COMMUNICATION AND SEXUAL BEHAVIOR AMONG HETEROSEXUAL UNIVERSITY WOMEN

by

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ABSTRACT

The number of AIDS cases in women is growing more rapidly with heterosexual transmission becoming the fastest growing mode of infection. The present study was interested in communication as a factor which may affect young women's sexual behavior.

The purpose of this study is to examine general and sexual communication in the family with regard to sexual behavior and investigate the roles that fathers and mothers play in sexual communication, the types of issues they discuss, and whether the communication process is effective in relaying the message.

The results indicated that one quarter of the subjects defined themselves as virgins although the majority of women were sexually active. With multiple partners and inconsistent condom use, the sexually active women were engaging in risky sexual behavior. However, the study also found a great deal of variability within the virgin subgroup that indicated that some virgins may also be at risk for certain STD's, including HIV.

It was found that neither general nor sexual communication with mothers or fathers differed between virgins, non-virgins, high or low risk women. While open-ended stories about sexual communication with parents provided detailed insight into the dynamics of communication, they were consistent with the scales in finding that mothers were the primary sex educators while fathers were rarely participating in sexual communication with their daughters. Possible explanations for the findings and ideas for future research are suggested.

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DEDICATION

This thesis is dedicated to my grandmother and my friend, Mrs. Marguerite L. H. Boycott, for being one of the biggest influences in my life and helping me to believe in myself and in my ability to achieve even the most starry-eyed dreams.

Chapter One

Introduction

The human immunodeficiency virus (HIV) epidemic is now in its second decade and continues to elude either a cure or a preventive vaccine (Kelly, Murphy, Sikkema, & Kalichman, 1993). First diagnosed among gay and bisexual men in the early 1980's, AIDS in the mid 1990's is shifting towards intravenous drug users and women of reproductive age (Wayment, Newcomb & Hannemann, 1993 as cited in Stein, Newcomb, & Bentler, 1994). By the end of June 1994, 401, 749 cases of AIDS in the United States had been reported to the CDC (CDC, 1994 as cited in Amaro, 1995). However, this is only the tip of the iceberg since an estimated 1.5 million Americans are believed to be infected with HIV (Chesney, 1993). Health Canada (1994) reported that as of April 1994, there were approximately 35,000 people in Canada who were infected with HIV and 9,511 people living with AIDS. The numbers are believed to be increasing rapidly. The World Health Organization (WHO) projects that, by the year 2000, the number of infected adults and children worldwide will increase to 30 to 40 million (Mann, 1991 as cited in Chesney, 1993). The human immunodeficiency virus (HIV) will clearly continue to be one of the most profound health concerns entering the new millennium.

Definition of HIV/AIDS

Acquired Immunodeficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency virus (HIV). HIV is passed directly from one person to another through contact with blood, semen, or vaginal fluids. There are three primary routes of contraction. These are; transmission through sexual contact with blood and body fluids, the sharing of intravenous needles, or being born to a mother who has the virus. Although at one time it was possible to get HIV from a blood transfusion, donated blood has been routinely screened in Canada since October 1985. This procedure has significantly lessened the risk of contracting the virus through blood transfusions.

Since HIV infection compromises the immune system, persons with AIDS are vulnerable to one or more infections that do not pose a threat to a person whose immune system is healthy. People infected with AIDS ultimately die, not as a result of AIDS itself, but because they have no immunological system to fight the multiple infections and cancers (Patten, 1991 as cited in Roscoe & Kruger, 1990). However, not everyone infected with HIV develops the deadly syndrome known as AIDS. In fact, many HIV infected people remain in good health and are asymptomatic for years. They are capable, however, of spreading the virus to others.

University Population and HIV

Recently, research has begun to focus on young adults. Since the peak prevalence of AIDS cases is in the 30-39 year old age group, and the onset of AIDS is believed to be a mean of 7 to 10 years after infection with HIV, it appears that those with AIDS became infected with HIV during the high school and college/university ages (Latman & Latman, 1995). An escalation of the epidemic among young people requires only two things. The first is unprotected sexual intercourse and the second is the presence of the virus. The university/college years are characterized by sexual and drug experimentation. As many researchers have noted, adolescents and college students are likely to experiment sexually, often with multiple partners, and without using condoms regularly (Lear, 1995). University students are often away from home for the first time with no supervision and the nature of university education places students in constant and continuing proximity to each other. A majority of young people have already experienced sexual intercourse prior to university and the new found freedom associated with living independently provides an environment in which sexual contacts may be increased. Since previous studies suggest that university students have not internalized the AIDS risk (Edgar, Freimuth, Hammond, McDonald, & Fink, 1992), and their high-risk activities make them a target for the HIV virus, it is imperative that researchers investigate their unique circumstances in order to develop appropriate and effective prevention programs, increasing the practice of safe sex.

Women and HIV

Since the beginning of the AIDS epidemic, educators have gone to great lengths to inform people about the disease, transmission, and how it can be prevented. While gay men have modified their behavior substantially, intravenous drug users continue to engage in unsafe activity. Many non-monogamous heterosexual men and women do not consider themselves at risk for HIV infection and are therefore not changing their behavior (Leigh, 1990; Siegel & Gibson, 1988 as cited in Wulfert & Wan, 1993). For two decades, researchers have documented an increase in the prevalence and incidence of premarital sex and a decline in the average age at onset of sexual intercourse. Coupled with the postponement of marriage, it appears that men and women are likely to have an increasing number of partners before becoming more or less monogamous.

The number of AIDS cases in women is growing more rapidly than in men. Through December 1994, the Centers for Disease Control and Prevention (CDC) received reports of 58, 428 cases of AIDS among adult and adolescent (13 years and older) women in the U.S (CDC, 1995). The proportion of women among cases in adults and adolescents has increased steadily, from 7 percent in 1985 to 18 percent in 1994. Heterosexual transmission of HIV is clearly the fastest growing mode for infection among women (Holmes, Karon, & Kreiss, 1990 as cited in Amaro, 1995). In fact, cases of adolescent girls contracting HIV from a male sexual partner represent the majority (91.5%) of AIDS cases known

to have occurred through heterosexual transmission among adolescents (CDC, 1994 as cited in Amaro, 1995). Heterosexual females are of particular interest since, relative to adults, adolescents with AIDS are more likely to be female than male (14% vs. 7%) and to have contracted HIV through heterosexual vs. homosexual/bisexual contact (9% vs. 4%)(Gayle et al.,, 1988; Goldsmith, 1988 as cited in Catania, Dolcini, Coates, Kegeles, Greenblatt, Puckett, Corman, & Miller, 1989). A major contributing factor to the difference in heterosexual transmission among women is that male to female transmission occurs more frequently than female to male transmission. Padian, Shiboski, and Jewell (1990) found that the odds of male to female transmission are 12 times greater than of female to male transmission. Clearly, a better understanding of young heterosexual women's sexual behavior is needed. It is for these reasons that the present study will focus on heterosexual university women.

Literature Review

Past research has centered on the role of education and knowledge, perceived risk, substance abuse, and communication. Theoretical models have been developed to explain sexual risk-taking behavior. Since many of the variables in sexual risk-taking research are studied in conjunction with one another, the following review of information may overlap but is organized as such for the purpose of clarity.

Education and Knowledge

Education and knowledge were the primary focus for study in initial psychosocial research on HIV/AIDS. The hypothesis was that, if people knew the facts about HIV/AIDS and its transmission, high risk behavior would cease and the epidemic would become non-existent. However, this has not been the case. Massive public education campaigns to decrease adolescent high-risk behaviors have not translated into a reduction of unsafe activities. Roscoe and Kruger (1990) found that their subjects were accurate in their knowledge of AIDS, but only 34% of the subjects reported actually changing their behavior in response to the threat of AIDS. Baldwin and Baldwin (1988) also found that their subjects scored high on knowledge of AIDS transmission, but this did not lead students to engage in markedly safer sexual practices than the less knowledgeable students, nor did it cause them to avoid casual sexual relationships or use condoms more. Since most studies have found that knowledge today is not translated into the reduction of risk behaviors (Carroll, 1988; Ishii-Kuntz, 1988; Joseph et al., 1987 as cited in Ishii-Kuntz, Whitbeck, & Simons, 1990), it has not been included as a variable in the present study.

Perceived Risk

People tend to believe that they are at less risk than others around them. The existence of optimistic biases has been demonstrated in a wide variety of domains such as wearing seatbelts (Weinstein, Grubb & Vautier, 1986 as cited in

van der Velde, van der Pligt, & Hooykaas, 1994), illness as a result of home radon (Weinstein, Sandman, & Roberts, 1990 as cited in van der Velde et al., 1994), and AIDS (Bauman & Siegel, 1987; van der Velde, van der Pligt, & Hooykaas, 1992 as cited in van der Velde et al., 1994). Weinstein (1989, as cited in van der Velde et al., 1994) posited two possible processes that could lead to optimism. These processes are the underestimation of the participant's own risk or the exaggeration of the risk of others. Most often, it is the latter. That is, they tend to compare themselves to people who are particularly high in risk.

Goldman and Harlow (1993) found that perceived risk was significantly related to AIDS preventive behavior in college students but not in the direction they predicted. Their results suggested that the more vulnerable a person felt, the less likely they were to engage in preventive behavior. Similar results were found by Weisman et al (1989, as cited in Goldman & Harlow, 1993) with a sample of adolescent women where greater perceived risk was not associated with an increase in AIDS preventive behavior. Kegeles et al (1990 as cited in Goldman & Harlow, 1993) also found that the greater the perceived susceptibility, the greater the adolescent's anxiety but the less likely he or she was to take AIDS preventive action. However, van der Velde et al (1994) proposed that optimism existed because the samples were usually focused on young and healthy college students. Therefore, they suggested that those at higher risk were less likely to be optimistic and that people were capable of

assessing their personal risk despite their biased beliefs about susceptibility (van der Velde et al., 1994). They found that all samples were optimistically biased but that perceptions of risk were related to previous risk behavior in high-risk samples only. They also found that optimists had lower levels of previous risky behavior and increased intentions to adopt safe sex practices. Therefore, their findings suggest that risk can be accurately self-reported since their subjects (of many different risk levels) seemed to judge their vulnerability (at least in part) on the basis of their own sexual practices.

Alcohol and Drug Use

Two psychological variables that have been previously linked with maladaptive health risking behavior are alcohol and drug use. Some studies have shown that alcohol and drug use are strongly related to noncompliance with safe sex practices (Clappen & Lipsitt, 1991; Stall, McKusick, Wiley, Coates, & Ostrow, 1986 as cited in Goldman & Harlow, 1993). Although the majority of the literature has shown that people who are heavier drinkers or drug users tend to have more sexual partners and use condoms less consistently, these studies are unable to demonstrate whether substance use has a direct causal effect on risky sexual behavior. This interpretation is supported by the fact that smoking, which is not regarded as a causal factor in lapses of judgment, is also highly correlated with high risk sexual activities (Leigh & Stall, 1993). The results can be equally well explained by hypothesizing that an underlying tendency toward

sensation seeking, risk-taking, or impulsiveness leads people both to substance use and to riskier sex. Both sex and substance use are complex behaviors and determining the nature of the relationship between them is not simple (Leigh & Stall, 1993). Most of the problems with research concerning risky sex and substance abuse are methodological. Since it is difficult to conduct a controlled experiment to study the influence of a drug on sexual behavior in a natural setting, most studies have relied on correlational findings to draw their conclusions. There are three categories used to differentiate the types of studies in the literature. The first are global association studies in which measures of overall substance abuse and overall risky sexual behavior are collected in separate questions and then the relationship between these two variables is examined. In this case, the existence of a global association between substance use and general sexual activity does not necessarily indicate a link between substance use and risky sex. After all, heavier drinkers may have more frequent sex but not more frequent risky sex and this distinction cannot be determined from data on general patterns of sexual activity (Leigh & Stall, 1993).

Situational association studies measure the frequency of alcohol or drug use in conjunction with sexual activity. Although these studies are more focused, it is possible that the relationship of substance use with sex to risky behavior may be an artifact of the relationship between the total amount of sex and the total amount of risky behavior. As well, this type of data does not establish that substance use and risky sex occurred on the same occasion.

Lastly, event analyses focus on discrete sexual events which ask about the circumstances of a specific sexual encounter and the role of substance abuse. While event analyses are better than global or situational because they provide a temporal sequence, they cannot account for the possibility of a confounding variable that may be responsible for both the risky sex and substance use such as a risky or sensation seeking personality. In conclusion, although it is clear that there is a positive relationship between substance use and risky sex, it is unclear at which level this link exists (Leigh & Stall, 1993).

Theories

While psychologists have sought to understand AIDS risk and AIDS preventive behavior, the systematic application of formal, psychological theory in this area has been relatively rare (Coates, 1990; Fisher & Fisher, 1992; Kelly, Murphy, Sikkema & Kalichman, 1994 as cited in Fisher, Fisher & Rye, 1995). Nevertheless, four theoretical models have been repeatedly seen and applied to health related research. They are Ajzen and Fishbein's Theory of Reasoned Action or Theory of Reasoned Action and Planned Behavior, The Health Belief Model, the AIDS Risk Reduction Model (ARRM), and Bandura's Social Learning Theory. These theories and similar constructs such as self-efficacy, control, and meaning have been used to try and understand risk behaviors and behavior change.

Theory of Reasoned Action and Planned Behavior

Boldero, Moore and Rosenthal (1992) found limited support in examining the applicability of Ajzen and Madden's (1986) Theory of Planned Behavior to condom use. While confirming that intention does predict condom use, the results demonstrated that predictive power is increased when intention is measured closer in time to the behavior in question. Since intention changes over time and the predictive ability of intention is dependent on the time of its measurement and the behavior in question, other contextual factors such as communication and condom availability block the direct path posited by this theory to exist between intention and behavior.

Health Belief Model

The Health Belief Model (HBM) has been applied to HIV risk related behaviors but has been criticized because of its omission of factors that are specific to HIV acquisition in adolescents. The limitations of the HBM in the context of prevention of HIV infection in adolescents include difficulty in accounting for change of habitual behaviors, relative exclusion of emotional reactions, peer group influence, and the lack of maturational constructs (Brown, DiClemente, & Reynolds, 1991). As well, Montgomery et al (1989, as cited in Brown et al., 1991) found that perceived susceptibility appeared to be of little importance in predicting HIV preventive behavior, while perceived severity had the largest beneficial impact on behavior. Knowledge of HIV and AIDS is not

translated into behavior change because of an individual's failure to see themselves as susceptible to the threat of AIDS, a crucial component of the HBM (Woodstock et al., 1992 as cited in Brown et al., 1991).

AIDS Risk Reduction Model

The AIDS Risk Reduction Model is a model of harm reduction that reflects the history of behavior change stage models in health psychology (Ewart, 1991; Prochaska & DiClemente, 1983 as cited in Catania, Coates, & Kegeles, 1994). Stage 1 hypothesizes that perceived risk is a fundamental precondition for changing risky sexual behavior. Stage 2 is based on Cognitive-Social Learning Theory which states that people must make a commitment to safer sex and that this decision is dependent on strong self-efficacy beliefs (Catania et al., 1989b, 1992a as cited in Catania et al., 1994). Stage 3 focuses on the negotiation of safe sex with one or more partners who may not share the same perceptions of risk or commitment to safer sex. Studies have found that college students engage in fairly risky behavior yet continue to believe they are not placing themselves at risk for HIV infection (Goldman & Harlow, 1993). If a fundamental aspect to changing one's risky behavior in Stage 1 is perceived risk, prior literature undermines this theory since the majority of young people do not feel vulnerable to HIV infection and have not personalized the AIDS risk (Edgar, 1992). The second stage assumes that self-efficacy and making a commitment to use condoms is the same process across genders. However, making the

commitment to use condoms is not as completely controllable by a woman as a man since she is not the one who wears it. Lastly, the negotiation of safer sex in the third stage is also different for women, since they either have to convince the man to wear a condom or refuse to have sex at all in order to protect themselves.

Social Learning Theory

The Social Learning Theory (Bandura, 1977 as cited in Amaro, 1995) emphasizes the concepts of modeling, perceived efficacy, and self-efficacy. Modeling is the process by which people are influenced by observing others. Perceived efficacy refers to the belief that a given behavior will result in a given outcome and self-efficacy refers to an individual's belief that he or she can effectively carry out a desired behavior in a particular setting. When applied to sexual behavior, self-efficacy posits that the knowledge of steps that must be taken to avoid risk, motivation to avoid risk based on the benefit of the protective action, and the belief that the protective action taken will be effective will lead to risk reduction (Bandura, 1989 as cited in Amaro, 1995). Studies have shown that the social learning theory is the most effective school-based prevention program in delaying the initiation of sexual activity and in causing people to use protection (a condom) because it stresses the social aspects of risk behaviors such as peer pressure and the importance of building skills such as communication to resist these external pressures (Kirby et al., 1994 as cited in

Amaro, 1995). Although this appears to be the most salient theory, it is still flawed with respect to the self-efficacy emphasis. The fact is that self-efficacy is different for men and women. For women, although the intended outcome is still condom use where safe sex is concerned, the desired behavior for her is not the wearing of the condom but the ability to successfully negotiate with the male to wear one or being able to assertively refuse to have intercourse.

Self-Efficacy, Control and Meaning

On a similar note, the constructs of self-efficacy and control and meaning have been closely examined in the literature. Control and meaning have been consistently associated with maladaptive health risking behaviors such as illicit substance abuse, suicide ideation, and suicide attempts. Newcomb and Harlow (1986, as cited in Goldman & Harlow, 1993) found that low personal control, low personal competence, and feelings of powerlessness were related to increased negative behaviors such as alcohol and drug abuse. These concepts represent more global, internal constructs related to a person's self-concept. Research on the genders have found that women may feel less subjective control than men when it comes to engaging in particular AIDS relevant safe sex behavior. Gender differences have also been noted with regard to self-efficacy with men perceiving themselves as more efficacious. However, Goldman and Harlow (1993) found that women reported greater feelings of self-efficacy than did men but it was also found that a sense of competence and ability to control their life

did not explain much about their perceptions of risk regarding HIV infection. Therefore, Goldman and Harlow (1993) suggested that control and meaning may be too global and broad a construct to capture the kind of perceived control that is associated with such concepts as perception of risk and AIDS preventive behavior in women.

Summary of Theoretical Models

All of the theories assume that risk behavior and behavior change in all areas of health can be explained by one general model. Findings from intervention studies suggest that the factors proposed by these theoretical models may fail to account for behavior change in women and risk behaviors in the general female population (Catania, Coates, Stall et al., 1992; Catania, Coates, Kegeles et al., 1992 as cited in Amaro, 1995). Sexual behavior is more complex than these models would suggest. Knowledge about HIV with regard to using condoms does not sufficiently describe the contextual factors that affect a woman's ability to engage in safer sex (Amaro, 1995). The basic conceptualization of the models does not take gender into account as a central determinant of sexual behavior and fails to consider the broader cultural and social and situational context of sexuality. Furthermore, the models are based on the assumption that sexual behaviors are controlled by the individual and that encounters are initiated under the individual's control. However, sexual behavior can be impulsive, physiologically driven, and can be imposed involuntarily under

certain circumstances. Lastly, gender roles and cultural norms and values influence, if not define, the behavior of men and women in interpersonal relationships where sexual behavior occurs (Amaro, 1995).

Since these models fail to consider the contextual social factors relating to gender that shape the reality of risk and the potential for risk reduction among women, the models will not be invoked in the present research.

Communication

Since the transmission of AIDS can be controlled through the use of a condom, researchers have been interested in the factors responsible for the failure of many people to use condoms when engaging in sexual activity (e.g. Abrams, Grahams, Spears, and Marks, 1990; Adler & Irwin, 1988; Moore & Rosenthal, 1991a as cited in Boldero et al., 1992). Boldero, Moore and Rosenthal (1992) investigated intentions and attitudes towards the use of condoms and found that communication with a sexual partner and condom availability were both found to be significant predictors of condom use. As stated earlier, most studies assume that sexual risk behaviors such as not using a condom are seen as the same behavior in both men and women when in fact these behaviors are quite different. For men, the behavior is wearing the condom while for women the behavior is persuading the male to wear a condom or in some cases deciding not to have sex if the male partner refuses (Amaro, 1995). Since in order for condom use to occur a woman may have to insist that

a man put on a condom, whereas a man only needs to make the decision to wear one, the woman has less control than the man in this situation. Her preventive behavior therefore may be less dependent on her own internal feelings and more dependent on her communication skills. A woman's perception of her risk may be mediated by variables that tap into her ability to assert herself in sexual relationships (Goldman & Harlow, 1993).

While communication has been acknowledged as a contextual factor influencing the decision to practice or not practice safe sex, research concerning this important variable is still in its early stages of development.

Two areas seem to dominate the majority of the research on communication in a sexual context. The first is the examination of sexual communication within a relationship and the role it plays in the decision of whether or not to practice safe sex. The second is the role that general and sexual communication in the family plays in later sexual communication and consequently behavior, attitudes, and knowledge with regard to sexuality.

Communication in sexual encounters has not improved substantially despite the risk of HIV/AIDS infection. Poppen (1994) compared the sexual experiences of adolescents in 1979 and adolescents in 1989 to see if there had been an increase in safe sex practices over the decade. It was found that discussions about contraception did not increase over the decade with only about half the respondents reporting such discussions prior to sex with a first partner. Although condom use did increase and was a popular contraceptive

method in 1989, they were still used less than 50% of the time with a new partner whose sexual history was unknown.

Edgar et al (1992) examined the way people choose to communicate in sexual situations as they decide whether or not to use condoms. The results indicated that few people try to assess the risk of contracting AIDS or other sexually transmitted diseases with a new partner. The main purpose for using a condom was as a method of birth control and the majority of subjects seemed to show minimal concern for issues of uncertainty related to AIDS and other STD's. In sexual encounters where a condom was not used during the last sexual encounter, it was found that women who wanted to use a condom were less likely to communicate their wishes to partners than male counterparts. In situations where a condom was used, females who initiated the condom use relied primarily on a direct approach or a sexual veto to communicate their wishes while male initiators typically put the condom on without communicating about the issue. Understanding womens' fears about communicating safe sex practices could lead to more effective training in negotiation skills necessary to initiate discussion about condom use with a new partner.

The question of what impact parent-child general and sexual communication might have on adolescent behavior, attitudes, and sexual knowledge is one that has not been directly answered empirically (Fisher, 1993). Children acquire knowledge and expectations about sex in number of ways such as parents, siblings, friends, and television. Both parents and adolescents

believe that primary sex educators should be parents, but parents are not always the primary source of sex education (Bennett & Dickinson, 1980; Koblinsky & Atkinson, 1982; Furstenberg, Herceg-Baron, Shea & Webb, 1984; Yarber & Greer, 1986 as cited in Kotva & Schneider, 1990). However, when parents did participate in sexual communication, the mother was the most frequently identified educator (Fisher, 1986; Inman, 1974 as cited in Mueller & Powers, 1990). There has been evidence that unmarried adolescents for whom their parents were a significant source of sex education were less likely to have engaged in sexual intercourse and less likely to have had more than one sexual partner (Fox, 1981; Furstenberg, 1971; Lewis, 1973; Shah and Zelnik, 1981; Spanier, 1977 as cited in Fisher, 1993). However, more recent research has failed to replicate these findings or establish a clear relationship between a high level of sexual communication in the family and age at first intercourse or number of sexual partners (Darling & Hicks, 1982; Fisher, 1988; Herceg-Baron & Furstenberg, 1982; Newcomer & Udry, 1985 as cited in Fisher, 1993). Since research has indicated that the connection between sexual communication in the family and sexual behavior is unclear (Ward and Wyatt, 1994), it would appear that further examination of the relationship between parent-child sexual communication and adolescent sexual behavior is needed.

Mueller and Powers (1990) investigated the relationship between parental sexual communicator style and adolescent sexual behavior and information accuracy. They found that students who perceived their parents as having

friendly and attentive styles of communicating reported less sexual activity in junior high school, in college, and totally (Mueller & Powers, 1990). More importantly, they found that perceived parental communicator styles were significantly correlated with adolescents' self-reports of sexual activity, contraceptive use, and sexual knowledge accuracy. Since the adolescents' perception of the parents' communicator style was more important than the actual communicator style, actual parental communication about sex will not be measured in the present study. Instead, the study will focus on young women's perception of general and sexual communication in the family.

Research has also found that general communication is more strongly correlated with responsible sexual behavior on the part of adolescents than sexual communication (Fisher, 1990; Kotva & Schneider, 1990). The evidence suggests that sexual communication is part of the general level of communication in the family. General communication, specifically, openness in communication has also been found to be the strongest and most consistent predictor of parent-child communication about sexuality (Fisher, 1990). Fisher (1990) suggested that it made intuitive sense "that families in which there was open, easy communication would be more likely to discuss sexuality" (p.64). For this reason, both general and sexual communication in the family was examined.

Present Study

The purpose of the present study was to examine communication and it's relationship to sexual behavior in university women. It was an exploratory study aimed at providing a better understanding of general and sexual communication in the family, and sexual communication within a relationship. By taking a retrospective look at past general and sexual communication within the family and present sexual behavior and communication, it was hoped that a clearer understanding of communication as it relates to young heterosexual university women would be gained.

The present study investigated the following questions;

1. What effect does general and sexual communication within the family have on young women's sexual behavior?
2. What role does the father and mother each play in sexual communication? What types of issues do they discuss with their daughters and is the communication effective in relaying the message?
3. How is communication occurring during sexual encounters with regard to safe sex practices? Who is initiating the safe sex discussions? Is the discussion successful resulting in safe sex practices? If the outcome of the discussion was not successful (safe sex was not practiced), why not?
4. What are the primary concerns women have prior to engaging in a sexual encounter for the first time with a new partner? Was the issue or question discussed, was an answer obtained, and how was this accomplished?

Chapter Two

Method

Participants

The participants in this study were 138 volunteer undergraduate female students attending the University of Northern British Columbia. Posters with information about the study and testing times were displayed throughout the school and interested participants were asked to attend at a time convenient for them. The researcher also went to classes to talk about the study and the eligibility criteria. Participants in the Psychology subject pool were given credit for completing the questionnaire. Due to a low participation rate from the pre-designated testing times, a table in a high traffic area of the university was set up for recruitment. As well, a lottery draw with a one hundred dollar prize was advertised as a reward for all women who completed the study. All participants were heterosexual unmarried women between 18 and 25 years of age.

Design

Participants in this study were categorized according to whether or not they had experienced sexual intercourse with a man. Sexual intercourse refers to penile-vaginal penetration. Virgins were defined as participants who had not experienced sexual intercourse with a man and non-virgins were defined as participants who had experienced sexual intercourse with a man. Participants were then placed into categories based on their risk scores that were determined

by responses to a set of questions inquiring about women's risk-related sexual behaviors.

The study included six measures in scale format and these were supplemented by open-ended questions. One scale, the General Communication Scale, had two subscales for each of the mother and the father, thus creating four variables for this scale. These were openness in communication with the mother, problems in communication with the mother, openness in communication with the father, and problems in communication with the father. The other four variables were the weighted topics scale for mother and the weighted topics scale for father as defined by the extent to which eight sexual issues had been discussed with each parent; sexual communication for mother as defined by the extent of sexual communication between mother and daughter, and sexual communication prior to a sexual encounter as defined by whether an issue was thought about, an answer obtained, and the extent to which it was discussed.

The primary analysis was Multivariate Analysis of Variance (MANOVA). The purpose of MANOVA is to determine whether group membership is associated with reliable differences in combined dependent variable scores (Tabachnick & Fidell, 1989). In MANOVA, the groups are the independent variables and the predictors are the dependent variables. In the present study, the independent variable or group membership was formed according to whether the participants were virgins or non-virgins, and high or low risk was based on a

median split of the risk scores within each group. The eight dependent variables were Openness in Communication with Mother, Problems in Communication with Mother, Openness in Communication with Father, Problems in Communication with Father, Weighted Topics Scale for Mother, Weighted Topics Scale for Father, the Sexual Communication Scale for Mother, and the Sexual Encounter Scale.

Measures

Risk Score for Non-Virgins

The responses to the following questions served as the basis for the calculation of risk score (See Appendix B for actual questionnaire).

1. At what age did you first experience sexual intercourse?
2. How many partners have you had sexual intercourse with in your lifetime?
3. During these sexual encounters, how consistent has your condom use been?
4. Have you ever started using condoms in the beginning of a relationship and then stopped after getting to know him?
5. Have you ever started having sexual intercourse with no condom and then stopped briefly to put on a condom prior to ejaculation?
6. Have you ever had sexual intercourse without a condom but he withdrew prior to ejaculation?
7. Have you ever not used a condom or weren't worried about it because you were on the pill or using other forms of birth control?

8. Have you ever suggested that a condom be used, but there was no condom available, and you proceeded anyway?

9. Have you ever started using a condom and then it was taken off half way through intercourse?

10. Have you ever had an unwanted pregnancy?

11. Have you ever had an Sexually Transmitted Disease?

12. Have you ever had sex with a man who you knew used intravenous drugs for recreational purposes?

13. Have you ever engaged in anal intercourse without using a condom?

14. Have you ever had sexual intercourse without using a condom while you were drunk or high?

A question about intravenous drug use by the subject was dropped from the risk score because no participants reported using intravenous drugs for recreational purposes.

Risk Score for Virgins

The following questions served as the basis for calculating a risk score (See Appendix B for actual questionnaire).

1. Which of the following behaviors best describes what has occurred during any sexual activity you have had with a man?

(Tick appropriate box or boxes) The items were kissing, touching above clothes, touching under clothes, being completely unclothed with male, masturbation (female doing it to male), masturbation (male doing it to female), oral sex (male doing it to female), oral sex using a condom (female doing it to male), oral sex not using a condom (female doing it to male), anal sex using a condom, and anal sex not using a condom?

2. How many boyfriends (men you have had intimate relations with) have you had?

3. Have you ever engaged in any of the above behaviors (Question 1) while you were drunk or high?

Responses to these questions served as the basis for measuring sexual risks within the virgin group. The item 'anal sex not using a condom' was dropped from the risk score since no one in this group had engaged in that behavior.

Family Communication Scales

General Communication

The Parent-Adolescent Communication Scale was developed by Barnes and Olson (1982). This 20-item form measures open family communication and problems in family communication. There are equivalent forms for adolescents and parents but the present study used only the adolescent forms since the study was concerned with the participants' perceptions of the communication

with their parents. As well, previous research has indicated that different results are obtained when using the parents' reports rather than the adolescents' reports as the source of information about communication (Fisher, 1989; Newcomer & Udry, 1984, 1985 as cited in Fisher, 1990). Students are asked to indicate the extent of their agreement with various statements by means of a 5-point Likert scale ranging from "strongly agree" to "strongly disagree". The adolescent version requires them to answer each question about their mother and father separately. The scores of the two scales range from 20-100. The two subscales, Open Family Communication (items 1, 3, 6, 7, 8, 9, 13, 14, 16, and 17) and Problems in Family Communication (items 2, 4, 5, 10, 11, 12, 15, 18, 19, and 20) can range from 10-50, with higher scores indicating greater levels of open communication or problems in communication. It has a Cronbach's alpha reliability coefficient of .88.

Sexual Communication Scales

The Weighted Topics Scale was created by Fisher (1987) and measures the extent to which nine specific sexual topics have been discussed with both the mother and the father. The topics are pregnancy, fertilization, intercourse, menstruation, sexually transmitted diseases, birth control, abortion, prostitution, and homosexuality. The Likert scale ranges from 0 indicating 'none' to 4 which indicates 'a lot'. Each item for each parent was summed to create a total score on the scale. The possible scores can range from 0-36 for each parent, with

higher scores indicating greater amounts of communication. The Cronbach's alpha reliability coefficient for this measure has been previously found to be .90 (Fisher, 1993).

Unlike most scales, this uses a relatively objective measure (topics discussed) with a relatively subjective one (extent to which topic was discussed) (Fisher, 1993). However, since it is limited in terms of examining the nature of that communication, it was used in conjunction with the Sexual Communication Scale.

The Sexual Communication scale was created by Murnen & Allegier (1985) and consists of 14 items that assess the various aspects of sexual communication between mother and daughter. The items include the frequency and timeliness of discussions on sexual issues as well as attitudes conveyed during the interactions. Questions 2 to 11 are answered on a 5 point Likert scale and question 1 is a checked item with three possible answers. These are assigned a code of 1 for discussion afterwards, 2 for discussion at the time, or 3 for discussion before. The scores on this scale can range anywhere from 13-63, with a higher score indicating better communication. Kotva & Schneider (1990) found the reliability of this scale to be .87. Two other questions were added to this scale by the researcher. The statements ask directly about their sexual communication relationship with their parent(s). The first item deals with how easy or difficult they feel it is to talk to their parent(s) about sex and the second asks the participants to characterize the sexual communication relationship

between themselves and their parents from 'excellent to very poor'. These last two items were anchored on a 5-point Likert scale as well. Thus, the revised Sexual Communication scale had a possible range of scores from 15-73. Items worded negatively (items 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13) were reverse scored so that a higher score indicated better sexual communication.

Descriptive open-ended questions

Two open-ended questions were used to supplement and expand upon the sexual communication scales. The questions asked participants to describe a situation when a conversation about sexual matters took place between themselves and their mother, and their father. They were asked to describe the situation, the setting, the content, the attitude and atmosphere, and the outcome. This type of information was expected to highlight and assist in the interpretation of the father's role in communication with their daughters about sexual matters.

Sexual Encounter Scale

The Sexual Encounter scale contained two sections, the first created by the researcher and the second a scale already in existence. Throughout both sections, participants were asked to describe the communication behavior that took place during their most recent experience of having sex for the first time with a new partner.

The first section contained closed-ended questions eliciting information about the length of time they had known the other person, where the event took place, alcohol and drug use at the time, and condom use. If condoms were used, the open-ended question asked the participants to describe interaction about the use of condoms, focusing on who initiated it, how it was discussed, and how they felt about it. If condoms were not used, participants were asked to describe communication obstacles that were encountered and the reasons a condom was not used.

The second section of the scale was created by Edgar et al (1992) and consists of 13 items based on information gathered in focus groups. The 13 items list concerns about a new sexual partner that might occur to an individual prior to having sex. For each question, participants indicated whether they had thought about the issue prior to having sex with this new partner and whether they obtained an answer. These were simple 'yes' or 'no' questions and were assigned either a '1' or '0' score, respectively. They were also asked to what extent the issue was discussed (on a 5-point Likert scale from 'not at all' to 'a lot'). For each issue, scores for whether the item was thought about, an answer obtained, and extent of discussion scores were summed. The possible scores ranged from 0 to 7, with a higher score representing better communication prior to sex. Lastly, if they obtained an answer on an item, they were asked to write how the answer was obtained. The purpose of this scale was to give an

indication as to the issues that appear to be the most important and if and how answers were obtained through discussion.

Spanier (1976 as cited in Edgar et al., 1992) argued that the details of most significant sexual experiences should not be difficult for individuals to recall on surveys. Edgar et al (1992) stated that the participants in the focus groups consistently indicated that they were confident in their ability to report information about the last time they had sex with a new partner.

Procedure

Participants who came to the testing times in seminar rooms completed the battery of instruments in groups in the presence of the researcher to maximize the completion rate. Participants who came to the table in the public place were informed of the topic and the criteria and asked if they were interested in participating. These participants took the questionnaires away with them to answer the questions. All participants were given a letter explaining the nature of the study and how to contact the researcher should questions arise. This letter informed them that, should they feel uncomfortable with the subject matter, they were free to stop participating at any time. Lastly, the letter assured the participants of full anonymity and confidentiality (See Appendix A for Volunteer Letter). Upon completion, participants dropped off the completed questionnaire in a 'drop box' and filled out a ticket for the draw and/or the paper work for credit if they were in the Psychology subject pool. Both the credit forms

and tickets could not be matched to the questionnaire, keeping all questionnaires anonymous and confidential.

The questionnaires were ordered in the package with the general communication scales first, counterbalanced with respect to the father and mother form. This was followed by the weighted topics scale, the sexual communication scale, and the personal and demographic questionnaire. At the end of this section, participants were asked whether or not they had had sexual intercourse with a man. If the answer was 'yes', they moved directly to the questionnaire covering sexual history and risk-taking behaviors, and the recent sexual encounter. If they answered 'no', they moved to a different sexual history and risk-taking questionnaire, and then completed the General Well-Being Scale. The General Well-Being Scale was used as a 'time filler' because the sexually active women had more information to complete than the virgins. This enabled all participants to finish within the same time frame and ensured that virgins would not identify themselves by leaving the room early. The General Well-Being Scale was not used in the analyses.

Chapter Three

Results

Descriptives

There were 138 questionnaires returned. However, one subject was dropped from the analysis as she did not fill out the questions on the sexual history scale. Since she could not be categorized, her data was dropped from the analysis, leaving n=137. Two participants did not answer one question each on the sexual history scale and the missing values were imputed based on their pattern of responses. Values were also imputed for 13 participants on questions 1, 4, 4b, 6, and 6b in the sexual communication with the mother scale. The pattern of answers along with written comments indicated that the questions could not be answered because the issue was never discussed with the mother. Since the possible scores ranged from 1 to 5, with a low score indicating poor communication, missing data on these items that followed this pattern were recoded with 0's to indicate a low score. Each questionnaire was re-examined individually to make sure they followed the aforementioned pattern.

Within the 137 participants, 101 were non-virgins and 36 were virgins representing 73.7 and 26.3 percent of the sample respectively.

The Sexual Encounter Scale was dropped in its entirety due to an extensive amount of missing data and thus was not included in the analyses.

The variables and their labels are summarized in Table 1.

Table 1

Variables and Labels

Variable Label	Variables
AGE	Age of Subject
LIVHOME	Do you live at home?
FIRSTYR	First year away from home?
YRSAWAY	How many years have you lived away from home?
WITHHIV	Have you ever known anyone with HIV?
COURSEX	Have you ever taken a course on sexual behavior?
SEXINTER	Have you ever had sexual intercourse with a man?
AGEINTER	Age at first intercourse
USEBC	Did you use birth control during this experience?
NUMPART	Number of sexual partners
CONDUSE	Condom use
CONDETA	Have you ever started using condoms in the beginning of the relationship and then stopped after getting to known him
CONDETB	...started using condoms in the beginning of the relationship and then stopped after one or both of you had HIV/STD testing
CONDETC	...started having sexual intercourse with no condom and then stopped briefly to put on a condom prior to ejaculation
CONDETD	...had sexual intercourse without a condom but he withdrew prior to ejaculation
CONDETE	...not used a condom or weren't worried about it because you were other forms of birth control
CONDETF	...suggested that a condom be used, but there was no condom available, and you proceeded anyway

CONDETG	...started using a condom and then it was taken off half way through intercourse
PREGNAN	Have you ever had an unwanted pregnancy?
STD	Have you ever had a sexually transmitted disease?
DRUG	Have you ever used intravenous drugs for recreational purposes?
SEXWDRUG	Have you ever had sex with a man who used intravenous drugs for recreational purposes?
ANALNCON	Have you ever had anal sex without a condom?
SEXDRUNK	Have you ever had sexual intercourse while drunk or high?
ORALNCON	Have you ever performed oral sex on a man without a condom?
SEXACT1A	Have you engaged in any sexual activity that involves kissing?
SEXACT1B	...touching above clothes?
SEXACT1C	...touching under clothes?
SEXACT1D	...being completely unclothed with male?
SEXACT1E	...masturbation (female doing it to male)?
SEXACT1F	...masturbation (male doing it to female)?
SEXACT1G	...oral sex (male doing it to female)?
SEXACT1H	...oral sex using a condom (female doing it to male)?
SEXACT1I	...oral sex not using a condom (female doing it to male)?
SEXACT1J	...anal sex using a condom?
SEXACT1K	...anal sex not using a condom?
BOYFRIEN	How many boyfriends (men you have had intimate relations with) have you had?
SACTDRUN	Have you ever engaged in any of the above behaviors (sexual activity in Question 1) while you were drunk or high?
VIRCHOIC	Is being a virgin a conscious choice that you have made?
MOPENCOM	Mothers-open communication subscale in general communication scale
MPROBCOM	Mothers-problems in communication subscale in general communication scale

FOPENCOM	Fathers-openness in communication subscale in general communication scale
FPROBCOM	Fathers-problems in communication subscale in general communication scale
WTSMOTH	Weighted Topics Scale for Mother
WTSFATH	Weighted Topics Scale for Father
SEXCOMM	Sexual Communication Scale-Mothers only

The means, standard deviations, obtained ranges, and possible ranges of the variables applicable to all the participants in this study are displayed in Table 2. Descriptive statistics applicable to non-virgins and virgins are displayed in Table 3 and Table 5 respectively. Descriptives of communication scales are displayed for these groups in Table 4 and Table 6.

Risk Score Calculation

Risk scores were based on participants' answers to questions about sexual history. For sexually active women, the risk score was based on age at first intercourse, the number of 'lifetime' sexual partners, how often they used condoms during these encounters, whether they had had an STD and/or an unwanted pregnancy, engaged in anal sex without a condom, had sexual intercourse without a condom with a man who was using intravenous drugs, had sexual intercourse while under the influence of drugs or alcohol, and six specific questions about condom use.

For virgins, the risk score was derived from the extent of sexual activity they had had based on responses to a checklist of 10 items, how many boyfriends or men they had had intimate relations with, and whether or not any of these encounters had occurred while under the influence of drugs or alcohol.

Table 2

Descriptives of All Participants (n=137)

Variable	Mean	Percent		Std. Dev.	Range	Poss. Range	Valid N
		Yes	No				
Age	20.5			2.1	18-25	18-25	137
Live at Home?		16.8	83.2		0-1	0-1	137
First Year?		27.2	72.8		0-1	0-1	114
Years Away?	3.4			1.9	.5-9.5	.5-9.5	83
Know Anyone With HIV		18.2	81.8		0-1	0-1	137
Course in Sexuality?		40.4	59.6		0-1	0-1	136
Mopencom	38.0			9.4	12-50	10-50	137
Mprobcom	27.6			8.6	10-47	10-50	137
Fopencom	32.4			10.2	10-50	10-50	134
Fprobcom	28.7			8.6	11-47	10-50	134
WTSMoth	16.2			9.5	0-36	0-36	137
WTSFath	6.5			8.3	0-36	0-36	134
SexComm	43.5			13.8	14-71	15-73	130

Table 3

Descriptives of Non-Virgins (n=101)

Variables	Mean	Percent		Std. Dev.	Range	Poss. Range	Valid N
		Yes	No				
Age	20.8			2.0	18-25	18-25	101
Live at Home?		12.9	87.1		0-1	0-1	101
First Year?		25.0	75.0		0-1	0-1	88
Years Away?	3.7			1.9	1.5-10.0	1.5-10	66
Known Anyone with HIV?		17.8	82.2		0-1	0-1	101
Course in Sexuality?		43.6	56.4		0-1	0-1	101
Age at First Intercourse	16.5			2.1	11-25	11-25	101
Used Birth Control?		78.2	21.8		0-1	0-1	101
Number of Partners?	3.6*			2.5	1-8	1-8	101
Condom use?	2.6**			1.1	1-5	1-5	101
CondetA		52.5	47.5		0-1	0-1	101
CondetB		16.8	83.2		0-1	0-1	101
CondetC		27.7	72.3		0-1	0-1	101
CondetD		55.4	44.6		0-1	0-1	101
CondetE		64.4	35.6		0-1	0-1	101
CondetF		25.7	74.3		0-1	0-1	101
CondetG		18.8	81.2		0-1	0-1	101
Unwanted Pregnancy?		15.8	84.2		0-1	0-1	101
STD?		8.9	91.1		0-1	0-1	101
Use Intravenous Drugs?		0.0	100.0		0	0-1	101
Sex with IV Drug User?		3.0	97.0		0-1	0-1	101
Anal Sex (w/o condom)		16.8	83.2		0-1	0-1	101
Sex While Drunk/High		53.5	46.5		0-1	0-1	101
Oral Sex (w/o condom)		91.1	8.9		0-1	0-1	101

* 3.6 in coding represents the range of 4-7 partners

** 2.6 in coding represents condom use 50-75% of the time

Table 4

Descriptives of Communication Scales for Non-Virgins (n=101)

Scale	Mean	Std.Dev	Range	Poss. Range	Valid N
Mopencom	37.7	9.7	12-50	10-50	101
Mprobcom	28.0	8.8	10-47	10-50	101
Fopencom	32.6	10.8	10-50	10-50	98
Fprobcom	28.3	8.9	11-47	10-50	98
WTSMoth	17.0	9.9	0-36	0-36	101
WTSFath	7.2	8.9	0-36	0-36	98
SexComm	44.0	13.6	15-71	15-73	94
Risk Score	50.0	10.0	31-72	0-80	101

Note: The fathers of three participants were deceased.

Table 5

Descriptives of Virgins (n=36)

Variables	Mean	Percent Yes	Percent No	Std. Dev	Range	Poss. Range	Valid N
Age	20.0			2.0	18-25	18-25	36
Live at Home?		27.8	72.2		0-1	0-1	36
First Year?		25.0	47.2		0-1	0-1	26
Years Away?	2.4			1.1	.5-5.0	.5-5	17
Known Anyone with HIV?		19.4	80.6		0-1	0-1	36
Course in Sexuality?		31.4	68.6		0-1	0-1	35
SexActA		88.9	11.1		0-1	0-1	36
SexActB		77.8	22.2		0-1	0-1	36
SexActC		61.1	38.9		0-1	0-1	36
SexActD		30.6	69.4		0-1	0-1	36
SexActE		30.6	69.4		0-1	0-1	36
SexActF		22.2	77.8		0-1	0-1	36
SexActG		22.2	77.8		0-1	0-1	36
SexActH		11.1	88.9		0-1	0-1	36
SexActI		16.7	83.3		0-1	0-1	36
SexActJ		2.8	97.2		0-1	0-1	36
SexActK		0.00	100.0		0	0-1	36
# of Boyfriends?	1.6*			1.2	0-6	0-6	36
Sexual Activity While Drunk/High		33.3	66.7		0-1	0-1	36
Virgin-Conscious Choice?		83.3	16.7		0-1	0-1	36

* 1.6 in coding represents a range of 1-3 boyfriends

Table 6

Descriptives of Communication Scales for Virgins (n=36)

Scale	Mean	Std.Dev	Range	Poss. Range	Valid N
Mopencom	38.8	8.5	17-50	10-50	36
Mprobcom	26.7	8.2	12-45	10-50	36
Fopencom	31.9	8.7	12-50	10-50	36
Fprobcom	29.7	7.7	15-42	10-50	36
WTSMoth	14.1	8.0	2-36	0-36	36
WTSFath	4.5	5.8	0-29	0-36	36
SexComm	42.1	14.3	14-66	15-73	36
Risk Score	50.1	10.0	39-77	20-80	36

Risk scores were calculated for both virgins and non-virgins by entering the items into a Principal Components Analysis and extracting one factor. This one factor is the construct or latent variable labeled 'risk score' and the procedure takes into account the intercorrelations among the risk score items. For example, age at first intercourse may be highly correlated with number of partners because they started earlier and therefore may have had more sexual partners. Factor scores (i.e., z-scores) were saved as variables and represented a score for each individual on that latent variable. These scores were then converted into raw scores using a procedure for transforming z-scores to raw scores (Brown, 1983, p. 163). The scores were converted to T-scores using the equation, T=a + bz with a and b as constants. The scores had a mean of 50 and a standard deviation of 10 based on the equation T=50 + (10 X z-score). The scores ranged from 20 to 80, with a higher score representing higher risk.

High and Low Risk

Within each group (virgin and non-virgin), there was enough variability in risk scores to justify the use of a median split to differentiate high and low risk subgroups (See Table 2 and Table 3). However, it must be noted that these subgroups are not comparable to each other. A virgin with a high risk score is only comparable to a virgin with a low risk score, and a non-virgin with a high risk score is only high risk compared with non-virgins. Therefore, when reference is

made to a high risk virgin, it is meant that they are higher risk relative to the other virgins in the sample.

The subgroups consisted of 52 high-risk non-virgins, 49 low-risk non-virgins, 18 high-risk virgins, and 18 low-risk virgins. The means, standard deviations, and range of the communication scales for these groups are summarized in Table 7.

Primary Analysis

A 2 (intercourse or no intercourse) X 2 (risk, high or low) between-participants multivariate analysis of variance was performed on seven independent variables: open communication with the mother, problems in communication with the mother, open communication with the father, problems in communication with the father, the weighted topics scale for mother, the weighted topics scale for father, and sexual communication with the mother.

MANOVA was used to compare the general and sexual communication within the family among each of the subgroups. There were no univariate or multivariate within cell outliers at α.001. Results of evaluation of assumptions of normality, homogeneity of variance-covariance matrices, linearity, and multicollinearity were satisfactory.

With the use of Wilks' criterion, it was found that the combined dependent variables were not significantly affected by intercourse, $F(7, 119)=1.17$, $p=.32$, risk score, $F(7, 119)=1.43$, $p=.20$, or their interaction, $F(7, 119)=.77$, $p=.62$ (See

Table 7

Descriptives of Communication Scales for each Group

Variables	Non-Virgin High Risk (n=52)			Non-Virgin Low Risk (n=49)			Virgin High Risk (n=18)			Virgin Low Risk (n=18)		
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Mth-Open Comm	38.7	9.0	10-50	36.6	10.4	10-50	36.9	9.5	10-50	40.7	7.1	10-50
Mth-Prob in Comm.	28.0	8.8	10-50	28.0	8.8	10-50	27.4	8.9	10-50	25.9	7.6	10-50
Fth-Open Comm.	34.3	10.6	10-50	30.9	10.7	10-50	32.6	8.0	10-50	31.3	9.6	10-50
Fth-Prob in Comm.	27.1	8.4	10-50	29.5	9.2	10-50	27.9	5.8	10-50	31.4	9.0	10-50
WTS - Mother	19.6	9.7	0-36	14.2	9.4	0-36	14.2	9.0	0-36	13.9	7.1	0-36
WTS - Father	9.4	10.3	0-36	5.1	6.8	0-36	4.8	7.2	0-36	4.1	4.1	0-36
Sexual Comm-Mth	46.7	14.6	15-73	41.3	12.0	15-73	40.7	15.2	15-73	43.4	13.7	15-73

Table 8). The strength of association was very small according to Cohen's criteria. Cohen, 1992)(See Table 8), which further confirmed there was no difference in general or sexual communication in the family between virgins or non-virgins or high or low risk women.

Univariate and Roy Bargmann stepdown test results are summarized in Table 9 and pooled within-cell correlations among DV's are shown in Table 10.

Table 8

Results of MANOVA

	Test Name	Value	Exact F	Hypth. DF	Error DF	Sig. of F	Effect Size
Intercourse	Pillais	.06	1.17	7.00	119.00	.32*	.07
	Hotellings	.07	1.17	7.00	119.00	.32*	
	Wilks	.94	1.17	7.00	119.00	.32*	
	Roys	.06					
Risk Group	Pillais	.08	1.43	7.00	119.00	.20*	.08
	Hotellings	.08	1.43	7.00	119.00	.20*	
	Wilks	.92	1.43	7.00	119.00	.20*	
	Roys	.08					
Intercourse by	Pillais	.04	.77	7.00	119.00	.62*	.04
Risk Grp.	Hotellings	.05	.77	7.00	119.00	.62*	
Interaction	Wilks	.96	.77	7.00	119.00	.62*	
	Roys	.04					

Note: All effect sizes are small according to Cohen, 1992.
*is non-significant at α=.05

Table 9
Univariate F test and Roy Bargmann Stepdown Results

IV	DV	Univariate F	df	Sig. Level	Effect size	Stepdown F	df	Sig. Level
Intercourse	Mopencom	.75	1/125	.39	.01	.75	1/125	.39
	Mprobcom	.75	1/125	.39	.01	.10	1/124	.75
	Fopencom	.19	1/125	.67	.00	.27	1/123	.60
	Fprobcom	.56	1/125	.46	.00	.78	1/122	.38
	WTSMoth	2.42	1/125	.12	.02	5.65	1/121	.02
	WTSFath	3.32	1/125	.07	.03	.60	1/120	.44
	SexComm	.58	1/125	.45	.00	.08	1/119	.77
Risk Group	Mopencom	.18	1/125	.67	.00	.18	1/125	.67
	Mprobcom	.08	1/125	.78	.00	.00	1/124	.96
	Fopencom	1.76	1/125	.19	.01	1.83	1/123	.18
	Fprobcom	3.58	1/125	.06	.03	2.24	1/122	.14
	WTSMoth	2.76	1/125	.10	.02	4.57	1/121	.04
	WTSFath	2.18	1/125	.14	.02	.06	1/120	.80
	SexComm	.31	1/125	.58	.00	1.05	1/119	.31
Intercourse by Risk Grp Interaction								
	Mopencom	2.67	1/125	.11	.02	2.67	1/125	.11
	Mprobcom	.38	1/125	.54	.00	.81	1/124	.37
	Fopencom	.47	1/125	.50	.00	.37	1/123	.54
	Fprobcom	.05	1/125	.83	.00	.90	1/122	.34
	WTSMoth	2.36	1/125	.13	.02	.63	1/121	.43
	WTSFath	1.06	1/125	.31	.01	.04	1/120	.84
	SexComm	2.39	1/125	.13	.02	.09	1/119	.77

Note: All effect sizes are small according to Cohen, 1992.

Table 10

Pooled Within -Cell Correlations Among Communication Scales with Std. Deviations on Diagonal

Variables	Mopencom	Mprobcom	Fopencom	Fprobcom	WTSMoth	WTSFath	Sexcomm
Mopencom	9.48						
Mprobcom	-.75	8.83					
Fopencom	.08	-.11	10.10				
Fprobcom	-.08	.26	-.79	8.46			
WTSMoth	.58	-.42	.03	-.08	9.02		
WTSFath	.21	-.23	.47	-.41	.52	8.21	
SexComm	.59	-.49	.20	-.22	.77	.51	13.68

Open-Ended Questions

Two open-ended questions were asked to supplement and expand upon sexual communication within the family. The first asked the subject with which member of the family she had had the most discussion about sexuality. The other question asked participants to describe a situation in which sexual matters were discussed between themselves and their parents. Specifically, it asked for one story pertaining to their mother and one story pertaining to their father.

A frequency count on the answers given for the first question revealed that most women named their mother as the family member they have had the most discussion with about sexuality (65.2%), followed by their sister (13.6%).

A content analysis of the responses was carried out and stories were categorized on the basis of subject matter. These categories were then examined for themes.

Since some of the stories contained elements of several of these categories, they were coded according to the main or essential point of the story as judged by the researcher. The stories were coded into the categories of sex in general, birth-control/pregnancy/STD's, menstruation, homosexuality, reproduction, other and/or not answered or unable to remember a story. It must be noted that not all categories were applicable to both mother and father (See Table 11). For the analysis, stories about mothers and fathers were dealt with separately.

Table 11

Percent of Responses In Categories for Mothers and Fathers

Subject	Mother-(n=137) %	Father-(n=134) %
Sex in General	25.6	15.7
Birth Control/Pregnancy/STD's	35.9	11.2
Menstruation	7.4	----
Homosexuality	----	7.5
Reproduction	8.0	1.5
Other/Not Answered or Unable to Remember a Story	23.1	64.1

Mother

Of the 137 stories for mothers, 25.6% of them were about sex in general, 35.9% were about birth-control/pregnancy/STD's, 7.4% about menstruation, 8.0% about reproduction/puberty, and 23.1% were about other topics or not answered. The other topics covered a range of issues such as hearing parents having intercourse, problems with friends and relationships, showing too much emotion in public, thoughts on masturbation, hormones, and comments on communication within the family but with no story. Since 61.5% of the stories fell into either the sex in general or birth control/pregnancy/STD's categories, the analysis attempted to focus mainly on the examination of these questionnaires. In addition, the categories of sex in general and birth control/pregnancy/STD's tended to contain information related to the last five years while the other categories tended to contain stories whose time was compatible with the issue such as menstruation which would have occurred around 12 years of age (See Table 11 for Percent of Responses).

Stories in these categories were examined for themes. The sex in general category contained information about mothers and daughters talking mainly about the daughter's sexual behavior. However, there were a few cases when the discussion also moved into the mother's sexual activities as well. In the situations referring to the daughter's sex life, both mothers and daughters seemed to equally initiate these conversations. The fundamental theme that emerged in this category was the importance of the reaction by the mother.

Daughters seemed concerned about their mothers' reactions whether they had initiated the conversation or were being asked about a sexual matter:

"...I was afraid she'd be angry at me for having sex."

"...I was pretty scared as I thought I was going to be in trouble."

"...I lied and said yes. I didn't want her to think any less of me."

"...I felt she would be ashamed of me."

The previous quotes are examples that demonstrate that the mother's perceived reaction was very important to their daughters. However, it was the actual reaction that may have set the tone for future conversations about sex. If the mother was negative or unaccepting of the daughter's activities, it was unlikely that the daughter would confide in her again or at least not until some time had passed:

> When I was 19, after I lost my virginity, my mom found a container of vaginal foam in my room. She asked if it was mine & I told her I had sex with my boyfriend. This took place in my room and I was pretty scared as thought I was going to be in trouble. I didn't think my mom would approve. In the end, she told me to go on the pill and made me feel guilty, like I had done something wrong. This created future secrecy between us, and I eventually became quite embarrassed when the topic of conversation came to do with anything sexual. It took two years after that to talk to my mother about sex comfortably.

> "Mom was digging through my room and found my birth control pills and she asked condescendingly if my boyfriend and I were active. I lied and told her it was for cramps & she said okay & it was over."

> "My mom went all weird one time when I told her I thought I was pregnant. I don't talk to her about stuff like that anymore because of her reaction."

> I didn't tell my mother I was on birth control because I was afraid she would be angry at me for having sex. She found the birth control pills and was very hurt and angry at me. We had a very poor relationship when I was a teenager, and this didn't help."

These stories are examples of reactions that were perceived as negative by the daughters. On the other hand, the mother was non-judgmental and compassionate, the conversation was a vehicle that deepened and strengthened the relationship between mother and daughter. This positive response from the mother created an open environment in which communication could thrive:

> ...my boyfriend and I had broke up and we ended up getting together after the pub one night. We had sexual intercourse. I thought we were back together but he didn't. I've never felt so bad, hurt, used. I never told my mom, only lied and told her we talked and cuddled all night. I felt she would be ashamed of me. I finally told her 1 and 1/2 weeks later. I cried and she hugged me, said she wasn't mad, and talked to me about the emotions and about my boyfriend, her experiences, and gave me advice. It was great.

> We were having a good trusting comfortable talk about life and she asked me if me & my boyfriend were having sex...The whole attitude was comfortable and she never judged me or said anything negative. Now we have a lot of trusting talks. I can talk to my mother about anything.

> I remember numerous conversations with my mother, who was always very careful to offer advice and insight as opposed to preaching or ordering me to behave in a certain way. She wanted to keep communication open...she tried to make me understand the consequences of the choices I make.

The stories suggest that mothers and daughters sometimes had difficulty interpreting each other's reactions and at other times, they both knew what the reaction was going to be. The fact is that reactions do play a role in communication in every realm of life. However, it is this interaction of reactions, albeit complex, that can set a precedent for future communication surrounding sexual issues for mothers and daughters.

The 'sex in general' category centered on the participants' sexual activity and whether they were having sexual intercourse, continuing on with the topic of birth control.

The birth control/pregnancy/STD categories contained stories about going on the pill, getting pregnant, having pregnant friends, abortion, and contracting sexually transmitted diseases. The main focus of these conversations was pregnancy rather than sexually transmitted diseases. The second theme was the inability to communicate directly.

In situations where birth control was discussed, it almost always was referring to the birth control pill. It appeared that the mothers and daughters primary concern was for the daughter not to get pregnant:

> I talked to my her (mother) about going on the pill for the first time in grade 12, she always told me to ask her or tell her when I felt I was ready to have sex and she would put me on the pill with no questions asked. She always wants me to be open and honest with her, and I feel comfortable with this situation and discussion with her...Although she had said no questions asked, she quizzed me. Have I had sex before, was I sure, was I ready emotionally. I told her that I had had sex before and I began to cry. I told her I was sorry I didn't ask her then,...She consoled me, told me she kind of had a hunch about that anyways, she said she was happy

> I told her now. She wasn't mad. She ended the conversation and we went and got the pills the next day. She always said she'd rather me be protected than pregnant.

There were approximately three or four participants that stated that their mothers told them they should be using condoms as well as the pill, but the majority of the time, the concern was centered around pregnancy:

> In Grade 11, my mum brought up a conversation about condoms, while we were stacking wood in the yard. she mentioned all the kids at her school who were pregnant and used condoms. She then let me know that if I decided to have sex it was my choice. But to use the pill as well as condoms.

The above examples suggest that mothers are not concerned about STD's or HIV, at least not enough to talk more about condoms. The issue of pregnancy was the primary, if not the only, concern with mothers. However, the other consequences of unprotected sex, such as STD's and HIV, were not acknowledged by these parents and not addressed as unique issues.

The second theme was the type of communication that occurred either through hypothetical 'what if' scenarios or indirect conversation. This type of communication provided a safe realm that allowed both mother and daughter to feel each other out on issues such as pregnancy:

> I initiated the conversation about pregnancy and the amount of support I would receive from my parents. Throughout the positive calm conversation in the living room, my mother told me that they would support me in what ever choice I made and they would help me make the best choice for me.

> We discussed pregnancy when one of her foster children delivered a boy at 17 yrs of age. This is when I was 24. I asked her what would happen if came home pregnant. She said it would be okay. It seems like in this day and age it is very common. She has definitely mellowed since I was a teenager.

Thus, the daughters felt that they had obtained an idea of what the parents' reaction would be if they found themselves in that situation. In addition to this, they often had conversations indirectly related to themselves. In this sense, the mother did not deal directly with her daughter's sexuality but still got her point across and daughters still had a perceived sense of what would happen based on what their mother had said:

> My mom is not uncomfortable about birth control, sexual matters of other sorts as long as it does not involve my own experiences. My mother often initiates conversations about pregnancy and what she would like me to do should I ever have an unwanted pregnancy (adoption not abortion).

> My mother and I were driving somewhere and she started talking to me about my relationship with my boyfriend at the time. She was basically warning me about pre-marital sex, but in a really veiled way. I remember her saying 'if you get pregnant, don't come running to me'...I got the message that she didn't know for sure if I was sexually active, but she thought so, and she definitely did not approve.

The three themes concerning the influence of perceived and real reactions, the importance of birth control for protection from pregnancy, and the communication styles used by mothers and daughters provide a substantial amount of information relevant to the realm of sexual communication. The

stories are compatible with the results on the sexual communication scale and weighted topics scale that indicated that mothers and daughters do communicate, although the open-ended questions reveal that the methods of communicating are not always ideal. The fact that the communication about sex is occurring between mothers and daughters provides an opportunity for potential improvement.

In the present study, the only scale that was available to assess sexual communication between fathers and daughters was the weighted topics scale, a scale that measured the extent to which eight sexual topics had been discussed. With no sexual communication scale to measure the communication process in more detail, the analysis of the open-ended stories between fathers and daughters is of crucial importance in understanding the father's role in this area of communication.

Father

With respect to the conversations between daughters and fathers, it was found that over half (52.2%) responded by stating that they had no story, either because they had never discussed sex with their fathers, or did not remember discussing anything:

> "I can't remember a specific incident, but mostly my father discussed things in a joking manner. So nothing was ever very serious or substantial."

Some participants indicated their fathers appeared to avoid communication about sex with them or that communication would not occur because their fathers might pass judgment:

> "He was essentially private and avoided the subject if he could."
>
> "Never. He would lock me in a chastity belt if he found out I wasn't a virgin."

The section was sometimes left blank. The blank sections could indicate that there had been no discussion, no memory, or perhaps the father had not been around for a variety of reasons. In some cases, the fathers were present when the conversations took place between mothers and daughters.

Since over half the questionnaires did not contain stories about father-daughter communication, it was obvious that sexual communication between fathers and daughters was a very different experience than it was for mothers and daughters.

The stories for the discussion with the father were coded into the categories of sex in general (15.7%), birth control/pregnancy/STD's (11.2%), homosexuality (7.5%), reproduction/puberty (1.5%), and other/not answered (64.1%) (See Table 11). The 'other' category contained stories about boyfriends, advice on relationships, dirty jokes, and stories about the parents' relationship such as how they met, problems they were having, or daughters hearing their parents having sexual intercourse and then confronting them about it.

Since the study was interested primarily in the sexual communication fathers have with the daughters, questionnaires in the 'sex in general' and birth control/pregnancy/STD categories were the focus of this analysis. It is within these categories that themes related to the communication process were examined. All of the themes that surfaced within the questionnaires were about communication or lack of communication with fathers and they were all representative of the fact that fathers and daughters were not comfortable communicating about sex. When daughters wrote about good and positive experiences communicating with their fathers, it was often general communication that was described and not sexual matters.

Fathers seemed to communicate well on issues such as broken hearts or advice about relationships:

> I've only talked to my father once about relationships, and that was about the breakup with my boyfriend. He told me the guy's point of view about breakups and tried to explain what my boyfriend may have been feeling. He gave me advice, and surely it was all good, my dad showed me he cared, he's never done that before. The advice ended up working in the end when my boyfriend and I got back together.

However, in the realm of sexual communication, the fundamental theme that surfaced was that fathers and daughters communicate indirectly or through scenarios not related to themselves, even more so than mothers and daughters. That is to say, they talked about others' sexual behavior or "so and so's"

pregnancy. In the sex in general category, about 38.1% of the stories about sex had nothing to do with the daughter:

> The main discussions I've had with my dad concerning sex involved religion. We discuss the issue now that I'm adult but never whilst I was younger. We discuss values, abstinence-but it is always detached i.e. not about me. I get the impression my dad feels its none of his business...My dad respects me, but I think he takes the notions of 'ignorance is bliss' concerning my sexual activities.

> With my father, we never discussed sexual situations concerning ourselves, only other people. He would express his opinions to me about his beliefs also which were very strong beliefs. I agreed with many of his ideas even though I didn't act on them.

> "My dad and I frequently watch T.V. together and we discuss sexual issues on the news and in documentaries...Dad and I do not discuss my sex life."

> "I don't recall ever talking about my own sexuality with my father, but we discussed issues such as abortion and prostitution."

> "It was a conversation about the friends of mine that have children or are pregnant...the attitude was very negative towards the girls we were discussing."

> "My dad's boss's daughter is an acquaintance of mine. She started doing some 'bad' things & my dad all of a sudden turned into a gossip queen. My dad and I don't really talk about sex at all."

Some stories included sexual matters relating to the daughter. However, the father's role in these conversations was often very passive. The conversation

or situation may have involved a sexual matter but there was no communication between the daughter and the father. The father's role was as a silent participant, almost as if he felt it was none of his business or not his place to inquire about the daughter's activities:

> I had had a boyfriend for a few months. One day I thought I had a yeast infection (or something, maybe an STD). I asked him to drive me to the Doctor's office. He did. He did not ask why. I did not tell him I had only a yeast infection. I told him I had to go to a pharmacy to have a prescription filled. He did not ask what for. I did not tell him. He looked at other things far away while I got it filled. We went home.

Perhaps the father felt that "ignorance was bliss" so to speak and that the daughter could handle it on her own. Regardless, when the father did communicate directly to the daughter about a sexual issue, it was usually brief and to the point:

> "He said he needed to talk me & he said not to have sex because I could get pregnant or die of AIDS."

The stories suggested that the majority of fathers felt it was not their role to communicate with their daughters. It appeared that communication about sex was thought of as the mothers' domain and any information that the father may have needed or wanted about his daughter's sex life, he could get from a secondary source, such as the mother:

> "My father does not want to believe that I am having sex so we never discussed it. I am sure he talks about it with my mother, however."

> "...asked where I stayed while I was moving and I told him my boyfriends. He asked if my Mom knew and I said yes and he said are you sure. I said yes and he said okay...he also was worried & asked my mom if I was on the pill & Mom told him yes. He was glad I was on the pill.

There were a few cases where a positive conversation about sexual matters with the father occurred:

> When I had gone home for the weekend and came home to find my dad there. I had an awful week discovering that I might have gotten a STD from one time that my fiancee and I had unprotected sex. I told my dad and he was really supportive and told me it would be OK. He told me not to completely blame my fiancee because I knew about his past and I knew that we both should have been more careful...The atmosphere was of anger & fear on my part, but it was comfortable talking with my dad.

The stories that were concerned with reactions from fathers were rare. Although the reaction that a father gave was also important in the communication process between father and daughter, it was not as strong as it was for mothers and daughters. This was likely because few issues were discussed with the father that would elicit a reaction. Daughters were also worried about jeopardizing the relationship they have with their fathers, even prior to communicating about sex, anticipating the fathers' perceived reaction:

> "...I have no idea what my father would have to say, other than he'd hope I wasn't (having sex). I know he'd be extremely disappointed in me."

When a daughter did communicate with her father about sexual activity, the reaction of the father could block further communication:

> When I became pregnant at 19, I waited 5 and 1/2 months before I told my father (I wasn't living with him at the time). When I finally developed the courage to tell him, at his house, he looked like he was going to have a heart attack. He said 'Don't you know about birth control?' I then cried and he took me home. We didn't speak again until after I had my baby.

According to the data, the majority of the women were not comfortable talking to their fathers about sexual matters. The stories revealed that fathers and daughters did not communicate directly about sexual matters. They communicated indirectly because one or both felt uncomfortable about discussing sexual matters related to the daughter. It was the sexual aspect that created this uncomfortable setting since fathers and daughters communicated well about other general topics:

> I'm not comfortable discussing my sex life with my dad but we have had a few (1 or 2) conversations about AIDS, homosexuality etc when I was growing up. It's a shame that I feel restrained talking to my dad about sex because he's extremely intelligent and well-informed and we can talk about almost anything else under the sun.

Summary

The process or characteristics surrounding sexual communication are consistent with the scales that were examined in the study. The fathers' scores, although lower than those of the mothers', on the general communication scale indicated that they are quite good at open communication with their daughters about general information and about the same as mothers with regard to problems in general communication. However, the weighted topics scale scores were extremely low for fathers compared with mothers' scores. This was consistent with the results found in the open-ended scales that indicated that fathers did not communicate well about sexual issues when they communicated about them at all. However, the open-ended responses provided more detail in terms of what problems existed and clues as to why.

Chapter Four

Discussion

The purpose of the present study was to examine the effect of general and sexual communication within the family on young women's sexual behavior. The study was interested in investigating the roles that fathers and mothers play in sexual communication, the types of issues they discuss, and whether the communication process is effective in relaying these messages.

Sexual Activity

The present study found that approximately one quarter of the women in the sample (n=137) defined themselves as virgins although the majority of women were sexually active.

The sexually active women had been active for an average of 4.27 years and, in this time, had four to seven partners since the onset of sexual activity. The age at first intercourse and number of partners in this study is similar to other studies (Boycott, 1994; Kotva & Schneider, 1990). Condoms were not used consistently during the sexual encounters. Almost one quarter of the respondents had had either an unwanted pregnancy and/or a sexually transmitted disease. In addition to this, some women had also engaged in anal intercourse without a condom. With multiple partners and inconsistent condom use, these women are engaging in unsafe sexual practices.

The literature advocates abstinence from sexual intercourse as a safer method for not contracting HIV. In this sense then, a virgin might be considered risk free. However, an important finding of the present study is that there is such a thing as an "unsafe virgin" defined traditionally as someone who has not experienced sexual intercourse. The present study found that this subgroup had a variety of sexual experience. The study included virgins who did not engage in sexual activity, those who engaged in low risk behaviors such as oral sex with no condom, and a few who engaged in higher risk behaviors such as anal sex with a condom. Therefore, it must be noted that some virgins may be at risk for certain STD's, including HIV. The notion that sexual safety is associated with virginity is not justified.

This finding leads to the idea that the categorization of women into virgin and non-virgin status groups was not useful and creates a limiting definition of sexual activity. The dichotomous split is limiting because sexual activity in itself is more of a continuum as was seen by the range of sexual activity the virgins had engaged in within this study. Virgins and non-virgins are not distinct groups.

Implications of the Findings

Methodological

This study utilized two measures that have not often been used in communication and sexual risk-taking research. The first is the open-ended questions. The second is the procedure used to create the risk score.

Fisher (1993) noted that scales used to measure family sexual communication have generally been of two types. They either focused on the quality of the family communication or on the content of the discussions. Within these two types there is variability in both the extent and quality of questions asked. Although scales are recognized for their ability to provide a clear and interpretable score on an aspect of communication, they are limited by the questions asked and the degree to which they explore the dynamics of sexual communication. According to Fisher (1993), to understand sexual communication, the researcher should observe spontaneous family discussions about sexuality or videotape the interactions of families discussing sexual issues. Since both of these methods are time consuming and expensive, open-ended questions represent one alternative. Such questions provide for spontaneity since they allow participants to choose a salient sexual issue and describe the details about the sexual communication that exists between themselves and their parents. Hence, the open-ended scales provide a forum for women to discuss the nature, the time frame, and outcome of a sexual encounter. Open-ended questions can be anonymous and encourage subjective comments that express the woman's thoughts and feelings on the situation. Further, open-ended questions serve as a reinforcement on the scale scores, ensuring that the conclusions drawn from the quantitative data are not simply an artifact of the instruments used (Fisher, 1990).

Previous studies have used risk scores based on summations of values assigned to responses to a number of items to obtain a comprehensive measure of women's risk-related sexual behaviors. As an enhancement of simple summation, Ward & Wyatt (1994) assigned values or weights in 5-point increments with behaviors that were associated with greater risk of pregnancy or of acquiring STD's receiving higher point values. For example, a higher number of sexual partners and a earlier age at first sexual intercourse would both receive higher points. However, this method does not take into account the intercorrelation that exists between variables such as age at first intercourse and number of partners. If a woman who began intercourse earlier also had more partners, she would be given weighting on both questions, creating a false sense of variation, if not risk status.

The present study took this interrelationship between variables into consideration by using the Principal Components Analysis (PCA). This method provided a factor score that takes into account the intercorrelations that exist between these individual variables. The Principal Components Analysis provides a statistical basis for assigning risk scores, a procedure that has not been used in the sexual communication and risk-taking literature.

Communication

The statistical analysis revealed that general and sexual communication within the family did not vary between the virgins or non-virgins or high or low

risk women. his is consistent with other studies that have shown that there are no clear relationship between the level of sexual communication in the family and age at first intercourse or number of sexual partners, variables which were included in the overall risk scores (Darling & Hicks, 1982; Fisher, 1988, 1989; Herceg-Baron & Furstenbergm, 1982; Newcomber & Udry, 1985 as cited in Fisher, 1993).

The present study found that women had better general and sexual communication with their mothers than their fathers. This is consistent with prior literature that found that the mother-daughter relationship was the most disclosive relationship in families (Fox & Inazu, 1980 as cited in Kotva & Schneider, 1990), that mothers are the primary sex educators in most families (Fisher, 1993; Inman, 1974 as cited in Mueller & Powers, 1990), and that both mothers and adolescents were more likely to report high levels of communication about sexuality if the child was a daughter (Fisher, 1990). The focus on the daughter may arise because women have much more experience with direct and serious consequences as a result of unplanned pregnancies and STD's. The fact that the issue of pregnancy surfaced in many of the written stories indicated that this was a primary concern for young women and their mothers.

Both the weighted topics scale and open-ended questions in the present study found that fathers seldom communicated with their daughters about sexual matters. Fox (1981 as cited in Fisher, 1990) concluded that , "...the most notable aspect about the father is his almost complete absence as a source of sex

education for his children" (p. 83), a quote that is consistent with the current findings.

Kotva & Schneider (1990) have suggested that encouraging families to improve their general communication skills may result in more effective communication when discussion focuses on sexual issues. Research has found that general communication and sexual communication are positively correlated and that openness in general communication is the most significant predictor of parent-child communication about sexuality (Kotva & Schneider, 1990; Fisher, 1990). However, in the present study, although scores on general communication were high for both mothers and fathers, the scores on sexual communication were high only for mothers and low for fathers. The pattern of responses to the open-ended questions also followed this pattern. Thus, general and sexual communication may be related for mothers and daughters but not necessarily for fathers and daughters.

Possible Explanations for the Findings

Since general and sexual communication did not differ between virgins and non-virgins or high and low risk women, explanations for such findings should be explored. One explanation is that general and sexual communication within the family does not impact on the sexual behavior of the children. However, there is a large time gap between the discussions about puberty or menstruation in the family to the time that the daughters engage in sexual

intercourse for the first time and even longer to when they move out of the family home and enter university or college. Whether the parents talked to their daughters throughout this period is not known and was not measured. More influential variables during these times may have affected the womens' sexual behavior. These include mass media, friends, sexual education, and siblings. coupled with external factors such as peers, drugs and alcohol, and a partner's pressure. These factors may be more influential than the one time communication with the mother or father.

Women in the study rated general communication with their mothers and fathers as quite good but only the sexual communication between mothers and daughters was rated highly. Fathers appeared absent from the discussions of sexual behavior with their daughters as if it was not their role to discuss such matters. Research on sexual communication within the family has found that mothers are the primary sex educators and studies have seldom focused on fathers and their participation in sexual communication with their daughters. In the limited literature that examines the father's role, few reasons for the absence of the father in communication have been cited and those reasons that are provided are often Freudian in nature. For example, Allegier (1983 as cited in Fisher, 1990) suggested that fathers are unlikely to discuss sexuality with their children because the potential for the arousal of incestuous feelings are greater on the part of the fathers than the mothers. Allegier goes on to state that the level of comfort a parent feels when talking to a child about sexuality is inversely

related to the intensity of attraction felt towards that child, a hypothesis that has never been tested. An alternative explanation for the absence of father in sexual communication is that, as the daughter grows up, the father and daughter see each other not as father and daughter but as man and woman, changing the dynamics of their relationship.

The lack of communication about STD's, specifically HIV, might suggest that parents are not aware of the potential risks involved with their daughters' emerging sexuality. Diseases like HIV/AIDS may not have been an issue for parents during their own sexual development, at least not to the degree that pregnancies out of wedlock were. They may have little experience in dealing with issues of safer sex and the risks that accompany sexual encounters in the 1990's.

Finally, although it appears that the responses to the open-ended questions were consistent with the results found on the communication scales, data from the stories suggested that there are barriers to communication between parents and daughters that scales did not or could not detect. These barriers warrant more explanation. For example, a high score on the sexual communication scale for the mothers is supposed to indicate good sexual communication between mothers and daughters. Yet, the stories contained elements of communication that were limited to non risk aspects of sexual development or were ineffective due to reactions or attitudes. The fact that your mother spoke to you a lot about menstruation does not imply you have a good

communicative relationship with her about sexual behavior as the score on the scale would imply. As well, a high score on the weighted topics scale does not seem to indicate that there has been more sexual communication. In fact, many of the items on this scale seem to be more general in nature. If a parent had significant conversations with their daughter about prostitution and homosexuality, this is not necessarily indicative that there is a great deal of sexual communication occurring in the household. The definition of "sexual communication" needs to be re-defined in order for these scales and future scales to be considered valid. This will be taken into consideration when future research is suggested.

Limitations of the Study

There are three limitations to the findings of the present study. They are the response bias, the social desirability bias, and the generalizability of the findings.

Approximately twenty-three percent of those given the questionnaires did not complete them. The non-respondents may differ with respect to their communication skills and sexual behavior from those who participated in the study. The bias exists because respondents may have been more comfortable about responding to questions of a personal and sensitive nature such as sexual activity. Since it is difficult to get around the volunteer bias, it is hoped that the

anonymous and confidential nature of the study helped by making them feel comfortable, attracting an unbiased selection of participants.

With any research that involves personal information, there is always the potential for responses to be made on a social desirability basis. Social desirability is the tendency to "put the best foot forward" and socially unacceptable, illegal, immoral, or embarrassing activities may not be reported. However, since the questionnaire was completed voluntarily and anonymously, it is assumed that participants answered honestly and that the responses are both valid and reliable.

The last limitation involves the issue of generalization. Since the sample was comprised of university women between the ages of 18-25, the present findings can only be generalized to other university women with caveats with respect to the specificity of sexual behavior and communication characteristics that may be unique to UNBC students. The findings, however, cannot be generalized to other ages or cohorts of women or to men since they may differ with respect to life circumstances, sexual activities, practices, and behaviors. Replication of this research on different populations of women will assist in addressing the degree of generalizability of the results of the present study.

Future Research

Although the present findings found that general and sexual communication in the family did not differ with not related to sexual risk-taking

behavior, there is a need for a continuing focus on the dynamics of sexual communication within the family. It is recommended that the focus of further research begin with the development of a qualitative approach such as using open-ended questions in order to capture the essence of the dynamics that occur within the complex process called "communication." The focus of research should be on sexual activity not on defining or categorizing women on the basis of whether they have experienced sexual intercourse.

In addition to this, detailed attention needs to be directed to the time frame in which sexual communication occurs in the home. While the scales used in the present study suggest that certain issues were discussed a lot and with positive attitudes, they do not provide feedback as to whether such discussion took place on a continuing basis or were the subject of a one-time discussion. These temporal conditions surrounding sexual communication in the family may be important.

Womens' perceptions of their mothers' and fathers' communication with each other, may prove to be a fruitful line of investigation in explaining the risk-taking activities engaged in by young women. There is a need for sexual research to focus on the relationship between father and daughter and on sexual communication, both in two parent homes, and in single parent homes where the father is the sole provider. This may shed light on the apparent inhibition of fathers to communicate with their daughters about sexual matters. Parents' attitudes surrounding sexuality may also play an important role in how young

adults approach their own sexuality and behavior and should continue to be examined. Finally, it seems imperative to examine further why parents are more concerned about and eager to address and communicate with their daughters about birth control rather than about the protection from sexually transmitted diseases.

Conclusion

This exploratory study has shown that general and sexual communication within the family does not differentiate between virgins and non-virgins or high and low risk women. The study also shed light on the roles of mothers and fathers in sexual communication with their daughters, from the daughter's perspective. To overcome the communication barriers that exist between parents and their children, emphasis needs to be placed on educational programs and continuing communication in the family throughout the years of adolescence and young adulthood education in preparation for when young adults leave home.

University courses in human sexuality could aid in the sexual education at a time when it is needed most, and communication with parents is often difficult. Presently, there are institutions that provide these courses. Universities and colleges should be encouraged to offer courses in sexual behavior and risk-taking since interest and participation in such matters for some young people is just beginning, if not increasing, during this time. For others, it would be a

continuation of education surrounding sexuality but in an objective and open environment in which sexuality with all of its' responsibilities and consequences can be accepted.

Many parents seem unwilling or unable to talk to their children about sexuality. While educational programs may assist those adolescents or young adults whose parents are unwilling to discuss these matters, parents should also have access to programs in which they can learn to communicate sexual information to their children throughout their lives. Whether this is implemented through parenting classes, school education, or community based courses, there is a need to recognize that parents need help in dealing with sexuality and HIV just as young adults and adolescents do.

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APPENDICES

APPENDIX A

Volunteer Letter

Dear Volunteer,

Your participation in my study involves answering questions pertaining to communication and sexual activity. My study includes personal and sensitive material about sexual behavior, experiences, and relationships. It is an exploratory study aimed at providing a better understanding of the relationship between communication and sexual behavior and activity. The entire task will take approximately 1 hour.

My name is Nicole Boycott and I am a Community Health student at the University of Northern British Columbia, under the supervision of Dr. David Fish. My study will fulfill part of the requirements for a Master's degree. If you have any questions, comments, or concerns, you can call 562-8775.

During the questionnaire period, you will be asked to fill out the questionnaire booklet to the best of your abilities. It is also asked that you answer each question honestly and openly. Please follow the directions, write neatly, and check to make sure each question has been completed.

Complete confidentiality and anonymity is assured since no names are placed on the questionnaires and they are secured in a drop box until the majority of data has been collected. Participants who are receiving credit for the subject pool will need to fill out a form but this form cannot be matched to the questionnaire. Participants are free to stop participating, with no explanation necessary, at any time during the experiment.

It is requested that participants be female and at least 18 years of age. Please feel free to ask any questions.

Thank you

APPENDIX B

Questionnaire

Questionnaire A

PARENT-ADOLESCENT COMMUNICATION

Adolescent and Mother Form

Howard L. Barnes & David H. Olson

The following questions pertain to the relationship between you and your mother.

Response Choices

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree

---

_____ 1. I can discuss my beliefs with my mother without feeling restrained or embarrassed.

_____ 2. Sometimes I have trouble believing everything my mother tells me.

_____ 3. My mother is always a good listener.

_____ 4. I am sometimes afraid to ask my mother for what I want.

_____ 5. My mother has a tendency to say things which would be better left unsaid.

_____ 6. My mother can tell how I'm feeling without asking.

_____ 7. I am very satisfied with how my mother and I talk together.

_____ 8. If I were in trouble, I could tell my mother.

_____ 9. I openly show affection to my mother.

_____10. When we are having a problem, I often give my mother the silent treatment.

_____11. I am careful about what I say to my mother.

_____12. When talking to my mother, I have a tendency to say things that would be better left unsaid.

_____13. When I ask questions, I get honest answers from my mother.

_____14. My mother tries to understand my point of view.

_____15. There are topics I avoid discussing with my mother.

_____16. I find it easy to discuss problems with my mother.

_____17. It is very easy for me to express all my true feelings to my mother.

_____18. My mother nags/bothers me.

_____19. My mother insults me when she is angry with me.

_____20. I don't think I can tell my mother how I really feel about some things.

PARENT-ADOLESCENT COMMUNICATION

Adolescent and Father Form

Howard L. Barnes & David H. Olson

The following questions pertain to the relationship between you and your father.

Response Choices

1	2	3	4	5
Strongly Disagree	Moderately Disagree	Neither	Moderately Agree	Strongly Agree

_____ 1. I can discuss my beliefs with my father without feeling restrained or embarrassed.

_____ 2. Sometimes I have trouble believing everything my father tells me.

_____ 3. My father is always a good listener.

_____ 4. I am sometimes afraid to ask my father for what I want.

_____ 5. My father has a tendency to say things which would be better left unsaid.

_____ 6. My father can tell how I'm feeling without asking.

_____ 7. I am very satisfied with how my father and I talk together.

_____ 8. If I were in trouble, I could tell my father.

_____ 9. I openly show affection to my father.

_____10. When we are having a problem, I often give my father the silent treatment.

_____11. I am careful about what I say to my father.

_____12. When talking to my father, I have a tendency to say things that would be better left unsaid.

_____13. When I ask questions, I get honest answers from my father.

_____14. My father tries to understand my point of view.

_____15. There are topics I avoid discussing with my father.

_____16. I find it easy to discuss problems with my father.

_____17. It is very easy for me to express all my true feelings to my father.

_____18. My father nags/bothers me.

_____19. My father insults me when he is angry with me.

_____20. I don't think I can tell my father how I really feel about some things.

Questionnaire B

Weighted Topics Scale

Using a scale from 0 (0=NONE) to 4 (4=a lot), please indicate how much discussion you have had with each of your parents about the following topics.

NONE 0 1 2 3 4 A LOT

	Mother	Father
Pregnancy	_____	_____
Fertilization	_____	_____
Intercourse	_____	_____
Menstruation	_____	_____
Sexually Transmitted (Venereal) Diseases	_____	_____
Birth Control	_____	_____
Abortion	_____	_____
Prostitution	_____	_____
Homosexuality	_____	_____

Sexual Communication Scale

The following questions pertain to the relationship between you and your mother.

1. My mother told me about menstruation, (please tick one)

before my first period occurred _____
when my first period occurred _____
after my first period occurred _____

2. My mother viewed menstruation as a

1	2	3	4	5
very positive event				very negative event

3. My mother talked to me about the biological aspects of reproduction

1	2	3	4	5
very frequently				never

4. When my mother talked to me about the biological aspects of reproduction, she seemed to be

1	2	3	4	5
comfortable				uncomfortable

4.b) When my mother talked to me about the biological aspects of reproduction, she seemed to be

1	2	3	4	5
negative				positive

5. My mother talked to me about the emotional aspects of sexuality (such as the relationship of love and sexual expression)

1	2	3	4	5
very frequently				never

6. When my mother talked to me about the emotional aspects of sexuality, she seemed

1	2	3	4	5
comfortable				uncomfortable

6.b)When my mother talked to me about the emotional aspects of sexuality, she seemed

1	2	3	4	5
negative				positive

7. During my childhood, my mother was affectionate (hugging, kissing etc.) with my father in my presence

1	2	3	4	5
very frequently				never

8. While I was growing up, sex was the subject of general family conversation

1	2	3	4	5
very frequently				never

9. My parents generally give me the impression that sexuality can be pleasurable or positive

1	2	3	4	5
very frequently				never

10. My parents have conveyed to me through their actions or words that they enjoy their sexual relationship with one another

1	2	3	4	5
very frequently				never

11. Some parents let their children know through their actions and words that they make love with one another. My parents let me know this

1	2	3	4	5
very frequently				never

12. I can talk to one or both of my parents about sex

1	2	3	4	5
very easily				not at all

13. I would characterize the sexual communication relationship between my parent(s) and I as

1	2	3	4	5
excellent				very poor

please continue on the next page

14. Please describe two situations in which a discussion about sexual matters occurred between you and your mother, and then you and your father. Please provide details as to who initiated the conversation, what it was about, where the conversation took place, the atmosphere or attitudes surrounding the conversation, when this occurred, and the end result (how the conversation ended).

Mother_____

Father_____

In general, which member of your family have you had the most discussion with about sexuality? _____

Questionnaire C

Personal Information:

1. What is your age? _____

2.a) Do you live at home? Y / N

2.b) If no, is this your first year away from home? Y / N

2.c) If you answered no to the previous question (2b), how many years have you lived away from home? _____

3. Have you ever known anyone with HIV/AIDS?

YES NO

4. Have you ever taken a course in which sexual behavior was studied in detail?

YES NO

5.a) Have you ever had sexual intercourse with a man? Y / N

5.b) If YES, please move to Questionnaire D

If NO, please move to Questionnaire E

Questionnaire D

6. At what age did you first experience sexual intercourse? _____

7.a) Did you use birth control during this experience?

YES NO

7.b)If yes, what type of birth control did you use?

_____

8. How many partners have you had sexual intercourse with in your lifetime?

1 2-3 4-5 6-7 8-9 10-11 12-13 14 or more

9. During these sexual encounters, how consistent has your condom use been? Please tick one.

_____ I have always used a condom (100% of the time)
(with every person, every time)

_____ I almost always use a condom (75% of the time)

_____ I occasionally use a condom (50% of the time)

_____ I almost never use a condom (25% or less of the time)

_____ I never have used a condom (0% of the time)

10. Which of the following describes in more detail your experiences with condoms?

(Tick one or more appropriate boxes.)

Have you ever?

_____ started using condoms in the beginning of the relationship and then stopped after getting to know him?

_____ started using condoms in the beginning of the relationship and then stopped after one or both had HIV/STD testing?

_____ started having sexual intercourse with no condom and then stopped briefly to put on a condom prior to ejaculation?

_____ had sexual intercourse without a condom but he withdrew prior to ejaculation?

_____ not used a condom or weren't worried about it because you were on the pill or using other forms of birth control?

_____ suggested that a condom be used, but there was no condom available, and you proceeded anyway?

_____ started using a condom and then it was taken off half way through intercourse?

11. Have you ever had an unwanted pregnancy?

YES NO

12. Have you ever been concerned that you might have contracted an STD?

YES NO

13. If yes, did you act (follow-up)on the problem, thereby confirming or denying the concern?

YES NO

14. Have you ever had a Sexually Transmitted disease?

YES NO

15. Have you ever used intravenous drugs for recreational purposes?

YES NO

16. Have you ever had sexual intercourse with a man you knew used intravenous drugs for recreational purposes?

YES NO

17. Have you ever engaged in anal sex without using a condom?

YES NO

18. Have you ever had sexual intercourse without using a condom while you were drunk or high?

YES NO

19. Have you ever performed oral sex on a man without using a condom?

YES NO

Questionnaire D cont'd

For the following set of questions, please focus on your most recent experience of having sex for the first time with a new partner.

1. How long did you know the person prior to engaging in intercourse?

just met 1 month 2-3 months 3 months or more

2. Where did this event take place?
(please circle)

a) home(parents)
b) home(mine)
c) hotel
d) car
e) friend's place
f) other

3. Was alcohol or drug use a factor in this encounter?

YES NO

4. Was a condom used in this encounter?

YES NO

please continue on next page

5. If yes, please describe this encounter and the interaction about the use of condoms, focusing on communication specifically (e.g. such as who initiated or brought up using a condom, at what point was it discussed, how you felt about it etc.).

6. If no, please describe this encounter in terms of any communication obstacles that presented themselves and/or the reasons a condom was not used (e.g. didn't think about it, too nervous, forgot, wasn't available etc.).

7. For the following items, please state whether you thought about them prior to or during the encounter, if you obtained an answer, and to what extent (0=not at all, 5=completely) it was discussed?
Remember: The focus is on your most recent experience of having sex for the first time with a new partner.

Issues	Thought About	Received Answer	Extent Discussed (0 to 5)
1. Whether or not he was infected with the AIDS virus?	Y/N	Y/N	_____
2. The number of previous partners he had before me?	Y/N	Y/N	_____
3. Whether he was currently involved with someone else?	Y/N	Y/N	_____
4. Whether or not he had had an AIDS(HIV) test?	Y/N	Y/N	_____
5. Whether or not he had had sex with another man?	Y/N	Y/N	_____
6. Whether or not he had any AIDS symptoms?	Y/N	Y/N	_____
7. Whether he had practiced anal sex?	Y/N	Y/N	_____
8. When he last had a new sexual partner?	Y/N	Y/N	_____
9. Whether or not he had ever used intravenous drugs?	Y/N	Y/N	_____

10. Whether or not he had had sex with a promiscuous person?	Y/N	Y/N	_____
11. His feelings about using condoms during sex?	Y/N	Y/N	_____
12. Whether he had used condoms with previous sex partners?	Y/N	Y/N	_____
13. Whether or not he had a sexually transmitted disease?	Y/N	Y/N	_____

For the previous 13 questions, if you obtained an answer, please mark down the # of the question and how you obtained that answer?

Question #	How an Answer was Obtained?
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

PLEASE CHECK TO MAKE SURE YOU HAVE ANSWERED ALL QUESTIONS APPLICABLE TO YOU

THANK YOU FOR YOUR PARTICIPATION

Questionnaire E

1. Which of the following behaviors best describes what has occurred during any sexual activity you have had with a man?
(Tick appropriate box or boxes)

_____ Kissing

_____ Touching above clothes

_____ Touching under clothes

_____ Being completely unclothed with male

_____ Masturbation (female doing it to male)

_____ Masturbation (male doing it to female)

_____ Oral sex (male doing it to female)

_____ Oral sex using a condom (female doing it to male)

_____ Oral sex not using a condom (female doing it to male)

_____ Anal sex using a condom

_____ Anal sex not using a condom

2. How many boyfriends (men you have had intimate relations with) have you had?

0 1 2-3 4-5 6-7 8-9 10-11 12-13 14 or more

3. Have you ever engaged in any of the above behaviors (Question 1) while you were drunk or high?

YES NO

4. Is being a virgin a conscious choice that you have made?

YES NO

please continue on next page

Questionnaire E cont'd

General Well-Being Schedule (GWB)

This section of the study contains questions about how you feel and how things have been going with you. For each question, circle the answer that applies to you.

---

1. How have you been feeling in general? (During the past month)
   1. In excellent spirits
   2. In very good spirits
   3. In good spirits
   4. I have been up and down in spirits a lot
   5. In low spirits really
   6. In very low spirits

2. Have you been bothered by nervousness or your "nerves"?(During the past month)
   1. Extremely so-to the point where I could not work or take care of things
   2. Very much so
   3. Quite a bit
   4. Some-enough to bother me
   5. A little
   6. Not at all

3. Have you been in firm control of your behavior, thoughts, emotions OR feelings?(During the past month)
   1. Yes, definitely so
   2. Yes, for the most part
   3. Generally so
   4. Not too well
   5. No, and I am somewhat disturbed
   6. No, and I am very disturbed

4. Have you felt so sad, discouraged, hopeless or had so many problems that you wondered if anything was worthwhile?(During the past month)
   1. Extremely so,to the point that I have just about given up
   2. Very much so
   3. Quite a bit
   4. Some-enough to bother me
   5. A little bit
   6. Not at all

5. Have you been under or felt you were under any strain, stress, or pressure? (During the past month)

1. Yes, almost more than I could bear or stand
2. Yes, quite a bit of pressure
3. Yes-some-more than usual
4. Yes-some-but about usual
5. Yes-a little
6. Not at all

6. How happy, satisfied, or pleased have you been with your personal life? (During the past month)

1. Extremely happy-could not have been more satisfying or pleased
2. Very happy
3. Fairly happy
4. Satisfied-pleased
5. Somewhat dissatisfied
6. Very dissatisfied

7. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory? (During the past month)

1. Not at all
2. Only a little
3. Some-but not enough to be concerned / worried about
4. Some and I have been a little concerned
5. Some and I am quite concerned
6. Yes, very much so and I am very concerned

8. Have you been anxious, worried, or upset?(During the past month)

1. Extremely so-to the point of being sick
2. Very much so
3. Quite a bit
4. Some-enough to bother me
5. A little bit
6. Not at all

9. Have you been waking up fresh and rested?(During the past month)

1. Every day
2. Most every day
3. Fairly often
4. Less than half the time
5. Rarely
6. None of the time

10. Have you been bothered by any illness, bodily disorder, pains, or fears about your health?(During the past month)

1. All the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time

11. Has your daily life been full of things that were interesting to you? (During the past month)

1. All the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time

12. Have you felt down-hearted and blue? (During the past month)

1. All the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time

13. Have you been feeling emotionally stable and sure of yourself? (During the past month)

1. All the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time

14. Have you felt tired, worn-out, used-up, or exhausted? (During the past month)

1. All the time
2. Most of the time
3. A good bit of the time
4. Some of the time
5. A little of the time
6. None of the time

For each of the scales below, note that the words at each end of the 0 to 10 scale describe opposite feelings. Circle any number which seems closest to how you have generally felt. (During the past month)

15. How concerned or worried about your HEALTH have you been?

0 1 2 3 4 5 6 7 8 9 10
Not concerned at all — Very concerned

16. How RELAXED or TENSE have you been?

0 1 2 3 4 5 6 7 8 9 10
Very relaxed — Very tense

17. How much ENERGY,PEP,VITALITY have you felt?

0 1 2 3 4 5 6 7 8 9 10
No energy at all, listless — Very energetic, dynamic

18. How DEPRESSED or CHEERFUL have you been?

0 1 2 3 4 5 6 7 8 9 10
Very depressed — Very cheerful

19. Have you had severe enough personal, emotional, behavioral, or mental problems that you felt you needed help?

1. Yes, and I did seek professional help
2. Yes, but I did not seek professional help
3. I have had (or have now) severe personal problems, but have not felt I needed professional help
4. I have had very few personal problems of nay serious concern
5. I have not been bothered at all by personal problems during the past year.

20. Have you ever felt that you were going to have, or were close to having, a nervous breakdown?

1. Yes-during the past year
2. Yes-more than a year ago
3. No

21. Have you ever had a nervous breakdown?

1. Yes-during the past year
2. Yes-more than a year ago
3. No

22. Have you ever been a patient or outpatient at a mental hospital, a mental health clinic, for any personal, emotional, behavioral, or mental problems?

1. Yes-during the past year
2. Yes- more than a year ago
3. No

23. Have you ever seen a psychiatrist, psychologist, or psychoanalyst about any personal, emotional, behavioral, or mental problem concerning yourself?

1. Yes-during the past year
2. Yes-more than a year ago
3. No

24. Have you talked with or had any connection with any of the following about some personal, emotional, behavioral, mental problem, worries or "nerves" CONCERNING YOURSELF? (During the past year?)

a. Regular medical doctor (except for definite physical conditions or routine check-ups)----------YES NO

b. Brain or nerve specialist---------- YES NO

c. Nurse (except for routine medical conditions)---------- YES NO

d. Lawyer(except for routine legal services)---------- YES NO

e. Police (except for simple traffic violations)---------- YES NO

f. Clergyman, minister, priest, rabbi etc.----------YES NO

g. Marriage Counselor---------- YES NO

h. Social Worker---------- YES NO

I. Other formal assistance---------- YES-What kind?

_____

_____

NO

25. Do you discuss you problems with any members of your family or friends?

1. Yes-and it helps a lot
2. Yes-and it helps some
3. Yes-but it does not help at all
4. No-I do not have anyone I can talk to about my problems
5. No-no one cares to hear about my problems
6. No-I do not care to talk about my problems with anyone
7. No-I do not have any problems

PLEASE CHECK TO MAKE SURE YOU HAVE ANSWERED ALL THE QUESTIONS APPLICABLE TO YOU

THANK YOU FOR YOUR PARTICIPATION