

PATTERNS OF RISK-TAKING BEHAVIOUR OF FIRST YEAR UNIVERSITY STUDENTS

By

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Abstract

This study investigated risk-taking behaviours among 244 first year students (Male=52 and Female=192). The risk-taking behaviours of the students were grouped into Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use, Risky Sexual Behaviour and Unhealthy Dietary Behaviour subscales. Statistically significant correlations were found among all the risk-taking behaviour subscales other than Unhealthy Dietary Behaviours, which did not correlate with the other risky behaviours. Statistical significant sex differences were found regarding risk-taking behaviour that implicated males as higher risk-takers than females.

CHAPTER ONE

1.1 Background of the Problem

In the United States of America (USA) 70% of all deaths among youths and the young adult population result from four causes: motor vehicle accidents, other unintentional injuries, homicide, and suicide. This population is also negatively affected by morbidity and social problems resulting from unwanted pregnancies, obesity, sexually transmitted diseases (STD), and exposure to the HIV/AIDS virus (Eaton et al. 2006).

In response, The Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) to monitor priority health-risk behaviours that contribute substantially to the leading causes of death, disability and

social problems of the youth and adults in the USA (Brener et al, 2004). A review conducted by the CDC in 1988 revealed that virtually all behaviours contributing to the leading causes of morbidity and mortality among the young population could be placed into six categories: behaviours that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviours that contribute to unintentional pregnancies and STDs, including HIV infection, unhealthy dietary behaviour and physical inactivity. These behaviours are often interrelated and extend into young adulthood (Brener et al, 2004).

Similarly in South Africa, risk-taking behaviours have also been strongly linked to youth mortality and morbidity. Like the CDC in the USA, the National Department of Health of South Africa undertook a youth risk behaviour survey in 2002 in order to provide data regarding the prevalence of behaviours that place school-going learners at risk. This survey provided provincially and nationally representative data that was used to inform intervention development, inform youth health policy development and provide baseline data for future surveys.

The final report of a study conducted by the Fort Hare Institute of Social and Economic Research (FHISER) (2007) showed that many youths in the Buffalo City are engaged in a risky behaviour lifestyle by choice. This study reveals that a large percentage of youth in the Buffalo City area continue to engage in risky behaviour like unprotected sex and having multiple sexual partners, despite the known threat posed by HIV/Aids and other sexually transmitted diseases.

1.2 Rationale and Significance of the Problem

If one takes into account the importance placed on establishing and monitoring high-risk behaviours that contribute substantially to leading causes of death, disability and social problems of the youth in the USA, it is relevant to extend this form of inquiry to South African students. Most studies on risk-taking behaviours are concerned with school-going youth while less emphasis has been placed on university students. This study aims to add to the relatively small pool of knowledge regarding risky behavioural patterns of university students. It would be useful to be aware of correlations that might exist among the various risky behaviours of the students in order to ascertain possible risk behaviour profiles, which could inform prevention programmes. It would also be useful to know whether risk behaviours differ according to sex. A further possible benefit of this survey would be to provide baseline data for future surveys on South African students regarding risky behaviour.

1.3 Statement of the Problem

It is the purpose of the study to firstly, establish the relationships among various risk-taking behaviours of first-year students and secondly to establish whether there are sex differences in such risk-taking behaviours.

1.4 General Hypotheses

1. Correlations exist among risk taking behaviour subscales.
2. Sex differences exist in the risk-taking profile of first year students.

1.5 Definitions

Risk-taking profile – refers to patterns of risk-taking behaviours among the various youth populations that form part of the study.

Risk – refers to the dangers youths expose themselves to.

Risk-taking behaviour – refers to behaviours that place youths at risk.

1.6 Summary and Overview

The leading causes of morbidity and mortality among the youth in the USA are related to six categories of health risk behaviours: behaviour that lead to unintentional injuries and violence; tobacco use; alcohol and drug use; sexual behaviours that contribute to unintentional pregnancies and STDs, including HIV infection; unhealthy dietary behaviours; and physical inactivity.

Due to the importance placed on monitoring these behaviours and the relative lack of research conducted with university students it seems appropriate to extend this form of

inquiry to South African students. It would also be useful to be aware of correlations that might exist among the various risky behaviours of the students as well as possible sex risk-taking behaviours. Chapter 3 will provide a detailed account of how this study was carried out.

CHAPTER TWO

REVIEW OF THE LITERATURE

2.1 Theories of Risk-Taking Behaviour.

2.1.1 Belief-Desire Psychology and the Rational Person Model

Lachenicht (1993) reasons that humans naturally behave irrationally, which means that rationality is an ideal rather than a true picture of human behaviour. This irrational behaviour is often shaped by temptation and the power of immediate rewards and punishments. Lachenicht (1993) doubts that even a person with strong willpower would be able to refuse the powerful attraction of reward one hundred percent of the time. This person might be able to resist temptation 99 out of a 100 times, which means that he or she might succumb at least once. This makes this person as weak as his or her weakest moment.

Lachenicht (1993) links this principal to the AIDS pandemic in Africa by highlighting

ineffective behavioural programmes that attempt to modify behaviour by, for example, encouraging the use of condoms in a society that places much emphasis on high fertility and sexual freedom. This means that condom use would run counter to this population's emphasis on fertility. According to Lachenicht (1993) apart from frequent sexual opportunities that might exist in this society that would undermine even the strongest of resolutions to use condoms there are other cultural factors conspiring against the use of condoms. This means that in a society such as ours, a simple behavioural programme (education, free condoms, advertising and the like) would be unlikely to be highly effective in the curbing of AIDS.

Lachenicht (1993) argues that structural programmes rather than behavioural programmes would be more effective at curtailing a pandemic such as the AIDS pandemic. Structural programmes attempt to alter the way in which a group of people regard or organize some aspect of their activity (Lachenicht,1993). Whereas a behavioural programme would, for example, attempt to make sex workers aware that they are at risk if they do not use condoms, a structural programme would rather aim to legalize and regulate sex-workers, including regular health inspections and blood tests. Structural programmes recognize that humans are only as strong as their weakest moment when exposed to repeated temptations and therefore provide structural support and opportunities that make people as strong as their strongest moment (Lachenicht, 1993).

Lachenicht (1993) once again uses the AIDS pandemic as an example when

highlighting the appropriateness of structural interventions compared to behavioural advice. Rather than bombard homosexual men with information regarding the risk of contracting AIDS, structural programme would rather facilitate the formation of identity in homosexual men. Structural intervention would, for example, involved abolishing legal sanctions against homosexual men, recognize their rights, encourage a climate of tolerance towards homosexuals and providing counseling for homosexual teenagers. This type of intervention would be more effective than behavioural programmes.

2.1.2 The Link between Risk Behaviour and Psychosocial Maturity

Steinberg and Scott (2003) argue that risky behaviour is closely linked to psychosocial maturity, which develops during adolescent years. Their discussion takes place within the context of developmental immaturity, diminished responsibility and the juvenile death penalty. They contend that juveniles should not be held to the same standards of criminal responsibilities as adults, because adolescent's decision-making ability is limited compared to adults. They are less able to resist peer and other coercive influences. This is due to the nature of their character which is in the process of undergoing change. This immaturity of adolescence should be a mitigating condition that allows them to be dealt with in a separate justice system which makes them less eligible for capital punishment.

They further contend that adolescent judgment and decision-making differ from that of adults as a result of psychosocial immaturity. Among these psychosocial factors that

provide an understanding of adolescent judgment and decision-making are: 1) susceptibility to peer pressure, 2) attitudes towards the perception of risk, 3) future orientation and 4) the capacity or lack thereof for self-management. Adolescents might be relatively cognitively mature regarding the process of decision-making but their psychosocial immaturity can affect decision-making outcomes. These psychosocial factors influence adolescent values and preferences in ways that drive the cost-benefit calculus in making choices. This has serious implications for risky behaviour because even though adolescent cognitive processes are relatively mature, they are less psychosocially mature, which affects their decision-making capacity.

According to Steinberg and Scott (2003) substantial research supports the idea that adolescents or teenagers are more susceptible to peer influences than adults. This susceptibility to peer influence increases from childhood into adolescence and peaks approximately at age 14. Thereafter peer influence slowly declines as the adolescent grows into adulthood (Steinberg and Scott, 2003). This means developmental differences seem to affect peer influences on risky behaviour.

In the period extending from childhood to adulthood individuals become more future-orientated. Adolescents are inclined to discount the future more than adults do (Steinberg and Scott, 2003). This means that adolescents tend to think more short-term and therefore respond more to the possible benefits or rewards gained from the risky-behaviour rather than the possible risks involved in the behaviour. They argue that this takes place due to two main reasons: firstly, adolescents, unlike adults, are less able to

think about events that have not yet occurred, and secondly, the weaker future orientation of adolescents could reflect more limited life experience. Adolescents may simply place more weight to short-term consequences because they seem more important to their lives (Gardner, as cited in Steinberg and Scott, 2003).

Adolescents also maintain a different attitude towards risk than adults. They use a risk-reward calculus which places less weight on risk (Steinberg and Scott, 2003). Adults would be more inclined to be cognisant of any potential risks and decision-making regarding risky behaviours. Decisions for adolescents, on the other hand, are driven more by rewards and less by risk. Adolescents would, for example, place more emphasis on the pleasure gained from risky-sexual behaviours than on the possible risk of becoming pregnant or contracting sexually transmitted diseases including HIV.

Even though more research is needed, the common belief that adolescents are more impulsive than adults finds support in research on developmental changes in impulsivity and self-reliance (Steinberg and Scott, 2003). Impulsivity seems to increase during middle adolescence and then decline as the adolescent matures into adulthood. This means that adolescents are inclined to be more impulsive regarding risky-behaviour than adults, which could have dire consequences concerning issues such as violent behaviour, sexual risk-behaviour and alcohol and drug use.

2.1.3 Risky Shift Theory

A study conducted by Hensley (as cited in Gardner and Steinberg, 2005) sought to determine whether developmental differences affected peer influences on risky behaviour. In a comparison of young adolescents and college students, this study attempted to determine whether the tendency for individuals to take more risks on groups than when alone – a phenomenon known as *risky shift* – might differ across age groups. The result of this study revealed that *risky shift* was greater among adolescents than among college (university) students, which indicates that developmental differences seem to affect peer influences on risky behaviour. According to the *risky shift* theory people tend to make decisions regarding behaviour differently when in groups than they would if they were alone. When in a group people are inclined to make riskier decisions because they believe that the risk is shared by the group members therefore exposing themselves to less risk as individuals (Hart, 2001).

2.1.4 Group Polarisation Theory

Whereas the risky shift theory asserts that the presence of others should always lead to increased risk-taking, proponents of the more recent group polarisation theory suggests that the direction of risk-taking behaviour of individuals depends largely on the risk-taking tendencies of group members or peers (Hogg, Turner and Davidson, 1990). McGarty, Turner, Hogg, Davidson and Wetherell (1992) argue that group polarisation develops from a process of intragroup conformity to a polarized in-group norm. This

means that low risk-taking individuals would become even more low risk-taking when grouped together with other low risk-takers and high risk-takers would become even more high risk-takers when grouped together with other high risk-takers. The self-categorisation theory refers to group polarization as a process of conforming to polarised norms which defines one's own group in contrast to other groups within a specific social context. This means that an ingroup confronted by a risk-taking outgroup would polarize towards caution, whereas an ingroup confronted by a low risk-taking outgroup would polarize towards risk (Hogg et al, 1990).

2.1.5 The Link between High-risk Behaviour and Egocentricity

Egocentricity can also be associated with high-risk behaviour. As adolescents become more capable of abstract reasoning, they also become more adept at thinking about their own experiences (Louw and Edwards, 1998). These introspective skills can be highly egocentric and self-focused, which often results in adolescents believing that their own experiences are unique. According to Alderman and Seigel (2002) egocentricity is not only associated with a sense of being unique and invulnerable but is often the reason adolescents embark on high-risk behaviours as they attempt to establish independence and ensure peer approval. Louw and Edwards (1998) provide an example where a young girl might not use contraceptives because she believes pregnancies only happen to others and not to her. This egocentric thinking of adolescents often results in feelings of invulnerability, which means they maintain a 'it

won't happen to me' attitude, which fosters risky behaviour.

2.1.6 The Role Personality Type Plays in High Risk-Taking Behaviours

Some individuals might simply be higher risk-takers and sensation-seekers than others. People who abuse alcohol or drugs may have personalities more prone to taking risks, making them more likely to have sex and less likely to use condoms (The National Center on Addiction and Substance Abuse, 1999) (CASA). While it seems unlikely that cigarette smoking leads to sexual risk-taking behaviour, individuals who take the risk of smoking cigarettes (like alcohol abusers and drug users) are more likely than non-smokers to be sexually active and have sex with multiple partners (CASA,1999). A study conducted by Burns and Wilde (1995) examined how risk-taking personalities correlates with certain driving behaviours and driving records of taxi drivers. The results of the study suggested that taxi drivers who reported a need for more tension, risk and adventure in their lives (High-Risk Personality) tended to drive at excessive speeds and drive irresponsibly by, for example, changing lanes in a careless manner. Taxi drivers reported taking more risks for their arousal and pleasure sensation (Sensation Seeking Personality) where more frequently convicted of speeding and traffic violations. The results of a further study conducted by Cooper, Agocha and Sheldon (2001) revealed that neurotic and extroverted individuals tended to abuse alcohol and participate in risky sexual activities. These studies seem to confirm that some individuals might have higher risk-taking profiles than others.

2.1.7 The Role Education Plays High Risk Behaviour

In the USA a debate has polarised around the question of whether it is best to suppress teenage sexual behaviour or whether one should accept the fact that the majority of young teenagers will become sexually active with a partner within the next decade of their lives (Ehrhardt, 1996). The argument revolves around the belief that sex education itself would encourage risky adolescent sexual activity. This means that schools and other educational institutions should either remain silent or discuss sexuality in context of fear and danger in order to encourage sexual abstinence.

Unfortunately the victims of this debate have been the adolescents who have been left uninformed and ignorant regarding responsible decisions about sexual relationships with their partners (Ehrhardt, 1996). This lack of education, however, has not deterred adolescents from risky sexual behaviour. In fact, girls and boys are having intercourse earlier today than they were 20 years ago. Ehrhardt (1996) argues that the lack of sexual education programmes have negatively affected the rates of teenage pregnancies in the USA. In the Netherlands, for example, the problem of teenage pregnancies has virtually been eliminated. This was mainly due to sex education and readily available contraceptives rather than attempting to change sexual behavioural patterns. Ehrhardt (1996) therefore claims that the promotion of sexual abstinence would be futile without comprehensive sexual education.

According to Ehrhardt (1996) there are very few discussions or studies that portray

sexual feelings and behaviours as a normal aspect of human development, which is intensely experienced by young teenagers. The positive aspects of adolescent sexuality is seldom mentioned nor is sexual competence considered to be something that needs to be taught or learned. Ehrhardt (1996) further mentions that to become a competent sexual being takes experience and knowledge and the view that adolescence should have no sexual interaction at all would be damaging to natural developmental processes. Ehrhardt (1996) warns that a narrow focus on risk, fear and disease regarding adolescent sexuality may lead to increased rates of sexual inadequacies, sexual distortions and interpersonal problems.

2.1.8 Rational Decision-Making and Risk-Taking Sexual Behaviours

Pinkerton and Abramson (as cited in Symons, 1993) questions whether well informed, emotional people are able to make rational decisions regarding risky sexual practices. According to Symons (1993) the answer is yes if “rational” consists of choosing between sexual abstinence, having safer sex and having risky sex. If the perceived pleasure of risky sex is greater than the perceived risk of HIV infection a person would normally opt for risky sex (Symons, 1993). In other words, a person who is engaging in risky sexual behaviour is not suicidal because he or she would have rationally decided that the pleasure of risky sex outweighs the relatively small chance of contracting AIDS.

According to Symons (1993) if a HIV negative heterosexual person engages in a single act of penile/vaginal intercourse without a condom with a person of an unknown HIV

status, the chance is of contracting HIV is about 1 in 5 million. This means that the vast majority of people engaging in sexual intercourse without condoms are not behaving irrationally in terms of mortality risk. Pinkerton and Abramson (as cited in Symons, 1993) argue that sex is pleasurable and rates at near the top of most people's short list of pleasures. Yet despite this many writers regard sex as one area of life where humans should strive to reduce risk to the absolute minimum, no matter the cost.

Symons (1993) maintains that because humans experience a relatively high degree of pleasure and a relatively low degree of mortality risk from engaging in sexual intercourse without condoms, it is not surprising they do not comply with "safer sex" campaigns in general. This means that personal and public decisions should be based on accurate risk assessments and not on exaggerated HIV/AIDS statistics (Symons, 1993).

2.1.9 Theories regarding sex differences in risk-taking behaviours

According to Lopes (as cited in Byrnes, Miller and Schafer, 1999) theories of gender related risk taking behaviour fall into one of three categories. The first category of theories attempts to explain the differences between people who regularly take risks and people who regularly avoid risks (Byrnes et al, 1999). These theories predict that the size and direction of gender differences is not affected by context. In other words,

men always take more risks than women irrespective of context.

The second category consists of theories that attempt to explain the differences between situations that promote risk-taking and situations that promote risk avoidance ((Byrnes et al, 1999). An example would be Kahneman and Tversky's prospect theory (as cited in Byrnes et al, 1999), which attempts to explain why most people seem to prefer a risky option over a low-risk option when choices are framed in a positive manner but shift their preferences when the same choices are framed in a negative manner (Byrnes et al, 1999).

The third category consists of theories that attempt to explain differences among people and situations that encourage risk-taking (Byrnes et al, 1999). In other words, these models attempt to explain why only certain people take risks in certain situations. According to the models in this category, individuals take risks in a particular context because they firstly believe they will be successful and secondly they value success within that context (Atkinson, as cited in Byrnes et al, 1999). These models also propose that gender differences would vary by context and that in some contexts women would take greater risks than men.

Byrnes et al (1999) further mention other multifactor models that support the idea of context specifically. Arnett's (1992) theory of broad and narrow socialization, for example, suggests that the level of individual risk-taking depends on two factors: Firstly, endogenous tendencies such as sensation seeking and secondly, the manner the

individual's culture places restrictions on risk taking, such as laws, norms and parenting practices (as cited in Byrnes et al, 1999). Even though cultural restrictions might dampen a sensation seeker's inclination to take risks, these restrictions do not totally eliminate the inclination. Therefore, this model predicts that men would take more risks than women in most cultures because sensation seeking is found more often in men than in women (Byrnes et al, 1999).

Wilson and Daly's (1985) sociobiological model argues that even though gender differences would not be found within all contexts, men tend to take more risks (as cited in Byrnes et al, 1999). Wilson and Daly (as cited in Byrnes et al, 1999) argue that risk-taking is an attribute of masculine psychology that evolved from the competitive demands of primate societies where competition forced dominant individuals to engage in risk-taking behaviours to maintain or gain their position of power. This suggests that men would only take more risks than women when the context involves competition. According to Byrnes et al (1999) this model does not take into account the possibility of greater risk-taking by women in these contexts.

Byrnes et al (1999) maintain that once the theories had been categorized it was possible to understand to what extent each category could explain patterns of gender differences in risk-taking. Whereas Category one theories could explain pervasive patterns of gender differences across contexts, Category two theories could not. In the same way Category three theories could explain patterns of variable gender differences across contexts, which the theories in the other two categories could not (Byrnes et al,

1999). According to Byrnes et al (1999) Category three theories demonstrate greater ability to explain gender differences in risk-taking behaviour than theories in categories one and two.

2.2 The USA and South African Youth Risk Surveys

2.2.1 The national Youth Risk Behavior Survey (YRBS) conducted in the USA

In the USA 72% of all deaths among adolescents and young adults result from four courses: motor vehicle accidents (30%), unintentional injuries (15%), homicide (15%) and suicide (12%). Morbidity and social programs also result from pregnancies among teenage women and cases of sexually transmitted diseases (STDs), including HIV infection that occur annually (Eaton et al, 2008). These leading causes of morbidity and mortality among youth in the USA are linked to six categories of health risk behaviours: behaviours that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviour that contribute to unintentional pregnancies and STDs, including HIV infection; unhealthy dietary behaviours; and physical inactivity (Eaton et al, 2008).

To monitor these health-risk behaviours in each of these six categories among youth and young adults the Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) (Brenner et al, 2004). The YRBSS includes national, state and local-based surveys of students in grades 9 – 12, which are

conducted biennially since 1991(Eaton et al, 2008).

In the same way the YRBSS was developed by the CDC to monitor health risk behaviours that impact on youth of the USA, the National Department of Health of South Africa commissioned the Medical Research Council to conduct a similar survey on school-going learners in South Africa. Children and adolescents below the age of 19 make up half of South Africa's population therefore the school setting provides an appropriate social context to obtain information about young people and their behaviours (South African National Youth Risk Behaviour Survey, 2002).

The results of the 2007 YRBS, as discussed by Eaton et al (2008), reveal the following regarding youth risk behaviour within the six categories mentioned earlier (South African figures appear in the brackets). Among high school students in the USA 11.1% (85.7%) had never or rarely worn a seatbelt when riding in a motor car driven by someone else. During the 30 days before the survey, 29.1% (34.5%) of high school students had ridden in a car or other vehicle driven by someone who had been drinking alcohol, 18% (16.7%) had carried a weapon, and 5.9% (9.2%) had carried a weapon on school property. During the 12 months before the survey, 35% (30.2%) of students had been in a physical fight one or more times, 7.8% (14.9%) had been threatened or injured with a weapon on school property, 9.9% (13.6%) had been slapped, hit or physically hurt on purpose by a boyfriend or girlfriend and 6.9% (17.3%) had attempted suicide. Nationwide, 7.8% (9.8%) of students had ever been physically forced to have sexual intercourse when they did not want to. In addition, 75% (49.1%) of school students had

ever drunk alcohol, 26% (23%) had had five or more alcoholic drinks in a row on at least once during the 30 days before the survey, 38.1% (12.8%) had ever used marijuana one or more times and 7.2% (6.4%) had ever use any form of cocaine. The results of the 2007 survey also indicated that 47.8% (41.1%) of students had ever had sexual intercourse. Among the 35.0% of currently sexually active students nationwide, 22.5% (13.8%) had drunk alcohol or used drugs before their last sexual intercourse.

2.2.2 A comparison of risk behaviours of South African and USA school students

According to the information gained from these two surveys South African school students are more inclined than their USA counterparts to drive without a seat belt, carry a weapon to school, be threatened with a weapon on school premises, be hit, slapped or physically hurt by a boyfriend/girlfriend and be forced to have sexual intercourse. According to these surveys more than twice as many South African students attempt to commit suicide than USA students.

A higher percentage of USA students have been involved in a physical fight than South African students. A higher percentage of USA students had ever smoked cigarettes, drank alcohol, smoked marijuana, used cocaine and had sexual intercourse than South African students.

2.2.3 Buffalo City Municipality Youth at Risk Study 2007

The Buffalo City Municipality commissioned a study to the Fort Hare Institute of Social and Economic Research (FHISER) to investigate youth risk behaviour within the Buffalo City. The study, which was conducted in 2006, had two main objectives: to evaluate the current situation of youth at risk within the Buffalo City and to analyse the current resources that are available to address the challenges facing youth at risk.

The study revealed that a large percentage of youth in Buffalo City continue to engage in risky behaviour such as unprotected sex and having multiple sexual partners, despite the known threats of contracting HIV/AIDS or other sexually transmitted diseases (FHISER, 2007). The study highlights worrying levels of irresponsibility in the face of HIV and other dangers to the youth in this area. The study conducted by FHISER revealed the following statistics regarding risky behavioural patterns of the youth in the Buffalo City area.

The mean age of first sexual intercourse of youth between the ages of 14 - 20 was 15 years and 6.3% of respondents in the same age group had sexual intercourse with 11 people or more during their lifetime. Of the respondents 9.6% admitted to drinking alcohol or using drugs before having sexual intercourse the last time they had sexual intercourse. The results of the study also indicate that 18.2% of youth smoked cigarettes, 7.8% had ever smoked marijuana, 1% had ever used cocaine and 63.5% had ever drank alcohol. In the Buffalo City area 43.2% of youth had consumed five or

more alcoholic drinks in a row at least once during the 30 day period preceding the study and 7.4% had attempted to commit suicide during the 12 month period prior to the study. The study further revealed that 64.6% of youth felt unsafe when walking in the area where they live after dark.

According to the information gained from the USA survey and the Buffalo City Municipality survey the Buffalo City youth are more inclined than their USA counterparts to engage in binge drinking and attempt suicide. A higher percentage of USA students had ever smoked cigarettes, drank alcohol, smoked marijuana and used cocaine than the Buffalo City youth. According to the surveys the USA youth are also more prone to using alcohol and drugs before sexual intercourse than the Buffalo City youth.

Flisher, Reddy, Muller and Lombard (2003) found that among high school students 23.4% of males and 5.5% of females had participated in sexual intercourse by the age of 14 years. By the age of 19 years 71.8% of males and 58.2% of females had participated in sexual intercourse (Flisher et al, 2003). The study further revealed that the average time since the last intercourse episode was four weeks, the average number of sex partners in the year prior to the study was one and 78.4% had known the most recent partner for more than seven days. At their last sexual intercourse episode 65.4% of the students used contraception. The most common method of contraception were condoms (67.7%) and injectable steroids (43.2%) (Flisher et al, 2003). The conclusion of the study was that the proportion of sexually active students had increased since 1990 and that intervention programmes should commence in primary

school. This study also concluded that a large number of students are at risk for pregnancy and sexually transmitted infections (Flisher et al, 2003).

A further study conducted by Flisher, Ziervogel, Chalton, Leger and Robertson (1993) investigated road related risk-taking behaviours of Cape Peninsula high school students. The results of this study revealed that during the previous year 8.5% of the students had been involved in a motor vehicle accident and 7.4% had been injured in a pedestrian accident. Of the students who had driven a vehicle, 63.2% do not have a driver's license, 16.1% drove an overcrowded vehicle and 8% admitted driving while under the influence of alcohol or marijuana (Flisher et al, 2003). Of those who had been on a motorbike, 47.9% reported riding without a helmet and 37.5% did not wear seatbelts on the last occasion they were in the front seat of a motor vehicle. This study concluded by emphasizing the importance of motor vehicle accident prevention programmes (Flisher et al, 2003).

Flisher, Ziervogel, Chalton, Leger and Robertson (1993) found that 53.2% of high school students reported ever using alcohol, 26.2% had used alcohol recently and 15.4% reported episodes of binge drinking in the previous 14 days. The drinking patterns of these students varied according to school standards, home language and gender (Flisher et al, 2003). The results also indicated that within this population males consumed more alcohol than females and for both genders alcohol consumption rates increased with age. Overall, drinking prevalence rates was highest among English speaking adolescents and lowest among Xhosa-speaking females. This study revealed

the prevalence of binge drinking in particular as being of concern (Flisher et al, 2003).

Flisher, Ziervogel, Chalton, Leger and Robertson (1993) further examine violent behaviour among the above mentioned population. Of the total sample 12.7% of the students reported that they had been physically hurt by another person at school, 9.6% indicated that they had been injured at home and 13.8% reported being physically injured in other settings. Of the students that had injured others, 11% indicated that they had done so within the year prior to the study. The study further revealed that 5% of students had committed an act of vandalism and 9.8% of males and 1.3% of females had carried knives to school (Flisher et al, 2003).

2.3 Associations among risk-taking behaviours

Flisher, Ziervogel, Chalton and Robertson (1993) argue that in order for interventions to be effective they should not address various risky behaviours independently but should rather approach risky behaviour in a more holistic manner by taking into account the lifestyle in which the behaviour is embedded. Previous studies have indicated that relationships exist between various forms of risk-taking behaviour such as alcohol and drug use, smoking and unsafe sexual practices. On the other hand, it has been shown that associations also exist among various forms of health-enhancing behaviours such as physical exercise, healthy eating patterns and seatbelt use (Flisher et al, 1993). Pickett et al (2004) contend that the engaging in one form of risk behaviour more often than not might indicate an increased likelihood of engaging in other forms of risk

behaviour. Alcohol and substance use, for example, is often assumed to be associated with high levels of sexual risk-taking and lower levels of condom use.

In their study Flisher, Ziervogel, Chalton, Leger and Robertson (1993) investigated the relationships between adolescent risk behaviours and the influence these behaviours have on one another. The results indicate that there were substantial associations between many forms of substance abuse (Flisher et al, 1993). An association also existed between injury and getting home late at night, which was in turn a predictor of substance abuse. Marijuana smoking, alcohol binge drinking and getting home late at night were further associated with having had sexual intercourse. This study concluded by stressing that there are significant relationships between many adolescent risk behaviours (Flisher et al, 1993).

The results of a study conducted among young Ugandan unmarried people by Nazarius and Rogers (2005) indicate that alcohol consumption is associated with risky behaviour among this population, which highlights the importance of programmes aimed at not only controlling alcohol consumption among young people but understanding the relationship between alcohol consumption and risky behaviour. Yet despite the high coincidence of alcohol use and risky behaviour, including risky and violent sexual activity, remarkably few public or private prevention, treatment and counseling programmes attend to this connection (CASA, 1999). This is unfortunate because it seems clear that alcohol and drugs have an intimate relationship with high-risk behaviours and dangerous sexual activity. Individuals who use alcohol and drugs are

more likely to initiate sex at earlier ages, have more sexual partners and have sex with higher risk patterns.

The CASA (1999) report, entitled "*Dangerous Liaisons: Substance Abuse and Sex*" attempts to analyze the complex connection between substance abuse and sexual activity and violence within the teenage population. According to this report the majority of school going adolescents would have to make a conscious choice whether to drink alcohol, whether to use illegal drugs and whether to have sexual intercourse. Those who choose to drink or use drugs are much more likely to have sexual intercourse, to have sexual intercourse at a younger age and to have sexual intercourse with several individuals (Casa, 1999).

Key findings of this report include the following: Teenagers who drink are seven times likelier than those who don't to have sexual intercourse; Teenagers who use illegal drugs are five times likelier than those who do not use illegal drugs to have sexual intercourse; Teenagers who use alcohol are twice as likely and teenagers who use drugs are three times as likely as none using teenagers to have sexual intercourse with four or more individuals; Teenagers under 15 years of age who have ever had a drink are twice as likely as those who have not to have had sexual intercourse; Teenagers under 15 years of age who have ever used drugs are almost four times as likely than those who have not to have sexual intercourse; Teenage sexual activity linked to alcohol and drug use increases the chances of infection with sexually transmitted diseases, including HIV/AIDS infection and unwanted pregnancies (Casa, 1999).

According to the CASA (1999) report alcohol use has also been implicated in up to 75% of date rapes and that alcohol and drug use could serve as a trigger for aggressive behaviour. It is also mentioned in the report that alcohol is implicated in more incidents of sexual violence, including rape and child molestation, than any other single drug (CASA, 1999). The report therefore finds close and often dangerous liaisons between substance abuse and sexual activity, particularly within the teenage and female populations. Substance abuse can therefore be viewed as a common culprit in many dangerous and risky sex activities. The CASA (1999) report therefore argues that substance abuse and sex education programmes for adolescents or teenagers should deal with the relationship between drinking, using drugs and sexual activity.

Palen, Smith, Flisher, Caldwell and Mpofu (2003) confirm these findings in their study which examines the covariance of substance use and various sexual behaviours in over two thousand South African students. The findings of this study indicate that associations exist between lifetime substance use and certain sexual risk behaviours, such as the association between substance use and being unfamiliar with one's sexual partner.

Despite intensive research and public awareness programmes regarding the risk of HIV infection posed by sexual intercourse, sexually active adolescents continue to engage in high rates of behaviours that puts them at increased risk of becoming infected with HIV/Aids (Kurt. Dermen, Cooper and Agocha, 1998). Kurt et al (1998) agree that

alcohol has been most frequently identified as a potential contributor of HIV-related sexual risk-taking. If it can be shown that alcohol or drug-use causes high-risk sexual behaviour, interventions aimed at preventing the combination of alcohol / drug-use and sexual behaviour might effectively diminish the continuing spread of HIV infection (Stall and Leigh, 1994).

2.4 Sex differences regarding high risk behaviour

The results of most surveys and research seem to point to males as being more inclined to participate in risky behaviour, especially in the areas of sexual activity, alcohol and drug use and violent behaviour (CASA, 1999). In a study focusing on factors promoting unsafe sexual behaviour in South African youth, Eaton, Flisher and Aaro (2002) mentioned that 10 to 25% of males have more than four sex partners per year compared to 1 to 5% of females. The results of a further study conducted by Flisher, Reddy, Muller and Lombard (2003) further implicate males as high sexual risk-takers, in that by the age of 14 years, 23.4% of males and only 5.5% of females had participated in sexual intercourse. These findings are in line with the results obtained from the 1st South African National Youth Risk Behaviour Survey (2002) which shows that 25.4% of males and 5.6% of females initiated sex for the first time before the age of fourteen. A further study conducted by FHISER (2007) in the Buffalo City Municipal (BCM) area revealed that the mean age at first sexual intercourse for males was 14.4 years and females 16.7 years.

In their study concerning racial and gender differences in patterns of adolescent risk behaviour for HIV and other sexually transmitted diseases Halpern et al (2004) found that males are more likely than females to participate in substance use, binge drinking, marijuana use, illegal drug use and high levels of sexual activity. The FHISER (2007) report further mentions that the results of their BCM Youth Risk Study indicate a lack of concern among males about contracting the HIV virus. One in five male respondents said they had had eleven or more sexual partners compared to one in fifty among female respondents. The study further revealed that in the Buffalo City area 25.4% of males compared to 6.2% of females reported drinking alcohol or using drugs before the last time they had sexual intercourse. This highlights a further area of concern which involves the consumption of alcohol among youth, especially if one takes into account the CASA (1999) report which associates alcohol with various criminal activities including sexual violence. According to the FHISER (2007) report 69.3% of male compared to 51% of female youths in the Buffalo City area admitted consuming five or more alcoholic drinks in a row during the last 30 days prior to the survey.

According to Lindegger and Durrheim (2001) male dominance with regard to risk-taking could be attributed to the manner masculinity is constructed and implanted into male thinking through the process of socialization. Lindegger and Durrheim (2001) argue that the single dominant construction of masculinity comprises of the discourse of the male sex-drive, the notion of conquest, masculinity-as-penetration, males-as-risk takers and the notion of the idealized male body. The pattern of risk behaviour associated with each of these constructions are: -

- Male sex-drive: This accepted belief holds that men are driven by an uncontrollable sex-drive that is biologically rooted. Women are expected to submit in order to provide men with the desired sexual relief. This skewed belief is viewed as playing a large role in the perpetuation of the HIV/Aids pandemic.
- The notion of conquest: Masculinity is established by conquest, including the conquest of women. This means that men would conquer as many as possible in order to be viewed as masculine by other men.
- Males-as-risk-takers: Men regard themselves as risk takers and because of this involve themselves in risky behaviours such as substance abuse, reckless driving, violent behaviour and unprotected sex.
- Masculine as penetration: Masculinity is viewed as synonymous with penetration, both of nature and body.
- Idealized male body: Opposite to the female body the male body, makes man a 'real man'. This has lead to a desire to the instilling of certain values such as toughness, competitiveness and desire for control. This pre-occupation with the ideal male body has lead to the discrimination and abuse of other 'bodies' especially the bodies of women.

Importantly these constructions of masculinity create a context for the fostering of risky behaviour and incidences violence, which impact not only on the youth but on the population as a whole (Lindegger and Durrheim, 2001).

2.5 Summary

Youth risk behaviour among adolescents and young adults is recognised as a particularly destructive social phenomenon and remains one of the main causes of death, disability and illness among these populations. This social phenomenon remains a complex issue that deserves further research. The methods used in this study will be discussed in chapter three.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This study will firstly establish the relationships that might exist among various risk-taking behaviours of a first-year students and secondly it will establish whether there are sex differences in such risk-taking behaviours.

The statistical programme, Statistical Package for the Social Sciences (SPSS) student version 11.0 four Windows, was used to process the data collected from the students. A convenience sampling method was used to collect the necessary data. A survey research design provided an effective means of establishing relationships that might exist between the various risky behaviours as well as establishing gender differences

regarding such behaviours.

3.2 Sample

The sample consisted of 244 first-year psychology students (mean age 20.8 yr., $SD=1.5$) of which 52 (21.3%) were male (M age=21.3, $SD=1.04$) and 192 (78.7%) were female ($M=20.7$, $SD=1.5$) (Figure 1).

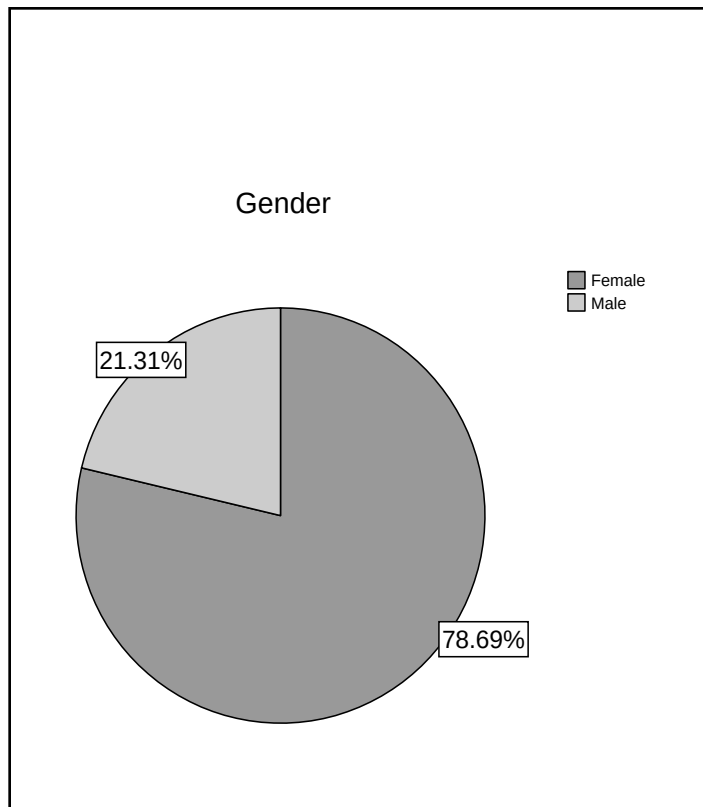


Figure 1. Gender ratios of participants

Of the sample 55.3% of the students were within the range of 22 years and older ($N=135$), 12.3% ($N=30$) were 20 years old, 10.7% ($N=26$) were 19 years old, 10.7% ($N=26$) were 18 years old, 10.2% ($N=25$) were 21 years old and .8% ($N=2$) were 17

years old (Figure 2).

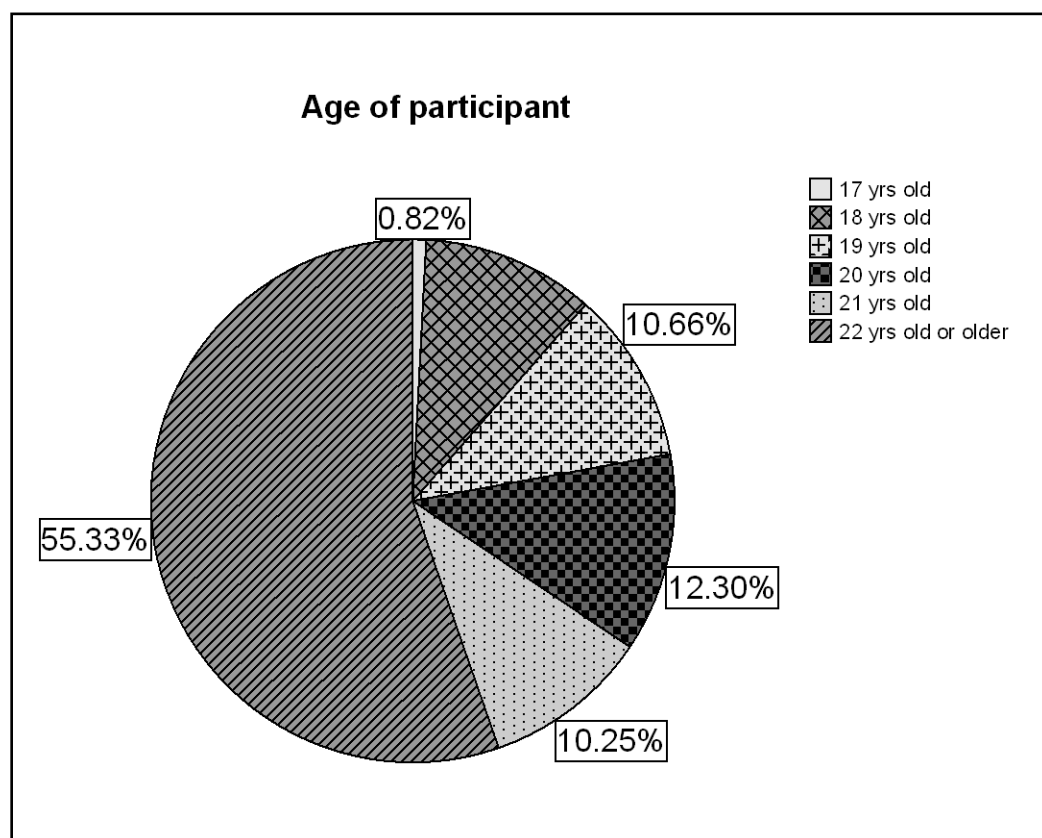


Figure 2. Age of participants ratio of participants.

Of the sample 66.8% (N=163) were first-year students, 26.2% (N=64) were second-year students, 3.3% (N=8) were third year students and 3.7% (N=9) were fourth year students (Figure 3).

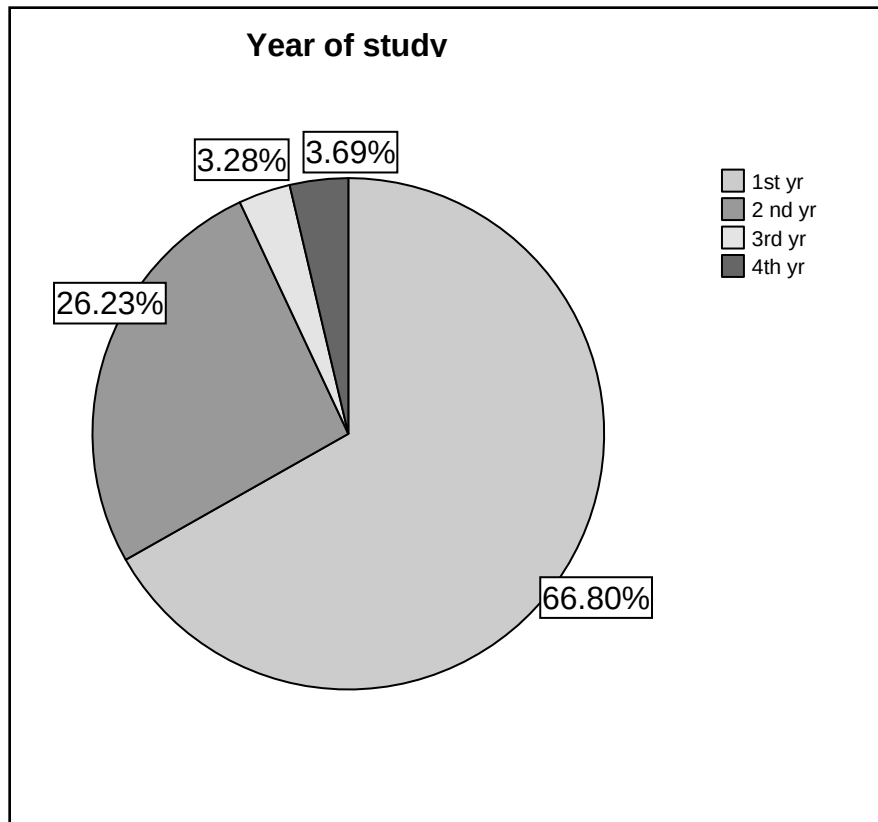


Figure 3. Year of study ratio of participants.

The use of apartheid racial categories is not endorsed by the researcher but for the purpose of this study the use of racial categories is useful in terms of service delivery to target groups. The racial grouping of the population consisted of the following: 77.5% (N=189) where black students, 12.3% (N=30) where white students, 8.2% (N=20) were coloured students, .8% (N=2) were Indian students and 1.2% (N=3) were from other racial backgrounds (Figure 4).

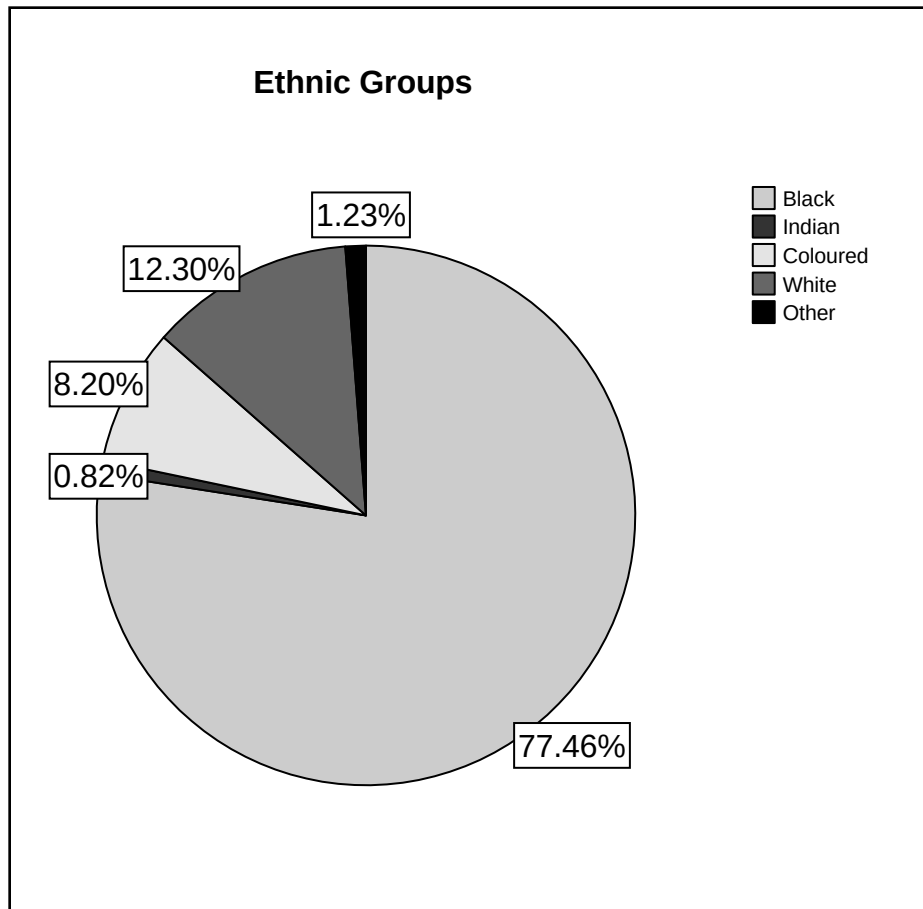


Figure 4. The ethnic group ratios of the participants.

3.3 Instrumentation

Questionnaires were administered to all consenting first-year psychology students during lecture time. The questionnaires were completed anonymously under the supervision of the lecturer. The questionnaire contained 79 questions regarding risky behaviour and six demographic questions.

The questionnaire used in this study was based on the questionnaire used in the YRBSS conducted in the USA. Minor modifications were made to make the

questionnaire more applicable to university students in South Africa. For examples, in one question the word “dagga” was added to marijuana to make the question more understandable for South Africans.

To test the reliability and validity of the YRBS questionnaire (version 1991 and 1999), the CDC conducted two test-retest studies, one in 1992 and the other in 2000. The 1992 reliability tests revealed that approximately three fourths of the items on the 1991 version of the questionnaire had a substantial to high reliability ($\kappa = 61\% - 100\%$). The reliability tests conducted in 2000 revealed even higher reliability (Brener et al, 2004).

The study used the items on the questionnaire to measure the following risk-taking scales: Risky and violent behaviour; tobacco use; alcohol and drug use; sexual behaviours; and unhealthy dietary behaviour. The risky and violent behaviour scale consists of the following three items in the questionnaire: When you rode a bicycle during the past 12 months, how often did you wear a helmet?; During the past 30 days, on how many days did you carry a gun?; During the past 30 days, on how many days did you carry a weapon such as a gun, knife or club on university property?

The Cronbach Alpha Coefficient for risky and violent behaviour scale was 0.70, which is acceptable compared to the guideline of $\alpha > 0.70$ (Finchilescu, 2002).

The tobacco use scale consists of the following items in the questionnaire: During the past 30 days, how many days did you smoke cigarettes?; During the past 30 days, on

the days you smoked, how many cigarettes did you smoke per day?; During the past 30 days, how did you usually get your cigarettes?; During the past 30 days, how many days did you smoke cigarettes on university property?; During the past 30 days, how many days did you use chewing tobacco, snuff, or dip?; During the past 30 days how many days did you use chewing tobacco, snuff or dip on university property?; During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?

The Cronbach Alpha Coefficient for tobacco use scale was 0.80, which is acceptable compared to the guideline of $\alpha > 0.70$ (Finchilescu, 2002).

The alcohol and drug use scale consists of the following items in the questionnaire: During your life, on how many days have you had at least one drink of alcohol?; During the past 30 days, on how many days did you have at least one drink of alcohol?; During the past 30 days, on how many days did you have five or more drinks of alcohol in a row, within a couple of hours?; During the past 30 days, how did you usually get the alcohol you drank?; During the past 30 days, on how many days did you have at least one drink of alcohol on university property?; During your life, how many times have you used marijuana/dagga?; How old were you when you tried marijuana/dagga for the first time?; During the past 30 days, how many times did you use marijuana/dagga?; During the past 30 days, how many times did you use marijuana/dagga on university property?; During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?; During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase?; During your life, how many times have

you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?; During your life, how many times have you used heroin?; During your life, how many times have you used methamphetamines?; During your life, how many times have you used ecstasy?; During your life, how many times have you taken steroid pills or shots without a doctor's prescription?; During your life, how many times have you used a needle to inject any illegal drug into your body?

The Cronbach Alpha Coefficient for alcohol and drug use scale was 0.79, which is acceptable compared to the guideline of $\alpha > 0.70$ (Finchilescu, 2002).

These sexual behaviour scale consists of the following items in the questionnaire: How old were you when you had sexual intercourse for the first time?; During your life, with how many people have you had sexual intercourse?; During the past three months, with how many people did you have sexual intercourse?; Did you drink alcohol or used drugs before you had sexual intercourse the last time?; The last time you had sexual intercourse, did you or your partner use a condom?; The last time you had sexual intercourse, what one method that you or your partner use to prevent pregnancy?

Cronbach Alpha Coefficient for sexual behaviour scale was 0.77, which is acceptable compared to the guideline of $\alpha > 0.70$ (Finchilescu, 2002).

The unhealthy dietary behaviour scale consists of the following items in the questionnaire: During the past 7 days, how many times did you drink 100% fruit juice

such as orange juice?; During the past 7 days, how many times did you eat fruit?; During the past 7 days, how many times did you eat green salad?; During the past 7 days, how many times did you eat potatoes?; During the past 7 days, how many times did you eat carrots?; During the past 7 days, how many times did you eat other vegetables?; During the past 7 days, how many times did you drink a can, bottle, or glass of soda or pop, such as coke?; During the past seven days, how many classes of milk did you drink?

Cronbach Alpha Coefficient for unhealthy dietary behaviour scale was 0.75, which is acceptable compared to the guideline of $\alpha > 0.70$ (Finchilescu, 2002).

The questionnaire also contained a number of demographic items such as age, sex, year of study, race, height and weight. The purpose of these questions was to identify the risk-taking profiles of certain subgroups such as the risk-taking profile of males and females.

3.4 Hypotheses

1. Correlations exist among risk-taking behaviours.
2. Sex differences exist in the risk-taking profile of first year students.

3.5 Data collection

Permission for the study was obtained from the Department of psychology at the UFH. The questionnaire was distributed by the researcher. Participants were given verbal instructions regarding the completion of the questionnaire and confidentiality was guaranteed to all the participants who participated.

3.6 Data analysis

Once the data had been collected it was analyzed using the SPSS programme. The SPSS programme was used to:

- Establish correlations that might exist among the various risk-taking subscales (Pearson Correlation).
- Once correlations were found among the variables a multiple regression analysis was performed in order to predict high risky behaviorus, such as risky sexual behaviour, from the other risky behaviours.
- An Anova was conducted to establish relationships between those who scored high on Risky and Violent Behaviour and those who scored low on Risky and Violent Behaviour with regards Tobacco Use, Alcohol and Drug Use, Risky Sexual Behaviour and Unhealthy Dietary Behaviours.

3.7 Ethical Considerations

This study conforms to the full philosophical principles of ethics mentioned by Wassenaar (2006). The principle of autonomy and respect for the dignity of persons: this study guaranteed individual confidentiality, which is an important operational expression of this principle (Wassenaar, 2006). The principle of nonmaleficence: this study ensures that no harm would befall any of the research participants as a direct or in direct consequence of the research. The principle of beneficence: the possible benefit gained from this study would outweigh any possible risk for any participants. The principle of justice: the participants were treated with fairness and equity during all stages of research (Wassenaar, 2006).

3.8 Limitations

Convenience sampling does not conform to the statistical principle of randomness and therefore information gained from this form of sampling cannot be generalized to other settings or populations (Durrheim and Painter, 2006).

3.9 Summary

A convenience sampling method was used to generate a sample of 244 first-year students of which 21.3% were male and 78.7% were female. A questionnaire

containing 79 items regarding risky behaviour was used as an instrument to collect data from the students. The items in the questionnaire were used to measure the following risk-taking scales: risky and violent behaviour, tobacco use, alcohol and drug use, sexual behaviours and unhealthy dietary behaviours. The Cronbach Alpha Coefficient for all these scales were acceptable compared to the guidelines of $\alpha > 0.70$. The SPSS programme was used to establish correlations that might exist among the various risk-taking subscales. Where correlations were found a multiple regression analysis was performed in order to explore the predictive ability of the risk-taking behaviours on behaviours such as risky sexual behaviour. Thereafter a Chi-squared analysis was conducted in order to identify significant differences between those who scored high and those who scored low on the various risky behaviours regarding risk taking patterns. The results of the study will be presented in Chapter 4.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter presents the results of firstly, a correlation analysis and secondly, a multiple regression analysis, which were conducted to establish possible relationships that might exist among the risk-taking behaviours as well as establishing the predictive value each risky behaviour might have on the other risk-taking behaviours. This chapter further reveals the results of an Anova, which was conducted to establish the risky

behaviours of those who scored high on the Risky and Violent Behaviour subscales participated in as compared to the risky behaviours of those who scored low on the Risky and Violent Behaviour subscale.

4.2 Examining the Relationship between Variables: Correlation

4.2.1 Pearson Correlation Coefficient of High Risk Behaviours for all participants

Pearson correlation coefficients were computed to estimate associations among all the measures (Table 2). The correlations among ratings on Risky and Violent Behaviours ($M=3.31$; $SD=1.34$), Tobacco Use ($M=8.72$, $SD=4.74$); Alcohol and Drug Use ($M=25.09$; $SD=9.36$) and Sexual Behaviours ($M=21.40$; $SD=6.95$) were all significant. There was no association between Unhealthy Dietary Behaviours ($M=21.75$; $SD=7.44$) and the other variables.

Table 1. Descriptive Statistics for the five subscales for all participants.

	Mean	Std.Deviation	N
RISKY & VIOLENT BEHAVIOURS	3.3197	1.34725	244
TOBACCO USE	8.7213	4.74322	244
ALCOHOL & DRUG USE	25.0902	9.36942	244
SEXUAL BEHAVIOURS	21.4098	6.95873	244
UNHEALTHY DIETARY BEHAVIOURS	21.7582	7.44050	244

There is a significant, positive correlation between Risky Behaviours and Tobacco Use ($r=.22$, $p>.01$); Alcohol and Drug Use ($r=.16$, $p>.01$); Sexual Behaviours ($r=.10$, $p>.05$).

There is a strong, significantly positive relationship between Tobacco Use and Alcohol Use ($r=.57$, $p>.01$). There is no significant relationship between Unhealthy Behaviours and the other variables.

Table 2. Pearson Correlation Coefficients for the five subscales for all participants

		RISKY BEHAVIOUR	TOBACCO USE	ALCOHOL & DRUG USE	SEXUAL BEHAVIOURS	UNHEALTHY DIETARY BEHAVIOURS
RISKY AND VIOLENT BEHAVIOUR	Pearson Correlation	1	.225(**)	.165(**)	.108(*)	.054
	Sig. (1-tailed)		.000	.005	.046	.202
	N	244	244	244	244	244
TOBACCO USE	Pearson Correlation	.225(**)	1	.571(**)	.065	.104
	Sig. (1-tailed)	.000		.000	.155	.052
	N	244	244	244	244	244
ALCOHOL & DRUG USE	Pearson Correlation	.165(**)	.571(**)	1	.023	.039
	Sig. (1-tailed)	.005	.000		.358	.270
	N	244	244	244	244	244
SEXUAL BEHAVIOURS	Pearson Correlation	.108(*)	.065	.023	1	.088
	Sig. (1-tailed)	.046	.155	.358		.086
	N	244	244	244	244	244
UNHEALTHY DIETARY BEHAVIOURS	Pearson Correlation	.054	.104	.039	.088	1
	Sig. (1-tailed)	.202	.052	.270	.086	
	N	244	244	244	244	244

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

4.2.2 Pearson Correlation Coefficient of High Risk Behaviors for Male participants

Pearson correlation coefficients were computed to estimate associations among all the measures (Table 4). The correlation among ratings on Tobacco Use ($M=10.72$,

SD=6.11); Alcohol and Drug Use (M=30.94; SD=11.00) was significant. There was no association between Risky and Violent Behaviours (M=4.00; SD=2.37) and the other variables. Other than with Alcohol and Drug Use, there was no association between, Tobacco Use and the other variables. Other than with Tobacco Use, there was no association between Alcohol and Drug Use and the other variables. There was no association between Sexual Behaviours (M=22.80; SD=6.86) the other variables. There was no association between Unhealthy Behaviours (M=21.67; SD=6.83) and the other variables.

Table 3. Descriptive statistics for the five subscales for male participants.

	Mean	Std. Deviation	N
RISKY & VIOLENT BEHAVIOUR	4.0000	2.37635	52
TOBACCO USE	10.1154	6.11861	52
ALCOHOL & DRUG USE	30.9423	11.00163	52
SEXUAL BEHAVIOURS	22.8077	6.86005	52
UNHEALTHY DIETARY BEHAVIOURS	21.6731	6.83337	52

There is a strong significant, positive correlation between Tobacco Use and Alcohol & Drug Use ($r=.58$, $p>.01$). There is no significant relationship between the other the Risky Behaviours (see Table4).

Table 4. Pearson Correlation Coefficients for the five subscales for male participants

		RISKY BEHAVIOUR	TOBACCO USE	ALCOHOL, DRUG USE	SEXUAL BEHAVIOURS	UNHEALTHY DIETARY BEHAVIOURS
RISKY & VIOLENT BEHAVIOUR	Pearson Correlation	1	.167	.082	.051	-.063
	Sig. (1-tailed)		.118	.282	.361	.329
	N	52	52	52	52	52
TOBACCO USE	Pearson Correlation	.167	1	.586(**)	.106	.088
	Sig. (1-tailed)	.118		.000	.227	.268
	N	52	52	52	52	52
ALCOHOL & DRUG USE	Pearson Correlation	.082	.586(**)	1	.089	.150
	Sig. (1-tailed)	.282	.000		.266	.143
	N	52	52	52	52	52
SEXUAL BEHAVIOURS	Pearson Correlation	.051	.106	.089	1	-.005
	Sig. (1-tailed)	.361	.227	.266		.486
	N	52	52	52	52	52
UNHEALTHY DIETRY BEHAVIOURS	Pearson Correlation	-.063	.088	.150	-.005	1
	Sig. (1-tailed)	.329	.268	.143	.486	
	N	52	52	52	52	52

** Correlation is significant at the 0.01 level (1-tailed).

4.2.3 Pearson Correlation Coefficient of High Risk Behaviours for Female participants

Pearson correlation coefficients were computed to estimate associations among all the measures (Table 6). The correlations among ratings on Risky and Violent Behaviours (M=3.13; SD=0.80), Tobacco Use (M=8.34, SD=4.23); Sexual Behaviours (M=21.03; SD=6.95) and Unhealthy Behaviours (M=21.78; SD=7.61) were all significant. There was a strong and significant correlation between Alcohol & Drug Use (M=23.50; SD=8.21) and Tobacco use.

Table 5. Descriptive statistics for the five subscales for female participants.

	Mean	Std. Deviation	N
RISKY & VIOLENT BEHAVIOUR	3.1354	.80078	192
TOBACCO USE	8.3438	4.23728	192
ALCOHOL & DRUG USE	23.5052	8.21695	192
SEXUAL BEHAVIOURS	21.0313	6.95453	192
UNHEALTHY BEHAVIOURS	21.7813	7.61330	192

There is a significant, positive correlation between Risky & Violent Behaviours and Tobacco Use ($r=.25$, $p>.01$); Sexual Behaviours ($r=.13$, $p>.05$) and Unhealthy Dietary Behaviours ($r=.16$, $p>.05$). There is a strong, significantly positive relationship between Tobacco Use and Alcohol and Drug Use ($r=.54$, $p>.01$). There were no significant correlations between the other variables.

Table 6. Pearson Correlation Coefficients for the five subscales for female participants

		RISKY & VIOLENT BEHAVIOUR	TOBACCO USE	ALCOHOL & DRUG USE	SEXUAL BEHAVIOURS	UNHEALTHY DIETARY BEHAVIOURS
RISKY & VIOLENT BEHAVIOUR	Pearson Correlation	1	.252(**)	.106	.133(*)	.160(*)
	Sig. (1-tailed)		.000	.072	.033	.013
	N	192	192	192	192	192
TOBACCO USE	Pearson Correlation	.252(**)	1	.544(**)	.030	.116
	Sig. (1-tailed)	.000		.000	.341	.054
	N	192	192	192	192	192
ALCOHOL & DRUG USE	Pearson Correlation	.106	.544(**)	1	-.047	.010
	Sig. (1-tailed)	.072	.000		.259	.444
	N	192	192	192	192	192
SEXUAL BEHAVIOURS	Pearson Correlation	.133(*)	.030	-.047	1	.111
	Sig. (1-tailed)	.033	.341	.259		.063
	N	192	192	192	192	192
UNHEALTHY DIETARY BEHAVIOURS	Pearson Correlation	.160(*)	.116	.010	.111	1
	Sig. (1-tailed)	.013	.054	.444	.063	
	N	192	192	192	192	192

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

4.3 Multiple Regression Analysis

4.3.1 The use of a Multiple regression analysis to predict Risky and Violent Behaviour from Tobacco, Alcohol and Drug Use, Sexual Behaviour, and Unhealthy Dietary Behaviour for ALL participants.

The analysis yielded a final model which included one of the four variables ($F_{4,23}=3.95$, $p<.0001$; $R^2=.06$). Tobacco Use ($\beta=.18$) was the only important predictor variable for Risky and Violent Behaviour.

Table 7. Multiple Regression Coefficients for Risky and Violent Behaviour for ALL the participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	2.181	.412		5.291	.000
	TOBACCO USE	.052	.022	.185	2.404	.017
	ALCOHOL, DRUG USE	.008	.011	.056	.734	.464
	UNHEALTHY DIETARY BEHAVIOURS	.004	.011	.024	.382	.703
	SEXUAL BEHAVIOURS	.018	.012	.093	1.469	.143

a Dependent Variable: RISKY_BEHAVIOUR

4.3.2 The use of a Multiple regression analysis to predict Tobacco Use from Risky and Violent Behaviour, Alcohol and Drug Use, Sexual Behaviour and Unhealthy Dietary Behaviour for ALL participants.

The analysis yielded a final model which included two of the four variables ($F_{4,23}=32.27$, $p<.0001$; $R^2=.59$). Risky and Violent Behaviour ($\beta=.12$) and Alcohol and Drug Use ($\beta=.54$) were the only important predictor variables for Tobacco Use.

Table 8. Multiple Regression Coefficients for Tobacco Use for ALL the participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-1.202	1.274		-.943	.347
	RISKY & VIOLENT BEHAVIOUR	.450	.187	.128	2.404	.017
	ALCOHOLDRUG USE	.277	.027	.546	10.336	.000
	SEXUAL BEHAVIOURS	.022	.036	.032	.615	.539
	UNHEALTHY DIETARY BEHAVIOURS	.047	.033	.073	1.398	.164

a Dependent Variable: TOBACCO_USE

4.3.3 The use of a Multiple regression analysis to predict Alcohol and Drug Use from Risky and Violent Behaviour, Tobacco Use, Sexual Behaviour and Unhealthy Dietary Behaviour for ALL participants.

The analysis yielded a final model which included one of the four variables ($F_{4.23}=29.20$, $p<.0001$; $R^2=.32$). Tobacco Use ($\beta=.56$) was the only important predictor variable for Alcohol and Drug Use.

Table 9. Multiple Regression Coefficients for Alcohol and Drug Use for ALL the participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	15.449	2.362		6.541	.000
	RISKY & VIOLENT BEHAVIOUR	.279	.380	.040	.734	.464
	TOBACCO USE	1.117	.108	.565	10.336	.000
	SEXUAL BEHAVIOURS	-.022	.072	-.016	-.301	.764
	UNHEALTHY DIETARY BEHAVIOURS	-.026	.067	-.020	-.382	.703

a Dependent Variable: ALCOHOLDRUG_USE

4.3.4 The use of a Multiple regression analysis to predict Sexual Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Unhealthy Dietary Behaviour for ALL participants.

The analysis yielded a final model which included none of the four variables ($F_{4,23}=1.21$, $p=.30$; $R^2=.02$). None of the variables were important predictor variables for Sexual Behaviour.

Table 10. Multiple Regression Coefficients for Sexual Behaviour for ALL the participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	17.975	1.985		9.054	.000
	RISKY & VIOLENT BEHAVIOUR	.499	.340	.097	1.469	.143
	TOBACCO USE	.072	.116	.049	.615	.539
	ALCOHOL & DRUG USE	-.017	.058	-.024	-.301	.764
	UNHEALTHY DIETARY BEHAVIOURS	.073	.060	.078	1.213	.226

a. Dependent Variable: SEXUAL_BEHAVIOURS

4.3.5 The use of a Multiple regression analysis to predict Unhealthy Dietary Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Sexual Behaviour for ALL participants.

The analysis yielded a final model which included none of the four variables ($F_{4,23}=1.13$, $p=.34$; $R^2=.01$). None of the variables were important predictor variables for Unhealthy Dietary behaviour .

Table 11. Multiple Regression Coefficients for Unhealthy Dietary Behaviour for ALL the participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	18.584	2.148		8.651	.000
	RISKY & VIOLENT BEHAVIOUR	.139	.365	.025	.382	.703
	TOBACCO USE	.174	.124	.111	1.398	.164
	ALCOHOL & DRUGUSE	-.024	.062	-.030	-.382	.703
	SEXUAL BEHAVIOURS	.084	.069	.078	1.213	.226

a Dependent Variable: UNHEALTHY_BEHAVIOURS

4.3.6 The use of a Multiple regression analysis to predict Risky and Violent Behaviour from Tobacco, Alcohol and Drug Use, Sexual Behaviour, and Unhealthy Dietary Behaviour for MALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4,47}=.42$, $p=.78$; $R^2=.03$). None of the variables were important predictor variables for male Risky and Violent behaviour.

Table 12. Multiple Regression Coefficients for Risky and Violent Behaviour for MALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	3.712	1.753		2.117	.040
	TOBACCO USE	.070	.069	.179	1.010	.318
	ALCOHOL& DRUG USE	-.003	.039	-.015	-.082	.935
	SEXUAL BEHAVIOURS	.011	.050	.032	.225	.823
	UNHEALTHY DIETARY BEHAVIOURS	-.026	.050	-.076	-.525	.602

a Dependent Variable: RISKY_BEHAVIOUR

b Sex = Male

4.3.7 The use of a Multiple regression analysis to predict Tobacco Use from Risky and Violent Behaviour, Alcohol and Drug Use, Sexual Behaviour and Unhealthy Dietary Behaviour for MALE participants.

The analysis yielded a final model which included one of the four variables ($F_{4,47}=6.63$, $p<.0001$; $R^2=.36$). Alcohol and Drug Use ($\beta=.57$) was the only important predictor variable for Tobacco Use.

Table 13. Multiple Regression Coefficients for Tobacco Use for MALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-2.123	3.834		-.554	.582
	RISKY & VIOLENT BEHAVIOUR	.305	.302	.119	1.010	.318
	ALCOHOL & DRUG USE	.318	.066	.571	4.801	.000
	SEXUAL BEHAVIOURS	.044	.105	.050	.423	.675
	UNHEALTHY DIETARY BEHAVIOURS	.008	.106	.009	.080	.937

a Dependent Variable: TOBACCO_USE

b Sex = Male

4.3.8 The use of a Multiple regression analysis to predict Alcohol and Drug Use from Risky and Violent Behaviour, Tobacco Use, Sexual Behaviour and Unhealthy Dietary Behaviour for MALE participants.

The analysis yielded a final model which included one of the four variables ($F_{4,47}=6.45$, $p<.0001$; $R^2=.35$). Tobacco Use ($\beta=.57$) was the only important predictor variable for Alcohol and Drug Use.

Table 14. Multiple Regression Coefficients for Alcohol and Drug Use for MALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	16.126	6.538		2.466	.017
	RISKY & VIOLENT BEHAVIOUR	-.045	.552	-.010	-.082	.935
	TOBACCO USE	1.036	.216	.576	4.801	.000
	SEXUAL BEHAVIOURS	.046	.189	.029	.242	.810
	UNHEALTHY DIETARY BEHAVIOURS	.160	.190	.099	.843	.403

a Dependent Variable: ALCOHOLDRUG_USE

b Sex = Male

4.3.9 The use of a Multiple regression analysis to predict Sexual Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Unhealthy Dietary Behaviour for MALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4,47}=.16$, $p=.95$; $R^2=.01$). None of the variables were important predictor variables for Sexual Behaviour.

Table 15. Multiple Regression Coefficients for Sexual Behaviour for MALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	21.071	4.387		4.804	.000
	RISKY_BEHAVIOUR	.096	.426	.033	.225	.823
	TOBACCO_USE	.086	.203	.076	.423	.675
	ALCOHOLDRUG_USE	.027	.112	.044	.242	.810
	UNHEALTHY_BEHAVIOURS	-.016	.148	-.016	-.111	.912

a Dependent Variable: SEXUAL_BEHAVIOURS

b Sex = Male

4.3.10 The use of a Multiple regression analysis to predict Unhealthy Dietary Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Sexual Behaviour for MALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4.47}= .34$, $p=.84$; $R^2=.02$). None of the variables were important predictor variables for Unhealthy Dietary behaviour

Table 16. Multiple Regression Coefficients for Unhealthy Dietary Behaviour for MALE participants

Model		Unstandardized Coefficients		Standardized Coefficients	t		Sig.	
		B	Std. Error	Beta	B	Std. Error		
1	(Constant)	19.879	4.430		4.487		.000	
	RISKY BEHAVIOUR	-.220	.420	-.077	-.525		.602	
	TOBACCO USE	.016	.201	.014	.080		.937	
	ALCOHOLDRUG USE	.093	.110	.150	.843		.403	
	SEXUAL BEHAVIOURS	-.016	.144	-.016	-.111		.912	

a Dependent Variable: UNHEALTHY_BEHAVIOURS

b Sex = Male

4.3.11 The use of a Multiple regression analysis to predict Risky and Violent Behaviour from Tobacco, Alcohol and Drug Use, Sexual Behaviour, and Unhealthy Dietary Behaviour for FEMALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4.18}=4.82$, $p=.001$; $R^2=.09$). Tobacco Use ($\beta=.24$) was the only important predictor variable for Risky and Violent Behaviour.

Table 17. Multiple Regression Coefficients for Risky and Violent Behaviour for FEMALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	2.260	.281		8.042	.000
	TOBACCO USE	.047	.016	.248	2.961	.003
	ALCOHOL&DRUG USE	-.002	.008	-.025	-.302	.763
	SEXUAL BEHAVIOURS	.013	.008	.111	1.579	.116
	UNHEALTHY DIETARY BEHAVIOURS	.013	.007	.119	1.691	.092

a Dependent Variable: RISKY_BEHAVIOUR

b Sex = Female

4.3.12 The use of a Multiple regression analysis to predict Tobacco Use from Risky and Violent Behaviour, Alcohol and Drug Use, Sexual Behaviour and Unhealthy Dietary Behaviour for FEMALE participants.

The analysis yielded a final model which included two of the four variables ($F_{4.18}=24.15$, $p<.0001$; $R^2=.34$). Risky and Violent Behaviour ($\beta=.18$) and Alcohol and Drug Use ($\beta=.52$) were the only important predictor variables for Tobacco Use.

Table 18. Multiple Regression Coefficients for Tobacco Use for FEMALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	-2.254	1.462		-1.542	.125
	RISKY&VIOLENT BEHAVIOUR	.955	.323	.180	2.961	.003
	ALCOHOLDRUG USE	.271	.031	.525	8.772	.000
	SEXUAL BEHAVIOURS	.013	.037	.022	.360	.720
	UNHEALTHY DIETARY BEHAVIOURS	.044	.034	.080	1.317	.189

a Dependent Variable: TOBACCO_USE

b Sex = Female

4.3.13 The use of a Multiple regression analysis to predict Alcohol and Drug Use from Risky and Violent Behaviour, Tobacco Use, Sexual Behaviour and Unhealthy Dietary Behaviour for FEMALE participants.

The analysis yielded a final model which included one of the four variables ($F_{4.18}=20.23$, $p<.0001$; $R^2=.30$). Tobacco Use ($\beta=.55$) was the only important predictor variable for Alcohol and Drug Use.

Table 19. Multiple Regression Coefficients for Alcohol and Drug Use for FEMALE participants

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.590	2.638		6.668	.000
	RISKY & VIOLENT BEHAVIOUR	-.199	.658	-.019	-.302	.763
	TOBACCO USE	1.077	.123	.555	8.772	.000
	SEXUAL BEHAVIOURS	-.066	.073	-.056	-.903	.368
	UNHEALTHY DIETARY BEHAVIOURS	-.049	.067	-.045	-.723	.471

a Dependent Variable: ALCOHOLDRUG_USE

b Sex = Female

4.3.14 The use of a Multiple regression analysis to predict Sexual Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Unhealthy Dietary Behaviour for FEMALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4.18}=1.45$, $p=.21$; $R^2=.03$). None of the variables were important predictor variables for Sexual Behaviour.

Table 20. Multiple Regression Coefficients for Sexual Behaviour for FEMALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	17.139	2.646		6.476	.000
	RISKY & VIOLENT BEHAVIOUR	1.031	.653	.119	1.579	.116
	TOBACCO USE	.052	.146	.032	.360	.720
	ALCOHOL&DRUG USE	-.066	.073	-.078	-.903	.368
	UNHEALTHY DIETARY BEHAVIOURS	.081	.067	.089	1.213	.227

a Dependent Variable: SEXUAL_BEHAVIOURS

b Sex = Female

4.3.15 The use of a Multiple regression analysis to predict Unhealthy Dietary Behaviour from Risky and Violent Behaviour, Tobacco Use, Alcohol and Drug Use and Sexual Behaviour for FEMALE participants.

The analysis yielded a final model which included none of the four variables ($F_{4,18}=2.08$, $p=.08$; $R^2=.04$). None of the variables were important predictor variables for Unhealthy Dietary behaviour

Table 21. Multiple Regression Coefficients for Unhealthy Dietary Behaviour for FEMALE participants

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta	B	Std. Error
1	(Constant)	15.614	2.973		5.252	.000
	RISKY & VIOLENT BEHAVIOUR	1.199	.709	.126	1.691	.092
	TOBACCO USE	.208	.158	.116	1.317	.189
	ALCOHOL & DRUG USE	-.057	.079	-.062	-.723	.471
	SEXUAL BEHAVIOURS	.096	.079	.088	1.213	.227

a Dependent Variable: UNHEALTHY_BEHAVIOURS

b Sex = Female

4.4 The relationship between those who scored high on Risky and Violent Behaviour and those who scored low on Risky and Violent Behaviour with regards Tobacco Use, Alcohol and Drug Use, Risky Sexual Behaviour and Unhealthy Dietary Behaviours

An Anova indicated that those who scored high on Risky and Violent Behaviour scored significantly higher on Tobacco Use ($M=9.73$, $SD=5.73$) than those who scored low on Risky and Violent Behaviour ($M=7.48$, $SD=2.69$, $p<.0001$). Those who scored high on Risky and Violent Behaviour also used scored significantly higher on Alcohol and Drug Use ($M=27.82$, $SD=10.56$) than those who scored low on Risky and Violent Behaviours ($M=21.76$, $SD=6.25$, $p<.0001$). There were no significant differences between those who scored high on Risky and Violent Behaviour and those who scored low on Risky and Violent Behaviour with regards Risky Sexual Behaviours and Unhealthy Dietary Behaviours.

Table 22. Anova Coefficients for high Risky and Violent Behaviour and low Risky and Violent Behaviour with regards Tobacco Use, Alcohol and Drug Use, Risky Sexual Behaviour and Unhealthy Dietary Behaviours

		Sum of Squares	df	Mean Square	F	Sig.
TOBACCO USE	Between Groups	307.727	1	307.727	14.434	.000
	Within Groups	5159.322	242	21.320		
	Total	5467.049	243			
ALCOHOL&DRUG USE	Between Groups	2216.460	1	2216.460	28.060	.000
	Within Groups	19115.556	242	78.990		
	Total	21332.016	243			
RISKY SEXUAL BEHAVIOURS	Between Groups	63.800	1	63.800	1.319	.252
	Within Groups	11703.216	242	48.360		
	Total	11767.016	243			
UNHEALTHY DIETARY BEHAVIOURS	Between Groups	157.045	1	157.045	2.858	.092
	Within Groups	13295.688	242	54.941		
	Total	13452.734	243			

4.5 Tables summarizing gender differences regarding risk taking behaviours of the first year students.

Table 23 Male students as higher risk takers

Male students were MORE likely than female students to have engaged in these risk behaviours (Chi-Squared was used to establish significant differences)			
Behaviour	<i>P</i> Value	Male	Female
Carried a weapon (gun, knife or club) during the past 30 days	.00	21.2%	3.1%
Smoked cigarettes during lifetime	.01	65.4%	46.9%
Current alcohol use (drank on 20-29 days during past 30 days)	.01	5.8%	1%
Sniffed glue, aerosol spray or paints	.00	11.5%	6.8%
Marijuana use	.00	48.1%	18.7%
Cocaine use	.02	13.5%	3.1%
Ecstasy use	.02	15.4%	4.2%
Sexual intercourse with more than 5 people during lifetime	.00	61.5%	22.9%
Sexual intercourse with more than 5 people during the past 3 months	.00	13.5%	1.6%
Had first sexual intercourse at age 12 or younger	.00	23.5%	1.5%

Table 24 Female students as higher risk takers

Female students were MORE likely than male students to have engaged in these risk behaviours (Chi-Squared was used to establish significant differences)			
Behaviour	<i>P</i> Value	Female	Male
Forced to have sexual intercourse	.03	17.7%	5.8%
During the past 30 days ate less food to loose weight	.04	42.2%	26.9%

4.6 Summary

The results of the Pearson correlation indicated that correlations exist among certain of the risky behaviours, while the multiple regression analysis revealed that certain risky behaviours were predictor variables for other risk-taking behaviours. The results of this study further reveal that the risk taking patterns differed among those who scored high on the Risky and Violent Behaviour subscales and those who scored low on these subscales. The Pearson correlation and multiple regression analyses indicated that there were certain gender differences regarding risk-taking behavioural patterns. The Chi-square analysis revealed that there were significant differences between male and female students regarding certain risk-taking behaviours. These results are discussed in Chapter 5.

CHAPTER 5

DISCUSSION

5.1 Overview of the Study

Virtually all behaviours contributing to the leading causes of morbidity and mortality among the young population could be placed into six categories: behaviours that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviours that contribute to unintentional pregnancies and STDs, including

HIV infection, unhealthy dietary behaviour and physical inactivity. Most studies on risk-taking behaviours are concerned with school-going youth while less emphasis has been placed on university students. This study therefore aimed at adding to the relatively small pool of knowledge regarding risky behavioural patterns of university students.

The purpose of the study was to firstly, establish the relationships among various risk-taking behaviours of first-year students and secondly to establish whether there are sex differences in such risk-taking behaviours. The general hypotheses of this study was firstly that correlations exist among risk taking behaviour subscales and secondly that sex differences exist in the risk-taking profile among first year students.

There are many theories regarding youth risk behaviour but none agree on the exact reasons youths participate in such behaviour, which makes this social phenomenon a complex issue that deserves further research. Effective intervention programmes require research that embraces various aspects of risky behaviour including insight on how and to what extent various risky behaviours correlate with each other and how males might differ from females regarding risky behaviours. Research in this regard would provide intervention planners with specific information that would make interventions more specific and effective.

5.2 Overview of the Results

There were statistically significant and positive correlations among all the risky behaviours other than Unhealthy Dietary Behaviours, which did not correlate with the other risky behaviours. For the male participants a strong significant positive correlation existed between Tobacco Use and Alcohol and Drug Use. There were no correlations between the other risky behaviours among the male participants. For the female participants significant positive correlations existed between Risky and Violent Behaviour and Tobacco Use, and between Sexual Behaviour and Unhealthy Dietary Behaviour. As with the males, a strong and significant positive relationship existed between Tobacco Use and Alcohol and Drug Use.

For all the participants tobacco use was the only predictor variable for Risky and Violent Behaviour and that Risky and Violent Behaviour and Alcohol and Drug Use were the only predictors for Tobacco Use. For the male participants they were no predictor variables for Risky and Violent Behaviour. Alcohol and Drug Use were the only predictor variables for Tobacco Use. Tobacco Use was the only predictor variable for Alcohol and Drug Use. For females Tobacco Use was the only predictor variable for Risky and Violent Behaviour. Risky and Violent Behaviour and Alcohol Consumption were the only predictor variables for Tobacco Use. Tobacco Use was the only predictor variable for Alcohol and Drug Use.

Those who scored high on Risky and Violent Behaviour scored significantly higher on

Tobacco Use and Alcohol and Drug Use compared to those who scored low on Risky and Violent Behaviour. There were no significant differences regarding Sexual Behaviour and Unhealthy Dietary Behaviour between those who scored high and low on Risky and Violent Behaviour.

5.3 Implication of the Results

Effective intervention programmes require research that embraces various aspects of risky behaviour. It would, for example, be less effective to treat specific risk behaviours in isolation, when there is more than substantial evidence that risky behaviours often are associated with other risky behaviours. This information would play an important role in planning, establishing and implementing intervention programmes. It would also be important to aim interventions at specific groups who might have different risk profiles. It would, for example, be useful to understand how males differ from females regarding risky behaviour. Research in this regard would provide intervention planners with specific information that would make interventions more specific and effective. Interventions might also need to differ regarding school going adolescents and young university students. Most research has concentrated on school going children, resulting in a dearth of information regarding risk-taking patterns of university students. This study therefore may add to this neglected area of knowledge by investigating not only the associations that might exist among the risky behaviours of university students but also the possible sex differences regarding such behaviours.

The results of the survey reveal the following regarding youth risk behaviour within the six categories mentioned earlier (USA figures appear in the brackets). Among the students 7.4% (11.1%) had never or rarely worn a seatbelt when riding in a motor car driven by someone else. During the 30 days before the survey, 34.4% (29.1%) of the students had ridden in a car or other vehicle driven by someone who had been drinking alcohol, 7% (18%) had carried a weapon, and 2% (5.9%) had carried a weapon on school property. During the 12 months before the survey, 16.4% (35%) of the students had been in a physical fight one or more times, 6.6% (7.8%) had been threatened or injured with a weapon on school property, 16.8% (9.9%) had been slapped, hit or physically hurt on purpose by a boyfriend or girlfriend and 5.3% (5.3%) had attempted suicide. Of the first year students 15.2% (7.8%) had ever been physically forced to have sexual intercourse when they did not want to. In addition, 70.9% (75%) of the students had ever drunk alcohol, 25.4% (26%) had had five or more alcoholic drinks in a row on at least once during the 30 days before the survey, 25% (38.1%) had ever used marijuana one or more times and 5.3% (7.2%) had ever use any form of cocaine. The results from the 2007 survey also indicated that 85.25% (47.8%) of the students had ever had sexual intercourse, 39.7% (14.9%) of students had had sexual intercourse with four or more persons during their life and 45.9% (38.5%) of currently sexually active high school students had not used a condom during last sexual intercourse. Among the currently sexually active students, 11.1% (22.5%) had drunk alcohol or used drugs before last sexual intercourse.

A comparison of the USA and University of Fort Hare (UFH) surveys indicate that first year students at the UFH are more inclined to; drive with someone who had been drinking alcohol, be slapped or physically hurt by a boyfriend or girlfriend, and be forced to have sexual intercourse. A higher percentage of the UFH students had ever had sexual intercourse, had had sexual intercourse with four or more people and not use condoms the last time they had sexual intercourse. USA school going students are more inclined than first-year students at the UFH to never wear seatbelts, carry a weapon, carry a weapon to school and be involved in a physical fight. A higher percentage of USA school students had ever consumed alcohol, use marijuana, used cocaine and drank alcohol before their last sexual encounter. Interestingly these surveys indicate that school going children in the USA participant more in potentially dangerous risk-taking behaviours such as alcohol and drug use, carrying of weapons and physical fighting than the first-year university students of the UFH. This could be explained by a study conducted by Hensley (as cited in Gardner and Steinberg, 2005) which sought to determine whether developmental differences affected peer influences on risky behaviour. In a comparison of young adolescent school students and college students, this study attempted to determine whether the tendency for individuals to take more risks on groups than when alone – a phenomenon known as *risky shift* – might differ across age groups. The result of this study revealed that *risky shift* was greater among adolescent school students than among older college (university) students, which indicates that developmental differences seem to affect peer influences on risky behaviour.

Previous studies have indicated that relationships exist between various forms of risk-taking behaviour such as alcohol and drug use, smoking and unsafe sexual practices (Flisher et al, 1993). Pickett et al (2004) contend that the engaging in one form of risk behaviour more often than not might indicate an increased likelihood of engaging in other forms of risk behaviour. Alcohol and substance use, for example, is often assumed to be associated with high levels of sexual risk-taking and lower levels of condom use. These views are confirmed by the findings of this study by indicating that there were significant correlations among certain risk-taking behaviours of the first-year students of the UFH. Risky and Violent Behaviour not only maintained a significant positive correlation with Tobacco Use, Alcohol and Drug Use and Risky Sexual Behaviour but proved to be a significant predictor variable for Tobacco Use. A significant strong positive correlation also existed among Alcohol and Drug Use and Tobacco Use. These correlations confirm the first hypothesis of the study that for the first year students of the UFH correlations do exist among risk-taking behaviours .

Alcohol and Drug Use however did not correlate with Risky Sexual Behaviour within this sample population. This seems contradictory to many studies conducted on this topic. Studies conducted by Palen et al (2003), CASA (1999) and Kurt et al (1998) all indicate that alcohol consumption is associated with risky sexual behaviour. According to Ehrhardt (1996), however, there are very few studies that portray sexual behaviours as a normal aspect of human development, which is intensely experienced by young teenagers and that the positive aspects of adolescent sexuality are seldom mentioned.

However, university samples are older and would be expected to engage in these behaviours as they are freer from parental supervision where smoking for example, would be a normative, accepted practice. Ehrhardt (1996) warns that a narrow focus on risk regarding adolescent sexuality may lead to increased rates of sexual inadequacies, sexual distortions and interpersonal problems. Pinkerton and Abramson (as cited in Symons, 1993) questions whether well informed, emotional people are able to make rational decisions regarding risky sexual practices. According to Symons (1993) the answer is yes if “rational” consists of choosing between sexual abstinence, having safer sex and having risky sex. If the perceived pleasure of risky sex is greater than the perceived risk of HIV infection a person would normally opt for risky sex (Symons, 1993). In other words, a person does not have to be a compulsive risk taker to participate in risky sexual behaviour.

The results of most surveys and research seem to point to males as being more inclined to participate in risky behaviour than females, especially in the areas of sexual activity, alcohol and drug use and violent behaviour (CASA, 1999). Arnett's (1992) theory of broad and narrow socialization, for example, suggests that men would take more risks than women in most cultures because sensation seeking is found more often in men than in women (as cited in Byrnes et al, 1999). Wilson and Daly (1985) argue that men tend to take more risks because risk-taking is an attribute of masculine psychology that evolved from the competitive demands of primate societies where competition forced dominant individuals to engage in risk-taking behaviours to maintain or gain their position of power (as cited in Byrnes et al, 1999). The findings of this study are in

accordance with these discussions in that it found that first year male students were more inclined to carry a weapon, smoke cigarettes, drink alcohol, use drugs and take sexual risks than the female students, which confirms the second hypothesis of his study that sex differences exist in the risk-taking profile among first year students.

The Pearson correlation indicated a strong and significant correlation between Alcohol and Drug Use and Tobacco Use for the male students. The multiple regression analysis also indicates that Alcohol and Drug Use proved to be a significant predictor variable for Tobacco Use. There were no other significant correlations among the various risk-taking behaviours for the male students. For the female students on the other hand there were significant correlations between Risky and Violent Behaviour, Tobacco Use, Risky Sexual Behaviour and Unhealthy Dietary Behaviour. As with the male students there was a strong significant correlation between Alcohol and Drug Use and Tobacco Use. For the female students Risky and Violent Behaviour further proved to be a significant predictor variable for Tobacco Use while Tobacco Use proved to be a significant predictor variable for both Risky and Violent Behaviour and Alcohol Use. This information indicates that there are not only differences in risk-taking patterns among the first-year male and female students but that the risk-taking behaviours correlated differently for male risk-taking behaviours and female risk-taking behaviours, which has implications regarding interventions aimed at risk-taking behaviours.

5.4 Summary

The findings of this study indicate that the respondents participate less than school students of the USA in certain potentially dangerous behaviours such as alcohol and drug use, the carrying of weapons and physical fighting. This study further established that there were not only significant correlations among certain risk-taking behaviours of the respondents but that these correlations differed according to sex. Patterns of risk-taking behaviour were also established that implicated males as higher risk-takers than females. This information would be useful for interventions aimed at addressing risky behaviours of the first-year students.

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Appendix

- Questionnaire

Youth Risk Behaviour Survey

This survey is about health behavior. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to develop better health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do. Completing the survey is voluntary.

The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported. Make sure to read every question.

Thank you very much for your help.

DIRECTIONS

- Use a pencil or a pen.
- Fill in your answers by placing a cross over the correct choice.
- Example: A B C D
- If you change your answer, scratch out the old answer and place a cross over the new answer.
- Example: A B C D

1. How old are you?

- A. 16 years old or younger
- B. 17 years old
- C. 18 years old
- D. 19 years old
- E. 20 years old
- F. 21 years old
- G. 22 years old or older

2. What is your sex?

- A. Female
- B. Male

3. What year of study are you busy with.

- A. 1st year
- B. 2nd year
- C. 3rd year
- D. 4th year

4. What is your race? **(Select one response)**

- A. Black
- B. Indian
- C. Coloured
- D. White
- E. Other

5. How tall are you without your shoes on?

6. How much do you weigh without your shoes on?

The next 4 questions ask about safety.

7. **When you rode a bicycle** during the past 12 months, how often did you wear a helmet?
- A. I did not ride a bicycle during the past 12 months
 - B. Never wore a helmet
 - C. Rarely wore a helmet
 - D. Sometimes wore a helmet
 - E. Most of the time wore a helmet
 - F. Always wore a helmet
8. How often do you wear a seat belt when **riding in** a car driven by someone else?
- A. Never
 - B. Rarely
 - C. Sometimes
 - D. Most of the time
 - E. Always
9. During the past 30 days, how many times did you **ride** in a car or other vehicle **driven by someone who had been drinking alcohol**?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or more times
10. During the past 30 days, how many times did you **drive** a car or other vehicle **when you had been drinking alcohol**?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or more times

The next 11 questions ask about violence-related behaviors.

11. During the past 30 days, on how many days did you carry **a weapon** such as a gun, knife, or club?
- A. 0 days
 - B. 1 day
 - C. 2 or 3 days
 - D. 4 or 5 days
 - E. 6 or more days

12. During the past 30 days, on how many days did you carry **a gun**?
- A. 0 days
 - B. 1 day
 - C. 2 or 3 days
 - D. 4 or 5 days
 - E. 6 or more days
13. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club **on university property**?
- A. 0 days
 - B. 1 day
 - C. 2 or 3 days
 - D. 4 or 5 days
 - E. 6 or more days
14. During the past 30 days, on how many days did you **not** go to university because you felt you would be unsafe at university or on your way to or from university?
- A. 0 days
 - B. 1 day
 - C. 2 or 3 days
 - D. 4 or 5 days
 - E. 6 or more days
15. During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club **on school or university property**?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or 7 times
 - F. 8 or 9 times
 - G. 10 or 11 times
 - H. 12 or more times
16. During the past 12 months, how many times has someone stolen or deliberately damaged your property such as your car, clothing, or books **on school or university property**?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or 7 times
 - F. 8 or 9 times
 - G. 10 or 11 times
 - H. 12 or more times

17. During the past 12 months, how many times were you in a physical fight?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or 7 times
 - F. 8 or 9 times
 - G. 10 or 11 times
 - H. 12 or more times
18. During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or more times
19. During the past 12 months, how many times were you in a physical fight **on school or university property**?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or 7 times
 - F. 8 or 9 times
 - G. 10 or 11 times
 - H. 12 or more times
20. During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose?
- A. Yes
 - B. No
21. Have you ever been physically forced to have sexual intercourse when you did not want to?
- A. Yes
 - B. No

The next 5 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide, that is, taking some action to end their own life.

22. During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities?
- A. Yes
 - B. No
23. During the past 12 months, did you ever **seriously** consider attempting suicide?
- A. Yes
 - B. No
24. During the past 12 months, did you make a plan about how you would attempt suicide?
- A. Yes
 - B. No
25. During the past 12 months, how many times did you actually attempt suicide?
- A. 0 times
 - B. 1 time
 - C. 2 or 3 times
 - D. 4 or 5 times
 - E. 6 or more times
26. **If you attempted suicide** during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?
- A. **I did not attempt suicide** during the past 12 months
 - B. Yes
 - C. No

The next 11 questions ask about tobacco use.

27. Have you ever tried cigarette smoking, even one or two puffs?
- A. Yes
 - B. No
28. How old were you when you smoked a whole cigarette for the first time?
- A. I have never smoked a whole cigarette
 - B. 8 years old or younger
 - C. 9 or 10 years old
 - D. 11 or 12 years old
 - E. 13 or 14 years old
 - F. 15 or 16 years old
 - G. 17 years old or older

29. During the past 30 days, on how many days did you smoke cigarettes?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
30. During the past 30 days, on the days you smoked, how many cigarettes did you smoke **per day**?
- A. I did not smoke cigarettes during the past 30 days
 - B. Less than 1 cigarette per day
 - C. 1 cigarette per day
 - D. 2 to 5 cigarettes per day
 - E. 6 to 10 cigarettes per day
 - F. 11 to 20 cigarettes per day
 - G. More than 20 cigarettes per day
31. During the past 30 days, how did you **usually** get your own cigarettes? (Select only **one** response.)
- A. I did not smoke cigarettes during the past 30 days
 - B. I bought them in a store such as a convenience store, supermarket, discount store, or petrol station
 - C. I bought them from a vending machine
 - D. I gave someone else money to buy them for me
 - E. I borrowed (or bummed) them from someone else
 - F. A person 18 years old or older gave them to me
 - G. I took them from a store or family member
 - H. I got them some other way
32. During the past 30 days, on how many days did you smoke cigarettes **on university property**?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days

33. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?
- A. Yes
 - B. No
34. During the past 12 months, did you ever try **to quit** smoking cigarettes?
- A. I did not smoke during the past 12 months
 - B. Yes
 - C. No
35. During the past 30 days, on how many days did you use **chewing tobacco, snuff, or dip**, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
36. During the past 30 days, on how many days did you use **chewing tobacco, snuff, or dip on university property**?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
37. During the past 30 days, on how many days did you smoke **cigars, cigarillos, or little cigars**?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days

The next 6 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

38. During your life, on how many days have you had at least one drink of alcohol?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 9 days
 - D. 10 to 19 days
 - E. 20 to 39 days
 - F. 40 to 99 days
 - G. 100 or more days
39. How old were you when you had your first drink of alcohol other than a few sips?
- A. I have never had a drink of alcohol other than a few sips
 - B. 8 years old or younger
 - C. 9 or 10 years old
 - D. 11 or 12 years old
 - E. 13 or 14 years old
 - F. 15 or 16 years old
 - G. 17 years old or older
40. During the past 30 days, on how many days did you have at least one drink of alcohol?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days
41. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
- A. 0 days
 - B. 1 day
 - C. 2 days
 - D. 3 to 5 days
 - E. 6 to 9 days
 - F. 10 to 19 days
 - G. 20 or more days

42. During the past 30 days, how did you **usually** get the alcohol you drank?
- A. I did not drink alcohol during the past 30 days
 - B. I bought it in a store such as a liquor store, convenience store, supermarket, discount store.
 - C. I bought it at a restaurant, bar, or club
 - D. I bought it at a public event such as a concert or sporting event
 - E. I gave someone else money to buy it for me
 - F. Someone gave it to me
 - G. I took it from a store or family member
 - H. I got it some other way
43. During the past 30 days, on how many days did you have at least one drink of alcohol **on university property**?
- A. 0 days
 - B. 1 or 2 days
 - C. 3 to 5 days
 - D. 6 to 9 days
 - E. 10 to 19 days
 - F. 20 to 29 days
 - G. All 30 days

The next 4 questions ask about marijuana use. Marijuana also is called dagga, grass or pot.

44. During your life, how many times have you used marijuana/dagga?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 to 99 times
 - G. 100 or more times
45. How old were you when you tried marijuana/dagga for the first time?
- A. I have never tried marijuana
 - B. 8 years old or younger
 - C. 9 or 10 years old
 - D. 11 or 12 years old
 - E. 13 or 14 years old
 - F. 15 or 16 years old
 - G. 17 years old or older

46. During the past 30 days, how many times did you use marijuana / dagga?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
47. During the past 30 days, how many times did you use marijuana/dagga **on university property**?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times

The next 9 questions ask about other drugs.

48. During your life, how many times have you used **any** form of cocaine, including powder, crack, or freebase?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
49. During the past 30 days, how many times did you use **any** form of cocaine, including powder, crack, or freebase?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
50. During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times

51. During your life, how many times have you used **heroin**?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
52. During your life, how many times have you used **methamphetamines** (also called tik, speed, crystal, crank, or ice)?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
53. During your life, how many times have you used **ecstasy** (also called MDMA)?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
54. During your life, how many times have you taken **steroid pills or shots** without a doctor's prescription?
- A. 0 times
 - B. 1 or 2 times
 - C. 3 to 9 times
 - D. 10 to 19 times
 - E. 20 to 39 times
 - F. 40 or more times
55. During your life, how many times have you used a needle to inject any **illegal** drug into your body?
- A. 0 times
 - B. 1 time
 - C. 2 or more times

56. During the past 12 months, has anyone offered, sold, or given you an illegal drug **on school or university property**?

- A. Yes
- B. No

The next 7 questions ask about sexual behavior.

57. Have you ever had sexual intercourse?

- A. Yes
- B. No

58. How old were you when you had sexual intercourse for the first time?

- A. I have never had sexual intercourse
- B. 11 years old or younger
- C. 12 years old
- D. 13 years old
- E. 14 years old
- F. 15 years old
- G. 16 years old
- H. 17 years old or older

59. During your life, with how many people have you had sexual intercourse?

- A. I have never had sexual intercourse
- B. 1 person
- C. 2 people
- D. 3 people
- E. 4 people
- F. 5 people
- G. 6 or more people

60. During the past 3 months, with how many people did you have sexual intercourse?

- A. I have never had sexual intercourse
- B. I have had sexual intercourse, but not during the past 3 months
- C. 1 person
- D. 2 people
- E. 3 people
- F. 4 people
- G. 5 people
- H. 6 or more people

61. Did you drink alcohol or use drugs before you had sexual intercourse the **last time**?

- A. I have never had sexual intercourse
- B. Yes
- C. No

62. The **last time** you had sexual intercourse, did you or your partner use a condom?
- A. I have never had sexual intercourse
 - B. Yes
 - C. No
63. The **last time** you had sexual intercourse, what **one** method did you or your partner use to **prevent pregnancy**? (Select only **one** response.)
- A. I have never had sexual intercourse
 - B. No method was used to prevent pregnancy
 - C. Birth control pills
 - D. Condoms
 - E. Depo-Provera (injectable birth control)
 - F. Withdrawal
 - G. Some other method
 - H. Not sure

The next 7 questions ask about body weight.

64. How do **you** describe your weight?
- A. Very underweight
 - B. Slightly underweight
 - C. About the right weight
 - D. Slightly overweight
 - E. Very overweight
65. Which of the following are you trying to do about your weight?
- A. **Lose** weight
 - B. **Gain** weight
 - C. **Stay** the same weight
 - D. I am **not trying to do anything** about my weight
66. During the past 30 days, did you **exercise** to lose weight or to keep from gaining weight?
- A. Yes
 - B. No
67. During the past 30 days, did you **eat less food, fewer calories, or foods low in fat** to lose weight or to keep from gaining weight?
- A. Yes
 - B. No
68. During the past 30 days, did you **go without eating for 24 hours or more** (also called fasting) to lose weight or to keep from gaining weight?
- A. Yes
 - B. No

69. During the past 30 days, did you **take any diet pills, powders, or liquids** without a doctor's advice to lose weight or to keep from gaining weight? (Do **not** include meal replacement products such as Slim Fast.)
- A. Yes
 - B. No
70. During the past 30 days, did you **vomit or take laxatives** to lose weight or to keep from gaining weight?
- A. Yes
 - B. No

The next 8 questions ask about food you ate or drank during the past 7 days. Think about all the meals and snacks you had from the time you got up until you went to bed. Be sure to include food you ate at home, at school, at restaurants, or anywhere else.

71. During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice? (Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)
- A. I did not drink 100% fruit juice during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
72. During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)
- A. I did not eat fruit during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
73. During the past 7 days, how many times did you eat **green salad**?
- A. I did not eat green salad during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

74. During the past 7 days, how many times did you eat **potatoes**? (Do **not** count french fries, fried potatoes, or potato chips.)
- A. I did not eat potatoes during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
75. During the past 7 days, how many times did you eat **carrots**?
- A. I did not eat carrots during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
76. During the past 7 days, how many times did you eat **other vegetables**? (Do **not** count green salad, potatoes, or carrots.)
- A. I did not eat other vegetables during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day
77. During the past 7 days, how many times did you drink a can, bottle, or glass of soda or pop, such as Coke, Pepsi, or Sprite? (Do **not** include diet soda or diet pop.)
- A. I did not drink soda or pop during the past 7 days
 - B. 1 to 3 times during the past 7 days
 - C. 4 to 6 times during the past 7 days
 - D. 1 time per day
 - E. 2 times per day
 - F. 3 times per day
 - G. 4 or more times per day

78. During the past 7 days, how many **glasses of milk** did you drink? (Include the milk you drank in a glass or cup, from a carton, or with cereal.)
- A. I did not drink milk during the past 7 days
 - B. 1 to 3 glasses during the past 7 days
 - C. 4 to 6 glasses during the past 7 days
 - D. 1 glass per day
 - E. 2 glasses per day
 - F. 3 glasses per day
 - G. 4 or more glasses per day

The next 4 questions ask about physical activity.

79. During the past 7 days, on how many days were you physically active for a total of **at least 60 minutes per day**? (Add up all the time you spend in any kind of physical activity that increases your heart rate and makes you breathe hard some of the time.)
- A. 0 days
 - B. 1 day
 - C. 2 days
 - D. 3 days
 - E. 4 days
 - F. 5 days
 - G. 6 days
 - H. 7 days
80. On an average study day how many hours do you watch TV?
- A. I do not watch TV on an average study day
 - B. Less than 1 hour per day
 - C. 1 hour per day
 - D. 2 hours per day
 - E. 3 hours per day
 - F. 4 hours per day
 - G. 5 or more hours per day
81. On an average study day, how many hours do you play video or computer games or use a computer for something that is not school work? (Include activities such as Nintendo, Game Boy, PlayStation, Xbox, computer games, and the Internet.)
- A. I do not play video or computer games or use a computer for something that is not study work
 - B. Less than 1 hour per day
 - C. 1 hour per day
 - D. 2 hours per day
 - E. 3 hours per day
 - F. 4 hours per day
 - G. 5 or more hours per day

82. During the past 12 months, in how many team sports did you play? (Include any teams run by your university or community.)
- A. 0 teams
 - B. 1 team
 - C. 2 teams
 - D. 3 or more teams

The next 3 questions ask about other health-related topics.

83. Have you ever been taught about AIDS or HIV infection at school or university?
- A. Yes
 - B. No
 - C. Not sure
84. Has a doctor or nurse ever told you that you have asthma?
- A. Yes
 - B. No
 - C. Not sure
85. Do you still have asthma?
- A. I have never had asthma
 - B. Yes
 - C. No
 - D. Not sure

**This is the end of the survey.
Thank you very much for your help.**