

THE EFFECT OF FAMILY STRUCTURE ON THE SEXUAL
BEHAVIOUR CHOICES OF FEMALE ADOLESCENTS IN
SOUTH AFRICA

BY

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DECLARATION

I, Laura Candice Crosby declare that this research report is my own original work.

It is being submitted to the Faculty of Humanities and Social Sciences,
University of the Witwatersrand, Johannesburg

It is submitted in the partial fulfilment of the requirements for the degree of Master of
Arts in the field of Demography and Population Studies.

To the best of my knowledge, it has not been submitted before in part or in full for any
degree or examination at this or any other university.

.....

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LIST OF ABBREVIATIONS

CI	Confidence Interval
DHS	Demographic and Health Survey
OR	Odds Ratio
RHRU	Reproductive Health and Research Unit
SADHS	South African Demographic and Health Survey
SPSS	Statistical Package for Social Scientists
Stats SA	Statistics South Africa

ABSTRACT

The sexual behavioural choices made by adolescents is a salient issue in South Africa. The practice of risky sexual behaviour puts one at risk of unwanted pregnancy, STI and HIV infection. These behaviours affect one not only physically but mentally as well. Adolescence is a “turbulent” time in ones life and risky sexual behaviour makes this period all the more difficult and could result in disastrous consequences. This is due to the fact that sexual health and sexual practices of adolescents has implications for morbidity and mortality rates in South Africa.

In order to address the issue of risky sexual behavioural choices made by adolescents, this study has examined the effect of family characteristics on adolescent sexual behavioural choices. The 1998 South African Demographic and Health Survey data was used. The data set was a nationally representative data set with a probability sample of 12000 women aged 15-49 taking part in it. Analysis for this study was based on 2373 female adolescent respondents aged 15-19. The association between individual and family background characteristics and risky sexual behavioural choices was examined. Crucial variables were extracted and fitted to logistic regression models.

The study found that 47% of the female adolescents were sexually active. Of these, only 15% used a condom at the last sexual encounter despite the fact that 78% had a high degree of knowledge concerning HIV and condom use. South African adolescents are thus engaging in risky sexual behaviour.

The family household structures in which adolescents reside was found to be associated with risky sexual behavioural choices. Sexual activity is strongly associated with socio-economic status of the family. Condom use and HIV & contraceptive (condom) knowledge was found to be less strongly associated with the socio-economic (financial) status of the family but rather the social processes and relationships within the family are speculated to have a greater effect. The need for a more in-depth analysis with reference to family processes and relationships is recommended in order to properly understand the familial effect on sexual behavioural choices.

The findings from this study have implications for reproductive health and reproductive rights policies. Appropriate national strategies are needed to reduce risky sexual practices and thus ensure lower morbidity and mortality among South African youth.

CHAPTER 1

INTRODUCTION

1.1 General Introduction

The study of adolescent sexual behaviour and its consequences is vitally important in the wake of the HIV/AIDS epidemic in South Africa. Risky sexual behaviour choices made by adolescents' exposes them to unplanned pregnancy and sexually transmitted infections (STIs), including HIV/AIDS. Subsequently these affect their physical and mental health (DOH & MRC, 2002).

In South Africa a substantial number of adolescents are having unprotected sex. The result of adolescents' risk taking behaviour has culminated in high rates of pregnancy (16.4%) and STI infection (7.4%). These behaviours also demonstrate indifference towards the possibility of contracting HIV/AIDS with only 12.2% of adolescents indicating that they could contract HIV/AIDS in their lifetime (DOH & MRC, 2002).

Studies have examined and highlighted the importance of family as a predictor of adolescent sexual behaviour (Gage, 1998; Bakken & Winter, 2002; Kaufman et al, 2004). However the influence of the family has not been given deserved attention in South Africa, despite the fact that the family is the primary unit of socialisation.

The family unit is a valuable asset in the lives of all people. It is within the family that one learns to deal with issues in society, such as conflict resolution, effective communication and independence (Fine, 1995). It has been recognised that sexually related behaviours in adolescence and early adulthood are associated with characteristics of the family during childhood and adolescence (Bakken & Winter, 2002). However instead of targeting the family in order to reduce risky sexual behaviour among adolescents, national campaigns such as LoveLife targets individual sexual practices, encouraging a healthy sexual lifestyle such as using contraceptives, remaining faithful to one partner and establishing youth centres and adolescent-friendly clinics (LoveLife, 2005). It is not disputed that these initiatives are useful in encouraging "safe" sexuality

among adolescents, but the type of family environment in which adolescents live has not been sufficiently addressed.

Service providers in the social sector have failed to develop an effective strategy to work in partnership with the family for the betterment of adolescent sexual health (Taffa, et al., 1999). Furthermore Friedman (1997 in Taffa et al.) proposes that adolescents tend to believe what their parents do, but sex education has been promoted without parental involvement and without enough attention paid to values of the society.

1.2 Problem Statement

The fact that adolescents are engaging in risky sexual behaviour is undisputed (SADHS, 1998; Eaton et al, 2002; DOH & MRC, 2002). However little has been done to shed light on the role of the family in socialising the adolescent with regard to sexual behavioural choices. The family has been identified as the primary site of socialisation for adolescents therefore families in conjunction with sexual practices should be considered as targets in programmes for prevention of risky sexual behaviour among adolescents. The following should be addressed: the types of family structures from which sexual risk takers come, the socio-economic indicators within the family associated with sexual risk taking, and the social relationships within the family associated with sexual risk taking.

1.3 Justification

South African adolescents are undeniably engaging in risky sexual behaviour. Adolescent development is characterised by heightened sexual awareness and experimentation placing them at risk of unprotected sexual activity, unplanned pregnancy and sexually transmitted infections including HIV (DOH & MRC, 2002). High risk sexual behaviour is characterised by being sexually active, having more than one partner and practising sex without, irregular or incorrect condom use (Eaton et al, 2002). Fifty percent of South African adolescents are sexually active by the time they are 16 years old (Eaton et al, 2002). Thirty percent of South African women aged between 20 and 24 have given birth by the age of 20 and South Africa accounts for 15% of HIV infection globally among

youth aged 15-24 years (Rutenburg et al, 2003). These figures indicate that a substantial number of young people are taking risks in their sexual behaviour.

It has been recognised that sexually related behaviours in adolescence and early adulthood are associated with characteristics of the family during childhood and adolescence (Bakken & Winter, 2002). The family in South Africa is varied and household structures differ substantially due to social mobility, divorce and death. The traditional African family was an extended family covering several generations and it was in this unit where basic production and distribution of material goods and services took place (Ankrah, 1993). The conjugal (nuclear family) is now being isolated due to increased mobility and migration to urban settings, it takes sole responsibility for individual members and their tasks, this trend to nuclearisation is most evident among educated and urban populations (Ankrah, 1993). Nuclearisation thus tends to reduce family size and the support network within the family.

The family structure among Black South Africans has changed as mentioned above, the political history of South Africa was characterised by racial divisions and households were forced to adapt to the dwellings provided by the municipality. For Black families this meant that they were forced to live in “matchbox” houses with inadequate space for extended families. This resulted in overcrowding with more than 10 family members (Bozalek, 1997). With increased urbanisation in South Africa family size has decreased dramatically, to an average of 4 family members within the household (Statistics South Africa, 2003), this supports the claims made by Ankrah (1993).

Kaufman proposes that opportunities within the community are important to adolescent development. Adolescents who live in communities with high levels of crime, extreme poverty, unemployment and low educational levels are more likely to take sexual risks (Kirby, 1999 in Kaufman et al, 2004). Thus the environment in which an adolescent lives will impact on her sexual behaviour choices. The effects of the community environment are mediated by family processes (Kaufman et al, 2004). Furthermore educational levels of household members are associated with adolescent’s risk avoidance. This means that

higher levels of education within the household, reduces adolescent risk taking behaviour. Thus Kaufman et al (2004) suggests that programs promoting risk reduction for adolescents which emphasise family and households would yield positive outcomes.

Therefore a study that investigates the association between family households and adolescent sexual behavioural choices is pertinent. This study takes into account how family and household factors are associated with the type of sexual behavioural choices made by adolescent girls in South Africa. The study is based on cross-sectional data that captures the state of the family environment in which adolescents live and the choices adolescents have made regarding their sexual behaviour. A better understanding of how the family contributes to adolescent sexual activity allows for the design of effective interventions, promoting family involvement in adolescent sexuality programmes which foster responsible sexual behaviours including abstinence, being faithful to one partner and consistent condom use.

1.4 Objectives

1.4.1 General Objective

The general objective is to examine the effect of family structure on the sexual behavioural choices of female adolescents in South Africa.

1.4.2 Specific Objectives

- i. Investigate the sexual behavioural choices of female adolescents in South Africa.
- ii. Explore the relationship between family background characteristics and female sexual behavioural choices.
- iii. Measure the strength of association of individual characteristics and family background characteristics with sexual behavioural choices.

CHAPTER 2

LITERATURE REVIEW

2.1 Literature Review

2.1.1 Adolescent Sexual Activity in South Africa

Risky sexual behaviour among the youth of South Africa is well documented. Eaton et al (2002) suggest that there are three types of risky sexual behaviour that exposes one to unplanned pregnancy and sexual transmitted infections (STIs) including HIV/AIDS. These practices include being sexually active, having many sexual partners and practising unprotected sex i.e. not using a condom, incorrect use of a condom or irregular condom use. Thus just being sexually active puts one at risk despite any personal characteristic or attribute, however certain groups of youths are more at risk than other groups. It was reported that more Black South Africans than their White counterparts engage in risky sexual behaviour and have experienced pregnancy, abortion and STIs (DOH & MRC, 2002).

Adolescents make their sexual debut quite early as 50% of South African youth are reportedly sexually active by the age of 16 years (Eaton et al, 2002). Adolescent boys make their sexual debut earlier than girls and Black youths are more likely than other race groups to start sexual activity in their teens (Eaton et al, 2002). The mean age for first sex for boys was 16.4 years (RHRU, 2004) and 17 years for girls (RHRU, 2004; Fonn, 2003). When compared to women aged 60 and older, who made their sexual debut at 19 years of age (Fonn, 2003) it can be seen that South African adolescent girls are engaging in sexual activity at younger ages. Fonn (2003) demonstrated a steady decrease at the age of first intercourse for girls over a forty-year period indicating that the age of first intercourse may decrease further in the years to come.

The Reproductive Health Research Unit (2004) suggests that 52% of youth aged 15-24 used a condom at last sexual intercourse, and that more males than females reported

condom use. Consistent condom use however is low, only 33% reported always using a condom, while 31% reported never having used a condom (RHRU, 2004).

More boys reported having more than one sexual partner in their lifetimes than girls (RHRU, 2004; South African National Youth Risk Behaviour Survey, 2002) with 66.4% of boys and 38.1% of girls reporting more than two sexual partners in their lifetime (South African National Youth Risk Behaviour Survey, 2002).

The uses of alcohol and other illicit drugs has been identified as increasing the likelihood of sexual intercourse (Jemmot & Jemmot, 1993 in Kaufman, 2004), however only 13.8% of sexually active adolescents reported having used alcohol or drugs before sex. More White than Black and more male than female adolescents reported using alcohol or drugs before sex (Department of Health & Medical Research Council, 2002).

South African adolescents are thus engaging in highly risky sexual behaviour. Many youths feel that they are not at risk of any of the negative effects of sexual intercourse especially HIV which reduced the motivation to take the necessary precautions to ensure safe sexual behaviour (Eaton et al, 2002).

2.1.2 Important Factors Associated with Adolescent Sexual Behaviour Choices in South Africa.

Studies on adolescent sexual activity in South Africa has been concentrated on early child-bearing and unwanted/unplanned pregnancy in the face of HIV/AIDS (Makiwane, 1998, Kaufman et al, 2001, Rutenburg et al, 2003). These studies highlight increased sexual activity of adolescents at ever decreasing ages as a result of misconceptions about sexual activity as they relate to partner communication, coercion and cultural beliefs (Varga, 1997; Wood et al, 1998).

Black people in South Africa comprise 79% of the population. The Black population traditionally values fertility and large family size within marriage, and males harbour more power in sexual relationships (Rutenburg et al, 2003; Makiwane, 1998). Non-

marital childbearing has increased despite adolescent girls indicating a desire to pursue educational goals and careers (Makiwane, 1998, Kaufman, 2001). Although adolescent fertility is declining in South Africa (Rutenburg et al, 2003), non-marital childbearing is accepted or rather tolerated by the community. Having a child outside of marital union is not a cultural norm but cultural values and beliefs have rendered it as a way of proving fertility and consolidating masculinity (Varga, 1997; Makiwane, 1998; Rutenburg et al, 2003).

Rutenburg et al (2003) refer to the term “fertility conundrum” to explain the conflict between either using condoms or abstaining from sex and the desire to become pregnant. African women are vulnerable on three levels. Firstly they are vulnerable to the cultural emphasis placed on fertility (Makiwane, 1998; Rutenburg, 2003), secondly to male partners desire to prove their masculinity (Varga, 1997), and thirdly sexual coercion and a lack of partner communication (Dixon-Mueller, 1993, Mfono, 1998, Eaton, 2002).

Fertility is an important aspect of African culture. Many girls who indicated a desire for a baby indicated that they wanted to prove fertility (Makiwane, 1998). In Zulu tradition it was seen a woman’s duty to bear children. Men engaged in polygamous relationships with many women and this indicated masculinity (Varga, 1997). Within changing social environments, these traditions have become entangled with modern social sexual norms (Varga, 1997). Modern or more westernised African society has led to delayed age at first marriage and prolonged education (Kaufman et al, 2001). This has however resulted in extramarital sexual activity, with males taking advantage of their dominant role in the relationship to ensure sex with their partners. The relationship between men and women has become unbalanced in the sense that a young adolescent girl will submit to unprotected sexual intercourse as a means of proving her fidelity and love for her partner/boyfriend (Varga, 1997). Male adolescents view unprotected sex as a means of establishing power in a relationship. The more sexual partners a male has the more he is considered intelligent, masculine, cunning and witty (Varga, 1997).

These conceptions among adolescents further put girls at risk of violent coercion. Many adolescent girls have stated that their partners coerced them into having sex. Varga (1997: 56) reports that “refusal [of sexual advances] nearly always results in physical coercion, abuse or boy-friends’ threats of rejection.” Adolescent girls are also known to submit to sex in order to avoid physical abuse and “keep the peace” in the relationship. Eaton et al (2002) further state that pervasive, culturally entrenched discrimination against women increases the risk of HIV infection for those women. It is also important to note that violence and coercion in sexual relationships is linked to socio-economic status, and that one should not assume that African culture explains sexual subordination of women (Eaton et al, 2002).

Dixon-Mueller (1993) postulates that a higher percentage of girls than boys’ experience coerced sexual intercourse due to salient gender roles across a variety of cultures. The author also highlights that adolescent girls need to be given tool to resist pressures to engage in sex, since they are the ones who will bear the burden of pregnancy and health risks associated with pregnancy and reproductive health. Thus partner communication is said to be salient in sexual behaviour of adolescent girls. Peer pressure is placed on adolescent girls to have a boyfriend, but the status of a relationship only reached once sex has occurred, this is perpetuated by almost non-existent skills in communicating and negotiating with boyfriends (Rutenburg et al, 2003).

2.1.3 Identified Gap

Although poverty and peer expectations have been highlighted in contributing to risky sexual behaviour, little research has been conducted in South Africa specifically, concerning the role of the family and household structure in perpetuating this phenomenon. Kaufman et al (2004) points to the importance of such a study, arguing that household resources may be an important factor in determining individuals’ behaviour.

Bakken & Winter (2002) link family background characteristics and sexual risk behaviours among black men in the United States. They postulate that “during recent years it has been increasingly recognised that sexuality-related behaviours in adolescence and adulthood are associated with characteristics of the family during an individual’s childhood and early adolescence” (Bakken & Winter, 2002:252). It was found that men (aged 19-41) whose mothers worked were more likely to have sex at a younger age; households in which both parents were present indicated that sexual initiation/debut was delayed and fewer sexual partners were acquired during the lifetime. Furthermore, Miller (1998) postulates that poor socio-economic status and living in a single parent family is associated with adolescent sexual activity and pregnancy. Therefore family structure and its characteristics are important factors in sexual risk taking both in adolescence and in early adulthood.

Gage (1998) explores the components of decision making regarding sexual activity and contraceptive use among adolescents. The author postulates that the family’s influence in the decision-making process is manifest through family structure, finances, and elders’ power over marriage and childbearing decisions. As such both social and economic influences from within the family are associated with sexual behavioural choices.

This study will focus on South African adolescent girls and their sexual behaviour choices within the context of their individual and family background characteristics. The study will provide an indication of how resources within the family household effect sexual behaviour choices.

2.2 Theoretical and Conceptual framework

To study family life within an African context is very difficult; there is a wide range of cultural norms, changing social structures and socio-economic variables to be considered. This study makes use of three theoretical perspectives highlighted by Djamba (1997); these are reduced into a comprehensive conceptual model to explain individual sexual behaviour. The following three perspectives represent different views on family influences on sexual behaviour of women.

Firstly there is the Anthropological Perspective. It examines the social structure of the community such as patriarchal organisation and religious affiliation that sanction against non-marital sexual behaviour. These social structures are said to change with age and the prevailing socio-cultural environment. In other words this perspective emphasises the importance of social structure in shaping female sexual behaviour (Djamba, 1997). Many debates have arisen on the way in which social structure influences sexual behaviour, but only two provide convincing arguments. The first of these is the kinship system; within this system, Goethals' hypothesis of patrilineal bias (Goethals, 1978 in Djamba, 1997) assumes that in societies where males are in positions of power and authority (patriarchal kinship), the sanctions against female (non-marital) sexual behaviour is quite severe. Secondly, religiosity and not religious affiliation is said to have a significant influence on female sexual behaviour. According to Murdock (1964 in Djamba, 1997) there is a positive association between restrictive sex norms and religiosity (Odimegwu et al, 2002). Religiosity indicates the strength of socio-psychological bonds to the conventional social system, this is a more dynamic concept than religion, which is established by the family and remains unchanged throughout the lifetime. Religiosity is expected to change with age and the prevailing socio-cultural environment.

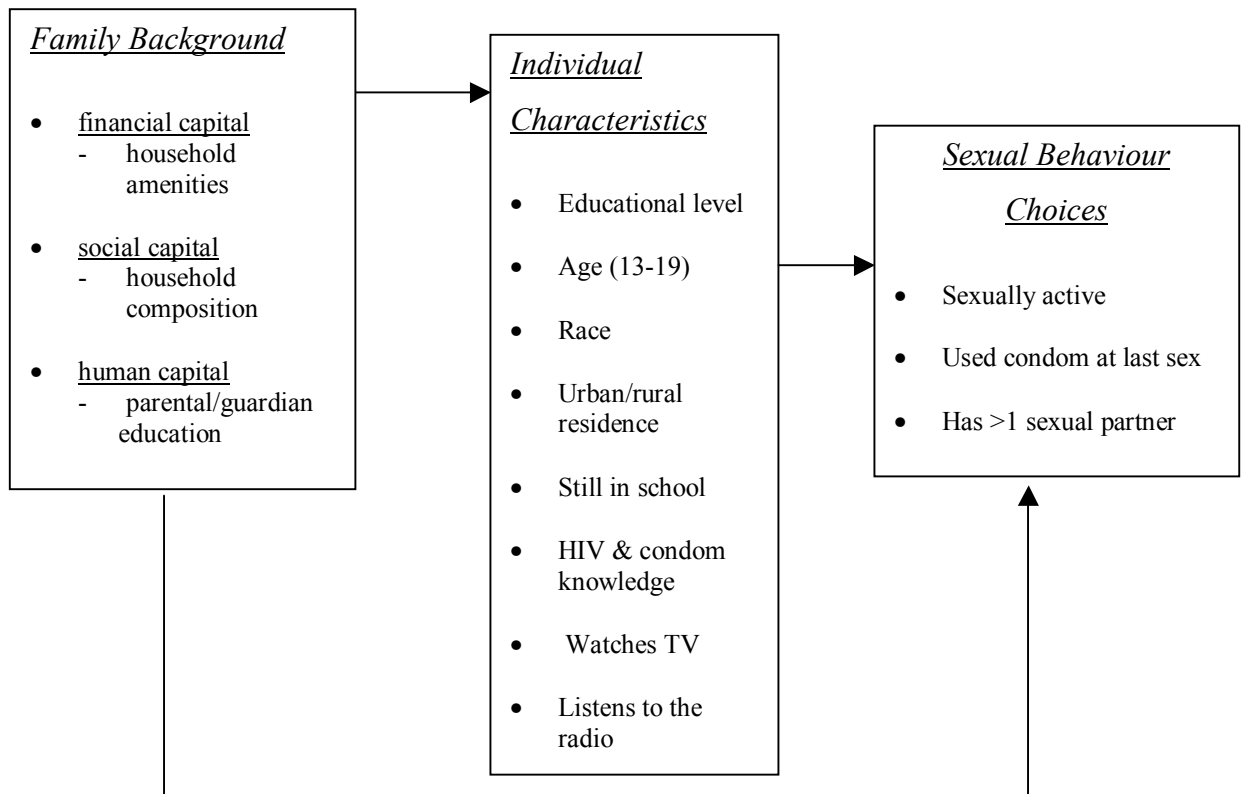
Secondly the Rational Adaptation Hypothesis is considered. This theory takes into account gender inequality in the distribution of resources, which leads women to partake in sexual activities for financial gain. This theory puts forward the argument that the sexual behaviour of women, especially unmarried women is economically rational. This phenomenon is said to occur due to gender inequality in the distribution of resources. Often young women will offer sexual favours to older men in exchange for gifts and other economic rewards giving rise to the phenomenon of "sugar daddies" (Djamba, 1997). It has been noted that these relationships are generally not coercive, but older men sometimes offer young women favours, the woman accepts the favour, but then finds herself in an "owing position", thus the woman feels obliged to repay the man with sexual intercourse (Djamba, 1997).

Lastly, the Social Disorganisation Perspective relates to the westernization of Africa and the breakdown of traditional norms in preference of those of western, developed nations. Due to modernisation, traditional behaviours regarding sexuality are falling by the wayside. It assumes that the current level of female sexual activity results from a breakdown of social control which older persons had over younger ones. Exposure to the “outside world” through mass media and trend towards urbanisation is said to destroy traditional customs and morals, the adoption of a western lifestyle leads to deferred/postponed marriage while removing youth from parental surveillance (Djamba, 1997).

The above theories posit different strategies for accounting for why women take part in risky sexual activity with male partners. By accounting for all three theories a comprehensive conceptual framework is developed to explore how the family and household structure influences sexual behavioural choices.

A conceptual framework was developed from Coleman’s Model of Social Capital (Djamba, 1997) which emphasises the role of family background characteristics in shaping individual sexual behaviour. It incorporated all aspects of the aforementioned theoretical perspectives. The framework proposed for this study is simplified so that it still captures all three theories, but uses variables that are easily measured

Figure 1: Adapted Conceptual Framework for the study of Female Sexual Behaviour in South Africa



Family background variables are crucial factors of socialisation. The model reflects three types of family resources or capital which affect adolescent socialisation (Djamba, 1997). Financial capital is essential for testing the rational adaptation theory. Human capital is only a partial measure of the social disorganisation theory, thus one needs to take into consideration the individual characteristics and exposure related factors. Social capital describes resources in the family that are useful for the cognitive and social development of young people; it describes the structure of the relations between family members (Djamba, 1997). For this study social capital describes the household members to gain an understanding of the basic family structure.

The above conceptual framework also shows how family background characteristics determine the type of exposure-related factors and individual characteristics, which then influences sexual behaviour choices. The family background characteristics are thought to influence sexual behaviour by controlling ones community (urban/rural) and access to education and media which also impacts on the type of information the adolescent is exposed to.

CHAPTER 3

METHODOLOGY

3.1. Introduction

Within this chapter the methodology of the study is discussed with reference to the data source and study population. The key variables and important terms are outlined and discussed. Hypotheses are stated.

3.2. Study design

The study is a secondary analysis of the 1998 South African Demographic and Health Survey (SADHS, 1998).

3.2.1. The 1998 SADHS

The SADHS (1998) was a national cross-sectional survey. It was a nationally representative probability sample of 12000 completed interviews with women between the ages of 15 and 49. The country was stratified by its 9 provinces, which were further stratified into urban and non-urban areas. The sampling frame from the October 1996 census was used. It consisted of approximately 86000 enumeration areas. The Primary Sampling units corresponded to the Enumeration Areas and were selected with probability proportional to size, the size being the number of visiting points in the Enumeration Area. A total of 970 primary sampling units were selected (690 urban & 282 non-urban). Ten visiting points from urban and 20 from non-urban areas were selected. A total of 12860 households were selected.

3.2.2 Sample Size

Sample size was allocated to the provinces based on results of other Demographic and Health Surveys, which had shown that a minimum sample of 1000 women is required to obtain demographic estimates at an acceptable level of sampling error. Twelve thousand women were interviewed with a minimum of 1000 from each province.

3.2.3 Questionnaire Design

The survey made use of three questionnaires: a household questionnaire, a women's questionnaire and an adult health questionnaire. The contents of the household questionnaire and the women's questionnaire were adapted from the DHS Model Questionnaires. The questionnaires were translated into all eleven official languages of South Africa.

The Household questionnaire was used to list all the usual members of the household including visitors. Basic demographic information (age, race, sex, education) was collected about each person as well as information regarding the dwelling, such as roof, wall and floor materials as well as source of water, type of toilet facility and ownership of consumer goods. The Women's questionnaire collected information from women aged 15-49 with regard to their health, fertility, sexual activity, child health and demographic characteristics.

For the purposes of this study the household questionnaire provided information regarding household structure to determine family background characteristics and media exposure. The women's questionnaire provided information regarding individual characteristics with reference to sexual behavioural choices, knowledge of HIV/AIDS and basic demographic characteristics.

3.2.4. Field Work and Quality Control

Fieldwork was conducted between January and September 1998. There were 175 candidates recruited. Fieldwork was conducted in all nine provinces. Teams of female interviewers were recruited and trained by personnel from the Medical Research Council (MRC), Human Sciences Research Council (HSRC), Free State University (Centre for Health Systems Research and Development) and Macro International. The teams were supervised by team leaders who ensured the workflow. Within each province two

centrally based editors screened all the questionnaires before submitting them for processing.

Quality control measures were instituted at three levels. First training was provided to team leaders and editors so that they were able to identify enumerator areas in the sample and guide selection of dwellings for interviews. Second, about 10% of the sample was re-visited in the months of the interview to ensure the appropriate dwellings were selected and interviewed. Third, a team from the HSRC carried out independent quality control visits to check questionnaires for errors, quality of identification and interviews at the enumeration areas and dwelling levels.

3.2.5 Data Processing

The questionnaires were processed at the Medical Research Council offices in Cape Town. Office editors checked the clusters for completeness and open-ended questions were coded. Completeness and consistency of information was checked and entered onto the computer using Integrated System for Survey Analysis (ISSA). A small proportion of the questionnaires were returned to the field for completion of missing information.

3.2.6 Study Population

The study population consists of South African adolescent females aged 15-19 years.

3.3 Variables used in Data Analysis

3.3.1. Definitions of important terms

- Adolescence: A complex stage in human development for the ages of 12-18 years involves a wide range of major life changes, the person experiences puberty and undergoes significant maturation both physically and psychologically. It is a transition to adulthood (Coleman, 1992).
- Financial Capital: this involves the physical resources that aid socialisation and financial resources that diminish family problems. Djamba (1997) suggests that family wealth is difficult to measure in Africa, thus it can be conceptualised as

household amenities or physical capital (ownership of durable goods such as a radio, television, microwave and motor vehicles).

- **Social Capital:** this refers to the different resources that are available in the family for the social development of young people. Coleman (1994, in Djamba, 1997) proposes several ways in which social capital can be measured. The indicators of social capital include, number of siblings, presence of biological parents, mother working outside the home (Djamba, 1997).
- **Human Capital:** this is measured using parents' education (Coleman, 1994 in Djamba, 1997). Within the African context this notion needs to be extended to adult relatives in the household due to the fact that human capital in the African family system is not always limited to the biological parents; rather youths may receive information regarding reproductive health from other adult relatives.

3.3.2. Independent Variables

These variables consist of the individual and family background characteristics outlined in the conceptual framework. According to the model, it is thought that these variables are salient in predicting sexual behaviour.

Table 3.1 Independent/Predictor Variables Used in the Study: Individual Characteristics

Variable	Categories	Codes
Age		
Educational Level	no education	0
	Primary	1
	Secondary	2
	Higher	3
Still in School	No	0
	Yes	1
Race	Black	1
	Coloured	2
	White	3
	Indian	4

Type of Residence	Urban	1
	Rural	2
Province	Western Cape	1
	Eastern Cape	2
	Northern Cape	3
	Free state	4
	KwaZulu Natal	5
	North West	6
	Gauteng	7
	Mpumalanga	8
	Northern Province	9
Media Exposure		
% watches TV every week		1
% listens to radio everyday		1
% reads newspaper once a week		1

For the above variables, age is a continuous variable as such it has no categories and no code, the values for age range from 15-19 in accordance with the respondents current age at the time of the survey. Educational level refers to the highest level of education of the respondent at the time the survey was taken. The variable named “in school” refers to whether or not the respondent was attending a formal schooling institution (i.e. primary or secondary school). Race is labelled and coded in accordance with the SADHS (1998) variable for “ethnicity”; it implies the standard labelling for the dominant racial groups found in South Africa. Media exposure relates to the percentage of respondents who answered “yes” to the statements “watches tv every week”, listens to the radio every day” and “reads newspaper once a week”.

Table 3.2 Independent/Predictor Variables Used in the Study: Family Background Characteristics

Variable	<u>Categories</u>	<u>Codes</u>
FINANCIAL CAPITAL		
Household amenities		
Source of drinking water	Piped water source	1
	Other water source	2
Type of Toilet Facility	Flush toilet	1
	Bucket/pit latrine	2
	Other	3
% has electricity		1
Ownership of Goods		
% has television		1
% has radio		1
% has car		1
% has bicycle		1
% has fridge		1
% has telephone		1
SOCIAL CAPITAL		
Number of People in Household	<= 6	1
	>= 7	2
No. of women aged 15-49	1 – 2	1
	3 – 8	2
Type of Family (household)	nuclear	1
	Extended	2
	non-family household	3
HUMAN CAPITAL		
Age of household head	15-34	1
	35-54	2
	55+	3
Sex of household head	Male	1
	Female	2

The variables in the above table highlight the family background characteristics in accordance with the categories indicated in the conceptual framework, i.e. Financial Capital, Social Capital and Human Capital.

The variable source of drinking water was collapsed into two categories. Piped water source refers to those respondents who indicated that they get their drinking water piped into their personal residence, the site/yard in which they live or a public tap. Other water sources refers to water that comes from a bore-hole/well, natural dams, rivers, springs, bottled water or water from a rain tank or water carrier/tanker.

Type of toilet facility was categorised into three categories. Flush toilet refers to respondents who have access to a flush toilet be it a personal or a shared toilet. Bucket/pit latrine refers to respondents who have access to a pit latrine or make use of the bucket system. Other toilet facilities refers to respondents who had access to some other form of facility or no facilities at all, thus making use of a bush or field.

Ownership of goods refers to those respondents who indicated that the household owned the mentioned items.

The number of people who reside in the household was categorised into less than and equal to six household members (≤ 6) and greater than and equal to seven household members (≥ 7). The number of women aged 15-49 (classified as eligible women by the SADHS, 1998) was categorised into 1-2 women and 3-8 women, the SADHS 1998 data did not indicate any households with more than 8 eligible women residing in the household.

For type of family, nuclear family refers to a household in which the biological parents are the household heads and they live in the household with their own children. Extended family refers to households where other family members such as an uncle, aunt, cousin, grand mother or grand father are also members of the household. Non-family households refers to households in which the adolescent is married to the household head or lives

with her spouses' extended family. Non-family households also refer to households in which the adolescent has been adopted/fostered.

An index was also created for financial capital, high financial capital was coded as 1, middle financial capital was coded as 2 and low financial capital was coded as 3. High financial capital was imputed when the respondent had access to piped water, flush toilet or bucket/pit latrine, electricity and owned at least two of the following goods: a radio, a tv and a telephone. Low financial income was imputed when the respondent had access to other water sources, bucket/pit latrine or other toilet facilities and owned only 1 or none of the aforementioned goods. Middle financial capital were those respondents who had other variations of water source, toilet facilities, electricity and owned at least 1 of the goods.

3.3.3. Dependent/Outcome variables

In this study there are 4 independent/outcome variables. Check also Table 3.3

Table 3.3 Independent/Outcome Variables used in the Study

Variable	Categories	Code
Sexually Active	No	0
	Yes	1
Used condom at last sex	No	0
	Yes	1
HIV & Condom knowledge	Low	0
	High	1
Number of Partners	1 Partner	0
	>1 Partner	1

The dependent/outcome variables included sexually active, which indicated whether or not the respondent was sexually active. This variable was imputed from two variables, namely age at first intercourse and time since last sex. Respondents who indicated that they were not sexually active (age at first intercourse = 0) but had indicated having had

sex in the past (time since last sex) were coded as sexually active. Used condom at last sex refers to whether or not the sexually active respondent used a condom at the last sexual encounter. HIV and Condom knowledge was imputed from two variables namely knowledge of condoms and ever heard of HIV/AIDS. If the respondents indicated that they knew condoms are used for both family planning and STI prevention; and the respondent had heard about HIV/AIDS the respondent was coded as “high” for HIV & condom knowledge. If the respondent indicated that condoms are used only for family planning or only for STI prevention or if the respondent was unsure of the use of a condom, she was coded as having low HIV & condom knowledge regardless of whether or not she had heard of HIV/AIDS.

3.4. Hypotheses

The hypotheses to be tested:

- Low financial capital is associated with risky sexual behavioural choices.
- The presence of both parents in a nuclear family reduces risky sexual behavioural choices.
- Adolescents from male-headed households are less likely to engage in risky sexual behaviour.
- Family background characteristics do more to explain risky sexual behavioural choices than individual characteristics.

3.5. Scope and Limitations

- Results for sexual activity may be biased due to the fact that adolescents are hesitant to report actual sexual behaviours due to the sensitivity of the subject (Hovell et al, 1994). In this study only 2% of sexually active adolescents indicated having had more than one partner. However other studies have found that up to 54% of adolescents have had two or more partners (DOH & MRC, 2002).
- Use of condoms in this study is presented by the adolescent indicating use of a condom at the last sexual encounter. This is not a good indicator of consistency of use, just because the respondent did not use a condom at last sexual encounter does

not necessarily mean that a condom was never used or that condoms are not used consistently.

- The study is attempting to relate social aspects of the family and sexual activity using secondary analysis. A more comprehensive study would include qualitative data to compose a more nuanced in depth understanding of families in South Africa.
- The study has not addressed issues such as peer pressure and influences from outside the household on adolescent sexual behavioural choices.
- The study is a secondary analysis. Some variables have been constructed from variables in the main data set in order to explore adolescent sexual activity more comprehensively. It would be better to have data that addressed these issues directly.
- The analysis is restricted to the variables available in the data set. Other factors believed to be important to the study are thus omitted.

3.6. Ethical Considerations

The study is a secondary analysis pre-existing data. No personal information about individual respondents was disclosed in the data set, thus anonymity is secured.

3.7. Data Management

The SADHS 1998 data set was downloaded from the Macro International Inc. web-site. The data set was presented in SPSS (Statistical Package for Social Scientists) format. SPSS version 10 was used. The data set was then converted from flat to rectangular file format. Variables considered pertinent for this study were selected from the original data set. These variables were then restricted to respondents aged 15-19 years. The data set was then transferred in to Intercooled Stata 8.1 for Windows.

There were a total of 2373 observations for respondents aged 15-19 years. Observations were incomplete for some variables due to respondents stating that they were unsure of their answers or omitting a question completely. The observations for the variables used in this analysis however were all over 95% complete.

3.8. Data Analysis

Variables used for the data analysis of this study were categorised and coded as explained in section 3.2.

Data analysis was conducted on three levels:

- i. Univariate Analysis: This was conducted to summarise the individual characteristics, family background characteristics and sexual behavioural characteristics of the study sample.
- ii. Bivariate Analysis: This was conducted to examine the association between individual characteristics and sexual behavioural choices as well as the association between family background characteristics and sexual behavioural choices. The relationship between financial capital and sexual behavioural choices is also explored. Cross tabulation and univariate logistic regression was used to achieve these objectives.
- iii. Multivariate analysis: The Logistic Regression model was used because the dependent variables are binary/dichotomous.

The basic dichotomous logistic regression equation for a number of variables is:

$$L_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_k X_{ki}$$

Where: L_i = dependent variables (sexually active, used condom at last sex, HIV &

α = constant.

β_k = regression coefficients

Logistic regression analysis was carried out using stepwise selection methods. The logistic regression model was then fitted. Logistic regression was carried out for individual characteristics and family background characteristics by each dependent/outcome variable.