fathers than compared to their peers with biological residential fathers or father figures.

Further exploration of this hypothesis continued with investigating the normality of the data in order to expose possible assumption violations that might influence the factor analysis. This was done using Levene's Statistics for the test of homogeneity of variance as presented in Table 10.

Table 10

Levene's Test of Equality of Error Variance

	F	Df1	df2	Sig.
Contact	4.191	2	323	.288
Communication	.422	2	323	.656
Connection	2.257	2	323	.106

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Levene's statistic was found to be insignificant for Communication (α = .656; $p > 0.05$), Connection (α = .106; $p > 0.05$) and Contact (α = .288; $p > 0.05$) which

indicated that the variances of scores in each population were equal and that it was possible to continue with the MANOVA.

In order to test the hypothesis, multivariate tests, which are converted into *F*-statistics, are presented. Pillai's trace is the least sensitive to violation of assumptions, while the last one, Roy's Largest Root, is generally the least robust and sensitive to any violation (Pretorius, 2007, p. 313). All F-statistics were found to be significant (as shown in Table 11). Pillai's trace value of .291 translated into an *F* statistic of 18.276 (df = 6, 644; $p < .000$). It was determined from the partial eta-squared value of .110 that the independent variable, Father Residential Status, accounted for 11% of the total variance.

Table 11

Multivariate Statistics – Pillai's Trace

Effect		Value	*F*	Hypothesis df	Error df	Sig.	Partial Eta Squared
Father Residential Status	Pillai's Trace	.291	18.276	6.000	644.000	.000	.110
	Wilks' Lambda	.713	19.711	6.000	642.000	.000	.116
	Hotelling's Trace	.397	21.155	6.000	640.000	.000	.121
	Roy's Largest Root	.382	40.970	3.000	322.000	.000	.209

The exploration of the data demonstrated that the data had not violated any normality assumptions and that there was an overall difference between the three groups. The

testing of the hypotheses proceeded with an examination of the separate *F* tests with *Bonferroni* adjustments to the operational *p* levels (.05/2 = 0.25). The *Bonferroni Correction* is a multiple-comparison correction, used when several dependent or independent statistical analyses are being performed simultaneously. The adjustment entails dividing the *p* level (usually .05) by the number of dependent variables (Meyers et al., 2006, p. 373). Due to the number of analyses, a *Bonferroni Correction* was essential to avoid spurious positives and the risk of possibly committing a Type II error.

Two out of the three dependant variables had statistically significant univariate *F* tests (Contact: $F = 47.30$, $p < .000$, partial $\eta^2 = .188$ and Connection: $F = 6.76$, $p < .000$, partial $\eta^2 = .040$). This indicates that the dependant variables 'contact' and 'connection' contributed to the significant multivariate effect. The null hypothesis was rejected for the dimensions of father-son contact and connection, as they varied across the groupings of father residential status. Father-son communication apprehension was the only dimension which did not vary across groupings.

As the independent variable, Father Residential Status, contained more than two levels and statistically significant univariate *F*s were observed. This called for a Scheffé post hoc multiple comparisons test to be computed for the dependant measures (contact and connection). The *Scheffé* test is a conservative procedure which conducts 'a simultaneous pairwise comparison of all means using the *F* distribution' (Meyers et al., 2006, p. 427).

The results of the pairwise post hoc comparisons are shown in the Table 12. The top row of the table presents the significance variation in contact and connection between the biology and residence types of fathers. The cells in the lower part give the estimated difference between the different groups of fathers, based on their biological and residential status, and the significance value for this estimate.

Table 12

Mean Differences (*p* Values) of Contact and Connection by Father Residential Status

	Father-Son Contact		Father-Son Connection	
Model fit:	F=47.30, df =323, p < .000***		F=8.19, df =323, p < .000***	
	Biological		Biological	
Pairwise Comparisons	Non-Resident Father	Father Figure	Non-Resident Father	Father Figure
Biological Resident Father	8.60*** (0.000)	3.56*** (0.001)	3.05*** (0.001)	.13 (.987)
Biological Non-Resident Father		5.04*** (0.000)		3.19** (.007)

Note. N = 323; ***. Correlation is significant at the 0.001 level (2-tailed); **. Correlation is significant at the 0.01 level (2-tailed)

Results of the post hoc comparisons for father-son contact showed that relative to biological resident fathers, father figures had less quality contact with the adolescent boys with a lower mean difference of 3.56 (p < .001). However, father figures had

more contact with the boys than biological non-resident fathers (indicated by a higher mean difference of 5.04, ($p < .000$). Post hoc comparisons for father-son connection showed that relative to biological resident father, biological non-resident fathers exhibited a lower mean difference of 3.05 ($p < .001$) and father figures had relatively no significant difference (mean difference = .13, $p > .05$). Father figures exhibited a significant ($p < .01$) father-son connection mean difference of 3.19 when compared non-resident biological fathers and their sons.

The results of the multivariate analyses indicated that the null hypothesis failed to be rejected for father-son communication. For the dimensions of father-son contact and connection the null hypothesis was rejected and concluded that father residential status influenced these two dimensions of paternal relationship quality.

5.3.3. Hypothesis III

The third hypothesis focused on the dimensions of relationship quality (contact, communication and connection) and their relationship to adolescent risk behaviours. It was proposed that father-son contact, communication and connection would be negatively associated with behavioural, social and health risk outcomes of the adolescent son.

Significant negative correlations were evident for all dimensions of paternal relationship quality and adolescent risk factors. The correlation matrix in presented in Table 13.

Table 13

Correlation matrix for Contact, Communication and Connection with risk outcomes (n = 331)

		Contact	Communication	Connection
Mental Health Risk	Pearson *r*	-.174**	-.226***	-.161**
	Sig. (2-tailed)	.002	.000	.004
Negative Family Relations Risk	Pearson *r*	-.330***	-.303***	-.317***
	Sig. (2-tailed)	.000	.000	.000
Educational Under-Attainment Risk	Pearson *r*	-.102	-.167**	-.099
	Sig. (2-tailed)	.065	.002	.074
Aggressive Behaviour and Delinquency	Pearson *r*	-.176***	-.210***	-.162**
	Sig. (2-tailed)	.001	.000	.003
HIV/STD Risk Behaviours	Pearson *r*	-.214***	-.169**	-.161**
	Sig. (2-tailed)	.000	.002	.003

Note. N=309; ***. Correlation is significant at the 0.001 level (2-tailed); **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2 tailed).

Contact was negatively associated with Negative Family Relations Risk (r = -.330, p < .001), HIV/STD Risk (r = -.214, p < .001), Mental Health Risk (r = -.174, p < .01) and Aggressive Behaviour and Delinquency (r = -.176, p < .001).

Communication exhibited negative correlations with Negative Family Relations Risk (r = -.303, p < .001), Mental Health Risk (r = -.226, p < .001), Aggressive Behaviour

and Delinquency (r = -.210, p < .001), Educational Under-Attainment Risk (r = -.167, p < .01) and HIV/STD Risk behaviours (r = -.169, p < .01).

Connection was negatively correlated with Negative Family Relations Risk (r = -.317, p < .001), Mental Health Risk (r = -.161, p < .010), Aggressive Behaviour and Delinquency (r = -.162, p < .01) and HIV/STD Risk (r = -.161, p < .01).

Educational Under-Attainment Risk did not show any significant relationship with father-son contact (r = -.072, p > .05) or father-son connection (r = -.084, p > .05).

The null hypothesis was rejected because higher levels of father-son contact, communication and connection were associated with lower levels of adolescent risk factors.

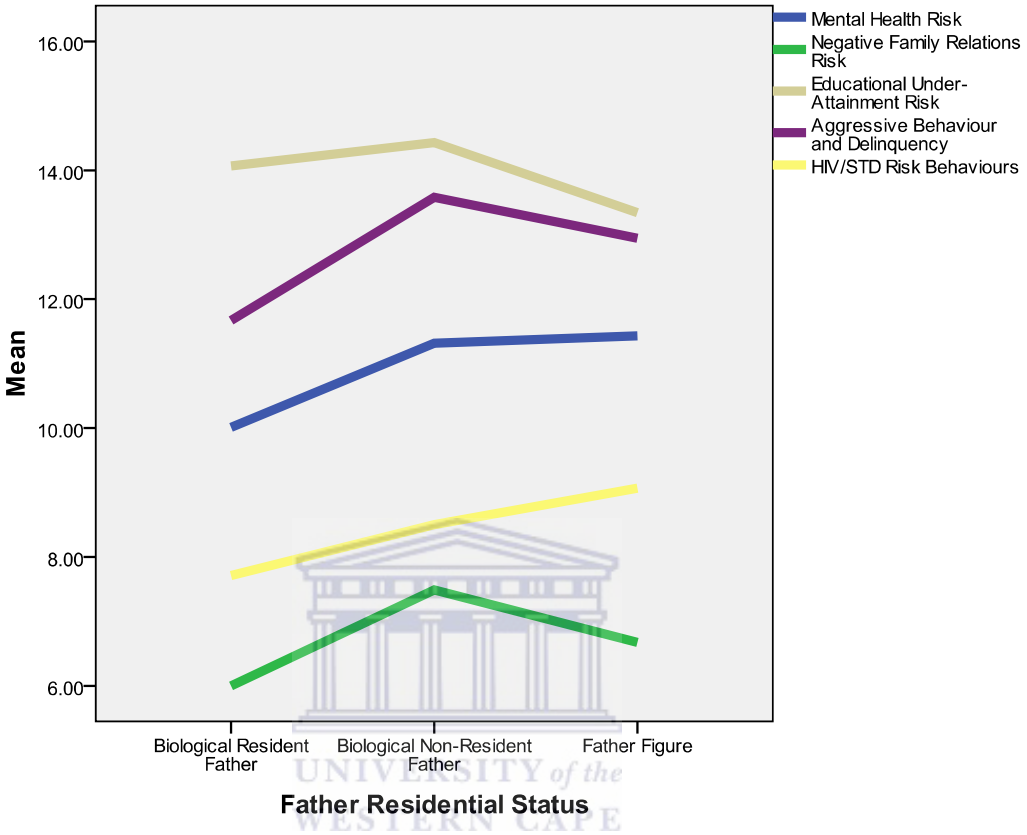
5.3.4. Hypothesis IV

The fourth hypothesis suggests that father residential status will have an effect on adolescent risk outcomes.

Figure 2 provides a visual representation of the associations between the dimensions of relationship quality and adolescent risk factors.

Figure 2

Adolescent Risk Factors across Groupings of Father Residential Status



All risk factors, except for Educational Under-Attainment were lower for boys with biological resident fathers than those with biological non-resident fathers or father figures. Also, boys with father figures are shown to be less at risk than boys with biological non-resident fathers. Therefore, further testing was necessary to assess the significance of the associations between adolescent risk factors and father residential status.

This hypothesis was investigated through simple multiple regression analysis using the Enter method, which enters all the variables at the same time. The analyses were performed using certain selected demographic variables (mother residential status,

age and socio-economic status) and father residential status as independent variables. Separate regressions were run for each dependant risk variable: Mental Health, Negative Family Relations, Educational Under-Attainment Risk, Aggressive Behaviour and Delinquency, and HIV/STD Risk Behaviours.

Father Residential Status had three levels (Biological Resident Father, Biological Non-Resident Father and Father Figure) and therefore two degrees of freedom were necessary for making comparisons. Since Father Residential Status had three levels, two dummy variables were developed. Biological Residential Father was chosen as reference group for the regression analysis. According to Lewis-Beck (1993, p. 76) the "choice of reference group is arbitrary assuming one follows appropriate procedures of interpretation and inference". One dummy variable represented Non-Biological Resident Father (and was coded "1" where a child had a biological non-resident father and "0" otherwise); and a second dummy variable, Father Figure, was coded "1" where a child had no biological father but a father figure instead, and "0" otherwise. (see Table 14 for results of regression analyses).

Mental Health Risk

The regression model yielded no significant predictors for mental health risk (R^2=.017, p = .357) and accounted for little over 1.7% of the variance in Mental Health Risk. The null hypothesis failed to be rejected when predicting an effect for father residential status on adolescent Mental Health risk.

Negative Family Relations

Biological Non-Residential Father (relative or compared to Residential Father) (t = 1.990; $p < .05$) and Mother Residential Status (t = 3.273; $p < .001$) emerged as the only significant predicators of Negative Family Relations (R^2=.057, $p < .01$). The model explained 5.7% of the variance for Negative Family Relations. The null hypothesis was rejected when predicting an effect of father residential status on adolescent negative family relations.

Educational Under-Attainment Risk

The regression model presented no significant predictors for Educational Under-Attainment Risk and the model accounted for 1.5% of the variance. The null hypothesis failed to be rejected when predicting an effect of father residential status on Educational Under-Attainment Risk.

Aggressive Behaviour and Delinquency

The regression model presented Biological Non-Resident Father (t = 2.094; $p < .05$) as the only significant predictor for Aggressive Behaviour and Delinquency and accounted for 2.5% of the variance. The null hypothesis was rejected when predicting an effect of father residential status on Aggressive Behaviour and Delinquency.

HIV/STD Risk Behaviours

Age (t = 5.858; $p < .000$) emerged as a strong significant predicator of HIV/STD Risk and this model accounted for 11% of the variance in HIV/STD Risk (R^2=.110, p

< .000). The null hypothesis failed to be rejected when predicting an effect of father residential status on adolescent HIV/STD Risk Behaviours.

Results showed that Father Residential Status had a significant effect Negative Family Relations and Aggressive Behaviour and Delinquency; thus the null hypothesis was rejected for these two risk outcomes. Age emerged as the only significant predictor of HIV/STD Risk Behaviours and therefore the null hypothesis failed to be rejected for Father Residential Status. No significant predictors emerged when testing the effect of Father Residential Status on Mental Health and Educational Under-Attainment Risk; and the null hypothesis failed to be rejected.

The next hypothesis proceeded to test for a greater effect of the dimensions of paternal relationship quality than father residential status on adolescent risk outcomes.

Table 14

Multivariate Regression Models Examining Father Residential Status Influences on Adolescent Risks

	Mental Health		Negative Family Relations		Educational Under-Attainment Risk		Aggressive Behaviour and Delinquency		HIV/STD Risk	
Model fit:	F (5,320) = 1.10, R^2=.017, p = .357		F (5,320) = 3.90, R^2=.057, p = .002**		F (5,320) = .983, R^2=.015, p = .428		F (5,320) = 1.64, R^2=.025, p = .148		F (5,320) = 7.94, R^2=.110, p = .000***	
Variable	Coefficient	*P*	Coefficient	*p*	Coefficient	*P*	Coefficient	*p*	Coefficient	*p*
Constant	5.656	.422	-1.364	.760	15.105	.039*	7.583	.219	-24.872	.000***
Biological Non-Resident Father	1.092	.254	1.203	.047*	.036	.971	1.750	.037*	.999	.197
Father Figure	.967	.367	-.026	.969	-1.304	.239	.887	.344	1.181	.173
Socio-Economic Status	-1.062	.244	-.501	.385	-1.411	.135	-.420	.599	1.318	.074
Age	.262	.522	.316	.224	-.096	.822	.190	.597	1.941	.000***
Mother Residential Status	.820	.474	2.365	.001***	1.590	.179	1.194	.233	-.632	.494

***. Significant at the 0.001 level (2-tailed); **. Significant at the 0.01 level (2-tailed); *. Significant at the 0.05 level (2 tailed).

5.3.5. Hypothesis V

The fifth hypothesis investigates whether relationship quality will have a more significant effect on risky behaviours than father residential status. This was evaluated through multiple regression analysis.

The predictive effect of relationship quality as opposed to father residential status on adolescent risk behaviours was measured through a multiple regression analysis using the Enter method. The analyses were performed using certain selected demographic variables (mother residential status, and socio-economic status) as well as indicators of paternal relationship quality (contact, communication and connection) and father residential status as independent variables.

Separate regressions were run for each dependent risk variable (Mental Health, Negative Family Relations, Educational Under-Attainment Risk, Aggressive and Delinquent behaviour and HIV/STD Risk Behaviours). Dummy coding was maintained from the previous analyses. (See Table 15 for results of regression analyses).

Mental Health Risk

Father-son Communication (t = 3.20; p < .01) emerged as the only significant predicator of Mental Health Risk. The model accounted for 7.5% of the variance in Mental Health risk. Multiple R for regression was statistically significant, F (8, 299) = 2.83, p < .01, adjusted R^2 = .050. The null hypothesis was rejected when predicting

a higher effect of father-son communication as compared to father residential status on adolescent Mental Health Risk behaviours.

Negative Family Relations

The model (R^2=.185, p = .000) accounted for 18.5% of the variance in Negative Family Relations Risk and yielded two significant predictors: Father-son Communication (t = 2.51; p < .05) and Mother Residential Status (t = 4.45; p < .000). The null hypothesis was rejected when predicting a higher effect of father-son communication as compared to father residential status on adolescent Negative Family Relations.

Educational Under-Attainment Risk

The model accounted for 5.7% of the variance in Educational Under-Attainment Risk and yielded two significant predictors: Father-son Communication (t = 2.91; p < .01) and Mother Residential Status (t = 1.99; p < .05). Multiple R for regression was statistically significant, F (8, 299) = 2.26, p < .05, adjusted R^2 = .032. The null hypothesis was rejected when predicting a higher effect of father-son communication as compared to father residential status on adolescent Educational Under-Attainment Risk.

Aggression Behaviour and Delinquency

Father-son communication (t = 3.17; p < .01) proved a more significant predictor of adolescent risk for aggressive behaviour and delinquency than father residential status for boys who had Non-Residential Biological fathers (t = 2.04; p < .05). The

model accounted for 7.4% of the variance in Aggressive Behaviour and Delinquency. Multiple *R* for regression was statistically significant, F (8, 300) = 3.02, $p < .01$, adjusted $R^2 = .050$. The null hypothesis was rejected when predicting a higher effect of father-son communication as compared to father residential status for adolescent Aggressive Behaviour and Delinquency.

HIV/STD Risk Behaviours

Father-Son Communication ($t = -1.43$; $p < .05$) and Age ($t = 5.53$; $p < .000$) emerged as the only significant predicators of HIV/STD Risk Behaviours. The model accounted for 13.8% of the variance in HIV/STD Risk Behaviours ($R^2=.138$, $p=.000$).

Results showed that risk factors for Mental Health, Education Under-Attainment Risk, Negative Family Relations, Aggressive and Delinquent Behaviour and HIV/STD risk behaviours were more significantly influenced by dimensions of relationship quality than Father Residential Status and therefore the null hypothesis was rejected. The dimension of Father-son Communication was the most significant predictor of risk factors for adolescent boys, when compared to other dimensions of relationship quality.

Table 15

Multivariate Regression Models Examining Paternal Relationship Quality and Residential Status Influences on Adolescent Risks

	Mental Health		Negative Family Relations		Educational Under-Attainment Risk		Aggressive Behaviour and Delinquency		HIV/STD Risk	
Model fit:	F (8,299) = 2.83, R^2=.075, p = .003**		F (8,300) = 8.50, R^2=.185, p = .000***		F (8,299) = 2.26, R^2=.057, p = .023*		F (8,300) = 3.01, R^2=.074, p = .003**		F (8,300) = 5.98, R^2=.138, p = .000***	
Variable	Coefficient	*P*	Coefficient	*p*	Coefficient	*P*	Coefficient	*p*	Coefficient	*p*
Constant	13.156	.082	6.612	.150	19.115	.014*	13.156	.082	6.612	.150
Biological Non-Resident Father	1.204	.278	.081	.904	.476	.673	1.204	.278	.081	.904
Father Figure	.923	.401	-.737	.270	-1.367	.223	.923	.401	-.737	.270
Socio-Economic Status	-.442	.626	-.377	.493	-1.086	.239	-.442	.626	-.377	.493
Age	.203	.623	.239	.342	-.135	.751	.203	.623	.239	.342
Mother Residential Status	1.408	.202	2.988	.000***	2.244	.047*	1.408	.202	2.988	.000***
Contact	.028	.748	-.087	.100	.036	.685	.028	.748	-.087	.100
Communication	-.248	.002**	-.118	.013*	-.231	.004**	-.248	.002**	-.118	.013*
Connection	-.430	.629	-.595	.270	.126	.889	-.430	.629	-.595	.270

***. Significant at the 0.001 level (2-tailed); **. Significant at the 0.01 level (2-tailed); *. Significant at the 0.05 level (2 tailed).

5.4. CONCLUSION

In this chapter a description of the sample of 331 participants was presented. The dimensions of father-son contact, communication and connection were nomologically validated as dimensions of relationship quality. Father residential status explained some of the variance in negative family relations and aggression. However, when looking at the interaction between dimensions of relationship quality and father residential status, a greater predictor of risk behaviour was father-son communication and age. Communication apprehension was a predictive factor for mental health risk, negative family relations, educational under-attainment, aggressive and violent behaviour and HIV/STD risk.

The next chapter provides a discussion of the results and compares findings to previous studies, thus highlighting any new findings and the implications thereof.

CHAPTER SIX

DISCUSSION OF FINDINGS AND RECOMMENDATIONS

6.1. INTRODUCTION

The main focus of this chapter is to present a discussion of the findings of hypotheses tested in this study. A brief overview of the limitations of the study is given. The significance of the study findings and recommendations for future research are presented as a conclusion to this thesis.

6.2. DISCUSSION OF FINDINGS

Through self-reports of adolescent boys, their involvement in risk activities and their perceptions of their relationship with their fathers were examined. Risk behaviours were investigated using the POSIT. HIV/STD risk behaviours were assessed on a POSIT-type subscale designed specifically for South Africa, the POSIT HIV/STD Risk Subscale. A measure of paternal quality contact time was developed for this study and was found to have three factors: the father's availability, activities engaged in together and the motivation of the son to spend time with his father (including the son's enjoyment of the time spent). This provided an extension to past conceptualizations of father-son contact which commonly assessed only the amount of time and activities engaged in. Dimensions of paternal relationship quality were nomologically validated to include contact, communication and connection. Bivariate correlations showed dimensions of paternal relationship quality to vary across groupings for father residential status. Linear regressions showed that father-son

communication was the stronger predictor of risk behaviours when compared to father residential status.

6.2.1. HYPOTHESIS I

This first hypothesis found that both quantity and quality of contact time, less communication apprehension and increased emotional connection between father and son were nomologically validated as dimensions of a quality paternal relationship. This study further developed Lamb's tripartite model of paternal involvement (Lamb et al., 1985) by additionally taking into account the motivation the child feels to spend time with his father and the satisfaction or enjoyment of the time spent together while the father is engaged with his child. The new model validated by this thesis introduced the theoretical conceptualization of a *quality paternal relationship* and excluded previously emphasised external factors such as the father's financial contributions (Brooks-Gunn, Britto & Brady, 1999; Duncan & Brooks-Gunn, 1997).

An essential part in this new conceptualization of paternal relationship quality was the development of a new measure of father-son contact. Through an exploratory factor analysis the measure of Father-Son Quality Contact Time Scale was analyzed into three factors of time and availability, engagement, and motivation and time enjoyment. The measure, although analyzed through factor analysis and measures of internal consistency, needs to be developed further and tested on other populations. Future research is needed to explore the factors that help or hinder paternal contact, communication and connection.

6.2.2. HYPOTHESIS II

The second hypothesis proposed that the residential status of the father would have a significant effect on the dimensions (contact, communication and connection) of relationship quality. Findings confirmed Flouri's (2007) results which found that biological non-resident fathers reported less contact, communication and connection than resident fathers or father figures. Explorations of these differences revealed father residential status to have a significant effect on father-son contact and connection, but no significant effect was found for paternal communication apprehension. Echoing the findings of Munsch, Woodward and Darling (1995), this study suggests that although residential status affected the likelihood of the father being considered important in the life of the child, the general quality of the relationship did not differ by residential status.

Findings for paternal contact were consistent with previous research suggesting that resident biological fathers may spend more time with their children because of proximity than non-residential fathers (Anderson, Kaplan, Lam & Lancaster, 1999). Mott's (1990) work posits that a father who resides in the home is a mere manifestation of the father's presence in the life of the child. Presence is only one indicator of the fathers' involvement in the life of his son. Relationship quality and his role in the family environment, together with emotional and financial contributions to the household account for his presence in the home. In view of this a father figure may take the place of a biological father. Boys with father figures reported slightly lower levels of contact, communication and connection than those with biological resident fathers. Although previous research suggests that biological family members have

different obligations to each other than do non-family members, active father figures have a key role to play in reducing risk behaviours in boys. Further research with a specific focus on the role of father figures in the lives of young men is especially important in a period when a vast majority of young men are living in absent-father homes.

6.2.3. HYPOTHESIS III

The third hypothesis explored the effect of the dimension of paternal relationship quality on adolescent risk behaviours. Paternal contact and connection was found to be significantly and negatively related to all adolescent risk outcomes, with the exception of educational under-attainment – which was only significantly associated with paternal communication. Not surprisingly, boys with higher levels of paternal contact, communication and connection were found to be less likely to report negative family relations.

Boys who spent quality contact time reported lower mental health risk, lower aggressive and delinquent behaviours and lower HIV/STD risk behaviours. These findings are significant because it highlights the need for fathers to invest quality time with their sons and not merely spend time in the vicinity of their sons. Both the quantity and the quality of the interactions are important for adolescent development (Welsh et al., 2004). Like Almedia et al. (2001), this study found that fathers who spent more time with their children were more likely to engage in supportive interactions with their children. Adolescents want a close, sensitive relationship with their fathers and the time used to cultivate these qualities is important. Further studies

should explore the time periods that fathers and sons spend engaging in activities and how fathers and sons feel about those times would extend knowledge in this area. Daily diary methods may be one helpful methodology for these purposes.

Paternal communication was the only dimension which showed a significant negative correlation with educational under-attainment as well as other risk behaviours. High school is a significant developmental phase (Gregory & Weinstein, 2004) in which learners prepare for the academic trajectory. Important decisions with long-term effects are made, such as whether to drop out, finish high school or pursue tertiary education. The study findings suggest that sons who can communicate openly with their fathers are less likely to report educational difficulties. Future research is needed to determine the areas of the son's high school education that benefit most from paternal communication.

Talking to fathers can also be interpreted to be a significant contributor to reducing adolescent mental health risk and aggressive behaviour outcomes. Boys at risk for aggression may be less likely to talk to their fathers and may be more likely to externalize behaviours.

Like paternal communication, connection was significantly and negatively associated with adolescent HIV/STD risk behaviours. The importance of the paternal relationship to the social concern of the spread of HIV has been highlighted. Paternal connection's significant negative association with adolescent mental health is consistent with Gray and Steinberg's (1999) findings and it appears that when adolescent boys perceive

their fathers as accepting and supportive they are at lower risk for mental health problems. This can have long-term effects on the adolescent by affecting his emotional stability as well as job opportunities, thereby putting him at risk for delinquent behaviour (Gray & Steinberg, 1999). The findings also show that boys with a greater sense of connection to their fathers are less likely to be at risk for aggressive or delinquent behaviour.

Interestingly, Herman, Dornbusch, Herron and Herting (1997) found no association between paternal connection and delinquency in a sample of European American youth. Given the stressful environment that South African children in lower income communities live in (Ward et al., 2007), paternal connection may be more crucial to them. Youth in lower income communities may not receive the high amounts of social support that European youths may receive at school or through other socializing agents (Bean, Barber & Crane, 2006). Paternal connection plays a crucial to youth living in lower-economic environments in the protection of youth from risk behaviours.

Even though the correlation analysis could not determine whether dimensions of relationship quality contributed to adolescent risk outcomes or vice versa, clear associations were drawn between father-son contact, communication and connection and various adolescent risk factors. Additional research is needed to better understand the way in which paternal relationship quality serves as a buffer to protect adolescent boys from risk behaviours, as well as extraneous factors that might mediate the effect of paternal relationship quality.

6.2.4. HYPOTHESIS IV

The fourth hypothesis examined the effect of paternal residential status on adolescent risk outcomes. Father residential status was a significant predictor of negative family relations and aggression for boys with non-residential fathers, relative to boys with resident fathers. The finding that father residential status influences family relations is not surprising. Based on the premise that non-resident fathers are more likely to have separated because of divorce or separation, inter-parental conflict could be significantly affected by father residential status, thereby leading to greater negative family relations. Mother residential status was also a significant predictor of negative family relations. Research indicates that living with biological parents gives children an advantage over other types of two-parent families, including one biological and one step-parent, and one biological parent with a cohabiting partner. Children living in the latter types of two-parent families appear to have outcomes that are more similar to children living in single-parent families (Anderson-Moore, Jekielek, & Emig, 2002).

Having a non-resident father emerged as the only significant predictor of aggressive and delinquent behaviour. Thomas, Farrell & Barnes (1996) report that involvement of non-resident fathers resulted in more delinquent behaviour from sons and state the cause to be the lack of parenting skills of some non-resident fathers. According to Valois, MacDonald, Bretous, Fischer & Wanzer Drane (2002) it is not family structure itself that explains aggression and violent behaviour but rather some other factor that may explain why that structure is present. This study finding is significant as adolescent may be at risk for aggression and delinquency prior to parental separation or divorce due to inter-parental conflicts.

Fathers (and mothers) need to be cautious in the renegotiation of family relationships and roles when separations do occur as this may have long-term effects on adolescent well-being. This study suggests that being born into a single parent family is not as monolithic a risk as has been assumed in some areas of the literature (see, for instance, Valois et al., 2002), but rather is more nuanced. The presence of a father figure was not found to be a significant predictor of any risk outcomes. Findings confirm Flouri's (2007) hypothesis that father figures can also provide a quality relationship that may protect young men from risk behaviours such as aggression and delinquency.

Another significant finding was the predictive significant effect of age on adolescent HIV/STD risk behaviours. Although the age of adolescence has been clearly associated with risk taking behaviours the direct effect of age is hard to determine. Age cannot be measured as a definitive construct as each individual progresses through the developmental phases differently. This study findings show that as the adolescent ages their risk for practicing unsafe sexual practices also increase. Further research focusing on a similar age range, however a bigger sample for each age category, may be beneficial to knowledge production and assist in the determination of the effect of age on adolescent risk outcomes.

6.2.5. HYPOTHESIS V

The fifth hypothesis investigates whether relationship quality will have a more significant effect on risky behaviours than father residential status. An interesting significant effect was found for paternal communication and no effect for paternal contact and connection or father residential status when looking at the interaction

between dimensions of relationship quality and father residential status. The hypothesis was therefore supported and findings showed paternal communication to be a predictive factor for mental health risk, and aggressive and delinquent behaviour. Paternal communication and mother residential status were both significant predictors of negative family relations, educational under-attainment and HIV/STD risk behaviours.

Paternal communication has been supported in the literature as a protective factor for adolescents against aggressive and delinquent behaviour (Howard et al., 1999). There has been little investigation into the association between paternal relationship quality and adolescent aggression and delinquency. Of those studies identified, parent-child communication has been singled out as one of the mechanisms that are associated with less violent behaviour (Caldwell et al., 2004; Griffin, Botvin, Scheier, Diaz & Miller, 2000). The results of hypothesis testing showed a strong predictive effect for paternal communication on adolescent mental health. This finding is noteworthy as little evidence is available in current literature to support his finding. This study therefore furthered knowledge in with regards to adolescent mental health and delinquent behaviour by looking specifically at the relationship quality between the father and son.

The regression analysis in hypothesis four showed boys with non-resident fathers and resident mothers were more at risk for negative family relations. Interestingly, the results of this regression analysis (hypothesis five) showed paternal communication as well as mother residential status to be predictive of negative family relations, with no

effect for father residential status. Negative family relations put adolescents at risk for other negative behaviours. It cannot be determined whether the negative family relationships were formed because of adolescent's delinquent behaviours or lack of paternal communication, or whether living with the mother was attributed to increased negative family relations. Future research into the area of the family should provide a deeper understanding of the home environment and inter-parental and family relationships. Controlling for the home environment will assist researchers to achieve clearer insights into the effects of the paternal relationship on adolescent risk outcomes.

In the previous correlation analysis (hypothesis three) paternal communication was the only dimension with a significant negative association to adolescent educational under-attainment risk. Using regression analysis (hypothesis five) results showed paternal communication and mother residential status as strong predictors of boy's educational difficulties. Jones (2004) found strong positive correlations, for boys with resident and non-resident fathers, between paternal relationship quality and adolescent academic achievement; and no effects were found regarding the mother's residential status.

Similarly, mother residential status was also found to be a predictor of adolescent HIV/STD risk behaviours. Study findings supports literature reporting that speaking frequently about sex between parents and children has been shown to decrease the likelihood of early sexual debut for the adolescent (East, 1996; Howard et al., 1999; Miller, Benson, & Galbraith, 2001). Chewning and Koningsveld (1998) found no

relationship between paternal communication and adolescent HIV risk. Miller et al. (2001) reported a positive correlation between parent-child communication and riskier sexual behaviour in adolescents. Future studies are needed, that include into the investigation of paternal relationship quality on adolescent risk behaviours, the role of maternal relationship quality and residential status. Findings suggest a strong influence of mother residential status and paternal communication in the protection of adolescent boys.

No effect was found for father residential status on adolescent risk outcomes. This finding is significant as it provides evidence that fathers, whether residential or not or whether biologically related or not, can form quality relationships with their sons and help protect their sons form risk behaviours. Past and contemporary research on fatherhood suggests that the quality of the father-son relationship has a significant effect on the child's development and well-being (Amato, 1997; Andry, 1960; Biller, 1993; Doherty et al., 1998; Hawkins & Dollahite, 1997; Richter & Morell, 2006). Boys with a quality paternal relationship may be able to better negotiate the turbulent period of adolescence. Father residential status alone has little to do with the adolescent's risk-taking behaviours, when compared to the enormous effect that the paternal relationship has on adolescent young men.

6.3. LIMITATIONS

The findings of this study should be viewed in the light of its limitations. First, the study used a cross-sectional research design and therefore causality claims cannot be made. It is not possible to determine whether paternal relationship quality contributes

to increased adolescent risk behaviours or whether adolescent risk behaviours contribute towards lowered paternal relationship quality. Second, this study investigated the links between father-son relationship quality and male adolescent risk behaviours, and therefore results may not be applicable to females or children of other ages. Third, the amounts of variance in adolescent risk behaviours explained by variables in the models were generally modest, ranging from 1.5% (Educational Under-Attainment) to 18.7% (Negative Family Relations). Fourth, maternal relationship quality or inter-parental conflict was not controlled for, only the residential status of the mother. The potential effects of the maternal relationship or mother figures in lives of adolescent boys and the relationships between the child's parents were not explored in this study and future research is needed to investigate the tripartite relationship between the son, mother and father.

6.4. CONCLUSION AND RECOMMENDATIONS

Despite these limitations, this study showed that paternal relationship quality plays a more significant role, specifically the dimension of communication, than whether fathers live with their sons or are biologically related to them, in the protection of adolescent boys from risk behaviours. Biological non-resident fathers have a responsibility to ensure that they are available to their sons and to create open channels of communication. Father figures also have the added responsibility of taking on the role of the biological father to boys who are generally more at risk for behavioural problems.

Research on paternal relationship quality must move beyond demonstrations of association between father's behaviours and adolescent outcomes to specific dimensions of the relationship and their effect on adolescent risk behaviours. Previous literature has focused mainly on fathers who are physically absent from the home but has given little attention to fathers who may be psychologically absent. Fatherhood is not a unidimensional construct that can be measured by a father's physical presence but rather it is the holistic context that fathers create, participate in and are involved with their families and children. This thesis provides the platform to investigate further the reasons or contexts that allow for a paternal relationship to positively affect adolescent wellbeing. While financial contributions are important to the well-being of children's needs, too much emphasis has been given to the financial contributions of fathers - especially non-resident fathers and too little to the relationships that men may foster with their sons.

These findings suggest a need to address the issues of building relationships between at-risk youth and their fathers (be they biological fathers or father figures) through community and clinical interventions. Detailed validation studies of the dimensions of contact, communication and connection and a single measure of relationship quality would be beneficial to the new conceptualization of paternal relationship quality. Promoting effective parenting skills amongst fathers could be beneficial in preventing risk behaviours amongst adolescent boys. Future research is needed to explore the factors that help or hinder paternal contact, communication and connection. Special attention should be given to the role of father figures in the lives of young men is

especially important in a period when a vast majority of young men are living in absent-father homes.

This thesis draws special attention to the importance of open and frequent communication between fathers and sons. Intervention programmes equipping fathers with the knowledge of health and social concerns of youth, strategies for creating open channels of communication, and the skills to talk to the sons should be at the fore in the protection of adolescent boys.

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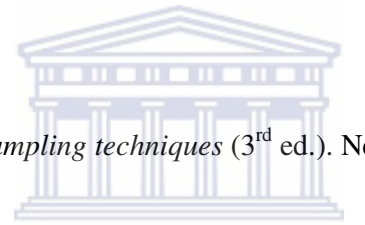

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APPENDEXES (A – U)

Appendix A: Letter to School Principal Requesting Permission

University of the Western Cape

Private Bag X17 Bellville 7535 South Africa
Telephone: +27 21 959 2631/2746
Fax: +27 21 959 2755
E-mail: cmalcolm@uwc.ac.za@uwc.ac.za

FACULTY OF COMMUNITY AND HEALTH SCIENCES

The Principal and staff: Name of School 1 March 2008

Re: Research Project on adolescent males and risk-taking behaviours

My name is Lynn Hendricks and I am a Masters Psychology student at the University of the Western Cape. I am currently doing research on adolescent boys' and their potential for risk behaviours. I am also looking at how their relationship with their fathers (with whom the adolescent deems as his father) protects them against these risk behaviours. This thesis is being supervised by Prof. C. Malcolm of the Psychology Department.

This proposal has been accepted and passed through the Senate, the Ethical Clearance Board and the Higher Degrees Committee of the University of the Western Cape. The Western Cape Education Department has approved this research within the Cape Town public school community. I am writing to request your permission to conduct research at your school. My research team would like to visit the school during the months of January-March 2008 for two-three days.

We would require you to provide a group of 60 (or more as determined by the number enrolled for 2008) male learners who are in grade eleven and between the ages of 16-19 years old. The learners would be required to be available for one meeting of 2 hours or two meetings of 1 hour each. All data will be collected in the form of questionnaires. Research methodology can be reviewed in the attached executive summary. We will be happy to share our findings with you through a written or verbal report. However, the actual data will be highly confidential to protect the participants and in order to adhere to research ethics.

We hope you will be able to participate in this research project. Your assistance is greatly appreciated.

Sincerely,

Student Researcher
Lynn Hendricks
076 305 6843
e-mail: 2642411@uwc.ac.za

Supervisor
Charles Malcolm PhD.
(021) 959 2454
e-mail: cmalcolm@uwc.ac.za

Appendix B: Consent and Assent Forms for Parent/Guardian and Learners in English and Afrikaans

University of the Western Cape

Private Bag X17 Bellville 7535 South Africa
Telephone: +27 21 959 2631/2746
Fax: +27 21 959 2755
E-mail: cmalcolm@uwc.ac.za@uwc.ac.za

FACULTY OF COMMUNITY AND HEALTH SCIENCES

Dear Sir/ Madam

Re: Research project on adolescent males and risk-taking behaviours

My name is Lynn Hendricks and I am a Masters Psychology student at the University of the Western Cape. I am currently doing research on adolescent boys' and their potential for risk behaviours. I am also looking at how their relationship with their fathers (with whom the adolescent deems as his father) protects them against these risk behaviours. This thesis is being supervised by Prof. C. Malcolm of the Psychology Department.

Your son is one of the 350 young people that have been chosen to take part in my research. I am writing this letter to ask you, the parent/guardian, permission for your son to participate in this research project. Your son will be asked to fill in a questionnaire which will ask him about his likelihood to engage in risk behaviour and feelings about the relationship with his father.

Please let me assure you that your son will not be asked to write his name, surname or even the name of his school. The name of the child should be included in this reply slip so that the researcher may know who has received permission from their parent/guardian to participate in the study. All information will be treated in the strictest confidentiality.

Please place your signature on the space, seal the letter in the envelope provided and give to your son to return it to me as soon as possible.

Sincerely,

Sincerely,

Student Researcher
Lynn Hendricks
076 305 6843
e-mail: 2642411@uwc.ac.za

Supervisor
Charles Malcolm PhD.
(021) 959 2454
e-mail: cmalcolm@uwc.ac.za

PLEASE RETURN THIS REPLY SLIP AS SOON AS POSSIBLE

PARENT/GUARDIAN

I, hereby give permission for my son _____to take part in the research conducted by Lynn Hendricks. I understand that all the information gathered by Lynn Hendricks will be strictly confidential and the identity of my son or my family will not be revealed.

Signature _____
Date_____

LEARNER

I, _____ hereby consent to participating in the research study conducted by Lynn Hendricks. I understand that I am under no obligation to participate and may leave the study at any time. I understand that all information gathered by Lynn Hendricks will be strictly confidential and the identity of my family or me will not be revealed.

Signature _____ Date_____

University of the Western Cape

Private Bag X17 Bellville 7535 South Africa
Telephone: +27 21 959 2631/2746
Fax: +27 21 959 2755
E-mail: cmalcolm@uwc.ac.za

FAKULTEIT VAN GEMEENSKAP EN GESONDHEID WETENSKAP

Geagte Heer/ Dame

Navorsing projek oor jeugdige seuns en risiko gedrag

My naam is Lynn Hendricks en ek is 'n Meesters Psigologiese student by die Universiteit van Wes Kaap. Ek doen heidiglik navorsing oor jeudige seuns en hulle potensiaal vir risiko gedrag. Ek stel ook belang in hoe hul verhouding met hul vaders (wie die jeugdige beskou as sy vader) teen risiko gedrag beskerm word. Prof. C. Malcolm van die Psigologiese Departement sal toesig hê oor hierdie tesis.

U seun is een van die 350 jeugdiges wat gekies is om deel te neem aan my navorsing. Ek skryf hierdie brief aan u, die ouer/ oppasser, om te vra of u seun kan deel neem in hierdie studie. U seun sal gevra word om a vraelys in te vul. Hierdie vraelys sal vra of daar 'n moontlikheid is dat hy in risiko gedrag sal deel neem en sy gevoellens oor sy verhouding met sy vader.

Laat ek u die versekering gee dat u seun nie gevra sal word om sy naam, van, of die naam van sy skool hoef te skryf nie. Die naam van die kind moet in die terugvoering ingesluit word sodat die narvorser kan kennis dra van wie toestemming gekry het van sy ouers/ oppassers om deel te neem in die studie. Alle informasie sal met die hoogste geheimhouding hanteer word.

Plaas asseblief u handtekening op die spasie en maak die brief toe in die koevert wat voorsien is. Gee die geslote brief aan u seun wie dit aan my so gou as moontlik sal oorhandig.

Die uwe,

Navorser
Lynn Hendricks
076 305 6843
e-pos: 2642411@uwc.ac.za

Opsigter
Charles Malcolm PhD.
(021) 959 2454
e-pos: cmalcolm@uwc.ac.za

STUUR HEIRDIE TERUGVOERING AS GOU AS MOONTLIK TERUG

OUER/OPPASSER:

Ek gee hiermee toestemming vir my seun, _____ ,om deel te neem in die navorsing wat deur Lynn Hendricks beheer word. Ek verstaan dat alle informasie wat deur Lynn Hendricks versamel is sal in die hoogste geheimhouding hanteer word. Die idetiteit van my seun of my familie sal nie openbaar word nie

Handtekening _____ Datum _____

LEERLING:

Ek, _____, gee hiermee toestemming om deel te neem in die navorsing wat deur Lynn Hendricks onderneem word. Ek verstaan dat ek onder geen verpligting is om deel te neem nie en mag die studie ter enige tyd verlaat. Ek verstaan dat alle informasie in die hoogste geheimhouding sal hanteer word. Die identiteit van my familie en ek sal nie openbaar word nie.

Handtekening _____ Datum _____

Appendix C: Practice Questions

1.a. **Please enter today's date __/__/____ (mm/dd/ yyyy)**

1.b. **Please enter the questionnaire language you are using** **1 Afrikaans**
2 English

TUTORIAL

You are going to start by practicing some responses. Please answer the following questions about yourself by circling the number that best indicates your answer. These next 4 questions are only for practice.

Jy gaan begin deur eers 'n paar antwoorde te oeffen. Antwoord asseblief die volgende vrae oor jouself deur die nommer te maak wat jou antwoord beste beskryf. Die volgende 4 vrae is net vir oeffening.

2. **I like to watch television.**
Ek hou van televiesie te kyk.

1 Yes/ Ja
2 No/ Nee
9 Don't Know/Weet nie

3. **My friends are fun to be around (Choose one).**
Dis lekker om met my vriende (tjommies) te wees.

1 Yes/ Ja
2 No/ Nee
9 Don't Know/Weet nie

4. **In the past 12 months, how many sports have you participated in? (Choose one)**
In die afgelope 12 maande, aan hoeveel sport het jy deelgeneem?

1 None/ Geen
2
3
4
5
9 Dont' Know/ Weet nie

5. **I walk to school (Choose one).**
Ek stap skool toe.

1 Never or almost never/ Nooit of amper nooit
2 Sometimes/ Somtyds
3 Often/ Dikwels
4 All the time/ Altyd
9 Don't know/ Weet nie

Appendix D: Demographic Questionnaire

Now, lets move on to the real thing. Please answer the following questions about yourself by circling the number that best indicates your answer.

Kom ons begin met die eintlike vrae. Antwoord asseblief die volgende vrae oor jouself deur die nommer wat jou antwoord die beste beskryf te sirkel.

6. **How old are you? (Choose one)**
Hoe oud is jy?

01 **15 years/ jaar**
02 **16 years/ jaar**
03 **17 years/ jaar**
04 **18 years/ jaar**
05 **19 years/ jaar**
06 **Older than 19 years/ Ouer as 19 jaar**
9 **Don't Know/ Weet nie**

7. **What grade are you in? (Choose one)**
In watter graad is jy?

1 **Grade 10/Graad 10**
2 **Grade 11/ Graad11**
3 **Grade 12/ Graad 12**
9 **Don't Know/ Weet nie**

8. **How would you identify yourself? (Choose one)**
Hoe identifiseer jy jouself?

1 **Black/ Swart**
2 **Coloured/ Kleurling**
3 **Indian/ Indiaan**
4 **White/ Wit**
5 **Other/ Andere**
9 **Don't Know/ Weet nie**

9. **Do you live with your biological mother? (Choose one)**
Lewe jy met jou biologiese (eie) ma?

1 **Yes/ Ja**
2 **No/ Nee**
9 **Don't Know/ Weet nie**

10. **Do you live with your biological father? (Choose one)**
Lewe jy met jou biologiese (eie) pa?

1 **Yes/ Ja**
2 **No/ Nee**
9 **Don't Know/ Weet nie**

11. **Are your parents… (Choose one)**
Is jou ouers..

1 **Married/ Getrou**
2 **Divorced/ Geskei**
3 **Never Married/ Nooit getroud nie**
4 **Separated/ Bly nie saam nie**
9 **Don't Know/ Weet nie**

12. **Which of the following describes your home best? (Choose one)**
Wat van die volgende beskyf jou huis die beste?

1 **Shack/ Pandokkie**
2 **Wendy house or backyard dwelling/ Wendy huis of agteplaas woning**
3 **Tent or traditional dwelling/ Tent of traditionele woning**
4 **Brick house or flat/ Bakseen huis of woonstel**
5 **Other/ Andere**
9 **Don't Know/ Weet nie**

13. **Which of these items do you have in your home? (Mark as many as necessary)**
Wat van die volgende ietems het jy in jou huis? (merk soveel as toepaslik)

__ **Television/ Televisie**
__ **Electricity/ Eletrieseteit**
__ **Tap Water/ Kraan water**
__ **Motorcar/ Motorkar**
__ **Telephone/ Telefoon**
__ **Bicycle/ Fiets**
__ **Don't Know/ Weet nie**
__ **None**

14. **Which ONE of the following best describes how things are in your home?**
Water EEN van die volgende beskryf die beste hoe dinge is in jou huis?

1 **We don't have enough money for food.**
Ons het nie genoeg geld vir kos nie

2 **We have enough money for food, but not for other basic items such as clothes.**
Ons het genoeg geld vir kos, maar nie vir basiese ietems soos klere nie

3 **We have enough money for food and clothes but are short of many other things.**
Ons het genoeg geld vir kos en klere, maar kort baie ander dinge

4 **We have the most important things, but few luxury goods.**
Ons het die belangrikste dinge, maar min lekkernye

5 **We have money for luxury goods and extra things.**
Ons het geld vir lekkernye en nog ander dinge

15. **How are you and your father related? (Choose one)**
Wat is die verhouding tussen jou en jou vader? (Kies een)

1 **Biological / Biologiese**
2 **Adopted / Aangeneem**
3 **Stepdad/ Steefpa**
4 **Older Brother / Ouer broer**
5 **Uncle / Oom**
6 **Other / Ander**
9 **Don't Know / Weet nie**

Appendix E: Father-Son Quality Contact Time Scale

Now we are going to ask you a few questions about your father (the person who fills the role of a father in your life). Remember all questions are answered anonymously. Do not be afraid to answer honestly. Circle the number that best describes your answer.

Nou gaan ons 'n paar vrae oor jou vader (die persoon wat die rol van 'n vader in jou lewe is) vra. Onthou dat all vra woord met die konfidentialiteit beantwoord. Moet nie bang wees nie om eerlik te wees. Maak 'n kring rond die nommer wat jou aantwoord die beste beskryf.

16. **How often do you see your father? (Choose one)**
Hoe gereeld sien jy jou vader? (Kies een)

1 **Every day / Elke dag**
2 **A few days a week / 'n Paar dae 'n week**
3 **Once a week / Eenkeer 'n week**
4 **Once a month / Eenkeer 'n maand**
5 **Every few months / Elke paar maande**
6 **Once a year / Eenkeer 'n jaar**
7 **Less than once a year / Minder as eenkeer 'n jaar**
9 **Don't Know / Weet nie**

17. **I can call my father at any time of the day if I need to speak to him. (Choose one)**
Ek kan my vader eenige tyd van die dag bel as ek met hom moet praat. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

18. **I enjoy spending time with my father (Choose one)**
Ek geniet dit met my vader tyd te spandeer. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

19. **I wish my father and I spent more time together. (Choose one)**
Ek wens dat my vader en ek meer tyd saam kan spandeer. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

20. **My father and I participate in activities or hobbies together (Choose one)**
My vader en ek neem deel aan aktiwiteite en stokperdjies. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

21. **My father and I do chores or projects around the house together (Choose one)**
Ek en my vader doen saam werkies en projekte by die huis. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

22. **My father is always available to speak to me when I need him. (Choose one)**
My vader is altyd beskikbaar wanneer ek hom benodig. (Kies een)

1 **Never or almost never / Nooit of amper nooit**
2 **Sometimes / Somtyds**
3 **Often / Dikwels**
4 **All the time / Altyd**
9 **Don't know / Weet nie**

23. **Over the past month have your father and you… (Check all that apply)**
Oor die afgelope maand het jy en jou vader… (Merk almal wat van toepassing is)

__ **Watched a movie together / Saam 'n fliek gekyk**
__ **Ate together / Saam geëet**
__ **Played a sport together / 'n Sport saam gespeel**
__ **Done a project together / Saam iets ontwerp**
__ **Gone out together / Saam uitgegaan**
__ **Spent time alone / Tyd aleen saam spandeer**
__ **None**

24. **Do you look forward to spending time with your father?**
Kyk jy vorentoe om tyd saam met jou vader deur te bring?

1 **Yes / Ja**
0 **No / Nee**
7 **Don't Know / Weet nie**

Appendix F: Child-Parent Communication Apprehension Scale for Use with Young Adults

25. I feel relaxed when talking with my father about things that happened during the day.
Ek voel ontspanne wanneer ek met my vader oor die dag se gebeure praat.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

26. I have no fear in discussing problems with my father.
Ek is nie bang om my probleme met my vader te bespreek nie.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

27. I am comfortable in developing intimate conversations with my father.
Ek is gemaklik wanneer ek 'n intieme gesprek met my vader aankoop.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

28. I look forward to talks with my father.
Ek sien daarna uit om 'n gesprek met my vader te hê.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

29. When in casual conversations with my father I don't feel I have to guard what I say.
Waneer ek 'n vriendelike geselsie met my vader voer, voel ek nie dat ek moet waak wat ek sê nie.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

30. I am afraid to come right out and tell my father exactly what I mean.
Ek is bang om openhartig met my vader te gesels en hom presies te sê wat ek bedoel

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

31. I am so relaxed with my father that I can really be an open communicator with him.
Ek is ontspanne in my vader se geselskap sodat ek openlik met hom kan kommuikeer.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

32. I am tense when developing in-depth conversations with my father.
Ek is gespanne wanneer ek 'n indiepte gesprek met my vader voer.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

33. I feel strained when anticipating talks with my father.
Wanneer ek 'n gesprek met my vader afwag, voel ek gespanne.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

34. Even in casual conversations with my father, I feel anxious and must guard what I say.
Selfs in 'n vriendelike geselsie met my vader voel ek angsbevange en moet waak wat ek sê.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

35. I have no fear telling my father exactly how I feel.
Ek is nie bang om vir my vader presies te sê hoe ek voel nie.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

36. I have no anxiety about telling my father my needs.
Ek voel geen angs om my vader van my behoeftes te vertel nie.

1) Strongly disagree / Verskil hewig	2) Disagree / Verskil	3) Don't know / Weet nie	4) Agree / Stem saam	5) Strongly agree/ Stem hewig saam

Appendix G: Revised CRPBI Acceptance Subscale

My father is a person who . . .
My vader is iemand wat…

37. makes me feel better after talking over my worries with her/him.
my beter laat voel nadat ek my kwellings met hom megedeel het.

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

38. smiles at me very often.
gereeld vir my glimlag

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

39. is able to make me feel better when I am upset.
my beter laat voel wanneere ek onsteld is.

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

40. enjoys doing things with me.
dit geniet om dinge met my te doen

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

41. cheers me up when I am sad.
my bemoedig wanneer ek treurig voel

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

42. gives me a lot of care and attention.
vir my baie sorg en aandag gee

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

43. makes me feel like the most important person in her/his life.
my laat voel dat ek die belangrikste persoon in sy lewe is.

(1) Not like him / Nie soos hy nie **(2) Somewhat like him / 'n Bietjie soos hy** **(3) A lot like him / Baie soos hy**

My father is a person who . . .
My vader is iemand wat…

44. believes in showing his love for me.
glo daaraan om vir my sy liefde te toon

(1) Not like him / Nie soos hy nie	(2) Somewhat like him / 'n Bietjie soos hy	(3) A lot like him / Baie soos hy

45. often praises me.
dikwels vir my prys.

(1) Not like him / Nie soos hy nie	(2) Somewhat like him / 'n Bietjie soos hy	(3) A lot like him / Baie soos hy

46. is easy to talk to
ek maklik mee kan gesels.

(1) Not like him / Nie soos hy nie	(2) Somewhat like him / 'n Bietjie soos hy	(3) A lot like him / Baie soos hy

Appendix H: Problem Oriented Screening Instrument for Teenagers

For the following questions, please think about the past year (or 12 months) in terms of your behaviour when answering these questions. Please answer the following questions about yourself by circling the number that best indicates your answer

Whenever you see the word "drugs" in the questions below, this means dagga, tik, mandrax, ecstasy, cocaine, heroine, white pipes, buttons and other illegal drugs

Vir die volgende vrae, dink asseblief oor jou gedrag in die afgelope jaar (12 maande) wanneer jy die volgende vrae antwoord. Antwoord asseblief die volgende vrae oor jouself deur 'n kring rond die nommer te maak wat jou antwoord beste beskryf.

Wanneer jy die woord dwelmiddels of drugs in die volgende vrae sien bedoel dit dagga, tik, ecstasy, cocaine, heroine, "white pipes", buttons en ander onwettige dwelmiddels.

RESPONSE OPTIONS FOR THE NEXT QUESTIONS (1 to 133) ARE:

(Y) Yes (N) No (D) Don't Know

PLEASE CIRCLE YOUR ANSWER ON THE ANSWER SHEET

1	Do you have so much energy you don't know what to do with it?	Het jy so baie energie dat jy nie weet wat om daarmee te doen nie?
2	Do you brag?	Brag jy graag?
3	Do you get into trouble because you use drugs or alcohol at school?	Beland jy in die moelikheid omdat jy dwelmmiddels (drugs) of alkohol gebruik?
4	Do your friends get bored at parties when there is no alcohol?	Word jou vriende (tjommies) vervelig (boring) as daar geen alkohol by parties is nie?
5	Is it hard for you to ask for help from others?	Is dit moeilik om vir anders om hulp te vra?
6	Has there been adult supervision at the parties you have gone to recently?	Was daar ouer toesig by die parties wat jy onlangs bygewoon het?
7	Do the adults in your home argue a lot?	Argumenteer (skel) die grootmense baie in jou huis?
8	Do you usually think about how your actions will affect others?	Dink jy gewoonlik aan hoe jou gedrag anders sal beinvloed?
9	Have you recently lost or gained a lot of weight that worries you?	Het jy onlangs gewig verloor of aangesit wat jou pla?
10	Have you ever had sex with someone who injected illegal drugs?	Het jy ooit seks gehad met iemand wat hulself met onwetlike dwelmmiddels (drugs) inspuit?
11	Do you often feel tired?	Voel jy dikwels moeg?
12	Have you had trouble with stomach pain or nausea?	Het jy 'n probleem met maag pyn of naarheid?
13	Do you get easily scared?	Word jy maklik bang?

14	Have any of your best friends dated regularly during the past year?	Het enige van jou beste vriende (tjommies) met ‘n vaste burg / girlie gespeen in die vorige jaar?
15	Have you dated regularly in the past year?	Het jy met ‘n vaste birk / girlie gespien in die vorige jaar?
16	Are most of your friends older than you are?	Is die meeste van jou vriende (tjommies) ouer as jy?
17	Do you have less energy than you think you should?	Het jy minder energie as wat jy dink jy moet he?
18	Do you get frustrated easily?	Word jy maklik frustreed?
19	Do you threaten to hurt people?	Dreig jy om mense seer te maak?
20	Do you feel alone most of the time?	Voel jy alleen meeste van die tyd?
21	Do you sleep either too much or too little?	Slaap jy te veel of te min?
22	Do you swear or use foul language?	Vloek jy of gebruik jy slegte taal?
23	Are you a good listener?	Is jy ‘n goeie luisteraar (listener)?
24	Do your parents or guardians like your friends?	Hou jou ouers of voogde van jou vriende (tjommies)?
25	Have you lied to anyone in the past week?	In die week wat verby is, het jy vir enige iemand gelieg?
26	Do your parents or guardians refuse to talk with you when they are angry with you?	Weier jou ouers of voog om met jou te praat wanneer hulle kwaad is met jou?
27	Do you rush into things without thinking about what could happen?	Is jy hastig om dinge te doen sonder dat jy aan die gevolge dink?
28	Is your free time spent mainly hanging out with friends?	Spandeer jy meeste van jou vrye tyd om net te ontspan (chill) met jou vriende (tjommies)?
29	Have you accidentally hurt yourself or someone else while high on alcohol or drugs?	Het jy jouself of iemand anders per ongeluk beseer terwyl jy “high” was op alkohol of dwelmmiddels (drugs)?
30	Have you had any accidents or injuries that still bother you?	Het jy enige ongelukke of beseerings gehad wat jou nog pla?
31	Are you a good speller?	Kan jy goed spel?
32	Do you have friends who damage or destroy things on purpose?	Het jy vriende (tjommies) wat dinge aspris vernietig of beskadig het?
33	Have the whites of your eyes ever turned yellow?	Het die wit gedeelte van jou oe ooit geel gedraai?
34	Do your parents or guardians usually know where you are and what you are doing?	Weet jou ouers of voog gewoonlik waar jy is en wat jy doen?
35	Do you miss out on activities because you spend too much money on drugs or alcohol?	Woon jy nie aktiwiteite by nie omdat jy te veel geld spandeer op dwelmmiddels (drugs) of alkohol?
36	Do people pick on you because of the way you look?	Veroorsaak jou optrede dat mense op jou nommer druk?
37	Do you and your parents or guardians do lots of things together?	Doen jy en jou ouers of voog baie dinge saam?
38	Do you get good marks in some subjects and fail others?	Kry jy goeie punte in sekere vakke en druip ander vakke op skool?
39	Do you feel nervous most of the time?	Voel jy senuweeagtig (nervous) meeste van die tyd?
40	Have you stolen things?	Het jy iets gesteel?

41	Have you ever been told you are hyperactive?	Het iemand al ooit vir jou gese dat jy "hyperactive" is?
42	Do you ever feel you are addicted to alcohol or drugs?	Voel jy ooit dat jy verslaaf is aan alkolhol of dwelmmiddels (drugs)?
43	Are you a good reader?	Is jy iemand wat goed kan lees?
44	Do you have a hobby that you are really interested in?	Het jy 'n stokperdjie (hobbie) of waarin jy regtig belang stel?
45	Do you feel people are against you?	Voel jy dat mense teen jou is?
46	Do you participate in team sports?	Neem jy deel aan spansport?
47	Have you ever read a book cover to cover for your own enjoyment?	Het jy al ooit 'n boek van voor tot agter gelees vir jou eie genot (pleasure)?
48	Do your friends bring drugs to parties?	Bring jou vriende (tjommies) dwelmmiddels (drugs) parties toe?
49	Do you get into fights a lot?	Raak jy baie betrokke met gestryery?
50	Do you have a bad/short temper?	Raak jy gou kwaad?
51	Do your parents or guardians listen to you when you talk to them?	Luister jou ouers of voog vir jou wanneer jy met hulle praat?
52	Have you started using more and more drugs or alcohol to get the effect you want?	Het jy meer en meer alkohol of dwelmmiddels (drugs) begin gebruik om die effek te kry wat jy wil he?
53	Do your parents or guardians have rules about what you can and can't do?	Het jou ouers of voog reels (bepalings) oor wat jy mag en nie mag doen nie?
54	Do people tell you that you are careless?	Se mense vir jou dat jy roekeloos (never minded) is?
55	Are you stubborn?	Is jy hardkoppig (stubborn)?
56	Do any of your best friends go out on school nights without permission from their parents or guardians?	Gaan enige van jou beste maats saans uit wanneer dit skool is, sonder toestemming van hul ouers of voog?
57	Do you have trouble getting your mind off things?	Het jy moelikhied om onstlae te raak van gedagtes?
58	Have you ever threatened anyone with a weapon?	Het jy al iemand gedreig met 'n wapen?
59	Do you ever leave a party because there is no alcohol or drugs?	Verlaat jy ooit 'n party omdat daar geen alkohol of dwelmmiddels (drugs) is nie?
60	Do your parents or guardians know what you really think or feel?	Weet jou ouers of voog wat jy eindelik dink of voel?
61	Do you often act on the spur of the moment (impulsively or without thinking)?	Reageer jy gewoonklik sonder om te dink?
62	Do you usually exercise or do activities to keep fit for a half-hour or more at least once a week?	Oefen jy gewoonlik of doen jy aktiwiteite vir omtrent half uur per of meer week om fiks te bly?
63	Do you have a constant desire for alcohol or drugs?	Het jy 'n aanhoudende verlange na alkohol of dwelmmiddels (drugs)?
64	Is it easy to learn new things?	Is dit maklik om nuwe dinge (iets nuuts) aan te leer?
65	Do you have trouble with your breathing or with coughing?	Het jy enige probleme met asemhaling of met hoes?
66	Do people your own age like and respect you?	Respekteer en hou mense van jou, in jou ouderdomsgroep?
67	Does your mind wander a lot?	Dwaal jou gedagtes baie?

68	Do you hear things noone else around you hears?	Hoor jy dinge wat niemand anders rondom jou hoor nie?
69	Do you have trouble concentrating?	Het jy probleme om te konsentreer?
70	Do adults in your home often have arguments which involve shouting and screaming?	Het grootmense in jou huis gereeld stryery wat geskree en gegil insluit?
71	Have you had a car accident while high on alcohol or drugs?	Het jy 'n motor ongeluk gehad terwyl jy "high" was op alkohol of dwelmmiddels (drugs)?
72	Do you forget things you did while drinking or using drugs?	Vergeet jy dinge wat jy gedoen het terwyl jy alkohol gedrink, of dwelmmiddels (drugs) gebruik het?
73	During the past month have you driven a car while you were drunk or high?	Gedurende die afgelope maand het jy 'n kar gery terwyl jy dronk was of "high"?
74	Are you louder than other people your age?	Is jy meer raserig (loud) as mense van jou ouderdom?
75	Are most of your friends younger than you are?	Is meeste van jou vriende (tjommies) jonger as jy?
76	Have you ever damaged someone else's property on purpose?	Het jy al ooit iemand se besittings met opset beskadig?
77	Do adults in your home like chatting with you and being with you?	Hou grootmense in jou huis daarvan om saam met jou te gesels en om saam met jou te wees?
78	Have you ever spent the night away from home when your parents or guardians didn't know where you were?	Het jy al ooit 'n aand weg van die huis gebly sonder dat jou ouers of voog weet waar jy is?
79	Do any of your friends take part in team sports?	Neem enige van jou vriende (tjommies) deel aan spansport?
80	Are you suspicious of other people?	Is jy agterdogtig (suspicious) van ander mense?
81	Have you been absent from school for 5 or more than 5 days in the past year?	Was jy 5 of meer dae afwesig van skool in die laaste jaar?
82	Are you usually pleased with how well you do in activities with your friends?	Is jy gewoonlik tevrede met hoe goed jy vaar in aktiwiteite met jou vriende (tjommies)?
83	Does alcohol or drug use cause your moods to change quickly like from happy to sad or vice versa?	Veroorsaak die gebruik van alkohol of dwelmmiddels (drugs) jou buie (moods) om skielik te verander, soos van gelukkig tot hartseer, of omgekeerd?
84	Do you feel sad most of the time?	Voel jy hartseer meeste van die tyd?
85	Do you miss school or arrive late for school because of your alcohol or drug use?	Is jy afwesig of daag jy laat op vir skool omdat jy alkohol of dwelmmiddels (drugs) gebruik?
86	Do your family or friends ever tell you that you should cut down on your drinking or drug use?	Se jou familie lede of vriende (tjommies) ooit vir jou dat jy minder alkohol of dwelmmiddels (drugs) moet gebruik?
87	Do you have serious arguments with friends or family members because of your drinking or drug use?	Het jy ernstige probleme met vriende (tjommies) of familie lede omdat jy gedrink is of dwelmmiddels (drugs) gebruik?
88	Do you tease others a lot?	Terg jy anders baie?

89	Do you have trouble sleeping?	Het jy probleme om te slaap?
90	Do you have trouble with written work?	Vind jy dit moeilik om skriftelike werk te doen?
91	Does your alcohol or drug use ever make you do something you would not normally do -like breaking rules, breaking the law or having sex with someone?	Veroorsaak jou alkohol of drug gebruik dat jy ooit iets doen wat jy nie gewoonlik doen nie, soos byvoorbeeld, die reels (bepalings) breek, die wet oortree, of seks het met iemand?
92	Do you feel you lose control and get into fights?	Voel jy dat jy beheer (control) verloor en dan in gevegte beland?
93	During the past month, have you bunked school without your parents or guardians knowing?	Gedurende die laaste maand, het jy stokkies gedraai (gedros of gebunk) sonder dat jou ouers of voog daarvan weet?
94	Do you have trouble getting on with any of your friends because of your alcohol or drug use?	Het jy probleme om oor die weg te kom met enige van jou vriende (tjommies) omdat jy alkohol of dwelmmiddels (drugs) gebruik?
95	Do you have a hard time following instructions?	Vind jy dit moeilik om opdragte uit te voer?
96	Are you good at talking your way out of trouble?	Kan jy maklik jouself uit die moeilikheid praat?
97	Do you have friends who have hit or threatened to hit someone for nothing?	Het jy vriende (tjommies) wat iemand al geslaan het, of gedreig het om hulle te slaan sonder enige rede?
98	Do you ever feel you can't control your alcohol or drug use?	Het jy ooit gevoel dat jy nie beheer (control) het oor alkohol of dwelmmiddels (drugs) gebruik?
99	Do you have a good memory?	Is jou geheue (memory) goed?
100	Do adults in your home know what your interests are?	Weet die grootmense in jou huis wat jou belangstelings is?
101	Do your parents or guardians usually agree about how to handle you?	Stem jou ouers of voog gewoonlik saam oor hoe om jou te hanteer?
102	Do you have a hard time planning and organizing?	Is dit moeilik vir jou om te beplan en te organiseer?
103	Do you have trouble with maths?	Is wiskunde swaar vir jou?
104	Do your friends bunk school a lot without their parents or guardians knowing?	Dros jou vriende (tjommies) gereeld, sonder dat hul ouers of voogde daarvan weet?
105	Do you worry a lot?	Bekommer jy jouself baie?
106	Does school sometimes make you feel stupid?	Laat skool jou soms simple voel?
107	Are you able to make friends easily in a new group?	Maak jy maklik vriende (tjommies) in 'n nuwe groep?
108	Do you often feel like you want to cry?	Voel jy gereeld dat jy wil huil?
109	Are you afraid to be around people?	Is jy bang om tussen mense te wees?
110	Do you have friends who have stolen things?	Het jy vriende (tjommies) wat al iets gesteel het?
111	Do you want to be a member of any organized group, team, or club?	Wil jy graag 'n lid wees van enige ge-organiseerede groep, span (team) of klub?

112	Do you think it's a bad idea to trust other people?	Dink jy dit is 'n slegte idee om ander mense te vertrou (trust)?
113	Do you enjoy doing things with people your own age?	Geniet jy om dinge te doen met mense van jou ouderdomsgroep?
114	Do you feel you study longer than your classmates and still get poorer marks?	Voel jy dat jy langer as jou klasmaats studeer maar jy kry nog steeds slegte punte?
115	Do you go out for fun on school nights without your parents' or guardians' permission?	Gaan jy saans uit vir pret (for fun), wanneer dit skool is, sonder jou ouers of voog se toestemming?
116	Is school hard for you?	Is skool moeilik vir jou?
117	On most days, do you watch more than two hours of TV?	Op die meeste dae, kyk jy meer as twee uur TV?
118	Are you restless and can't sit still?	Is jy onrustig (restless) en kan jy nie stil sit nie?
119	Do you have trouble finding the right words to say what you are thinking?	Is dit swaar vir jou om die regte woorde te kry om jou gedagtes (mind) uit te spreek?
120	Do you shout a lot?	Skree jy baie?
121	Have you ever had sex without using a condom?	Het jy ooit seks gehad sonder die gebruik van 'n kondom?
122	Have you ever had sex?	Het jy al ooit seks gehad?
123	Are you waiting to have sex until you are older?	Wag jy tot jy ouer is om seks te he?
124	Have you ever had any kind of sexual contact with anyone?	Het jy al ooit enige soort seksuele kontak gehad met iemand?
125	Did you have sex before your 15th birthday?	Het jy seks voor jou 15de verjaarsdag (birthday) gehad?
126	Have you ever been high on drugs or alcohol when you had sex with someone?	Het jy al seks gehad met iemand wanneer jy "high" was op dwelmmiddels (drugs) of alkohol?
127	Have you had sex with two or more people in the past 3 months?	Het jy seks met twee of meer mense gehad in die laaste 3 maande?
128	Have you ever had anal sex (this means when the penis enters the anus)?	Het jy al ooit anale seks gehad? (dit beteken dat die penis die anus penetreer gedurende seks)
129	Have you ever been sexually involved with someone who is more than 5 years older than you?	Was jy al ooit seksueel betrokke met iemand wat meer as 5 jaar ouer as jy is?
130	Have any of your closest friends had sex?	Het enige van jou naaste/ boesem vriende (tjommies) al seks gehad?
131	Have you ever thought your partner might be pregnant?	Het jy al ooit gedink jou seks partner swanger (pregnant) mag wees?
132	Have you been drunk in the past two weeks?	Was jy dronk in die laaste twee weke?
133	During the last two weeks, have you used any drugs other than alcohol to get high?	In die laaste twee weke, het jy enige dwelmmiddels (drugs), behalwe alkohol, gebruik om jou "high" te laat voel?

Thank you for you participation.

Dankie vir jou aandeel.

Appendix I: Father-Son Quality Contact Time Scale: Exploratory Principal Component Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.909	35.067	35.067	4.909	35.067	35.067	3.128	22.345	22.345
2	1.320	9.426	44.493	1.320	9.426	44.493	2.429	17.349	39.695
3	1.217	8.693	53.186	1.217	8.693	53.186	1.889	13.491	53.186
4	.959	6.850	60.036						
5	.863	6.166	66.202						
6	.806	5.757	71.959						
7	.734	5.241	77.199						
8	.615	4.393	81.592						
9	.578	4.125	85.718						
10	.511	3.651	89.368						
11	.432	3.085	92.453						
12	.408	2.917	95.370						
13	.348	2.488	97.858						
14	.300	2.142	100.000						

Appendix J: Father-Son Quality Contact Time Scale: Item-Total Statistics

Father-Son Quality Contact Time Scale	Scale if Item Deleted		Corrected Item-Total *r*	Squared Multiple *r*	α if Item Deleted
	Mean	Variance			
1. How often do you see your father?	13.150	34.842	.428	.276	.826
2. I can call father at any time of day if I need to speak to him	16.478	36.044	.603	.503	.795
3. I enjoy spending time with my father	16.509	36.529	.615	.488	.794
4. I wish my father and I spent more time together	16.679	41.711	.227	.216	.826
5. My father and I participate in hobbies and activities together	17.253	37.523	.589	.434	.797
6. My father and I do chores or projects around the house together	17.173	37.271	.566	.431	.798
7. My father is always available to speak to me when I need him	16.371	35.219	.678	.546	.787
Over the past month have you and you father…					
8. …watched a movie together?	17.762	42.324	.472	.325	.810
9. …ate together?	17.596	42.765	.455	.369	.812
10. …played a sport together?	18.039	42.760	.453	.299	.812
11. …done a project together?	17.960	42.403	.479	.389	.811
12. …gone out together?	17.731	42.404	.465	.361	.811
13. …spent time alone together?*	17.984	43.436	.316	.161	.817
14. Do you look forward to spending time with your father?	17.470	43.250	.478	.389	.813

* Inter-item total correlation lower than .20 and item deleted.

Appendix K: Revised C-PCA, YA and Internal Consistency

Child–Parent Communication Apprehension Scale for Use With Young Adults	Scale if Item Deleted		Corrected Item-Total *r*	Squared Multiple *r*	α if Item Deleted
	Mean	Variance			
1. I feel relaxed when talking with my father	22.9726	30.862	.610	.447	.774
2. I have no fear discussing problems with my father	22.9696	31.127	.578	.377	.779
3. I am comfortable in developing intimate conversations with my father	23.2766	31.585	.571	.363	.780
4. I look forward to talks with my father	22.7629	31.755	.587	.392	.778
5. Even in casual conversation I don't have to guard what I say*	23.0821	33.466	.403	.185	.804
7. I am so relaxed I can be a open communicator with my father	23.2523	31.043	.594	.369	.776
11. I have no fear in telling my father exactly how I feel	22.7477	32.397	.453	.259	.798
12. I have no anxiety about telling my father my needs	22.5957	33.638	.395	.220	.805

* Inter-item total correlation lower than .20 and item deleted.

Appendix L: Substance Abuse Risk Subscale: Item-Total Statistics

POSIT Substance Abuse Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
3. Do you get into trouble because you use alcohol and drugs at school?*	4.2568	26.240	.189	.810
29. Have you accidentally hurt yourself or someone else while high on alcohol or drugs?	4.2145	24.199	.481	.791
35. Do you miss out on activities because you spend too much money on drugs or alcohol?	4.2931	24.656	.484	.792
42. Do you ever feel you addicted to alcohol or drugs?	4.1964	23.764	.524	.788
52. Have you started using more alcohol or drugs to get the effect you want?	4.2175	23.825	.533	.787
59. Do you ever leave a party because there is no alcohol or drugs?	4.2598	25.544	.299	.803
63. Do you have a constant desire for drugs or alcohol?	4.2931	25.432	.368	.799
71. Have you ever had a car accident while high on alcohol or drugs?	4.4411	26.829	.249	.805
72. Do you forget things you did while drinking or using drugs?	4.2024	24.750	.390	.798
73. During the past month have you driven a car while you were drunk or high?	4.4018	26.247	.329	.801
83. Does alcohol or drugs cause your mood to change quickly like from happy to sad or vice versa?	3.9577	23.168	.498	.790
85. Do you miss school or arrive late for school because of your alcohol or drug use?	4.4079	26.024	.406	.799
86. Do your family or friends ever tell you that you should cut down on your drinking or drug use?	3.9456	23.585	.427	.796
87. Do you have serious arguments with friends or family members because of your drinking or drug use?	4.3323	25.338	.427	.796
91. Does your alcohol or drug use ever make you do something you would not normally do – like breaking rules, breaking the law or having sex with someone?	4.0544	23.324	.511	.789
94. Do you have trouble getting on with any of your friends because of your alcohol or drug use?	4.3716	26.246	.311	.802
98. Do you ever feel you can't control your alcohol or drug use?	4.2266	25.200	.349	.800

* Inter-item total correlation lower than .20 and item deleted.

Appendix M: Physical Health Risk Subscale: Item-Total Statistics

POSIT Physical Health Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
9. Have you recently lost or gained a lot of weight that worries you?	5.1903	10.645	.335	.480
10. Have you ever had sex with someone who injected illegal	5.5831	12.565	.116	.535
12. Have you had trouble with stomach pain or nausea?	4.9970	10.433	.297	.489
17. Do you have less energy than you think you should?	5.0846	10.769	.282	.495
21. Do you sleep either too much or too little?	4.5408	10.770	.264	.500
30. Have you had any accidents or injuries that still bother you?	5.0967	11.045	.206	.518
33. Have the whites of your eyes ever turned yellow?*	5.1903	11.549	.157	.531
36. Do people pick on you because of the way you look?*	5.0665	11.262	.181	.525
65. Do you have trouble with your breathing or with coughing?	5.3112	10.997	.288	.495
121. Have you ever had sex without using a condom?*	5.0846	11.193	.175	.528

* Inter-item total correlation lower than .20 and item deleted.

Appendix N: Mental Health Risk Subscale: Item-Total Statistics

POSIT Mental Health Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
1. Do you have so much energy you don't know what to do with it?*	12.2870	54.775	.137	.769
10. Have you ever had sex with someone who injected illegal drugs?*	12.9909	56.397	.144	.764
13. Do you get easily scared?	12.7039	54.451	.213	.762
18. Do you get frustrated easily?	12.0332	53.341	.229	.763
20. Do you feel alone most of the time?	12.5045	51.693	.392	.751
27. Do you rush into things without thinking about what could happen?	12.4048	51.496	.395	.751
39. Do you feel nervous most of the time?	12.5952	52.860	.313	.756
41. Have you ever been told you are hyperactive?	12.1480	53.030	.244	.762
45. Do you feel people are against you?	12.4048	52.120	.356	.753
57. Do you have trouble getting your mind off things?	12.0060	50.339	.448	.746
61. Do you often act on the spur of the moment (impulsively or without thinking)?	12.2024	52.332	.320	.756
68. Do you hear things no one else around you hears?	12.6375	53.541	.289	.758
69. Do you have trouble concentrating?	12.2870	49.963	.489	.743
81. Have you been absent from school for 5 or more than 5 days in the past year?*	12.3837	53.952	.187	.766
84. Do you feel sad most of the time?	12.7795	52.985	.393	.752
89. Do you have trouble sleeping?	12.7946	53.091	.379	.753
92. Do you feel you lose control and get into fights?	12.6344	54.039	.229	.762
95. Do you have a hard time following instructions?	12.7523	54.193	.264	.759
105. Do you worry a lot?	12.4169	50.953	.430	.748
108. Do you often feel like you want to cry?	12.6073	52.057	.388	.751
109. Are you afraid to be around people?	12.9033	55.136	.247	.760
118. Are you restless and can't sit still?	12.4260	51.439	.393	.751

* Inter-item total correlation lower than .20 and item deleted.

Appendix O: Negative Family Relations Risk Subscale: Item-Total Statistics

POSIT Negative Family Relations Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
7. Do the adults in your home argue a lot?	6.0695	16.707	.384	.661
26. Do your parents or guardians refuse to talk with you when they are angry with you?	6.0332	17.578	.256	.685
34. Do your parents or guardians usually know where you are and what you are doing?	6.1480	17.090	.349	.667
37. Do you and your parents or guardians do lots of things together?	6.0000	16.521	.404	.657
51. Do your parents or guardians listen to you when you talk to them?	6.5680	18.046	.436	.661
53. Do your parents or guardians have rules about what you can and can't do?*	6.4502	19.642	.047	.710
60. Do your parents or guardians know what you really think or feel?	5.5438	17.400	.323	.672
70. Do adults in your home often have arguments which involve shouting and screaming?	6.0846	16.702	.379	.662
77. Do adults in your home like chatting with you and being with you?	6.3716	17.598	.407	.660
100. Do adults in your home know what your interest is?	6.3837	17.201	.434	.655
101. Do you parents or guardians usually agree about how to handle you?	6.2628	17.528	.347	.668

* Inter-item total correlation lower than .20 and item deleted.

Appendix P: Negative Peer Relations Risk Subscale: Item-Total Statistics

POSIT Negative Peer Relations Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
4. Do your friends get bored at parties when there is no alcohol?	6.2840	12.828	.283	.501
16. Are most of your friends older than you?*	6.4502	14.321	.033	.574
20. Do you feel alone most of the time?*	6.6828	13.932	.120	.546
24. Do your parents or guardians like your friends?*	6.8097	14.045	.179	.529
32. Do you have friends who damage or destroy things on purpose?	6.6193	12.491	.341	.483
48. Do your friends bring drugs to parties?	6.6103	12.166	.401	.465
75. Are most of your friends younger than you?*	6.8248	15.151	-.048	.583
97. Do you have friends who have hit or threatened to hit someone for nothing?	6.4532	12.018	.387	.467
104. Do your friends bunk school a lot without their parents or guardians knowing?	6.5347	12.801	.302	.495
110. Do you have friends who have stolen things?	6.1511	12.195	.355	.477

* Inter-item total correlation lower than .20 and item deleted.

Appendix Q: Educational Under-Attainment Risk Subscale: Item-total Statistics

POSIT Educational Under-Attainment Risk Subscale	Scale if Item Deleted		Corrected	α if Item
	Mean	Variance	Item-Total *r*	Deleted
1. Do you have so much energy you don't know what to do with it?*	18.6012	58.907	.120	.715
17. Do you have less energy than you think you should?	18.8066	57.332	.260	.705
18. Do you get frustrated easily?	18.3474	57.276	.222	.708
23. Are you a good listener?	18.9789	58.293	.227	.707
27. Do you rush into things without thinking about what could happen?	18.7190	56.233	.321	.700
31. Are you a good speller?	18.6647	58.024	.213	.708
38. Do you get good marks in some subjects and fail others?*	17.8248	58.842	.166	.711
41. Have you ever been told you are hyperactive?*	18.4622	57.740	.183	.711
43. Are you a good reader?*	18.8640	58.857	.165	.711
47. Have you ever read a book cover to cover for your own enjoyment?*	18.3716	59.677	.052	.722
54. Do people tell you that you are careless?	18.7160	56.574	.290	.702
57. Do you have trouble getting your mind off things?	18.3202	54.788	.395	.693
61. Do you often act on the spur of the moment (impulsively or without thinking)?	18.5166	56.947	.260	.705
64. Is it easy to learn new things?	19.0785	58.757	.203	.708
67. Does your mind wander a lot?	17.9396	56.530	.322	.700
90. Do you have trouble with written work	19.0634	57.302	.324	.701
95. Do you have a hard time following instructions?	19.0665	56.808	.385	.697
96. Are you good at talking your way out of trouble?*	18.8399	62.292	-.121	.731
99. Do you have a good memory?	18.9789	58.148	.241	.706
102. Do you have a hard time planning and organizing?	18.8218	56.723	.303	.701
103. Do you have trouble with maths?	18.4320	57.240	.223	.708
106. Does school sometimes make you feel stupid?	18.9063	56.315	.343	.698
114. Do you feel you study longer than your classmates and still get poorer marks?	18.8338	57.187	.264	.704
116. Is school hard for you?	18.7764	55.356	.406	.693
118. Are you restless and can't sit still?	18.7402	55.011	.409	.693
119. Do you have trouble finding the right words to say what you are thinking?	18.4502	55.551	.342	.698

* Inter-item total correlation lower than .20 and item deleted.

Appendix R: Social Relations Risk Subscale: Item-Total Statistics

POSIT Social Relations Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
5. Is it hard for you to ask for help from others?*	5.8489	10.523	.189	.375
8. Do you usually think about how your actions will affect others?*	5.9063	11.328	.061	.422
16. Are most of you friends older than you are?*	5.6677	10.792	.111	.407
27. Do you rush into things without thinking about what could happen?*	5.8006	10.512	.189	.376
61. Do you often act on the spur of the moment (impulsively or without thinking)?*	5.5982	10.538	.176	.380
66. Do people your own age like and respect you?	6.1843	11.017	.252	.365
82. Are you usually pleased with how well you do in activities with your friends?*	6.1390	11.065	.179	.382
96. Are you good at talking your way out of trouble?*	5.9215	11.800	-.008	.443
107. Are you able to make friends easily in a new group?*	5.9063	10.637	.190	.376
112. Do you think it's a bad idea to trust other people?*	5.7190	10.681	.151	.390
113. Do you enjoy doing things with people your own age?	6.1722	10.773	.264	.358

* Inter-item total correlation lower than .20 and item deleted.

Appendix S: Leisure and Recreation Risk Subscale: Item-Total Statistics

POSIT Leisure and Recreation Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
6. Has there been adult supervision at the parties you have gone to recently?*	7.0151	11.021	.125	.332
14. Have any of your best friends dated regularly during the past year?*	7.4109	11.722	.059	.354
15. Have you dated regularly in the past year?*	6.9154	11.405	.047	.365
18. Do you get frustrated easily?*	6.8429	11.399	.058	.359
44. Do you have a hobby that you are really interested in?	7.6586	11.432	.201	.312
46. Do you participate in team sports?	7.3112	10.433	.247	.281
56. Do any of your best friends go out on school nights without permission from their parents or guardians?*	7.1057	11.119	.142	.325
62. Do you usually exercise or do activities to keep fit for a half-hour or more at least once a week?	7.3807	10.752	.211	.298
79. Do any of your friends take part in team sports?*	7.5921	11.473	.160	.322
111. Do you want to be a member of any organized group, team, or club?	7.3867	10.808	.233	.292
115. Do you go out for fun on school nights without your parents' or guardians' permission?*	7.6193	11.788	.095	.342
117. On most days, do you watch more than two hours of TV?*	6.6647	12.072	-.046	.402

* Inter-item total correlation lower than .20 and item deleted.

Appendix T: Aggressive Behaviour and Delinquency Risk Subscale: Item-Total Statistics

POSIT Aggressive Behaviour and Violent Behaviour Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
2. Do you brag?*	12.2749	36.073	.147	.716
19. Do you threaten to hurt people?	12.2024	33.398	.401	.693
22. Do you swear or use foul language?	11.0453	34.783	.262	.707
25. Have you lied to anyone in the past week?	11.3202	34.097	.268	.707
40. Have you stolen things?	11.5559	33.011	.334	.699
49. Do you get into fights a lot?	12.3021	34.333	.339	.700
50. Do you have a bad/short temper?	11.7130	32.339	.411	.690
55. Are you stubborn?	11.7160	32.689	.389	.693
58. Have you ever threatened anyone with a weapon?	11.9970	32.518	.414	.690
74. Are you louder than other people your age?	12.0574	34.569	.252	.708
76. Have you ever damaged someone else's property on purpose?	12.0785	33.067	.381	.694
78. Have you ever spent the night away from home when you parents or guardians didn't know where you were?	11.8792	34.246	.229	.712
80. Are you suspicious of other people?	11.6133	33.947	.265	.707
88. Do you tease others a lot?	11.6979	34.321	.226	.712
93. During the past month, have you bunked school without your parents or guardians knowing?	12.1420	34.025	.298	.703
120. Do you shout a lot?	12.1027	33.608	.330	.700

* Inter-item total correlation lower than .20 and item deleted.

Appendix U: HIV/STD Risk Behaviours Subscale: Item-Total Statistics

POSIT HIV/STD Risk Subscale	Scale if Item Deleted		Corrected Item-Total *r*	α if Item Deleted
	Mean	Variance		
121. Have you ever had sex without using a condom?	7.5861	27.855	.557	.764
122. Have you ever had sex?	7.2719	26.386	.649	.753
123. Are you waiting to have sex until you are older?	7.1329	27.770	.507	.769
124. Have you ever had any kind of sexual contact with anyone?	6.9547	29.110	.388	.781
125. Did you have sex before your 15th birthday?	7.6828	28.605	.413	.779
126. Have you ever been high on drugs or alcohol when you had sex with someone?	7.9003	29.993	.465	.775
127. Have you had sex with two or more people in the past 3 months?	7.9758	31.218	.363	.783
128. Have you ever had anal sex (this means when the penis enters the anus)?	7.8610	30.575	.361	.783
129. Have you ever been sexually involved with someone who is more than 5 years older than you?	7.7885	29.828	.413	.778
130. Have any of your closest friends had sex?	6.7704	30.244	.330	.785
131. Have you ever thought your partner might be pregnant?	7.8066	30.078	.400	.779
132. Have you been drunk in the last two weeks?	7.6888	30.094	.334	.785
133. During the last two weeks, have you used any drugs other than alcohol to get high?	7.7915	30.929	.279	.789