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An Abstract of A dissertation submitted to the Faculty of the Graduate School of Emory University, in partial fulfillment of the requirements for the degree of Doctor of Philosophy

2008

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ABSTRACT

Background

Botswana, with 1.7 million people, ranks second highest in HIV sero-prevalence worldwide, heterosexually transmitted and affecting more women than men. Health protective sexual communication (HPSC) between sexual partners can contribute to HIV prevention, but women face difficulties with HPSC due to cultural and gender issues. Valid and reliable measures are needed to explore young women's perceptions and beliefs about HPSC for HIV prevention interventions.

Purpose

The purpose this disertation research was to develop and evaluate psychometric measures of HPSC measures to guide culturally sensitive HIV prevention interventions for young women in Gaborone, Botswana. The study was guided by the Theory of Planned Behavior (TPB).

Methods

This cross-sectional multi stage multi-method dissertation study was conducted in Gaborone, Botswana among young women attending selected MCH clinics, selected through purposive sampling. Literature review of exsting measures and a qualitative elicitation pilot directed apriori content validity. Eleven measures were developed, translated and evaluated for content validity. A quantitative pilot among was conducted among 10 women for administrative feasibility. A larger quantitative study among 280 young women was conducted in the 13 city clinics for reliability, validity and hypothesis testing. All women recruited met the selection criteria, consented and responded to all questions.

Results

Twelve major themes and 20 sub-themes were elicited and used as items for 11 HPSC measures. Two meausres were unreliable, one had spuriously low reliability due to its brevity. Eight measures were reliable, with Cronbach's alphas between 0.70 and 0.95. Underlying factors were extracted for these using principal components analysis. Some significant relationships were indentified between measures.

Discussion of Findings

The TPB successfully guided the instrument development process, yielded reliable and valid measures, which had some significant relationships. The results highlighted the importance of HPSC, the significant influece of the male sexual partners and other relatives, and the need to integrate HPSC at all levels of HIV/AIDS prevention and control, and research, focusing on the effectiveness of HPSC.

Keywords: Heterosexual transmission of HIV, health protective sexual communication, instrument development.

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DEDICATION

This dissertation is dedicated to my mother who has been my pillar and role model. I also give hats down for all women of Botswana, especially those who have been infected or affected by the impact of HIV/AIDS such as widowhood, single-parenthood. This includes grand mothers who have to raise young orphaned children while dealing with their own challenges of advanced age. These women are the unrecognized and unrewarded heroes who have endured the challenges of a lifetime, and yet still continue to care for others with utmost love, generosity, and dedication that surpasses all human understanding.

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CHAPTER 1

INTRODUCTION

This chapter provides a brief introduction of a research study for the development and psychometric evaluation of instruments to measure health protective sexual communication (HPSC) among young women in Gaborone, Botswana. The following topics are covered: statement of the problem, study purpose and aims, background and significance of the study, measurement framework, conceptual basis, components of the instruments, and, conceptual definitions.

STATEMENT OF THE PROBLEM

HIV infection in Botswana has reached alarming rates with a prevalence of 17.1% in the general population. HIV prevalence in Botswana increased four-fold in the 1990s and early 2000s, with increased mortality rates among 25-54 year-olds. The prevalence among pregnant women attending antenatal clinics was reported to be 33.4 percent (Smart, 2006). An estimated 256,206 people aged 15-49 were HIV-infected in 2007, with over 33,000 deaths from HIV/AIDS-related causes. Of all people currently living with HIV/AIDS in Botswana, more women (157,783) than men (98,423) aged 15-49 years are infected (UNICEF Report, 2007). In 2005, 7 percent of 1,917 infants born to HIV-positive women had the virus, with a decline to 3.9 percent in 2006 (The Kaiser Family Foundation, August 2007).

HIV infection worldwide is predominantly transmitted heterosexually through unprotected sex with infected partners, whose sero-status is often unknown to the other (Morokoff et al., 1995; Harrison, Lurie & Wilkison, 1997; Wong, 2000; CDC, 2003; AIDS Epidemic Update, 2004; December, 2004; Quinn & Overbaugh, 2005), Botswana included. Batswana women's vulnerability to HIV is associated with many factors including weak partner ties, risky sexual behaviors, occasional multiple partners, lack of trust (Norr, McElmurry, Moeti & Tlou, 1992); substance abuse (Molamu, 1990; Weiser, et al. 2006); socio-economic factors; women's position in society and their dependency on their male sexual partners, and, intergenerational sex

(McDonald 1996; Masupu, 2000; Shisana, 2004). Jack et al., 1999; Ntseane, 2004; and Chilisa, Bennell and Hyde, 2001); practices such as vaginal cleansing, dry rough sex, and the low prevalence of male circumcision. Langeni (2005) identified that a majority of men in Botswana were not circumcised (84 percent in rural areas and 83 percent in urban areas). Many of these factors make HIV prevention an interpersonal matter requiring effective health protective sexual communication (HPSC) between sexual partners about risky sexual behaviors and negotiation for safer sex practices (Kimberly and Serovich, 1999).

Communication is a process of information transmission within a social context, in which one party formulates and transmits a message to another person who then receives, processes, interprets, derives meaning and responds to the message (Wyer and Grienfeldt, 1995). Communication stimulates thoughts for attainment of consensus on an issue or common goal, and/or agreement on some desired behavior. HPSC is communication between sexual partners that has health protective consequences (Catania et al., 1992) to transmit health protective sexual information, in order to prevent HIV, and sexually transmitted infections (STIs). HPSC should include sexual histories, risky behaviors and negotiation of safer sex (Catania, Coates & Kegels, 1994). HPSC can enhance the effectiveness of other preventive strategies that lower HIV risk behavior (Catania et al., 1992; Catania et al., 1990; DiClemente, 1991; DiIorio, William, Lehr & Soet, 2000; Quinna, et al., 2000; Malow et al., 1993; 1994; Rickman et al., 1994; Sheahan et. A.I, 1994; Wingood & DiClemente 1998). However, HPSC can be difficult between couples, often due to cultural barriers (Quina, 2000). Little information is available on HPSC for young Batswana women and their male sexual partners, and culture specific women focused HPSC measures are lacking. Therefore research is required to explore HPSC and the related power dynamics within the context of heterosexual relationships for young Batswana women.

The Botswana national AIDS prevention strategy has focused on community-based educational initiatives such as the ABC strategy (Abstain, Be faithful and Condomize). Adopted in the 1980's, the strategy challenges individuals to delay, avoid or reduce sexual transmission through abstinence, (especially for the youth), maintenance of monogamous relationships, avoidance of sexual intercourse other than with a mutually faithful HIV tested uninfected partner (i.e. being faithful) and, the correct and consistent use of condoms (i.e. condomize). Condom distribution with educational materials can significantly lower sexual risk and HIV transmission (UNAIDS 2004). However, many women in Botswana perceived themselves as having little power to make decisions on condom use and veto their male partner's refusal of condom use (McDonald, 1996, Jack et al., 1999). Women also perceived that requesting condom use would result in their partners' perceiving them as being unfaithful, distrustful or less attractive (Greig & Koopman 2003). These perceptions could be real or imagined, pointing to the need for clear communication between sexual partners about safer sex. Therefore measures are needed that can aid in quantifying HPSC beliefs and perceptions. The availability of such measures can aid in the development of knowledge and intervention strategies to assist women with HPSC.

STUDY PURPOSE AND AIMS

The purpose of this dissertation study was to develop measures that could assist in quantifying HPSC beliefs and perceptions specific to women in Botswana. An evaluation of the psychometric properties of the measures was conducted, based on internal consistency reliability, content and construct validity. The specific aims (**A**), and research questions (**RQ**) for the study were to:

A1. Describe the beliefs of young women in Gaborone, Botswana about HPSC with their male sexual partners.

RQ 1: What were the beliefs of young women in Gaborone, Botswana about the consequences of engaging in HPSC with their male sexual partners?RQ 2: Who did the young women believe were the significant referents or/people in their lives who would influence their ability to engage in HPSC with their male sexual partners?

RQ 3: What did the young women in Gaborone, Botswana believe that the influence of significant referents would be in regard to HPSC?

A 2: Describe the perceptions of young women in Gaborone, Botswana about HPSC with their male sexual partners.

R Q 1: What were the perceived advantages and disadvantages of HPSC for young women in Gaborone, Botswana about HPSC with their male sexual partners?

RQ 2: What was the perceived influence of significant referents on the ability to engage in HPSC for young women in Gaborone, Botswana?

RQ 3: What was the perceived partner's response to HPSC for young women in Gaborone, Botswana?

RQ 4: What was the perception of young women in Gaborone, Botswana regarding their willingness to comply with the wishes of significant others in regard to HPSC?

R Q 5: What was the perceived self-efficacy (ease or difficulty, and effectiveness) for

HPSC among young women in Gaborone, Botswana?

A 3: Develop measures for HPSC based on the understanding of young Botswana women's beliefs and perceptions about HPSC for the prevention of HIV/AIDS.

A 4: Evaluate the psychometric properties of the developed measures of HPSC among young women in Gaborone, Botswana with regard to the reliability (internal consistency) and validity (content, and construct validity) based on factor analysis and hypothesis testing procedures.

The following hypotheses were tested:

H 1: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with having discussed HPSC content with their male sexual partners in the past three months.

H 2: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with intentions for HPSC before the next sexual encounter.
H 3: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with having used safer sex practices (male condom, female condom, abstinence and monogamy) in the past three months.

The developed measures could be used in subsequent studies to explore women's HPSC in order to guide the development of culturally sensitive and women focused interventions for Botswana to promote assertiveness for health protective behaviors with their male sexual partners for the prevention of HIV and STI transmission.

BACKGROUND

HIV prevention in Botswana requires multiple approaches beyond the ABC and other strategies currently in use. Doworkin and Ehrhardt (2007) in their critique of the ABC strategy suggested that HIV prevention strategies must incorporate gender relations and other strategies to reduce HIV transmission. Norr et al., (2003) also proposed that promoting sexual behaviors is not fully under the individual's control but requires partner's involvement and cooperation. The ABC strategy therefore can be more effective when combined with effective health protective sexual communication (HPSC) between sexual partners (Kimberly & Jackson, 1999). Women need to develop confidence in initiating and sustaining communication that can help them to negotiate and maintain safer sex practices. Sexuality related communication between couples could be quite challenging (Quina, 2000; Noar, Liskin & Sakondhavat, 1992). Husbands and wives may avoid direct communication if one or both of them perceive that the topic of HIV prevention is so sensitive that to broach it would threaten the tranquility of the marriage (Zulu & Chepengno, 2003). Furthermore, couples may resort to non-verbal communication, which is often unclear and could lead to misinterpretations.

Women's difficulties with HPSC in Botswana may be attributable to many cultural and religious beliefs and personal factors. According to Norr et al., (2003) open communication about sexual matters is generally discouraged in African cultures, and gender inequalities pose a barrier for couples to change their behavior and that of their partners. Some of the barriers to HPSC include the cultural expectation that women should know or say little about sexual matters. Culturally in Botswana women are under the guardianship of a male relative, (either the father or male sibling if she is unmarried, or the husband once she gets married); and women are expected to comply with men's command as a sign of good womanhood (Denbow & Thebe, 2006). The payment of dowry at the start of a marriage may bestow some feelings of ownership for the wife by the husband. In religious circles women are expected to speak softly, to be obedient and to sexually submit to their men for procreative (and hence no contraception) rather than recreational sex. These beliefs, perceptions and behaviors are barriers to HPSC, and thus increase women's risk to HIV and sexually transmitted infections (STIs). Even the economically independent, educated and reportedly assertive women in Gaborone did not perceive themselves as having higher negotiating skills and power, did not know their partner's sero-status, and did not report using condoms more frequently than those with lesser education (Greig & Koopman, 2001).

Given the difficulties with HPSC related to power differentials, cultural and religious issues, the women's compromised position in society, and the limitations in past studies, current information specific to young Batswana women is needed to gain deeper understanding of their beliefs and perceptions regarding HPSC. The women's unique beliefs about the consequences, advantages and disadvantages of discussing safer sex with their partners, the potential influence of significant persons, women's willingness to comply with this influence, beliefs and perceptions about their own capability to be assertive, need to be measured in order to guide the development of culture-specific HIV preventive interventions for this population.

SIGNIFICANCE AND JUSTIFICATION FOR THE STUDY

The Increasing Prevalence of HIV/AIDS among Young Women in Botswana

Jack et al., (1999) and Masupu et al., (2002) explain that age at first sex for women is lower (17.5 years) than for men (19.2 years) in Botswana, usually with older men, exposing the women early in their lives to heterosexual HIV transmission. HIV is a major public health concern that leads to other health problems like opportunistic infections, AIDS and eventually death. The increased risk of heterosexually acquired HIV infection among young women in Botswana is concerning, requires effective HPSC between couples. Research is required to explore safer sex communication issues and concerns specific, identify issues and priorities to guide interventions that promote safer sex communication, and to reduce transmission rates, prevent new infections and reduce death.

Concerns about HPSC

Rickert, Sanghvi and Wiemann (2002), state that women have the right to control their bodies and the behavioral expressions of their sexuality in the context of HIV/AIDS prevention. However, a woman's ability to engage in safer sexual talk depends upon the partner's willingness to participate and share decisions related to the discussions. For example, partner cooperation is required to talk about, explore, and learn about, agree upon and use of the female or male condoms, (Cecil et al., 1998; Liskin & Sakondhavat, 1992).

Decisions that depend on a second person can be very difficult and require selfconfidence (i.e. self-efficacy) to negotiate or engage in HPSC, regardless of the perception about the other person's reaction, and this can often be the most difficult part of a relationship for women. Van Straden, et al., (1995) found that in Kigali, Rwanda, couple communication was salient in the prevention of HIV, and was associated with condom use only when the discussion was specific about STIs. Notably in this study, men tended to have control over decisions and to give women the responsibility for the provision of condoms. This power imbalance highlights the importance of the partner's influence on safer sex communication and safer sex practices that needs to be studied.

Quina et al., (2000) pointed out that among American women power dynamics determined having a voice in a sexual relationship, with abused women (sexually coerced) reporting significantly lower communication than the non-abused women. Furthermore, women with a partner with at least one known risk had significantly lower levels of communication of HIV-related information and lacked sexual assertiveness. Quina et al., (2000) therefore concluded that a woman's hesitation to express her sexual needs and to discuss HIV risk reduction is based on her understanding of power dynamics and interpersonal danger in the particular relationship. Quinna (2000) also found that women at lower risk for HIV were more likely to communicate with their partners, but still they were not likely to use condoms, with the effect that their actions are silenced. Second, women at higher risk for HIV were less likely to communicate with their partners and less likely to use condoms, again with the effect that their voices were silenced. This silencing is associated with fear of violence, rejection, accusations of infidelity, and perceived societal feminine behavior expectations and stigma.

Asserting rights for protected sex in an intimate relationship has different emotional contexts and consequences. It is often more difficult than any other type of communication even for people who are assertive in other contexts (Quinna, 2000). Noar, Morokoff and Redding (2002) explained that just because a person is assertive, it does not necessarily mean that she/he can be assertive about sexual matters. This may be associated with lower self-efficacy in sexual negotiation, as well as lower perceptions of control over safer sex (Amaro & Raj, 2000). These complexities surrounding HPSC between women and their partners need further research. This is particularly important for Botswana, where such research has not been conducted.

Some men may have difficulties in initiating or responding to safer sex talk. For example, Janneke et al. (1999) also found that men in Zimbabwe expressed difficulties in communicating about sexual matters within the context of a marital relationship. This may silence women and make it difficult to request safer sex strategies. This is likely to be a shared cultural concern between Botswana and these other countries which are in the same sub-region, and therefore it requires further research.

Inadequate Research on HPSC in Botswana

Few studies exist that have addressed HPSC from the perspective of women. Forsyth and Carey (1998) found that most studies done in the US to determine self-efficacy for HIV risk and prevention behaviors were methodologically flawed and lack construct validity. In addition, many of the scales were not behaviorally specific. Studies that addressed the construct hardly quantified the related factors. Studies also have often yielded different results. Some research indicated that communication improved dual decision-making and enhanced safer sex practices (Wingood and DiClemente 1998; Quina, et al., 2000; van Straten, King, Grinstead, Serufilira, & Allen, 1995). On the other hand, HPSC by women may evoke suspicion, defensiveness, and power imbalances, which result in coercion, violence and consequently unsafe sex (St. Lawrence et al., 1998). This can have an impact on whether or not women are able to assert themselves about the behaviors that are critical for their protection against HIV/AIDS and STIs. The number of studies that explore women's perceptions and beliefs about HPSC are very limited in Botswana, and therefore this warrants further research.

Measurement Issues

Scales related to HPSC were developed and tested among people in the US, who were White, Black, and Hispanic participants. The respondents were mostly adolescents, or college students (Catania, 1992; Catania, 1998; Catania, Coates & Kegeles, 1994; Dolcini, Coates, Catania, Kegeles & Hunk, 1995; Howard, Blumstein, & Schwartz, 1986; Snell & Finney, 1990; Harlow, 1993; Debro et al., 1994; Morokoff et al., 1995; Misovich, Pittman, Fisher & Fisher, 1998; Noar, Morokoff, &Redding, 2002; Kalichman et al., 2001; Dilorio et al., 1997; Noar et al, 2002). Many of the developed measures have not been tested among women in Botswana and may not address the salient socio-cultural perspectives of Batswana women. Many of the measures developed in previous studies addressed one or two HPSC constructs at a time and therefore ignored the composite influence of multiple factors on HPSC. Reports on these studies had minimal information on the instruments used and their psychometric properties (Zulu & Chepengeno, 2003). Other studies on HPSC in Africa were qualitative and therefore lacking in generalizability (Van Straden et al., 1995). Specific instruments are therefore required as the initial step in exploring HPSC from the Batswana women's perspective, to understand and quantify their unique beliefs and perceptions. This study will address the lack of reliable valid and comprehensive instruments, which will help to delineate, prioritize, tailor and guide culture-specific interventions to meet the needs of this population.

Theoretical Conceptualization Issues

Several theories have been reviewed to determine their utility in defining concepts related to HPSC and to conceptualize relationships among HPSC constructs. These key concepts include intention to perform the behavior, and perceived self-efficacy for enacting a behavior, the attitude towards the behavior, the perceived influence of other people on the behavior and the motivation to comply with this influence. The findings are presented below for each construct. *Intention:* Intention is the likelihood of performing the behavior (Montano & Kasprzyk, 2002). In behaviors that occur in intimate relationships, which cannot be observed and encouraged at the time of occurrence, it is critical to evaluate a person's intentions for the behavior. This will help to anticipate possible successes and failures for the behavior enactment, and to strengthen preparations to ensure its occurrence. The Theory of Planned Behavior (Ajzen, 1991) is the only theory that explicitly includes intentions as an antecedent to behavior enactment. The Social Cognitive Theory (SCT) does not address intention, implying that when the environment is positive, skills are strengthened, with self-efficacy, the behavior will occur, thus minimizing the need to evaluate its likelihood so that preparations can be made in advance to ensure behavior enactment.

Self-efficacy: The social cognitive theory (SCT) defines self-efficacy in terms of a person's confidence in performing a particular behavior and in overcoming barriers to the behavior (Bandura, 1995). The measures of perceived self-efficacy therefore depict statements that indicate how confident the person thinks s/he is in performing the behavior even under difficult conditions (Lewis, 2002; Kalichman et al., 2001; Dilorio et al., 1997). For example, "I can ask my partner to use a condom even if he does not want to talk about it". This way, measuring the ability, the source of difficulty and intention appear to all be measured in one statement, thus complicating measurement. The Health Belief Model (HBM) applies self-efficacy in the same way as the SCT. In the TPB, perceived self-efficacy is defined as the ease or difficulty of performing the behavior, and the efficacy with which a person thinks s/he can perform the behavior. In this respect, the sources of difficulty are defined separately as perceived advantages and disadvantages of performing the behavior (attitude), and motivation and the intention are addressed separately, thus separating the domains and constructs, and making measurement much clearer and easier.

The Influence of Other People: The SCT discusses the influence of other people under the broader concept of environment and then narrows it to the social environment. This dilutes the importance of significant people (especially the partner) in relational behaviors such as HPSC. The SCT also approaches the influence of other members of the family in terms of vicarious experience. This refers to copying a behavior performed by significant referents or being encouraged by seeing others perform a similar behavior (Baranowski, Pery & Parcel, 2002). This approach may not be applicable to intimate matters such as sexual communication between intimate partners, which do not lend themselves to direct observation.

The TPB explicitly recognizes the influence of significant persons in a person's ability to enact a given behavior, with regard to how the incumbent perceives who these people are and what their likely influence would be. This view is important in measuring intimate behaviors that cannot be observed directly, cannot be enacted independently and require the input of others, such as HPSC and the use of safer sex strategies. *Motivation to Comply with Wishes of Significant Others:* The Interpersonal Communication Theory (ICT) and the Interdependence Theory (IT) both address the concept of compliance (Lewis, DeVellis & Sleath, 2002). Both theories define compliance gaining as communication tactics and strategies used to influence other people, emphasizing positive direct bidirectional strategies in communication. This view assumes that communication already exists, and the emphasis is on making it bidirectional. It would be, however, necessary to establish that communication even exists, what the incumbent's perception is about the influence of people and his/her motivation to comply with these influences, an approach advanced by the TPB. *Attitude toward HPSC:* Attitude, as explained in the SCT, is an evaluation of the advantages and disadvantages, and is the outcome expectations or anticipated outcomes of the behavior, and expectancies or the values that a person places on a given outcome (Barrownowski, Perry & Parcel, 2002), but not explicitly stated as such. This is clearly articulated in the Theory of Planned Behavior Ajzen (1991).

Based on the above discussion, Theory of Planned Behavior (Ajzen, 1991) seems to be more effective in addressing deficiencies of other frameworks and could better help articulate factors related to HPSC for women. This theory has never been applied in this population in Botswana. This study created an opportunity to test the TPB for developing HPSC measures for young women in this country.

THE MEASUREMENT FRAMEWORK FOR THE HPSC MEASURES

The norm-referenced measurement framework was used for the instrument development process. The task when using norm-referenced measurement was to construct tools that measured specific characteristics in such a way that they maximally discriminate among subjects possessing different amounts of that characteristic, along ranges of scores (Waltz, Strickland & Lenz, 2005). In this study, the focus was on the attitudes, perceived influence of significant others and the partner, the motivation to comply with the others' wishes, and perceived self-efficacy for HPSC all arranged in scales that were summed to obtain ranges of scores.

Approaches to Instrument Development

The instrument development process for this project was a multistage, multi-method approach that included both qualitative and quantitative methods. The qualitative study was used for elicitation of themes and sub-themes that generated items for the measures, using a theorybased questioning mode during individual and focus group interviews. The quantitative study consisted of summated rating scales of items (Pedhazur & Scmelkin, 1991), developed on the basis of literature review of existing measures, theoretical framework and qualitative themes.

CONCEPTUAL BASIS FOR THE HPSC MEASURES

The HPSC measures were conceptualized based on a combination of modified scales that measure different dimensions of HPSC, the Theory of Planned Behavior constructs, and on the results of a qualitative elicitation pilot study conducted in Botswana on a typical sample described in detail in chapter three.

Available Measures of HPSC

Extensive literature review on measures of beliefs and perceptions about HPSC assisted in developing a blueprint, which addressed attitudes, perceived influence of significant others and the partner, motivation to comply with their wishes, and perceived self-efficacy. The objectives, sources, purpose, the sample on which they were tested, the number of items, reliability and validity information, and the relevance of these measures for the proposed HPSC for young women in Botswana are presented in Table 1.

Measure	Purpose	Population and Sample	No. items	Reliability	Validity	Relevance for the proposed measure
1. Condom Influence Strategies Questionnaire by Noar et al., (2002)	Measures strategies for condom negotiation (ability to persuade a partner to use condoms).	Men and women in Heterosexual relationships in Rhode Island, who were college students over 18 years, predominantly white, with sexual partners.	12	Internal consistency, using Cronbach's alpha. Alpha for all subscale ranged between 0.83-0.94.	Not provided	Used to derive influence tactics items for the HPSC measure.
2. AIDS Discussion Strategies Scale (ADSS) by Snell and Finney, (1990)	Measured types of interpersonal communication strategies that women and men used if they wanted to discuss AIDS with their partners.	Men and women in heterosexual relationships	72	Internal consistency ranges were: Rational= .9696; Manipulation= .9293; Withdrawal= .8385; Charm= .8182; Subtlety= .7466 Persistence= .8081	Women were more likely to use rational, strategies than men were, and less likely to use manipulation and charm to persuade their partners to talk about AIDS. Men were less likely to use withdrawal strategies than women were. There was a direct correlation between ADSS and AIDS stereotypes.	As above

Table 1, Summary Table of Measures Addressing HPSC Constructs

Measure	Purpose	Population and Sample	No. items	Reliability	Validity	Relevance for the proposed measures
3. Influence Tactics Scale (ITS) by Howard, Blimstein & Schwartz, (1986).	Measured different tactics used to gain compliance, and power within intimate relationships. Subscales were manipulation, supplication, autocracy disengagement, bullying, bargaining.	Homosexual and heterosexual couples. In National samples.	21	Cronbach's alpha for internal consistencies for each sub-scale were: Manipulation=.6; Bullying: =82; Disengagement=.75; Supplication=.71; Autocracy=.72; Bargaining=.55.	The use of some influence tactics varied according to gender controlling for income and appearance (masculinity).	As above.
4. AIDS Prevention Behavior Questionnaire by Misovich et al., (1998)	A subscale of the AIDS prevention information. motivation, behavioral skills, and behavior measure	Measures discussion of safer sex, condom accessibility and use, and risky sexual practices	18	Behaviors: safer sex communication and condom use had good internal consistency with alpha 0.98	Change in perceived difficulties AIDS prevention behavior for condom use group and no change for the control (no condom) group	Used to derive condom use and perceived ease or difficulty in HPSC

The Theoretical Framework for the Study: the Theory of Planned Behavior

The Theory of Planned Behavior (TPB) by Ajzen (1991) was selected as the appropriate conceptual framework that could adequately address limitations of other frameworks in exploring health protective sexual communication. The TPB emerged from the Theory of Reasoned Action (TRA), which was first introduced by Fishbein (1967) and further developed by Fishbein and Ajzen, (1975), Ajzen and Fishbein, (1980), and Ajzen (1991). The TRA is a social cognitive theory that focuses on intention to perform a behavior as the antecedent for behavior enactment. The intention is the perceived likelihood of performing a behavior (Montano & Kasprzysk, 2002), can be used as a proximal measure of behavior (Francis et al., 2004).

The intention is influenced by: 1) influenced by the individual's attitude towards performing the behavior, which is the positive or negative appraisal of the outcome of performing the behavior; 2) the perceived subjective norm, or an individual's perception of whether or not people important to him/her think the behavior should be performed; and 3) the perceived pressure from these people like family, friences, role models, partners, and motivation to comply with their wishes and aspirations. Ajzen & Fishbein, (1980), added perceived behavioral control, or the evaluation of self-efficacy for performing the behavior based on perceived level of difficulty and the effectiveness in performing the behavior. The behaviors are assessed on a continuum from those that are easily performed to those requiring considerable effort, resources and knowledge. Because of difficulties in measuring behavioral control, perceived behavioral control is used as a proxy for behavioral control (Ajzen & Fishbein, 1980).

The main aim of this study was to develop measures that explore the women's intentions to communicate with their male sexual partners about safer sex. The study specifically aimed to explore the women's attitude (negative or positive appraisal) towards engaging in HPSC; the perceived subjective norm (perceived influence of people important to the woman) about engaging in HPSC; and perceived behavioral control (the woman's perception about her own capability or self-efficacy) to engage in HPSC with their partners.

Certain underlying beliefs influence the perceptions. Behavioral beliefs about the negative or positive consequences of the behavior influence the attitude towards the behavior. The normative beliefs about that are important in a person's life or their perceived responses influence the perceived subjective norm on behavior enactment. The behavioral beliefs influence perceived behavioral control or a person's ability to perform or not to perform the behavior. In this study, behavioral beliefs refer to the woman's beliefs about the consequences of talking to her male sexual partner about engaging in HPSC. Normative beliefs refers to the woman's believes about who in her family and friends or other people can have some influence on her decision to engage in HPSC with her male sexual partner. Research has shown that the male sexual partner has substantial influence (Carovano, 1995). Other people may include the mother, siblings, and health care professionals. Figure 1 below presents the conceptual map of the TPB.

Figure 1, Conceptual Map of the Theory of Planned Behavior (Ajzen, 1991)



The key behavioral outcomes in this study were having had HPSC on specific topics in the last 3 months and use of specified safer sex practices. These behaviors are influenced by the intentions for HPSC or plans and commitment statements related to wanting to engage a partner in HPSC before the next sexual encounter. The intentions are influenced by a number of perceptions. First is the respondent's attitude towards HPSC, which includes the perceived advantages and disadvantages of engaging in HPSC. Second is the subjective norm, which is the perceived influence of the significant others and/or partner on the woman's intention to engage in HPSC. Third, is the motivation to comply with the demands of significant others and/or partners for or against HPSC, which influences the perceived behavioral control and intention to engage in HPSC. Fourth is the perceived behavioral control or self-efficacy, which is the respondent's perceived ease or difficulty of engaging in HPSC, and the effectiveness of HPSC on the outcome behavior. Perceived self-efficacy influences the intention, actual behavioral control and the behavior. Socio-demographic factors such age, income, level of education, marital status, HIV status of partner, length and quality of the relationship, also influence intentions for HPSC, HPSC content discussed and the use of safer sex practices. The diagram in figure 2 below shows the relationships of the TPB constructs as addressed in the proposed instrument development process.





The underlying beliefs, perceptions, intentions, content discussed and safer sex practices used were first explored qualitatively to determine themes and sub themes to formulate items for the measures. The blueprint for conceptualizing the instrument development process is presented in Table 2 below.

Table 2, Blueprint for the Modified HPSC Measures

Objective	Domain	Content	Source
Describe the characteristics of women in the sample.	Socio-demographic factors	Respondent's characteristics: age, education, income, marital status and HIV status, length and type of relationship, sexual partner.	Based on researcher's knowledge of target population.
		Partner characteristics: age, education, employment, income, HIV testing and status.	
Determine how women define and understand HPSC.	The meaning of HPSC	How women define and understand HPSC.	Based on women's qualitative communication study.
Determine the HPSC content that women are likely to have discussed with their partners in the 3 months.	Selected Content on HPSC	HPSC Content: Past and present sexual relationships; risky sexual behaviors and practices; alcohol and drug use; risky traditional and cultural practices; history of STDs, HIV status; use of safer sex practices.	Selected items from the AIDS Prevention Behaviors questionnaire (Misovich, Pittman, Fisher and Fisher, 1998) and expert input, women's qualitative communication study themes.
Identify the influence tactics that women and their partners may use during HPSC.	Influence Tactics	Influence strategies used by women to get their partners to engage in HPSC and to use safer sex practices, e.g. manipulation, withdrawal, charm, subtlety, persistence, aggression, pleading, use of social networks.	AIDS Discussion Strategy Scale (ADSS), (Snell & Finney, 1990), The Influence Tactics Scale (ITS), (Howard, Blumstein, & Schwartz, 1986).
Describe the factors that influence women's ability to engage in HPSC.	Factors that influence women's ability to engage in HPSC.	Partner's characteristics, relationship factors, knowledge about HIV and AIDS, social support.	Developed from the women's qualitative communication study themes.

Objective	Domain	Content	Source
Determine attitudes towards HPSC.	Attitudes towards HPSC.	Advantages and Disadvantages of HPSC.	Developed from the women's qualitative communication study themes.
Determine perceived subjective norm on HPSC	Perceived Subjective norm or perceived influence of partner.	The influence of significant others such as, parents siblings, friends, heroes, health care providers or sexual partner.	"
Determine perceived partner's response.	Perceived main partner's response to HPSC	The main partner response when HPSC is introduced may use influence tactics to respond to HPSC discussions.	AIDS Discussion Strategy Scale (ADSS), by Snell & Finney, (1990), The Influence Tactics Scale (ITS), by Howard, Blumstein, & Schwartz, (1986).
Determine perceived behavioral control on HPSC.	Perceived behavioral control	How women perceive their capability for HPSC, focusing on perceived ease or difficulty and perceived effectiveness of HPSC in getting partner to use safer sex practices.	Developed from the women's qualitative communication study themes. HPSC.
To describe the women's intentions to engage in HPSC before the next sexual encounter.	Intentions to engage in HPSC	Intentions to discuss each HPSC topic listed.	Developed from the women's qualitative communication study themes.
Describe the safer sex practices that women used with their partners in the last 3 months.	Safer Sex practices	Safer sex practices used in the last 3 months such as the male condom, female condom, microbicides, abstinence, monogamy.	Developed from the women's qualitative communication study themes.

Components of the HPSC Measures

The components HPSC measures are presented below.

Socio-demographic Factors

These personal characteristics of the woman and her partner were important in HPSC. These included age, educational level, income, marital status and the number of children in the dyadic relationship. Other important elements included were HIV testing and test results, type and length of relationship, and the type of partner.

Safer Sex Practices

This refers to activities that people perform to prevent the exchange of body fluids and to prevent sexual transmission of HIV and other STIs. The practices include the use of male or female condom, microbicides, monogamy and abstinence. Although the use of microbicides is not widespread in Botswana, they were included because at the time of the proposal for this study feasibility studies were proposed.

The Meaning and Understanding of HPSC

This component was not originally a part of the conceptual framework of the study, but it was intended to explore how women in Botswana conceptualized HPSC from their own perspectives. The scale included items on initiating safer sex discussions, talking about and letting partners know your feelings towards sexual protection, asking partners about sexual history and prevention of STIs and HIV/AIDS, exchanging information about safer sex histories, and asking partners to use protection (male or female condoms, fidelity or maintaining a monogamous relationship, and abstinence, absolute or conditional, contingent upon some reason for suspending sex, such as when a partner has an STI or is receiving treatment for it).

Health Protective Sexual Communication Content

HPSC content is an outcome behavior that is targeted for the prevention of HIV and STIs. Safer sex communication content pertains to selected discussion topics that women may include during intimate discussions with their sexual partners to assert for protection against HIV, STIs or pregnancy. The information includes sexual history (past and present sexual partners, serial or multiple relationships, relationships with partners who had multiple relationships, relationships with commercial sex partners, trading sex for money or material goods); history of infections, (STIs and HIV status); risky sexual behaviors (homosexuality, bi-sexuality); risky sexual practices (oral sex, anal sex, and dry rough sex); risky lifestyle behaviors (alcohol and drug use and vaginal cleansing); safer sex strategies (condom, monogamy, conditional abstinence, and male circumcision).

Influence Tactics for Achieving HPSC

Influence Tactics are also a domain outside the realm of the TPB, but literature indicates that these factors are important in facilitating movement toward behavior change of an interpersonal nature. This pertains to the strategies that women are likely to use to initiate and sustain HPSC. They may include: manipulation, withdrawal, rejection, silence, rationalization, charm/flirting, subtle hinting, supplication, persistence and suggestive action. The same influence tactics were used to derive items for exploring the perceived partner's influence on the woman's ability for HPSC.

HPSC Influencing Factors

Like influence tactics these factors are not part of the domain of the TPB but were indicated in the literature as important in interpersonal relationships that could affect self-efficacy for HPSC. These include external factors (facilitators and barriers) that may affect the women's ability to initiate and sustain HPSC such as partner's personal characteristics (i.e. if he is easy to talk to, is future focused, understanding, accommodative, respectful, willing to listen to others, and interested in a long-term relationship with the woman), the age difference between the partners, and the type and length of the relationship was also important, for example, a respectful, committed relationship in which there is freedom of expression is more conducive to HPSC.
Theory of Planned Behavior Factors

The TPB constructs important in HPSC include, attitude towards HPSC, perceived subjective norm about HPSC, perceived partner's response, motivation to comply with wishes of significant others, perceived behavioral control or self-efficacy for HPSC, intentions to engage in HPSC with a male sexual partner, as defined below.

Conceptual Definitions of Major concepts

Communication is defined as a process of information transmission within a social context, in which one party formulates and transmits a message to another, who in turn receives, processes, interprets, derives meaning and responds to the message (Wyer & Grienfeldt, 1995). The expected results of communication are stimulation of thoughts, attainment of consensus on an issue or common goal, and/or achievement of partner agreement on some desired behavior.

Health Protective Sexual Communication (HPSC) in this study is the transmission of health protective information introduced during intimate partner discussions for prevention of STIs and HIV, including discussions about sexual histories or high-risk sexual behaviors, and the use of safer sex strategies (Catania, Coates & Kegels, 1994).

Beliefs about HPSC are inner conceptions and positions held by women with regard to HPSC. These include behavioral, normative and control beliefs, and are defined below.

Behavioral Beliefs pertains to a woman's evaluations of the consequences of engaging in HPSC with her male sexual partners.

Normative Beliefs refers to a woman's beliefs about who her significant referents are (important people in her social network) and the extent to which she feels social pressure from these referents to talk or not to talk about safer sex, as well as the positive or negative judgments of this belief (outcome evaluation).

Control Beliefs are the extent to which a woman feels able to enact a behavior (HPSC) based on her knowledge and skills related to behavior enactment.

Perceptions about HPSC are the evaluations made by the woman on her ability to engage in HPSC based on her beliefs. The perceptions in this study include:

Attitudes towards HPSC is the woman's overall positive or negative appraisal of engaging in HPSC with her sexual partner, or perceptions of the advantages and disadvantages of doing so;

Perceived Subjective Norm is the perceived negative or positive appraisal of the influence of significant others (perceptions about how people close to the woman would influence her ability to engage in HPSC with a sexual partner).

Perceived Main Partner's Response is an aspect of subjective norm or the influence of others in the intention and enactment of a behavior focusing on the main male sexual partner. In this study, it refers to the women's appraisal of the main partner's response when the woman introduces HPSC topics in the context of intimate relationships. The main partner refers to the one that the woman considers the serious steady long-term partner;

Motivation to Comply is the woman's perception of her motivation or willingness to perform according to the wishes and expectations of the others.

Perceived Behavioral Control or Perceived Self-efficacy for HPSC is the woman's judgment of the ease or difficulty to communicate with her male sexual partner on health protective sexual topics and the effectiveness of the communication on the use of safer sex strategies.

Intentions for HPSC refer to statements indicating a plan, a promise indicating commitment to communicate with partners about safer sex.

Health Protective Sexual Communication Content forms the core during HPSC, which addresses risky sexual behaviors and safer sex (and other sexual risk reduction) strategies that prevent or reduce the risk of exchanging body fluids during sexual intercourse and the risk of STIs and HIV.

Influence Tactics are the strategies that a woman is likely to use to initiate and sustain HPSC with her sexual partner, or which the partners could use in response to the woman's discussions. *Influencing Factors* are the activities and behaviors that could improve or make HPSC possible *Length of Relationship* is the duration in months that the woman has been in a heterosexual relationship with the current partner.

Safer Sex Practices in this study refer to practices used to reduce the risk for exchange of body fluids during sexual intercourse, thus preventing HIV and STIs, such as male or female condoms use, abstinence, and maintenance of a monogamous relationship and use of microbicides. *Socio-demographic Factors* are personal characteristics of a woman and her sexual partner. These include age, educational level, income, marital status, whether or not they have been tested for HIV and their HIV status, type of partner (casual or steady), the quality of relationship, (good or bad), and the number of partners.

SUMMARY OF CHAPTER 1

Batswana women have been shown to be more vulnerable to HIV than their male counterparts are. Women's risk to HIV is associated with socio-cultural factors related to interpersonal relationship with men. Difficulties with HPSC have been identified. The need to address interpersonal issues related to health protective sexual communication (HPSC) were identified in order to guide the development of strategies to reduce women's vulnerability. Information specific to HPSC among young Batswana women was identified as inadequate in the literature, and instruments are lacking to measure HPSC within the cultural context of interpersonal sexual relationships. This research project addresses this need, guided by extensive literature review on available measures, qualitative elicitation research and the Theory of Planned Behavior to direct future interventions that promote HPSC for HIV prevention.

CHAPTER 2

BACKGROUIND OF THE STUDY

Introduction

This chapter presents background information and an overview of literature that led to the proposal for the development of instruments to measure HPSC among young women in Gaborone, Botswana. The chapter covers the country profile, epidemiology and the common factors influencing transmission of HIV focusing on Botswana, mode of transmission, factors influencing HIV transmission, strategies to combat the epidemic, the role of HPSC, research on HPSC in Africa, and factors influencing HPSC.

Background of the Country

Country Profile

Geographic Location

Botswana is a land-locked country in Southern Africa, just north of South Africa, with Namibia in the west, a thin strip of Angola in the north, and Zambia, and Zimbabwe in the northeast. This location places Botswana centrally for the cross continent transportation of goods and services by road and rail, at or near several ports of entry for 7 countries (South Africa, Namibia, Angola, Zambia, Zimbabwe and close to Mozambique) and a resting place for truck drivers. Botswana has a population of about 1.8 million people occupying a landmass of 602,957 square kilometers (232,802 square miles). The Capital City, Gaborone is on the southeastern corner, with a population of about 208,411 Central Statistics Office, 2008). Thirty-eight percent of the population is less that 15 years (HIVInsite, 2007) and 55% is between 15 and 65 years of age, and 4% lived over the age of 64 years in 2000 (Central Intelligence Agency, 2000).

Political and Economic Situation

Botswana has a multiparty democracy, since independence in 1966, and a stable economic progress dependent on mineral resources; especially diamonds. The gross domestic product or purchasing power was US \$5.7 billion (A Report of Physicians for Human Rights, 2007). Despite this success, 23 percent of the population lives below poverty datum line of \$1.00 per day, and unemployment rates are 23.8 percent. Over 50 percent of the population lives in rural areas. The semi-arid climate supports livestock, wildlife and subsistence farming (A Report of Physicians for Human Rights, 2007), that may often be affected by severe cyclical droughts leading to increasing income, education and economic disparities.

Botswana is one of the rapidly urbanizing countries in the world with 45 percent of the population currently residing in towns or urban villages, where reliance on agriculture is greatly reduced. Although standards of living are fairly good in cities and towns, the rapid increase in HIV has been a major challenge for the country. A report of the National AIDS Coordinating Agency and United Nations Development Programme (2007) on the economic impact of HIV/AIDS in Botswana, projected a decline in economic growth by 1.5 percent to 2.0 percent a year over the period 2001-2021, (being 25 percent to 35 percent smaller) as a result of HIV/AIDS. This associated with reduction in labor force, declining mining sector, reduced productivity, reduced population growth, reduced investment and a younger most likely inexperienced labor force. The government budget is also affected by health care costs (approximately 6 percent of spending) for in-patient, ambulatory services, the antiretroviral program, home-based care, orphan care and the care of vulnerable populations, and other prevention programs. The report suggests the need to focus on prevention efforts to reduce the extent of HIV and AIDS.

The Educational System

The Botswana government provides universal access to primary, secondary school and higher education. Almost 100 percent of children enroll in primary school but the number of young children 0-4, 5-9 and 10-14 years is projected to decline by 20% by 2010 due to HIV/AIDS, and reducing primary and secondary school enrollment thus increasing illiteracy and poverty. This is caused by declining fertility trends, HIV/AIDS deaths among women of childbearing age, reduced fertility of women with HIV. A comprehensive approach is therefore required to control the epidemic and its impact (A Report of Physicians for Human Rights, 2007).

The Health Care System

Botswana's health care system is based on a primary health model developed in Alma Ata (World Health Organization, 1978), and has developed a network of integrated, preventative, curative and promotive health services accessible to all people at a distance of at least 8 kilometers. These services are financially supported by government thus promoting high service utilization, with over 90 percent of the facilities providing maternal and child health and family planning (MCH/FP) services where women are the key consumers (Trayfors, et al., 1996).

The Socio-economic Status of Women

Batswana women are significantly economically disadvantaged compared to their male counterparts. In 2004 GDP per capita (purchasing power) for women was \$5, 322.00 less than half of men's GDP which was \$14, 748 .00. This is associated with high prevalence of femaleheaded households with minimal financial resources, and uneven distribution of family responsibilities between men and women. Unemployment was also higher for women (28 percent) than for men (22 percent). Economic empowerment for women was more apparently focused on the informal sector rather than formal gainful employment, with concentration in rural areas (A report of Physicians for Human Rights, 2007). The risks of poor business performance and increased income disparities are greater.

Legal and Judiciary System

Botswana's customary and judiciary system is based on Roman-Dutch laws where most family disputes are handled by the customary courts lead by tribal chiefs who follow the traditional customary laws with sporadic reference to common law (A report of Physicians for Human Rights, 2007). Under the customary law, women are subordinates of men such as their fathers, uncles, brothers, and sometimes grown sons. Women are denied property rights, and inheritance is passed to the eldest or youngest man. This gives men control of economic and family decisions and renders women powerless and dependent on men thus exacerbating economic disparities between men and women.

Violence against Women

It was estimated that in 2005, 6 out of every 10 women survived domestic violence, and 1, 544 women were raped. In addition, anecdotal reports indicate that sexual harassment at the work place and in learning institutions are prevalent (A report of Physicians for Human Rights, 2007). Violence creates fear, silences women and increases their vulnerability to STIs and HIV.

Epidemiology of HIV/AIDS among Women and Women's Vulnerability to HIV

When sentinel surveillance began in 1992, 18.1 percent of pregnant women tested positive for HIV. The figures peaked in 2000 at 38.5 percent and declined slightly to 35.4 percent by 2002, increasing again to 37.4 percent by end of 2004, 33.4 percent in 2005 and 32.4 percent in 2006 (National AIDS Coordinating Agency and United Nations Development Programme, 2007). The impact of antiretroviral therapy, introduced in 2000 in Botswana has not been evaluated by gender, but may show worse comparison than in the US because of the more marginalized situation of women in Botswana.

Botswana is situated in the worst hit region of the world, Sub-Saharan Africa, where over 10 percent of the world's population lives, and where more than 68 percent adults and nearly 90 percent of children live with HIV. National adult HIV prevalence exceeded 15 percent in eight countries in 2005 (Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe) (UNAIDS, 2007). Of all people living with HIV, more than 70 percent AIDS deaths occurred in 2007. More than 61 percent of adults living with HIV/AIDS in this region are women. The scale and trends of the epidemics in the region vary considerably, with southern Africa most seriously affected, and accounting for 35 percent of all people living with HIV.

According to UNAIDS (2005), new data from **South Africa**, which borders Botswana, show that HIV prevalence among pregnant women has reached its highest levels, with 29.5%

(range 28.5-30.5%) women attending antenatal clinics being HIV positive in 2004. Prevalence was highest among women aged 25-34 years. Very high HIV prevalence, often exceeding 30% among pregnant women, is still being recorded in four other countries in the region: **Botswana**, **Lesotho, Namibia and Swaziland.** Yet no clear patterns of a decline in prevalence are evident.

World wide, the AIDS epidemic is similarly taking a toll on women and girls. Although men were more affected than women at the start of the epidemic, the infection among women is now growing at alarming rates (Peter, 2002).

Mode of Transmission

Heterosexual intercourse remains the predominant mode of HIV transmission in Botswana, and accounts for the high rates of HIV transmission. Jack et al., (1999) revealed that women continued to engage in unprotected sex and young girls indicated difficulties asking their partners to use condoms. Other socio-demographic and cultural factors could be important in directing people's behaviors.

Heterosexual intercourse carries the highest risk of infection for women worldwide (Kaiser, Family Foundation, 2007), based largely on the partner's risk behavior (Wang, 2004). Hayes, Schultz and Plummer (1995), and; Hunter, (1993) explains the distribution of HIV in Sub-Saharan Africa is largely determined by sexual behavior and is related to heterosexual contact. Like other sexually transmitted diseases, the characteristics of sexual networks determine the extent and rate of spread of HIV. The primary modes of HIV transmission among women in the US are heterosexual contact and injection drug use (CDC, 2006). Of the estimated 131,195 female adults and adolescents living with HIV/AIDS, 73 percent had been exposed through highrisk heterosexual contact, and 26% had been exposed through injection drug use. Often, sex and substance use are intermingled such that the actual source of infection is difficult to identify. In addition, some HIV+ women might also voluntarily exchange sex for financial or material goods such as housing, food, or clothing in order to survive.

Factors that Influence Transmission of HIV

Sexual Behaviors and Practices: Unprotected sex, lack of knowledge of partners' serostatus, multiple partners are also concerns for HIV transmission in Botswana.(Jack et al., 1999); Masupu, 2002) explained that age-at-first sex was lower for women (17.5 years) than for men (19.2 years) in Botswana. These young women were likely to drop out of school and be economically dependent on men. The age difference becomes a barrier to safer sex communication between partners, and the risk of infection from the sexually experienced men to the young woman (intergenerational sex). McDonald (1996), Jack et.al, (1999), and Chilisa, Bennell and Hyde (2001) indicated that Botswana culture seems to endorse intergenerational sex. McDonald (1996) also found that older men, who were most likely more economically empowered, were encouraged to marry younger women, increasing the vulnerability of women to domination and abuse by the men, and possible coercion or forced unprotected sex.

In her study, Ntseane (2004) also identified sexual practices that could increase the risk of HIV transmission for women in Botswana. Among these is the cultural belief that sex with young girls (presumably disease free and safer) cleanses men's reproductive systems and protects the men from STIs. In the HIV/AIDS era, this cultural practice could encourage sex with multiple partners (Ntseane, 2004). Another belief is that at certain time a person's blood is hot (i.e. semen or vaginal discharge) and until they have cooled down both are in a condition to be harmful to others. For example, a woman is hot during menstrual periods and after an abortion, widows and widowers are hot for a year during their bereavement, a traditional doctor is hot for three days after one of his patient dies. Hotness resulting from sexual behavior itself is believed to indicate that if the person affected indulges in intercourse before cooling down, his partner will be stricken with disease and may die. This implies that having sex with a person at a time when she/he is not hot is safe, and this may increase the risk for unprotected sex.

Traditional treatment and healing practices for people with diseases were identified as important social functions of sex described by the different ethnic groups. In addition drinking herbs such as purgatives, grapple plant, etc. for cleansing the blood, may interfere with the effectiveness of antiretroviral drugs or other treatment for STIs, thus perpetuating transmission. The sexual practice of playful sex among blood cousin or uncles to strengthen social relationships in some ethnic Tswana groups is an additional risk factor. This is supposed to provide a safe place for the necessary sexual experience required for a good marriage. Safer sex communication in such instances may not be initiated, or may not be taken seriously, and the consequences are grim for women.

Individual sexual practices for women and their partners increase HIV infection risk in many places worldwide. For example, Morrokoff et al., (1997) suggested that African-American women in the US were more likely to have unprotected sex with male partners, whose serostatuses may not be known to the women, and who may have multiple partners, be bisexual or injection drug users.

Substance Abuse: Molamu (1996) states that alcohol use in Botswana could be blamed for perpetuating the controlling behavior of men, gender power disparity and violence against women. This could also lead to loss of control over sexual decisions and inability to access, assert for, and use protection when under the influence of alcohol.

Weiser, et al., (2006) conducted a cross-sectional, population-based study of 1,268 adults from five districts in Botswana using a stratified two-stage probability sample design. Multivariate logistic regression was used to assess correlates of heavy alcohol consumption (more than 14 drinks per week for women, and more than 21 drinks per week for men) as a dependent variable. Weiser, et al., (2006) also assessed gender-specific associations between alcohol use as a primary independent variable (categorized as none, moderate, problem and heavy drinking) and several risky sex outcomes including: (a) having unprotected sex with a non-monogamous partner; (b) having multiple sexual partners; and (c) paying for or selling sex in exchange for money or other resources. Criteria for heavy drinking were met by 31percent of men and 17 percent of women. Adjusted correlates of heavy alcohol use included male gender, intergenerational relationships (age gap ≥ 10 years), higher education, and living with a sexual partner.

Among men, heavy alcohol use was associated with higher odds of all risky sex outcomes examined, including unprotected sex (AOR = 3.48; 95 percent confidence interval [CI], 1.65 to 7.32), multiple partners (AOR = 3.08; 95percent CI, 1.95 to 4.87), and paying for sex (AOR = 3.65; 95% CI, 2.58 to 12.37). Similarly, among women, heavy alcohol consumption was associated with higher odds of unprotected sex (AOR = 3.28; 95 percent CI, 1.71 to 6.28), multiple partners (AOR = 3.05; 95 percent CI, 1.83 to 5.07), and selling sex (AOR = 8.50; 95 percent CI, 3.41 to 21.18). A dose-response relationship was seen between alcohol use and risky sexual behaviors, with moderate drinkers at lower risk than problem and heavy drinkers (Weiser, et al., 2006). In the US, casual and chronic substance users were more likely to engage in unprotected sex, share needles, especially when under the influence of drugs and alcohol, less likely to access health care (Leigh & Stall, 1993) and less likely to take their antiretroviral medicines exactly as prescribed (Sharpe, Lee, Nakashima, Elam-Evans, & Fleming, 2004).

Biological Factors: Male-to-female transmission of HIV is 2-5 times more efficient than female-to-male, and women are likely to be infected with the virus because of a larger surface area than the male genitalia (UNIFEM, 2005). Also the amount of virus in semen is more than in vaginal secretions, semen may remain longer in the female genital tract than does in the male, and women are more likely than males to have hidden and untreated STIs, which promotes efficiency of HIV transmission in women more than in men (Kaiser Family Foundation, 2003). Once they are infected with HIV, women are predisposed to shorter incubation periods and shorter survival periods (Quinn & Overbaugh, 2005).

A relationship has been established between STIs and HIV transmission, which present the third most common cause of attendance at public health facilities, and which may be the major determinant of the HIV epidemic in Botswana (National AIDS Coordinating Agency ([NACA], 2002). The prevalence of STIs in the country appears to be declining among women using family planning methods for the years 1993, 1997, and 2002. Certain factors have been identified to influence the inability to accurately estimate STIs in the country, including the asymptomatic nature of STIs among women, and the fact that some people with symptomatic STIs do not seek treatment from public health facilities or seek treatment at all (NACA, 2002).

STIs expose women to HIV because of inflammatory increase in the number of target cells for the virus and ulceration which provides a medium of direct viral entry virus during sex. Non-ulcerative STIs in women may go unrecognized, but may still influence the transmission of HIV. Sexually transmitted infections prevalent in Botswana include genital warts, herpes simplex type 2, gonorrhea, and syphilis, Trichomonas Vaginalis, and Chlamydia Trachomatis.

Male Circumcision: The National Institute of Allergy and Infectious Diseases (NIAID) and the National Institute of Health (NIH) supported two clinical trials in Rakai, Uganda and Kisumu, Kenya in 2006. The purpose of these trials was to determine whether male circumcision could be administered safely and its effectiveness in reducing the risk of HIV infection among adult men. Among the adult men enrolled in the trials, male circumcision reduced the risk of HIV infection by 48% in Uganda and by 53% in Kenya. The conclusion was that male circumcision performed in a medical environment could complement other HIV prevention strategies and lessen the burden of HIV/AIDS in those countries. These clinical trials were halted on December 12, 2006 based on the reviewers' recommendations regarding evidence of effectiveness of the intervention. Another Southern African randomized clinical trial was conducted by the French and South African researchers in 2005 funded by the French Agence Nationale de Researches sur Sida (ANRS). The purpose of the trial was to assess the protective value of male circumcision against HIV infection. The results showed that out of over 3, 000 HIV negative men, circumcision reduced the risk of acquiring HIV infection by 60%, further supporting evidence of the usefulness of male circumcision in HIV prevention. Batswana couples could benefit from this practice, and they should be encouraged to consider it during safer sex discussions.

Although the prevalence of male circumcision is about 60% in Africa, it is not common practice in Botswana. According to Langeni (2005), a majority of men in Botswana are not circumcised (84% in rural areas and 83% in urban areas). In both urban and rural areas, men who are not circumcised have a higher proportion of self-reported urethral discharge or genital ulcers (4.1% compared with only 1.9% in rural areas, and 3.6% compared with 3.1% in urban areas). Shapiro et al., (2002) and the USAID Issues Brief August 2003) suggested that Batswana men were receptive to male circumcision. Between 68% and 89% of the male and female respondents expressed interest in having their sons circumcised, but did not reflect interest for themselves. This information is critical for the development of programs to encourage discussion male circumcision between partners in the context of HIV prevention.

Socio- cultural Practices

Vaginal Health Practices: Dry Sex and Vaginal Cleansing: Vaginal hygiene practices involve the insertion or external use of a substance or material to affect sexual pleasure or satisfaction, hygiene, fertility, or reproductive health (Brown & Brown 2000). Societal or personal perceptions of vaginal lubrication, discharge, or menstrual blood as "dirty" or "unclean" might compel women to engage in practices to alter or remove vaginal fluids prior to sex in order to demonstrate good personal hygiene and adherence to socio-cultural norms that expect them to heighten pleasure for men (Vermund et al., 2001; Ray et al., 1996; Pitts et al., 1994).

Braunstein, and van de Wijgert, (2003) assert that such practices are one mechanism through which dominant socio-cultural and sexual ideals relating to gender, sexuality, the body, and notions of health and illness are reinforced. These practices include wiping the vagina or inserting substances into the vagina to dry it by removing vaginal fluids; inserting herbal or nonherbal preparations to constrict or tighten the vaginal walls; or inserting commercial or noncommercial substances to douche or cleanse the vagina and genital area. Substances used may include stones, leaves, herbs, powders, water with or without soap, dry cloth, pharmaceutical products (such as antiseptic liquid soaps and commercial douches), and tissue or toilet paper (Braunstein, & van de Wijgert, 2003). Women in South Africa cited numerous reasons for engaging in vaginal practices (van de Wijgert et al., 2001; Brown & Brown 2000; Beksinska et al., 1999; Pitts et al., 1994). Generally, they believed that such practices promote cleanliness, fertility, and good health, and enhance their male partner's sexual arousal and pleasure.

Mookodi, Ntshebe, and Taylor (2004) explained that sexual relations in subequatorial Africa are male-dominated, with the male initiating coitus and dictating its style and pace. These male-oriented cultural values underlie what is appropriately termed "dry sex," a common practice throughout sub-Saharan Africa. The "dry sex" mating behavior fits comfortably with the male distaste for vaginal secretions and foreplay, and disinterest in female sexual arousal and orgasm. "Dry sex" is a well-established and widespread practice in various subequatorial African cultures. It is very common in Southern Africa, particularly in Zimbabwe, Zambia, Malawi, some parts of Nigeria, some parts of Uganda, Southern Sudan, and even in Kenya and Botswana. The inevitable results of "dry sex" are increased friction, vaginal lacerations, suppression of the vagina's natural bacteria, and torn condoms (when these are used). All these consequences increase a woman's risk of STIs and HIV infection. (Gausset, 2001 & O'Reilly, 2006).

The Culture of Silencing

The cultural expectation of women's behavior in relationships with men affects women's vulnerability to HIV/AIDS (Wingood & DiClemente, 2000). The culture of silence as a virtue for good womanhood (Caravaro, 1992) may prevent women from getting preventive education and negotiate for safer sex. The expectation that men should be more knowledgeable in sexual matters than women may have similar consequences (Guptu, 2000). McDonald (1996) explains that young women in Botswana felt they were at risk of HIV because they were expected to provide sexual satisfaction for their partners. Greig and Koopman also found a negative correlation between negotiating power and subscription to cultural norms, meaning that women who had greater negotiation power were less likely to subscribe to cultural norms. Rural women however

may be less economically empowered, and be more likely to adhere to cultural norms and less able to have negotiating power than urban women, but this has not been explored in Botswana.

Some Strategies to Combat the Epidemic in Botswana

Many strategies have been instituted to control the HIV epidemic. While in the developed countries educational interventions and antiretroviral therapy have been successful in reducing the epidemic, the economic situations are different in many developing countries whose economies may not permit the full range of medical interventions. These countries, Botswana included, have largely adopted the ABC strategy ("Abstain, be faithful and condomize"), as part of their overall national HIV control strategy. The strategy requires the prevention of HIV through abstinence (periodic or absolute) from sexual intercourse, monogamous relationships, and consistent and correct use of condoms. These strategies make HIV transmission an interpersonal matter requiring partners to talk about transmission prevention issues and how to protect each other. The communication, however, poses difficulties because it encroaches into the sensitivities of people's personal and private lives that are difficult to penetrate, because of the complex psychological and socio-demographic influences on women's difficulty negotiating safer sex with their intimate partners. More research is needed to quantify and address different aspects of HPSC to determine priorities, focus areas and direct specific interventions for women.

The Role of HPSC

Although antiretroviral therapy (ART) has been effective in reducing the impact of HIV in families, the risk of new infections may still be a problem as people get healthier and resume their sexual activity. Many people who benefit from ART effectiveness are often reported to have changed perceptions about their ability to transmit the virus to others (Holstad, Dilorio, & Magowe 2006). Prevention of new infections using risk reduction behaviors should therefore be considered an integral part of the overall HIV prevention strategy. Partner communication and negotiation is a more effective strategy to enhance sexual risk reduction (Buysse, 1999; DiClemente, 1991; Catania et al, 1992; Malow et al., 1993; Catania et al., 1994; Rickman et al., 1994 and Sheahan et. al, 1994). HPSC between intimate sexual partners is associated with lower HIV risk behavior and can enhance the effectiveness of other preventive strategies and the avoidance of unprotected sex (DiClemente, 1991; Catania et al., 1992; Malow et al., 1993; Richman et al., 1994 Catania et al., 1994; Sheahan et al., 1994; DiIorio, Dudley, Lehr & Soet, 2000; Wingood & DiClemente 1998; Quina, et al., 2000).

Tassaw (2005) explains that, "Risk communication includes all messages and interactions that bear on risk decisions." Furthermore, risk communication is an interactive process of the exchange of information and opinions among individuals, groups, and institutions, and that perception of risk communication can vary from person to person, despite constancy of the message. Communication can be broadened to include discussions about the risk of HIV and STIs, disclosure of HIV statuses and sexual histories such as multiple partners, the use of alcohol before sex, request of information about high risk behaviors (such as anal sex), and talks about use of protection such as use of condoms (Quinna, 2000). Communication allows partners to gather sexual histories, assert their rights for protection, and negotiate for safer sex (Quinna, 2000).

HPSC depends on the willingness to introduce prevention content in intimate sexual discussions, so that negotiations can be pursued for the use of sexual risk reduction strategies. EngenderHealth (2005) explains that negotiation is a process in which two or more people with different perspectives or interests interact in order to arrive at a common goal or course of action. This usually entails a compromise on the part of one or both partners. For example, the use of condoms requires that a woman discuss the possibility with the partner when and how they must be used as well as the advantages of using them. Maintaining a monogamous relationship may also require an expression of commitment and honesty about past and present relationships. Abstinence may be required when one partner has a genital health problem or infections, or while on treatment for these. Partners who are HIV sero-discordant need to mutually agree on the ways to protect each other from infection, and those who are both sero-positive need to prevent sharing

of different strains of the virus, or mutant forms that may be resistant to treatment. However, communication of a sexual nature is not always easy, and partners, especially women, may find it particularly difficult to initiate and maintain such discussions. Some of the barriers that can stand in the way include culture, gender inequalities and role expectations (Soler, Quadagno, Sly, Riehman, Eberstein, & Harrison, 2000), which may prevent women from opening up and participating even when their partners initiate the discussions, as discussed in previous sections.

According to EngenderHealth (2005), sexual risk reduction refers to those practices or strategies commonly referred to as safer sex strategies/practices that enable people to reduce their sexual health risks and to lower the likelihood of infection with HIV and other STIs. Generally, safer-sex practices prevent the exchange of body fluids, such as semen, blood, and vaginal secretions, and can also include other practices such as use of condoms, avoidance of sex with a person of unknown HIV status or unknown sexual history. Wingood, Hunter-Gamble and DiClemente (1993) suggest that safer sex is not merely a question of proper condom use but rather involves many issues of trust, sexual negotiation, power, and sexual self-efficacy and gender roles. HPSC is expected to have a positive influence on the decision to use these sexual risk reduction strategies (Kelly & Kalichman, 1995; DiClemente, 1991; Catania et al., 1992; Malow et al., 1993; Catania et al., 1994; Richman et al, 1994 & Sheahan et. al., 1994) and sexual decision-making in intimate relationships (DiIorio, Dudley, Lehr & Soet, 2000).

Research on HPSC in Africa

The United Nations Development Program Development (UNDP) Report for Botswana (2000) indicates that in many communities in Africa, girls face higher risks of infection. In Ndola, Zambia, females age 14 were four times more likely to test HIV-positive than males of the same age. In the Kisumu district of Kenya, boys were HIV negative at age 16 whereas the HIV prevalence rate for 15-year-old girls was 8.3%, rising to 17.9% amongst 16 year olds. At 17 years of age, 29.4% of the Kisumu girls tested were HIV positive compared to only 2.2% of the boys. These patterns of HIV prevalence suggest strongly that HIV is being transmitted from older males

to young females, who in turn might infect boys of their age. Behavioral surveys from Tanzania and Zambia confirm that young girls are regularly having sex with older men. Therefore, HIV transmission for young women in Southern African is largely attributable to inter-generational sex, posing difficulties for women to assert themselves for safer sex.

Hadden (1997) suggests that South African women do not initiate discussions about safer sex or tell their partners to use condoms because it is culturally inappropriate, and it brings their own sexual behavior into question. Harrison, Lurie and Wilkinson (1997) conducted an ethnographic study in the Hlabisa district of northern KwaZulu/Natal in South African where HIV prevalence is 26%, twice the national average. This study was designed to explore constraints in communication among partners and to define predominant patterns of sexual networking. Key informants were identified from among women aged 19-27 and men aged 23-30 years who were seeking care for STIs in the outpatient department of Hlabisa district hospital. A research nurse conducted interviews about various aspects of the illness. A series of fifteen openended interview questions explored topics related to sexual networking and partner communication, focusing on the process and methods of partner notification and possible facilitating factors and constraints.

Patterns of sexual networking showed clear gender variations, with men more likely to discuss multiple partners. Both men and women claim that they tell one partner about their STIs, most often the steady partner. Sexual networks were evident and highly unstable for both men and women regardless of marital status, with women failing to acknowledge these networks. Strong distinctions were made between steady and casual partners, with emphasis on the role of trust in a relationship. Both men and women expressed anxiety in telling their partner about their HIV positive status, despite prior preparation for disclosure. Women were more likely to express fear while men were more likely to express embarrassment concerning communication about HIV/AIDS. The outpatient clinic card facilitated partner notification (patients are given an outpatient card that has information about their health visit, diagnosis and treatment), and

communication was easier when the partner was well known and trusted, and when the clinic card was used.

Simbayi, Strebel, Cloete, Henda, Mqeketo and Kalichman (2006), conducted anonymous surveys completed by 413 HIV positive men and 641 HIV positive women conveniently sampled from HIV/AIDS service providers in South Africa. Among these, 73% were younger than 35 years old; 70% were African; 70% were unemployed, and 75% were unmarried; 49% had been hospitalized for HIV-related conditions and 50% were taking antiretroviral (ART) therapies. These researchers found that 85% of participants were currently sexually active, and 42% of these indicated that they had sex in the previous 3-months with a person to whom they had not disclosed their HIV status. Participants who had not disclosed to all of their sex partners were significantly more likely to have multiple sex partners, HIV negative partners, partners of unknown HIV status, and unprotected intercourse with discordant sex partners. Disclosing HIV status to partners was also independently associated with the loss of a job or a place to stay. The study clearly shows continued indulgence in unsafe sex exposing sex partners to risks without giving them appropriate information, and how stigma could affect disclosure.

Babalola, Awasum, and Quenum-Renaud (2002) conducted a survey to identify the factors affecting primary sexual abstinence and condom use among Rwandans. The findings showed that urban residence and a younger age negatively influenced primary sexual abstinence and positively affected condom use. The ideational factors that are significant for primary sexual abstinence (before the first sexual encounter) were perceptions about the sexual behaviors of peers, perceived self-efficacy to refuse sex with someone truly loved and known for more than three months, self-esteem and attitudes toward premarital sex. As for condom use, the ideational variables with significant independent effects on behavior were: discussion of HIV/AIDS with sexual partner, and to a lesser extent, the perceived self-efficacy to use condoms, and discussion of condom use with the sex partner. The study indicated the difficulties with HPSC among young people. The implications of this study are that subjective norm, especially a partner, and the

length and quality of a relationship are important influences on safer sex communication and behaviors, which are factors of interest in the proposed study.

Wolff B, Blanc, and Gage, (2002) stated that in Uganda when couples communicated with each other about whether or not to stop childbearing, they did so in indirect and ultimately ineffective ways. Examples of indirect communication were overheard conversations, suggestive remarks, information gathered from a third party, or nonverbal channels. This resulted in both men and women overestimating each other's desire for additional children. Usually, women were more likely than men to want to stop talking about reproductive health issues because, if a discussion did not go well, they were more likely to pay the price of being abused or shouted at. This has implications on the power differentials between men and women in relationships, which affects the ability to engage in HPSC.

Factors that Influence HPSC

Socio-demographics

Income, Education and Age Differences: Women in less stable life circumstances have diminished ability to assert themselves and to insist on sexual risk reduction strategies. Lawrence, Eldridge, Reitman, Little, Shelby and Brasfield (1998) indicated that in the US, women who were poor and likely to be on Medicaid and women with low education, unemployed or employed in part-time jobs, with low family income, were less likely to be assertive. In addition, women in unstable and temporary or rapidly changing relationships and with more responsibilities for the care of children and family members were less likely to assert their need for protection in sexual relationships. In addition, women who were younger than their partners were exposed to power differentials and had less control in sexual decisions than their partners (Wingood & Di Clemente, 2000, McDonald, Bennell & Hyde 2001). These women were therefore less likely to assert their need for sexual protection. Botswana data on HIV and AIDS suggests that girls are more susceptible to HIV infection than boys are. For every HIV-positive boy under the age of 14, there are two HIV positive girls of the same age. The ratio then rises to 1:3 in the group aged 15-

29 years before converging towards 1:1 in older age groups. This data suggests the occurrence of power differentials between young men and women.

Marital Status: Researchers have found that the initiation of safer sex negotiation within heterosexual relationships is more difficult when a relationship is already established or when the partners are from social cultures where women are disempowered (Wingood, 1993). According to Ball, Cowan and Cowan, (1995), previous research on marital communication in the US indicated that women have more influence in marital problem solving because they raise issues and shape discussions, but that men have the power in marital problem solving. In their study to examine power and influence from the partner's perspective, these authors found that husbands and wives were perceived as having a primary influence on different aspects of the discussion. Women tended to raise the issues and draw men's attention in the early phase of the discussion, while men controlled the content and emotional depth of the later discussion phases and largely determined the outcome. The generation gap between partners in Botswana exacerbates the situation, with exploitation of younger women's vulnerability and naivete by adult males (UNDP, Botswana Human Development Report, 2000).

Length of Relationship: Morokoff, Harlow, and Quinna, (1995), suggested that most committed heterosexual and homosexual couples settle into a relationship without condoms and that women are less likely to use condoms with a longer-term or steady partner, regardless of the risk level of that partner (St. Lawrence et al., 1998; Wingood & DiClemente, 1998). Women in committed relationships in the US are less able to use protection for fear of losing the relationship due to low perceptions of risk (Pinkerton & Abramson, 1993; Sobo, 1993). This may also be the case in Botswana, but it has not been studied.

The length of a relationship may influence safer sex communication either negatively or positively depending on emotional growth and attachment over time and the openness of communication. There may be greater communication and trust. On the other hand, there may be less communication because of fear. Kalichman (2001) also suggested that self-efficacy for

disclosure of HIV status is likely to be influenced by changes in relationships and experience over time. Presumably, as the relationship becomes longer and stronger people tend to develop trust and consequently feel at less risk of infection from one another, and less likelihood of consideration for safer sex. Hobfall et al., 1993 found that fewer than 10% of African-American women in monogamous serial relationships used condoms consistently, and 35% had never discussed AIDS prevention with their partners. According to Lansky, Thomas, and Earp (1998), American women were more likely to engage in risky behavior with steady partners than with casual partners, and both men and women were more likely to use drugs with steady than with casual partners.

Use of Tactics to Initiate and Sustain HPSC: Because of the sensitive nature of sexuality discussions, negotiating safer sex can be difficult for partners, and it requires knowledge about influence strategies and negotiation skills. De Bro et al., (1994) examined strategies for influencing a new sexual partner to use a condom, in a sample of 393 heterosexual college students in the US. These researchers arrived at six influence strategies, namely; reward, emotional coercion, risk information, deception, seduction, and withholding sex. Noar, Morrokoff and Harlow (2002) also suggested that relationship conceptualization, autocracy, and direct request could be used to get their partners to use condoms. It is necessary to explore tactics that young Batswana women are likely to use to facilitate communication for sexual protection.

Perceived Main Partner's Influence: The sexual partner has influence on the direction of discussions on reproductive health risks such as pregnancy and STIs, and negotiating sex and use of contraceptive such as condom use with sexual partners (Kirby, 2001). In the United States, programs that emphasized specific skills, such as partner communication or negotiation, tended to be more effective than programs that stressed general knowledge (Kirby, 2001). Although such skills are receiving increasing attention in sexuality education, relatively few studies have documented the impact of partner communication on sexual behaviors. In the United States, researchers have found that women's health depends on their ability to negotiate sex with their partners, but the negotiation may encounter barriers, such as gender and cultural norms and role expectations (Soler, Quadagno, Sly, Riehman, Eberstein & Harrison, 2000). Women in particular, due to gender inequalities and lack of power within sexual relationships, may find it difficult, if not impossible, to negotiate safer sex with their partners and to reach a goal of using sexual risk reduction strategies. Partners may equate a request for safer sex with an indication of unfaithfulness and may react negatively, even violently, or may react by withdrawing financial support or terminating the relationship (Wingood & Di Clemente, 2000). An important dimension of this construct is the outcome, which is the receiver's (partner's) reaction or response to what is being communicated. The positive outcomes could be gaining compliance with the partner to adhere to the targeted behavior (e.g. condom use, talking about HIV antibody test results), where as negative outcomes can range from the more subtle behavior such as ignoring the sender, to more serious ones such as ostracism, anger, and/or violence.

Partner's Risk and HIV Status: Having a partner with a risk factor such as being HIV positive greatly increases a woman's chance of being infected (Morokoff et al., 1995). Knowing about a risk factor should alert the woman to the increased need to protect herself and encourage her to communicate about sexual risk reduction strategies (Quinna et al., 2000). However, women who have sex with risky partners may in fact be less assertive than other women may (Morokoff et al., 1997). In addition, women with high-risk partners are also at risk in other ways, from poverty, lack of education, partner violence, and lack of power in the relationship (Whitmire, Harlow, Quina, &Morokoff, 1998; Wingood & DiClemente, 1997). Uncertainty surrounding the sex partner's risk behavior was the second most common reason why African-American women worried about getting HIV (Cummings, Battle, Barker, & Krasnovsky 1999). Given that the partner's HIV status influences a woman's decision and ability to communicate with her partner, more research is needed to understand this from Batswana women's perspectives.

Perceived Behavioral Control or Self-efficacy for HPSC: Difficulties with HPSC can affect the woman's ability to initiate, be persistent and effective in communicating the sensitive sexual content. Rickert, Sanghvi and Wiemann (2002) claimed that if a woman does not believe that she has the right to assert her desire for effective protection, she increases her risk of pregnancy and STIs, regardless of whether she experiences any overt sexual coercion. O'Leary, Goodhart, Jemmott, and Boccher Lettimore (1992), found that higher self-efficacy for discussing sexual history with a partner was related to the number of risky encounters in the last sixty days among college students. Self-efficacy for HPSC has not been adequately explored in Botswana, where cultural domination of men in relationships is concerning.

SUMMARY OF CHAPTER 2

Background information on Botswana was presented to help articulate the context of women's HPSC issues. The country profile demonstrated a socio-economically progressive country that was confronted with ongoing challenges such as gender disparities that make women vulnerable to HIV. The epidemiology of HIV among women in Botswana was presented, ranking Botswana among the highest worldwide. Factors that fuel the epidemic for young women in Botswana were identified. These included heterosexual transmission; sexual behaviors and practices; traditional treatment and healing; alcohol abuse; biological factors; low rate of male circumcision; vaginal cleansing and dry sex practices; and the culture of silencing. Some strategies adopted in Botswana to prevent and control the epidemic were identified, including the ABC strategy. Gaps were identified in relation to the effectiveness of these strategies. Factors that influence HPSC at an interpersonal were discussed in the context of the TPB; to guide the instrument development process. The role of HPSC and Research in Africa on HPSC was explored to determine the focus, goals, methods, populations and outcomes of studies. Studies echoed the risks associated with heterosexual transmission of HIV and difficulties with HPSC among partners. The lack of valid and reliable instruments for measuring HPSC in Botswana and other parts of Africa was identified, and justifies the need and significance for this study.

CHAPTER 3

RESEARCH DESIGN AND METHODS

Introduction

In this chapter, the research design and methods for the instrument development study are presented. The subsections include the study design, instrument development process, setting, population, sampling, and recruitment procedures, measurers, data collection, data management, human subjects' protection, data analysis, reliability and validity testing, and limitations.

Research Design

This instrument development study consisted of a triangulation of a cross-sectional multistage, multi-method program of research that used qualitative and quantitative designs in six phases. Phase 1 entailed a cross-sectional qualitative pilot study that was conducted in June to July 2006 in Gaborone, Botswana, among young women aged 18 to 35 years, to elicit women's beliefs and perceptions about HPSC. Phase 2 entailed instruments item development. Phase 3 consisted of expert evaluation for content validity. Phase 4 entailed instruments translation and back translation. Phase 5 consisted of a cross-sectional quantitative pilot test of the developed instruments for readability, acceptability and administrative feasibility. Phase 6 consisted of a cross-sectional quantitative study to conduct internal consistency reliability and construct validity testing of the developed instruments. The phases are presented below.

Phase 1: A Qualitative Pilot Study

This study was conducted among young women residing in Gaborone, Botswana. The purpose of the study was to explore women's perceptions and beliefs about health protective sexual communication (HPSC) for the prevention of HIV/AIDS, thus meeting aim 1 and 2 presented on page 3 and 4 of this report. The results were used to derive themes and sub-themes that could generate items for development of quantitative measures that are culturally sensitive and relevant to young Botswana women to measure constructs related to HPSC.

The specific aims of the study were to:

- 1. Describe the beliefs of young women in Gaborone, Botswana, about HPSC.
- 2. Describe the perceptions of young women in Gaborone, Botswana, about HPSC.

Design

This was a cross sectional qualitative phenomenological study using individual interviews and focus group discussions based on the Theory of Planned Behavior (TPB) framework.

Setting

The study was conducted in maternal and child health clinics in Gaborone, Botswana. These clinics were within less than 2 kilometers walking distances from any household. The women received family planning, gynecological and other outpatient services such as general health consultation, treatment (injections and dressings), prenatal care, delivery, and postpartum follow-up at six weeks post delivery and under-five child welfare services. The services from these clinics were provided free within the universal health care system that was financially supported by Botswana government. The provision of free services promotes high service utilization, and women were easily accessible at these facilities to participate in the study.

Population

The study sample consisted of 42 sexually active women aged 18-35 years who attended maternal and child health services at Gaborone city clinics. Women in this age group were most at risk for HIV (Masupu et al., 2002). Purposive sampling using maximum variation was used for selecting the samples for both the individual interviews and the focus groups. This technique is used in qualitative research to select participants based on specified characteristics on the eligibility criteria below.

Eligibility Criteria

Participants were aged 18 to 35 years, having sexual partners, able to read and write in Setswana (the vernacular) and attended maternal and child health services at one of two clinics, one in the north and one in southern Gaborone. *Ineligibility Criteria:* Women were excluded from participation in the study if they had apparent debilitating illness, self-reported cognitive impairment or if they did not meet the age requirements noted above.

Human Subjects Protection

Approval for the qualitative pilot study was first obtained from the Emory University Institutional Review Board (IRB) in Atlanta. Approval was also obtained from the Health Ministry Research Committee, which constitutes the IRB for health research in Botswana, from the Gaborone City Council head office, and from the local clinic authorities. Individual women provided written consent. (See Appendix A).

Participant Recruitment

Meetings were held with the health authorities, and providers at the clinics to share the study goals, objectives/aims, benefits, eligibility criteria, procedures for the study, the target population, and, solicitation of assistance in referring women to the recruiter (the investigator). Health talks were held at each clinic, and participant recruitments flyers were posted at the clinic notice boards to introduce the study to potential participants. The participants recruitment flyers (Appendix B) and health talks (see lesson plan in Appendix B) focused on information related to the study purpose and objectives, benefits of the study and potential participants, and contact details of the recruiter for further information on the study.

The nurse supervisor at each clinic allocated working space for all meetings and for data collection (screening, consent signing and to conduct individual interviews and focus group meetings). Office space with a locked cabinet for data storage was obtained at the University of Botswana.

Data Collection Procedures

Women who were either referred by the providers or self-referred were given more details about the study and requested to choose to participate in either individual interviews or focus groups. The women who agreed had a consent form read to them and they were asked to initial each page and append their signature on the last page. Women who elected individual indepth interviews agreed to be interviewed on contact. The Principal Investigator conducted all interviews. Appointments were made for the three focus groups meetings for eligible individuals. Specific dates and times suitable for the group members were identified and focus group sessions were held at the two clinics on scheduled dates through the assistance of a trained research assistant. All interviews were audiotaped and transcribed verbatim to text. Field notes were taken to facilitate analysis.

Measures

Demographic Questionnaire: Before interviews were started, each participating woman was asked to complete a 10 to 15-minute demographic questionnaire consisting of their age in years, if they had a sexual partner, educational level, average annual income, marital status, the length of their relationship, whether they had an HIV test and their HIV status. The woman was also asked the same information about her partner.

Face-to-face Individual In-depth Interviews: The purpose of the individual interviews was to elicit information on the perceptions of women about HPSC, beliefs about advantages and disadvantages of HPSC, about significant people in their lives who have influence in their ability to engage in HPSC, their partner's influence on HPSC, their self-efficacy for HPSC, the content they were likely to include during communication with their partner, and the tactics they were likely to use to get their partner's compliance for discussions about HPSC. The Theory of Planned Behavior (TPB)-based researcher developed interview guide consisted of key research questions, which were translated into Setswana. Interviews were conducted in a secluded office that provided adequate privacy for women, taking about 45 minutes to complete per person.

Focus Group Interviews: The purpose of focus group interviews was to obtain additional information that may have been missed during individual face-to-face interviews by providing a forum for women to discuss the sensitive material through examining scenario vignettes and responding to related open-ended questions based on the scenarios. The interview/discussion

guide consisted of scripted scenarios based on real life experiences of women in Botswana known to the investigator, and inspired by the work of Kalichman and colleagues (2001). Scenarios have the advantage of providing a forum for arousing and opening people's minds, new emotions and thoughts about long-held internal beliefs, and they tend to be protective of the privacy of the individual especially in focus groups (Mietzner & Reger, 2004). The approach, therefore, maximized exploration of the many aspects of the problem while it protected the privacy of each woman by presenting information in a hypothetical manner. Focus groups sessions were 2 to 3 hours each. The investigator and a trained focus group assistant moderator directed the sessions by administering an interview/discussion guide in Setswana, probing for further information, clarifying responses, and keeping the group on track.

Data Analysis

The data analysis was conducted based on the qualitative description method. This method entails a straightforward description of phenomena, in which the descriptions always rely on the perceptions, inclinations and sensitivities of the describer (Sandelowski, 2000). The method was suitable for this study, which seeks to describe Botswana women's perception about health protective sexual communication from their own perspectives. A line-by-line analysis of the verbatim transcripts was conducted to determine emerging themes and sub-themes. Data analysis was conducted concurrently with data collection to constantly compare responses and confirm emerging themes continuously. The resultant themes presented in Table 3 below were used to develop items for instruments for a further quantitative study on these concepts.

Results

A total of 42 women participated in the study, 20 in individual interviews and 22 in three focus groups of eight, seven and seven. Respondents' mean age was 25 years. Their mean income was P800.00, equivalent to \$133.00 per month. The mean educational level was grade 8. Only two were married, 37 had children and the mean number of children was two. The mean age difference between women and their partners was five years with the men being older, and the

mean difference in educational level was two grades (more men had higher education, although a few women had more education than their partners did). Two of the women were HIV positive and among these, one had a sero-discordant partner. One woman was HIV negative, but her partner was HIV positive. All the women were in committed heterosexual relationships regardless of the partner's or their own HIV status. The emerging themes were similar in both individual interviews and focus groups with just a few differences in responses within the themes discussed under relevant themes. Table 3 below presents the themes.

Emerging Themes

Table 3, Summary of Emerging Themes from the Qualitative Pilot Study

Major Theme	Sub theme	Theme Content
HPSC. Mai with	a) Initiating and Maintaining Discussions with Male Sexual Partner.	1. Introducing safer sex topics to partner or letting partner start discussions:
		2. Being free to talk openly and asking partner about sexual matters and safer sex, "not being afraid".
		3. Letting partner know their feelings and thoughts about HPSC.
		4. Asking partner for information about sexual history.
		5. Creating an environment that is conducive to facilitate discussions and confidentiality/privacy.
	b) Using different sources of information.	1. Pamphlets from health professionals; bill-boards and public health posters;
	sources of information.	2. Health talks and individual counseling at health facilities.
		3. Open discussions with significant others (partner, friends, co-workers HPSC).
		4. Employment-based education.
	c) Responsibility for Initiating Discussions.	Both men and women, but mostly women initiated safer sex discussions.

Major Theme	Sub theme	Theme Content
2. HPSC Content Discussed (given and received)	Exchanging information with Male Sexual Partner asking questions on matters related to safer sex)	 Protection from STIs and HIV/AIDS, including: Condom use (male and female condom); maintaining a monogamous relationship; abstaining especially when partner was away. Requesting history of STD and HIV; history of previous sexual relationships; past history of sex with prostitutes or with people who had relationships with prostitutes; insisting on HIV testing or test results; discussing ART and related treatment; male circumcision; asking about sexual history; HIV status; risky life styles, use of alcohol before sex; discussing marriage and family planning.
3. Use of Influence Tactics	a) Direct confrontation,	Manipulation, fear, threatening, withholding sex, retreating, persistence, coercion, charm, rejection (i.e. getting out of the relationship), and subtle hinting.
	b) Indirect approach:	Reading about HIV/AIDS, talking about people with HIV/AIDS, asking for assistance from others.
4. Influencing Factors	a) Enabling factors.	1. Partner's personality: easy to talk to, future orientated, understanding, accommodative, loving, respectful and willing to agree with what is asked, "wants to be with me".
		2. Length of relationship: "having been with me for a long time".
		3. Age difference: Same age and so "I can talk to him freely"; older or younger.
		4. Support from significant others: Partner, mother, siblings and friends, nurses.
		5. Prior Knowledge (self and partner): about HIV/AIDS transmission, about availability of ART, about safer sex practices, knowing people living with HIV/AIDS or who died from AIDS.
		6. Participating in prevention programs and community support organizations and programs.

Major Theme	Sub theme	Theme Content
		7. Use of influence tactics to engage partner in HPSC:
		8. Perceived threat of HIV/AIDS (risk of being infected and fear of dying once infected).
	b) Barriers	1. Unresponsive, aggressive partner, suspicion about infidelity, fear of discordant result, health worker attitude, general notion that women were afraid to talk about sexual matters.
		2. Myths about condoms.
5. Beliefs about HPSC	a) Behavioral Beliefs (consequences of HPSC).	1. Significant persons identified as having influence on decisions for HPSC: Including partner, health care providers, mother, siblings, close friends; co-workers.
	m se).	2. Women believe that HPSC is a good thing to do, and can help use of safer sex practices.
	b) Normative Beliefs.	1. Positive consequences: Significant others endorse decision to talk to partner about safer sex. Partner listens and agrees to and engages in HPSC and uses safer sex practices.
		2. Negative consequences: partner ignores discussions, emotional disturbances, and disturbs harmony in the relationships, refuses to use safer sex, and may not want to be told by a woman what to do. (NB. No threats of physical harm mentioned as a result of talking about safer sex).
	c) Control Beliefs	1. Women's capability for HPSC based on the available resources and support.
		2. The general notion about women being afraid to talk to men about sexual matters.

Major Theme	Sub theme	Theme Content
		3. Some myths and knowledge and skill gaps on safer sex practices: knowledge about how insert a condom (avoiding breakages), the usefulness of male circumcision to STD and HIV prevention.
6. Attitudes towards HPSC	a) Advantages (Positive attitudes):	1. Helps protect against pregnancy and STI's including HIV.
towarus III SC	attitudes).	2. Encourages partners to discuss intimate issues that affect their lives.
		3. Draws partners closer together, and helps partners to k now and understand each other.
		4. Prevents Illness.
		5. Promotes health for individuals and the nation at large, thus reducing deaths.
		6. Promotes long living and good health so that people can raise families.
	 b) Disadvantages (Negative attitudes) 1. Dependency on the other person to talk (partner), 2. Partner's negative response (anger, ignores discussion, withdraws assisted as a second se	1. Dependency on the other person to talk (partner),
		2. Partner's negative response (anger, ignores discussion, withdraws assistance, walks away.
7. Perceived Subjective Norm	a) Positive perceptions	Reactions of significant others: mother, sibling, friend, health care provider (usually encouraging, supportive and providing information) or partner (according to partner type and relationship).
	b) Negative perceptions	None cited
10. Perceived	a) High self-efficacy	a) Women feel they have self-efficacy for HPSC and have talked to their male sexual partners.
Self-efficacy for HPSC	b) Low self-efficacy	b) Few women were afraid to introduce HPSC for fear of violence.

Major Theme	Sub theme	Theme Content
11. Intention for HPC	a) High intention for HPSC	a) Promise to commit to and persist with HPSC, and safer sex practices in future; avoidance of unprotected sex; being faithful and monogamous; testing for HIV.
	b) Low intention for HPSC.	b) Women had little intentions to talk about some issues if they had already talked about them such as having sex with people who sell sex for money.
12. Outcome behaviors	Use of safer sex practices	Male condom use, female condom use, abstinence, and maintaining monogamy.

Brief Discussion of Emerging Themes

The names used are not the real names, but are pseudonyms in respect of the women's confidentiality.

Major Theme 1, the Meaning of HPSC

This theme was a response to the question about what health protective sexual communication meant to the women in the study, which did not address any part of the conceptual framework but was used to establish a common meaning of the key construct under discussion. Women gave responses beyond their understanding of HPSC and included what they thought it involves. Four sub-themes emerged under this theme and are discussed below.

Sub Theme 1: Initiating Safer Sex Discussions

Women explained that initiating safer sex discussions included introducing safer sex topics to partners, talking openly and letting partners know their feelings about protection, asking partners about sexual history and talking about ways to prevent STI's and HIV/AIDS. Women said HPSC involved creating a cozy environment and ensuring confidentiality and privacy to enable free discussions, and adopting a positive and accepting attitude towards partners. Mare said "a cozy, relaxed atmosphere, when both of us are in a jolly light mood."

Some women explained that they initiated the discussions, while others said their partners initiated the discussions. For example, Peno, who is HIV positive and discordant with her partner, said that she was very ill on and off when she was expecting her second child, and it was her boyfriend who suggested she get an HIV test and they used a condom while waiting to get the test. Recca said her boyfriend had an STI, and he asked that they both get an HIV test along with the diagnosis and treatment of STI.

Sub Theme 2: Using Different Sources of Information

Women said that they needed to use different sources of information to prepare themselves for talking to their partners. The sources of information included pamphlets from clinics, health talks given by health workers, information received during counseling, open 58
discussions with friends, relatives and co-workers, employment-based HIV/AIDS educational programs, and billboards. Gonta spoke very firmly and said, "Men are a problem. You need to really know what you want to say to him beforehand. I like to listen to my nurses at the clinic; they are really good and they tell you everything, I was also lucky because at work we had a workshop on HIV/AIDS and I really understood how bad this disease is...." Women also said that they needed to be taught more about HIV prevention by the nurses, to be well prepared to approach their partners. Support groups were also stated as a need, to share information and to give each other moral support concerning difficulties encountered with HPSC with partners.

Sub-theme 3: Responsibility for Initiating HPSC

Most women said they initiated discussions every time, few said both them and their partners, and a few others said some men initiated discussions.

Major Theme 2: HPSC Content Discussed (Exchanging Information about Safer Sex with a Partner)

This entailed giving and receiving information about sexual matters including requesting the use of male or female condoms, abstinence, contingent upon some good reason for suspending sex such as when a partner had an STI or was receiving treatment for it), being faithful and maintaining a monogamous relationship.

Koon said, "I told him that since I don't know his background (meaning his past sexual behavior) it is best that we both get an HIV test." Past sexual behaviors such as oral and/or anal sex did not come up. In fact, many women giggled about the strangeness of these when the question was posed. The common response among the women was "Aaaa....!" with facial expression of shyness, and surprise at the thought of engaging in these sexual practices.

Safer sex discussions for women were also deemed to further address other concerns such as future plans like marriage and whether and/or when they would start a family. This would determine whether or not safer sex discussions could even be initiated and whether or not to use protection. For example, Lono said, "it depends on whether I know him well or whether we are going to get married. Then we can decide whether or not we want to prevent pregnancy, when, and how many children we are going to have. If I don't know him that well, I will insist on protection." Although a few women knew something about the protective role of male circumcision against STIs and HIV, none of them said they would include this in their discussions. Some women either did not know anything about it or had heard about it but did not believe it would work well for that purpose. Some of the women said that it should not really be encouraged. Tshaga said "I don't think it works, I think it even opens up chances for infection. What does the skin have to do with AIDS....? Some of these guys will start going around saying 'I've been circumcised and I won't have these diseases', and so I think it is dangerous because they will use it in the wrong way."

Major Theme 3: HPSC Influence Tactics

Women said that influence tactics enabled them to initiate and sustain HPSC including: direct confrontation; subtle hinting of topics; using charm/tenderness or flirting, persistence, manipulation (using fear language about the horrors of living with AIDS), and silence (not talking to him until he complies); withdrawal from sex; coercion; threatening to leave or actually ending the relationship; suggestive action (sneaking condoms in his drawers, pockets or luggage when he travels), with the hope that the partners would ask questions and thus a conversation would start. They also said that they sneaked them just in case they were needed elsewhere or in emergencies. Sera said, "You can't trust anyone, just put it in there he may remember to use it during those bad times. Even when he comes back and you see that one is missing, don't even ask questions because it means he was protecting you...." Others said they would participate in inserting the condom to ensure that it was used properly.

Major Theme 4: HPSC Influencing Factors

Other enabling factors included the perceived threat of HIV and AIDS, which was also said to play a role in assisting women to engage their partners in discussions. Reminding the partner about people they knew who had AIDS, seemed to start a fruitful conversation for some women. The couples were usually motivated by the love for health and long life that could enable them to raise their children together.

Barriers to safer sex communication included men's non-responsiveness, suspicion about infidelity when discussions were initiated; fear of what would happen if he tested positive and the woman tested negative for HIV; and, the general notion that women were afraid to talk about sexual matters. Some myths and knowledge gaps regarding safer sex strategies were identified, such as condom breakages, condoms bringing illness, and the inability to comprehend the usefulness of male circumcision in STI and HIV prevention. These were some of the barriers to effective communication. Health workers attitudes towards patients were also mentioned. For example, Gonie said that the first time she went to request an HIV test with her partner, the nurse had no time for them, and she did not give them enough information. Therefore, her partner stormed out, and when they got home, he did not want to listen because of the embarrassment they experienced. She said this to emphasize the importance of the health workers' attitudes, "Young people need someone who has patience, who can talk to them in a gentle way and make them to feel free and relaxed so that they can ask questions and get clarification. Then they can come back, but if you show that you have no time they run away for good, and trouble comes fast..."

Violence was not mentioned as an actual occurrence by any of the women, although some mentioned a few incidents of aggressive non-physical silencing. However, the threat of violence was perceived by women in the focus groups as source of difficulty for talking to partners about safer sex. A lot of them echoed the phrase "we are afraid of them because we don't want to make them mad, we don't want to be beaten." Although some women in the individual interviews maintained that they talked to their partners freely, some contradictions were noted when they were asked to give their experiences during an incident when they discussed safer sex with their partners. For example, Ompi said that her partner told her that he does not need to be told by a woman how to do his business, and that it was hard for her to approach him again.

Major Theme 5: Beliefs about HPSC

These were the women's conceptions about behavioral beliefs regarding HPSC (consequences of talking), normative beliefs (whom they thought were significant persons in their lives who had influence on HPSC), and control beliefs (whether or not they thought they were capable of communicating with their male sexual partners about safer sex).

Sub Theme 1: Consequences of Engaging the Partner in HPSC

Women talked about positive and negative consequences of communicating with their male sex partners about safer sex. Positive consequences included the fact that their partners would listen to them, participate in discussions and use safer sex practices.

Some negative consequences included the perceptions that partners could ignore the women, refuse to use safer sex practices, be emotional about the fact that such issues were raised and they were being told by women how to carry on their business, questioning the woman's fidelity or querying that their own fidelity was being questioned. Kuka said, "Well, he was kind-of uneasy and he just kept quiet..., he keeps quiet every time, and even walks away. As for going to the clinic, he says it is a waste of his time, and he does not see himself doing that when he is supposed to be working to feed his children. I don't want him to start yelling at me, so I leave him alone and try again another time ..."

Sub Theme 2: Significant Referents in the Relationship

The main significant persons in regard to HPSC unanimously identified by the women were the male sexual partners. Other people such as the mothers, siblings, friends, colleagues/co-workers, were just consulted or informed about the intent to communicate about safer sex with the partner but they were not expected to influence discussions.

Sub Theme 3: Control Beliefs

Women said that they had the capability and had indeed communicated with their partners about safer sex. Women also said they were able to persist with requests for safer sex, used different tactics to introduce discussions, to address the critical issues and to get their partner's responses. Mmale said, "I have no problem talking to him about protection even if he does not listen, I still talk. It is all about my health and I must protect myself and him. I just have to keep on trying, maybe one day he will use it (condom)." Letti said that she uses flirting and tender talk to get her partner to talk.

Major Theme 6: Attitudes toward HPSC

This theme addresses women's perceptions about the advantages and disadvantages of discussing safer sex with a male partner, the nature of influence from significant others, the women's motivation to comply, and their capability for talking with their partners. Five sub-themes that emerged are discussed below.

The advantages of HPSC mentioned were that it encourages the couples to discuss intimate matters, including protection against HIV and STIs, and it draws them together. It helps them to understand each other, and to reach a consensus. As a result, couples can protect each other, to prevent illness and unnecessary deaths, to raise families, to provide financial support for extended members of their families and to contribute to the country's development. Opeo said when she talked to her partner about safer sex he seemed very interested, and they started talking more about things that affect their lives. She said, "It is very important because we plan as a family. We know that if we die it's not just our children who suffer. The old people are expecting us to give them something (money), so if we die, there won't be anyone to do that. Instead we give them the burden to raise our children..." Mmala said, "Who knows I might be an important person holding a very important position, and if I die, the nation has lost, and the government will have to look for my replacement....."

Major Theme 7: Perceived Subjective Norm

The type of influence from significant referents differed. At the individual level, none of the women thought their partner would be violent and he was expected to agree to practice safer sex, to help the woman with treatment adherence if the woman or both were on antiretroviral therapy. However, during group discussions women expressed some possible negative consequences, just opposite of the ones cited above, including fear of violence. The mother, siblings and friends were usually supportive about the decision to discuss safer sex with the partner, or to endorse and applaud them when such discussions had already taken place. Gose said, "When I told my mother, she was very happy that I was able to talk to my man about such things and encouraged me to keep it up. She thought my man is good for me if he can listen to me. My sisters have no problem with it either." None of the women said they talked to a father or brother, but some indicated they shared information with their male and female friends and co-workers. Health care providers, especially nurses were identified as people who could influence HPSC between partners. Some women suggested that nurses could mediate when a partner was difficult, by inviting him to the clinic and teaching him about the need to discuss safer sex with his woman. Family Welfare Educators (a cadre of health care workers with minimum training focus on community health motivation, who conduct community and home visits for this purpose) were also suggested for this role.

Major Theme 8: Perceived Partner's Response

In the focus groups, women discussed the difficulties with encountered men. Some women had difficulty persisting with discussions on the use of safer sex. Rebu said "What can I say? He is the father of my children and I have to respect him. As long as I get '*phalatshe*' (the vernacular for maize meal, used as an expression to mean having food on the table for the family) for my children it's ok". This woman was expressing dependency on her partner and her willingness to comply with his desires. Bogele said, "If I turn myself into a mosquito (expression meaning making too much noise for him) I'll literally be chasing him out of the

house, and he will also get it (sex) from someone else". Some women said they would persist with or resume the discussions until a consensus is reached. However, this persistence did not always guarantee agreement for discussions and for the use of safer sex practices. Some said they would even suspend or refuse sex altogether.

Major Theme 9: Motivation to Comply with Wishes of Significant Persons

During individual interviews, some women said they did not feel compelled to comply with their partner's refusal to talk, or to have unprotected sex. Tsheo said, "If he refuses, he does not get me. I don't care I just want to protect myself, so if he does not want to be with me then so be it." This was slightly different from expressions of most women during focus group discussions where the general feeling was that men were difficult, uncooperative and noncompliant with safer sex discussions and practices. In addition, that it was difficult to refuse unprotected sex.

Major Theme 10: Perceived Self-efficacy

Some women said it was easy for them to talk to their partners about safer sex, and the use of safer sex practices. Women said that discussions were sometimes effective, but sometimes there were delaying tactics in using safer sex practices. Some factors were cited as important in assisting women to discuss safer sex effectively and gain compliance for safer sex practices. The age difference between the partners was mentioned, for example Teba said, "He is older than me and he knows everything, so he is supposed to protect me and treat me like a baby. He has to listen to me also, and teach me things…" This confirms women's desire to succumb to male domination.

Major Theme 11: Intention to engage in HPSC

This theme pertained to the likelihood of engaging in HPSC in the future. Women in this study made statements that indicated some promise to engage in HPSC with their partners in the future. These included continued persistence with HPSC and requests for condom use, being faithful, being monogamous, and periodically checking their HIV status, abstaining as necessary. Kantle emphasized that, "I will still remind him so that we get our test cleared...I

know I'm faithful and will remain like that, but I will remind him about being faithful to me, as

it is supposed to be...I will remind him that we should focus on each other and not have eyes

for other people (meaning extra-dyadic relationships). We need to be honest with each other,

tell each other about everything..., things like that."

The women shared incidents where they were actually able to discuss safer sex. Sego gave an

account of her previous discussion with her partner as follows:

"When we started I had just been to the Tebelopele center where I had been tested for HIV. When I got home, I waited until the moment was right for me to talk about it. I made sure that both of us were relaxed and laughing, and then I said, 'what do you think about this illness that is haunting people these days?' Then he replied that he thinks AIDS is real and it's a dangerous disease.' We then continued to talk about some people that we both knew who were suspected to living with AIDS, and some people that we had seen at the hospital. Then I asked him if that was how he wanted to see himself in the future. I wanted him to think about the consequences of his actions regarding sexual behavior. That's when I started asking that we needed to go and be tested, and that we should use condoms. He kept quiet for a moment and then he told me that what I was saying was reasonable and that he would think about it. He seemed scared at first, and told me about his fears about being positive. So then I told him that we could go together to the clinic and talk to the nurses. The nurses always explain everything, that there is a lot of support given and about the usefulness of antiretroviral therapy, that some people live longer and healthier lives because of these medicines. I did not tell him that I had already tested. The following day he went without telling anyone and when he came back, his results were negative. So that's when I showed him mine, which were negative. Ever since then we talked about being faithful to each other to avoid anybody coming in and spoiling our health. We are still considering using condoms but we want to have a child first."

Although the above incident is based on self-report, it was used as a proxy to measure

actual self-efficacy for HPSC because it is the only evidence available for the behavior having

occurred since it too intimate to be observed in the real world.

Major Theme 12: Actual Use of Safer Sex Practices in the Past Three Months

Women shared experiences with condom use. Nkel said "We talk about the condom and even practice inserting it.... so I even help him slip it on him sometimes. I just want to make sure that no mistakes happen. We use it correctly all the time... I'm not afraid of him. We're like friends." Other safer sex practices listed were abstinence, and maintaining a monogamous relationship.

Summary and Discussion of the Qualitative Study Findings

Twelve major themed and 20 sub-themes emerged from the qualitative analysis. Generally, women said that HPSC was a good thing and that it yielded some positive consequences for their health and life. Some women were capable of talking with their partners and were not hindered by any other persons in their families. They used different opportunities and enabling factors to help them to communicate effectively, and frequently obtained cooperation from their partners for further discussions and for the use of safer sex strategies. However, some often faced some difficulties with partners who were not easy to approach, and they proposed that they should be empowered through education and support from health care providers to be able to engage their partners in safer sex discussions. Some difficulties were related to men's fear of the stigma associated with living with HIV, AIDS and eventually death. Some women said that their partners were able to initiate HPSC, although in most instances it was either attached to their fears when the woman was known to be sero-positive or suspected because of illness.

Implications for the Qualitative Study Results

The results of this qualitative study support findings of research in HPSC (Buysse, 1999; DiClemente, 1991; Catania et al., 1992; Malow et al., 1993; Catania et al., 1994; Rickman et al., 1994 and Sheahan et. Al., 1994; Quina, 2000; Wingood & DiClemente 1998; Morokoff ., 1995). These results also highlight the need to address some information gaps for women. Although information about HIV and AIDS is widespread in Botswana, some new critical information needs to be incorporated into the public education strategy, such as the emerging research about the importance of male circumcision. The need to emphasize the importance of the use of protection at all times with or without knowledge of the partners sero-status is critical, especially in Botswana where the prevalence is high and a negative test results may occur during the window period when the body is still mounting an antibody response to HIV. Women need assertiveness training in addition to information and skills for HPSC. HPSC barriers need to be

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further articulated and addressed. Myths and misconceptions about HIV and AIDS still need to be addressed.

Health workers, especially nurses, play an important role as indicated by the women in this study, but their attitudes need to be addressed through continued dialogue and in-service updates. Information updates on HIV and AIDS need to be disseminated to health care providers, (practitioners and students) and they should be encouraged to pass it on during health talks and counseling. The national information, education and communication strategy needs to incorporate HPSC and encourage partners to talk about safer sex. Talking about safer sex should be demystified, contextualized, and made simpler for couples to comprehend and enact, and incorporate it their intimate discussions. Men also need special interventions related to HPSC since they have been identified as a potential source of difficulties in dyadic HPSC.

This study has set the stage for more quantitative research to measure HPSC among a similar groups of women in larger samples to develop culturally specific and woman focused instruments that can facilitate further identification of HPSC issues among the young women in Botswana and guide related HIV prevent interventions.

Phase 2 and 3: Development and Evaluation of the HPSC Measures

The measures were developed based on data obtained from the qualitative pilot study, extensive literature review of existing measures, study purpose and objectives, conceptual framework, knowledge of the target population and input from experts in women's health, measurement, and HIV/AIDS prevention research. Eleven scales were developed with a total of 158 items.

The developed measures were evaluated for content validity by a team of experts at Emory University. The team consisted of five professors in the Emory University School of Nursing and the School of Public health who form the dissertation research committee for the investigator. They bring to the table a mix of qualifications needed to conduct a successful study. The committee consists of experts in the following areas: measurement, research, women's health; HIV/AIDS care, and HIV/AIDS research; and sexual communication research in HIV/AIDS for young populations.

The experts were first requested to evaluate the quality of general format of the questionnaire, the level of difficulty of items, item social desirability, which items they thought needed to be deleted and the reasons for their deletion. The measures were evaluated for clarity, congruence with the objectives and the conceptual framework of the study, sufficiency in representation of the content, and specificity to the objectives of the measures. Changes were made on the items as per advice for each scale.

The second aspect of expert evaluation focused on objective assessment of the relevance of the items to the intent of each scale, and to the study aims and objectives and conceptual framework, for the purpose of computing a content validity index (CVI) for each scale. Three evaluators were selected from the dissertation committee based on their expertise in measurement, women's health, HIV prevention for women, and sexual communication research. A CVI is the proportion of items based on ratings on a 4-point Likert-type scale, being: (1) not relevant, (2) somewhat relevant, (3) quite relevant, and (4) very relevant (Waltz, Strickland and Lenz, 2005) by raters. This was computed to quantify the extent of agreement between the experts on their ratings of the items (Waltz, Strickland & Lenz, 2005). A CVI ranges from a 0 to 1. If half of the items are rated between 1 and 2, the CVI is below 0.5 indicating that the items are not relevant and therefore have poor content validity. A CVI of 0.8 (80%), indicated a good CVI and that the items were relevant, and therefore good content validity.

The completed scales are presented in Table 4 below, followed by the discussion of the instrument development process for each scale.

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Scale No	Scale Name	No. Items	Scale Focus	Item Formatting	Potential Range of Scores and Interpretation	Response Time in minutes
HPSC 1	The Meaning of HPSC	7	The meaning and understanding of HPSC by the respondent.	Unipolar 5-point Likert-type items ranging from 1 (strongly disagree) to 5 (strongly agree).	Lowest score=7 (poor understanding of HPSC). Highest score=35 (good understanding of HPSC Midpoint=21.	3
HPSC 2	HPSC Content Discussed	22	The content included when engaging in HPSC with male sexual partner(s) in the past 3 months.	Unipolar Likert-type items ranging from 1 (not at all) to 5 (all of the time).	Lowest score =22 (poor communication of specified content). Highest score=110 (Excellent communication of specified content. Midpoint=66	10
HPSC 3	Influence Tactics	19	The behaviors used in order to get male sexual partner(s) to engage in HPSC.	Unipolar 5-point Likert-type items ranging from 1 (not at all) to 5 (all of the time).	Lowest score=19 (low use of the influence tactic). Highest score=95 (maximum use of influence tactics). Midpoint=57.	8
HPSC 4	HPSC Facilitating Factors	29	Factors that help or facilitate HPSC for the woman and her male sexual partner(s).	Unipolar 5-point Likert-type items ranging from 1 (none of the time) to 5 (all of the time).	Lowest score=29 (none of the time). Highest score=145 (helpful all of the time). Midpoint=87.	12
HPSC 5	Attitudes Towards HPSC	11	The woman's judgment of the pros and cons of HPSC with her partner(s).	Theory of Planned Behavior (TPB) bipolar 5-point items range-2 (strongly disagree) to 2 (strongly agree).	Lowest score= -22 (low negative attitude). Highest score=22 (high positive attitude). Midpoint=0.	

 Table 4, HPSC Scale Focus, Item Formatting and Potential Range of Scores

Scale No.	Scale Name	No. Items	Scale Focus	Item Formatting	Potential Range of Scores and Interpretation	Response Time (minutes)
HPSC 6	Perceived Subjective Norm for HPSC	7	The woman's perceptions about significant person's reactions if she engaged in HPSC with her partner(s).	TPB bipolar 5-point items ranging from -2 (strongly disagree) to 2 (strongly agree).	Lowest score= -14 (low negative perceptions). Highest score=14 (high positive perceptions). Midpoint =0.	3
HPSC 7	Perceived Partner's Response to HPSC	26	The woman's perceptions of what her male sexual partner(s) would say when HPSC was introduced by her.	TPB-formatted bipolar 5-point items ranging from - 2 (strongly disagree) to 2 (strongly agree).	Lowest score= -52 (low negative perceptions). Highest score=52 (high positive perceptions). Midpoint=0.	10
HPSC 8	Motivation to Comply with Wishes of Significant Others	6	Position statements of the woman's level of motivation to comply with expectations of significant others regarding HPSC with her male sexual partner(s).	TPB-formatted Unipolar 7-point items ranging from 0 (not at all motivated) to 6 (extremely motivated).	Lowest score=-0 (no motivation). Highest score =36 (extremely motivated). Midpoint=18.	3
HPSC 9	Perceived Self – efficacy for HPSC	3	The woman's evaluation of her capability for HPSC based on her resources	TPB-formatted bipolar items ranging from -2 (strongly agree) to 2 (strongly disagree)	Lowest score= -6 (low perceived self-efficacy Highest score=6 (high perceived self-efficacy.	1

Scale No.	Scale Name	No. Items	Scale Focus	Item Formatting	Potential Range of Scores and Interpretation	Response Time in minutes
HPSC 10	Intentions for HPSC	23	The woman's likelihood of engaging in HPSC with their male sexual partner(s) before the next sexual encounter.	TPB-formatted bipolar 5-point items range -2 (strongly disagree) to 2 (strongly agree).	Lowest score= -46 (low intentions). Highest score=46 (high intentions). Midpoint=0	8
HPSC 11	Safer Sex Practices	5	Safer sex practices/methods that the woman has used in the past 3 months to prevent exchange of body fluids.	Bipolar 5-point Likert-type items ranging from 1 (very unlikely) to 5 (very likely). Each item is scored individually because they are mutually exclusive. A total score reflects use of safer sex practices.	Lowest score per item=1 (poor use of the method). Highest score per item=5 (good use of the method). Midpoint=1.5.	2
	Socio- demographic	22	To obtain socio- demographic and relational characteristics of the sample.	Categorical items of varying structures	No scale scoring Each item scored individually.	8
	Screening tool	10	To determine participants eligibility for participation	As above	As above	2

Development of Scale 1, the Meaning of HPSC (Appendix G-1)

Item Generation: This scale was developed from the qualitative study question addressing women's understanding of the meaning of the construct "health protective sexual communication." The question was asked to establish a common ground for further discussions on the issues related to HPSC. The women's responses to this elicitation question went beyond simple definitions of the construct but included statements that describe what it involves and how people achieve communication. Five sub-themes that emerged were used to develop five items. Two additional items came from the literature.

The items asked each woman to indicate her agreement or disagreement with the given responses on a range from 1(strongly disagree) to 5 (strongly agree). A sum of scores was obtained. The possible scores ranged from five to 35 with a midpoint of 20. A low score indicates poor comprehension of the meaning of HPSC, and high scores indicated high comprehension. *Expert Evaluation of the Scale:* Experts' subjective evaluation suggested changes on item 1, 2, 3 and 7 to make them clearer and simpler. Objective evaluation of the relevance of the items in this scale indicated a rating of 3 for item 2, and 4 for the remaining items, and thus very good agreement. The CVI was 26/28 or 0.93 (93%), indicating a high level of agreement among raters. All items were therefore retained after making suggested changes.

Development of Scale 2, HPSC Content Discussed (Appendix G-2)

Item Generation: This scale was intended to determine the content that women thought should be included when discussing safer sex with a male sexual partner. Items 2, 8 and 17 were adapted from the AIDS Prevention Behavior Questionnaire with permission from Mishovic et al., (1993), Item 6, 9, 16, and 19 were adapted from the HPSC with permission from Catania et al., (1994),. These items were confirmed by the women's responses during qualitative interviews in response to the question on what information they thought was necessary to include during safer sex discussions. Items 3, 4, 5, 12, 13, 14, 15 came from expert input. The rest of the items were

researcher developed based on literature and the qualitative data themes derived from the qualitative pilot study.

The scale consisted of 22 Likert-type unipolar items with responses ranging from 1 (not at all) to 5 (all of the time). The woman was asked to indicate her level of agreement with items related to how frequently she has communicated with her main sexual partner in the last 3 months about the safer sex content listed. A total score was computed, and possible scores ranged between 22 (poor communication) and 110 (excellent communication), the midpoint was 66. *Expert Evaluation*: Subjective evaluation of experts suggested changes on item 6 to separate having STIs and receiving treatment for it, into 2 items; and to make item 19 clearer and complete. Objective evaluation indicated one expert rating of 2 for items 6 and 9, and changes were made as suggested. Item 8 received a rating of 3 from all judges. Items 9, 10, and 22 received ratings of 3 by 3 judges. Items 17 and 21 received ratings of 3 by 1 of the judges. The rest of the items received ratings of 4 by all judges. Generally, the majority of the items received ratings of 3-4 indicating good agreement among raters. The CVI was 85/88=0.97 (97%) indicting a high proportion of agreement among judges. All items were retained and one was added as per recommendation of the experts, making the total of 22 items. Scores range between 22 and 110.

Development of Scale 3, HPSC Influence Tactics (Appendix G-3)

Item Generation: This scale consisted of 19 unipolar items pertaining to influence tactics that the woman might have used to engage their partners in HPSC. Items 1, 2, 4, 5, 8, 9, 10, 11, 12, 13, and 14 were adapted from the AIDS Discussion Scale and the Influence Tactics Scale with permission from Howard, Blimstein and Schwartz (1986), and from Snell and Finey (1990) respectively, and from the modified using qualitative study themes related to the question on how women managed to get their partners to discuss safer sex. Items 15 through 18 were exclusively derived from the qualitative pilot study themes.

The items asked the woman to indicate how frequently she has used the tactics listed. Responses range from 1(not at all) to 5 (all of the time). A total score was obtained by reverse ordering # 2 and summing up all responses. A possible minimum score of 19 indicated low use and a maximum of 95 indicates high use of those tactics.

Expert Evaluation: Subjective evaluation of experts suggested some changes for items 4, 5, 9, 11, and 15 to make them clearer. The objective ratings however were 3 for item 7, 9, and 13 (only one judge each) and 4 for all other items. The CVI was 73/76=0.96 (96.1%), indicating a high proportion of agreement between raters. Corrections were made as suggested.

Development of Scale 4, HPSC Influencing Factors (Appendix G-4)

Item Generation: Initially this scale consisted of 28 unipolar items pertaining to factors related to partner's personality, relationship factors, prior knowledge about HIV and STI transmission, participation in HIV prevention programs (self or partner), which affect HPSC. These factors were derived from the formative qualitative study sub-themes. Revisions were, however, made to split item 13 that pertained to "cry or throw temper tantrums" into two components pertaining to crying and throwing temper tantrums. The scale ended up with 29 items.

The woman was asked to indicate her level of agreement with each of the statements on how frequently the factors listed have affected her ability to communicate with her sexual partner about safer sex. Items were scored on a range of 1 (none of the time) to 5 (all of the time). A possible total score ranged from 29 (not very helpful) to 145 (very helpful).

Expert Evaluation: The experts' subjective evaluation suggested changes for items 6, 9, 13, 14, 15, and 21 for clarity, and separation of concepts, but they were all considered to be very relevant. Two judges rated all items at 4 (very relevant) and one judge rated the items at 3 (quite relevant). The CVI was 106/112=0.95 (95%), which indicated a high proportion of agreement among raters, and hence all items were retained with a few changes for clarity as suggested.

Development of Scale 5, Attitudes toward HPSC (Appendix G-5)

Item Generation: This scale consisted of 11 bipolar items pertaining to the woman's attitude towards HPSC with her sexual partner. These items were developed using TPB template

suggested by Fishbein and Azjen (1967, 1970 and 1975) and from the formative qualitative study themes pertaining to attitude toward HPSC.

The woman was asked to indicate her level of agreement with statements that describe the advantages of engaging her partner in HPSC. The woman is asked to indicate her level of agreement by circling a number from -2 (strongly disagree), through 2 (strongly agree). The midpoint was option zero. A possible negative score below zero indicated negative attitudes and a positive score above zero indicated positive attitudes. Items 8, 9, 10 and 11 were reverse-scored. *Expert Evaluation:* The experts suggested additional items (9-11) to explore more attitudinal issues. The ratings were at 4 for all items and the CVI was 100%. All items were retained.

Development of Scale 6, Perceived Subjective Norm (Appendix G-6)

Item Generation: This scale consisted of 7 Likert-type bipolar items on the subjective norm or perceived influence of significant referents or important people in a woman's life. The items were developed using the TPB template by Fishbein & Azjen (1967, 1970, and 1975) and from the responses during the formative qualitative pilot study to the question on what the woman thought the responses of significant people in their lives would be if she engaged in HPSC with the male sexual partner. The woman was asked to indicate from a list of responses her level of agreement on a range of scores from -2 (strongly disagree) to 2 (strongly agree). The midpoint was zero. A negative score below zero indicated perceived negative influence and a positive score above indicated perceived positive influence of significant others.

Expert Evaluation: One item was suggested by the experts to accommodate respondents who may not know what to say about the responses of others. The items were all rated at 4 by all experts, and the CVI was 100%. All items were retained.

Development of Scale 7, Perceived Partner's Response to HPSC (Appendix G-7)

Item Generation: This was a 26-item Likert-type bipolar scale consisting of items pertaining to perceived main partner's response when the woman initiated HPSC. These items were also based on influence tactics, but focused on the woman's perceptions about her partner's response when

safer sex discussions were introduced. Items 1 and 18 both were adapted from the AIDS discussion Scale with permission Howard, Blimstein and Schwartz (1986), and the qualitative pilot study themes. Item 5, 14, 15, 17, 19, 20, 21, 22, and 23 were adapted from the Influence Tactics Scale, with permission from Snell & Finey (1990). Items 1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 16 and 26 came exclusively from the formative qualitative pilot study interviews with women. Items 24 and 25 were adapted from literature. The respondent was asked to choose from among a list of responses indicating the likelihood of her partner responding that way. Each item ranged from -2 (very unlikely) to 2 (very likely). The mid-point was zero. Items 7 through 26 were reverse-scored. A negative score below zero indicated negative perceived partner's response and a positive score above zero indicated positive perceived partner's response to HPSC.

Expert Evaluation: Changes were suggested for items 5 to separate 2 ideas, 9, and 18 for clarity. The ratings were 4 by 2 judges for all items. However one of the judges rated item 9 at 2 and item 17 at 3. Changes were made on the items as suggested and they were all retained. The raters had an overall excellent agreement on the items, with a CVI of 101/104=0.97 (97%).

Development of Scale 8, Motivation to Comply with Perceived Wishes of Significant Others (Appendix G-8)

Item Generation: This scale consisted of 6 unipolar items pertaining to the motivation to comply with the expectations of significant referents regarding HPSC. The items were derived from the TPB template (Fishbein & Azjen, 1967, 1970 and 1975) and the qualitative pilot study. The woman was asked to indicate her level of motivation to comply on a scale ranging between 0 (not at all motivated) and 6 (extremely motivated). A score below 6 indicated low motivation and 21 to 42 indicated high motivation.

Expert Evaluation: Items 3, 4 and 5 had minor corrections from the experts. Two experts rated all items at 4 (very relevant) one expert rated items 1, 2, 3 and 4 at 3 and items 5 and 6 at 4. This rating indicated high agreement among raters. The CVI was 20/24=0.83 (83%) indicating high agreement among judges. All items were retained with minor changes.

Development of Scale 9, Perceived Self-Efficacy for HPSC (Appendix G-9)

Item Generation: This consisted of 3 bipolar items pertaining to perceived self-efficacy for HPSC. The items were developed based on the TPB template by Fishbein and Azjen (1967, 1970 and 1975). The items specifically related to the perceived ease or difficulty of engaging in HPSC, the amount of effort that the woman thought would be required to engage in HPSC with main partner and the perceived effectiveness of HPSC in the use of safer sex practices.

The respondent was required to indicate her level of agreement with the statements provided. Each item ranged from -2 (strongly disagree) to 2 (strongly agree). The midpoint was zero. A negative score below zero indicated low perceived self-efficacy and a positive score above zero indicated high perceived self-efficacy.

Expert Evaluation: All items were rated at 4 and the CVI was 100%, indicating a high level and proportion of agreement among experts. All 3 items were retained.

Development of Scale 10, Intentions to Engage in HPSC (Appendix G-10)

Item Generation: This consisted of 23 items on a bipolar scale pertaining to intentions to communicate about safer sex with the main partner. The items were developed based on the template by Fishbein and Azjen (1967, 1970 and 1975) and from the qualitative pilot study interview themes from the women's responses as to whether they intended to discuss safer sex with their partners before the next sexual encounter. Each woman was asked to indicate how likely or unlikely she was to discuss safer sex topics listed with her partner. Each item ranged from -2 (very unlikely) to 2 (very likely). The midpoint was zero. A negative score below zero indicated low intentions and a positive score above zero indicated high intentions for HPSC.

Expert Evaluation: Changes were made on items 2, 9, 13, and 18 regarding clarity. Two experts rated all items at 4. One expert rated items 2 and 13 at 2 and made suggestions for making the items clearer, which were incorporated. This same expert rated items 9, 21 and 22 at 3. The majority of the ratings were 3 to 4 with a CVI of 73/92=0.79 (79%), indicating a moderate interrater agreement.

Development of Scale 11, Safer Sex Practices Scale (Appendix G-11)

Item Generation: This scale consisted of 5 unipolar items on outcomes of health protective sexual communication pertaining to safer sex practices. The items were developed from the formative qualitative pilot study interviews themes. The items on the scale required the woman to indicate her level of agreement with the use of the listed safer sex practices during the last three months. Responses were rated on an ordinal Likert-type scale ranging from 1 (strongly agree) to 5 (strongly disagree). Responses were computed to generate a range of scores from 1 (low use) to 5 (high use) for each safer sex practice.

Expert evaluation: Comments from experts regarding clarity of items were incorporated. All experts rated all items at 4 and the CVI was 100%. All items were retained.

Other Measures

Socio-Demographic Questionnaire and Other Sample Characteristics (Appendix G)

Item Generation: This questionnaire consisted of 22 socio-demographic questions in two components outlined in the blueprint. The items were derived from literature review and based on knowledge of typical target population. Subscale 1 had 14 items about the respondent's relationship status, length of relationship, type and quality of relationship and type of partner, age, income, educational level, marital status, HIV statuses, and having talked about safer sex in the last sexual encounter, indicating who in the relationship usually took the responsibility for HPSC. Subscale 2 had 7 items about the main sexual partner's age, education, employment status, income, HIV testing and status.

Expert Evaluation: This questionnaire was evaluated subjectively only. The comments from the experts regarding wording and clarity were incorporated.

Phase 4: Instrument Translation and Back Translation

The purpose of the translation was to change the language of the research material from a source language (English), to the target language (Setswana), to make it usable, relevant and meaningful to the target population. This was intended to reduce bias related to language and

understanding, and thereby yielding meaningful and relevant results and thus adding to the validity of the study (Weidner, 1994; Serchest, Fay &Zaidi, 1972; Banville et al., 2000; Waltz Strickland & Lenz, 2005). Special attention was paid to cultural relevance, conceptual, linguistic and structural equivalence (Weidner, 1994).

The investigator translated the questionnaire into Setswana with the help of a Setswana speaking person in Atlanta who was also fluent in English. The investigator's native language is Setswana, which she speaks, writes and reads fluently. The investigator has also practiced as a nurse-midwife at the maternal and child health clinics in Botswana and has used the language in the assessment, diagnosis and planning of care for this population for over 20 years, and is therefore familiar with all aspects and sensitivities of the language in clinical settings, including sexual terms and discussions. The investigator also has had experience translating research material for The Centers for Disease Control (CDC) project on evaluation of educational materials for the Prevention of Mother-to-Child Transmission (PMTCT) of HIV/AIDS, targeted for a similar population of women in the northern part of the country.

Two people in Botswana who were fluent in English and Setswana were asked to evaluate the translated version for cultural relevance on a four-point scale ranging between 1 and 4 (1=irrelevant and 4=very relevant). A CVI was calculated similar to the expert ratings of the English version. The translated version was also given to three women who represented typical respondents to evaluate the items for acceptability, clarity, readability or level of difficulty of the questions. Table 4 below presents the questionnaire evaluation and translation process. After the initial translation, the two source language versions were compared to assess if the original purpose and objectives of the research questions were consistent. A committee of 2 people fluent in both English and Setswana conducted the evaluation. The final versions were given to the experts at Emory for final evaluation. The back-translated version was very close to the original version. Once translation was completed, the measure was ready for pilot testing in Botswana. A summary of the translation process is presented in Table 5 below.

Objective	Activity	Responsible Person
1. To evaluate the developed HPSC measure (Sperber et al., 1994).	1. Subjective evaluation through ongoing consultation with dissertation research committee. Focus on blueprint domains, congruence with study purpose, specific aims and conceptual framework, scaling, wording, and grammar (Haynes, Richard & Kubany, 1995).	The investigator, 3 measurement experts from the dissertation research committee.
	2. Objective evaluation: expert review and rating (CVI rating) for relevance to study aims, objectives and conceptual framework. (Haynes, Richard & Kubany, 1995; Waltz, et al., 2005; Waltz, Strickland & Lenz, 2005).	The investigator with the help of 3 measurement experts.
2.To conduct forward translation	1. Parallel (independent) translation by two people.	The investigator and a person from
(Vallerand, 1989).	2. Subjective evaluation of the two translated versions focusing on meaning, understandability, congruence, language and cultural equivalence.	Botswana fluent in both Setswana and English.
	3. Objective evaluation of the translated versions: develop a rating scale with instructions for relevance to study aims, objectives and conceptual framework.	
3. To conduct backward translation of the instrument	1. Back translation by a person fluent in both Setswana and English, with no exposure to the original English version.	A person in Botswana who is fluent in Setswana and English.
(Brislin, 1970).	2. Subjective evaluation: focusing on interpretability meaning, understandability, congruence, language and cultural equivalence.	The investigator and a back-translator.
	3. Objective evaluation: relevance to the study aims, objectives and conceptual framework.	The investigator and research dissertation committee Three experts from research dissertation committee.

Phase 5: Pilot Testing of the Instruments

The 5th phase entailed a quantitative cross-sectional pilot study to test the measures' readability, comprehensibility, administrative feasibility, scoring and general comments by respondents, and to identify issues related to logistical management of the study. The setting, population, eligibility criteria, and ineligibility criteria were the same as for the qualitative pilot study. The quantitative pilot study was implemented by the researcher and the two nurse-research assistants in Botswana who assisted in moderation of focus groups and transcription of data from audio to text in phase 4. One of the research assistants had a master's degree in maternal and child health nursing. The other had a master's degree in public health. Both of them had obtained certification for the online CITI training (training in human subjects' research).

Ten women aged 21-35 years who represented the typical sample were selected from two clinics in Gaborone using purposive sampling method based eligibility criteria. The participants were requested to rate their experiences with the HPSC scales using a 9-item postadministration questionnaire recommended by Berk (1994). Respondents rated each item about the questions on the scale of 1 (No) or 2 (Yes). The total core for this questionnaire ranged between 9 and 18. A minimum score of 9 indicated low rating of the measures, and 18 indicated good rating of the measures. All 10 participants responded to the entire questionnaire. The ratings totaled 18 for each woman indicating a CVI of 100% for all measures.

Phase 6: Quantitative Study for Reliability and Construct Validity Testing

Study Design and Setting

This phase entailed a cross-sectional quantitative study to perform internal consistency reliability and construct validity testing of the instruments. The study was conducted at the 13 clinics in Gaborone.

Sampling and Sample Size Determination

To determine the sample size, the rule of thumb of 10 women per item for the scale was used (Nunnally, & Bernstein, 1994). The scale with the highest number of items initially

contained 28 items at the time of planning; therefore, 280 women were included in the sample. An analysis was run using the NCSS PASS Software (2007) to determine the power that this sample size would yield to detect even small differences among variables. The results of multiple correlation power analysis indicated that a sample size of 280 at alpha 0.01 and 0.05 and a beta of 0.01713, R² of 0.1 for 7 variables being tested and R² of 0.1 for 10 variables controlled, the power would be 0.98 or 98%. For a Beta of 0.00318, R² of 0.1 for 7 variables being tested and R² of 0.1 for 10 control variables, the power would be 0.997 or 99.7%. This sample size was therefore adequate to run multiple regression analysis and detect differences even as small as 10%.

Setting

The study took place in Gaborone, Botswana. Gaborone City has a total of 15 clinics. One of the clinics was closed for renovations, and the other had problems with underutilization because of its location. Hence, 13 clinics were used for data collection. The clinics provide basic primary health care services outpatient health services and maternity services and most clients are mothers, children, and other. Four of the clinics provide 24-hour maternity services. Any complicated cases are referred to Princess Marina hospital, which is one of the three and the largest referral facilities in the country. Three of these clinics are in the northern part of the city, 1 in the east, 3 in the centre, 2 in the west, and 3 in the South, distributed by population density and reachable within at most 2 kilometers for every household.

Human Subjects Protection

Emory University Institutional Review Board, the Ministry of Health Research Committee in Botswana and Gaborone city head office clinic hierarchy (Appendix E), approved the study proposal. All the relevant information was provided as required by each of the institutions.

A written consent form was used to obtain permission for participation. The consent form (Appendix F) included detailed information regarding the title, purpose, benefits, and potential risks of the study, participants' rights for voluntary participation, confidentiality and why the

participants were selected to participate. The consent form was read and completed by participants prior to data collection or if they so wished, they were given the option to read it for themselves. The research team signed a pledge for confidentiality (Appendix F). The information about participants was under lock and key at an office allocated at the University of Botswana.

Participants received P10.00 for transportation, which was equivalent to \$ 1.60. Snacks were served to prevent fatigue as a result of hunger. None of the women had any adverse events during the course of data collection.

Participant's Recruitment

The recruitment began on June 19th and completed on August 9th 2008. A total of 280 women were recruited at the 13 maternal and child health clinics in Gaborone for the main quantitative study. Meetings were held with the clinic personnel to introduce the study and ask them to refer potential participants as they identified them during daily clinic consultations, using a screener in Appendix F. Details about the study and researcher's contact information were provided to the nurses together with the screener. Health talks were held daily at each clinic to introduce the study, following the lesson plan for participants provided in Appendix D. Recruitment flyers (Appendix F) were posted on the notice boards at each clinic. All women who were approached volunteered to participate and each volunteering woman was ushered for immediate eligibility screening into the study room allocated at each clinic. Written consent was requested from the participants of the study at the time of recruitment in Gaborone.

Training of Research Assistants

The investigator conducted training for the research assistants focusing on study purpose, specific aims, study protocols and procedures, highlights on respect for human subjects in research from the CITI training, data entry, coding procedures, and data analysis. Research assistants were encouraged to review and use the protocol checklist and instruments, and additional reviews were done with them to maintain fidelity to study procedures. Consistency in reading the script and the questions to the women was emphasized.

Data Collection Procedures

Women who agreed to participate were invited to the data collection room assigned at the clinic. Those who were eligible were asked if they could be interviewed immediately or if they wished to set a separate appointment. All women opted for immediate interviews at the point of recruitment. Structured interviews were conducted using the instruments in appendix G. A tenminute break was offered half way through the interviews, but women opted to continue without any breaks. The total interview time was one-and-half hours.

Study Measures

The screening was conducted using a researcher developed screening instrument (Appendix F). The screening instrument was a 10-item measure requiring information on the following: the woman's age; whether or not she had a current sexual partner, whether she resided in Gaborone; whether or not she considered herself a woman by birth; whether or not there was anything in her health that could affect her participation in the study; if she would be willing to discuss her intimate sexual communication matters; whether she volunteered to participate; and if she had participated in a similar study in the past 6 months. The study measures consisted of 11 instruments described in detail in phase 2 of this report. Some items required filling in the blanks while others required making an appropriate choice among the presented responses.

Data Management

Completed questionnaires were kept in a locked cabinet at the University of Botswana. A codebook was developed to facilitate computer data entry. All the data were entered by the investigator into Statistical Package for the Social Sciences (SPSS) computer software version 15 (SPSS Inc., 2007) for analysis. The data were double entered to ensure accuracy. Steps were taken to ensure safety and confidentiality of the data at all times. The de-identified data were transferred to a password protected personal web-drive on the Emory IT site.

Data Analysis Procedures

Preliminary Analysis: Descriptive statistics were run using SPSS version 15 to determine missing and abnormal cases. The data were summarized using frequency distributions. The means, mode, median, standard deviations, and skewness, were evaluated to obtain a sense of the data patterns. No missing data were identified.

Test for Sampling Adequacy: An interim test for sampling adequacy was conducted when a sample size of 200 was reached using Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity and anti-image correlation coefficients. The purpose of this was to determine whether the items could indeed be classified into a few underlying factors (Taylor, 2005). These procedures also assisted in determining that the sample size provided adequate power to conduct multiple regression analyses. If the KMO was less than 0.5 it was regarded as unacceptable, and a KMO greater than 0.7 was regarded as good enough to permit factor analysis for the sample size. The criteria used to determine sampling adequacy were: a significant Bartlett's test of $\rho < 0.05$, item anti-image correlations greater than 0.5 and a determinant of 0.01 or closer to zero. The KMO was 0.74, Bartlett's score was 2729.80, at df=231, p<0.001, anti-image correlations were greater than 0.5, and a determinant was less than 0.001, indicating that the sample size of 200 was adequate and would permit factor analysis procedures. However, data collection was continued based on the many other analyses anticipated on these data that could affect the power.

Bivariate Pearson and Spearman Correlations: A correlation matrix was produced to examine the patterns of relationships between variables. For highly skewed non-normal data, Spearman correlations were reported.

Internal Consistency Reliability Testing: Internal consistency reliability procedures were conducted to determine consistency of performance of one group of individuals across items on a single measure (Waltz, Strickland & Lenz, 2005; Portney & Watkins, 2000; Nunnally & Bernstein, 1994). Internal consistency reliability estimates were based on the correlations among items within a test, and they provided information about characteristics of individual items, the

relationship between items and the entire scale, and characteristics of the whole scale (Strickland, 1996). The reliability assessment for the HPSC measures focused on obtaining the Cronbach's alpha coefficient for items on each scale because they measured different attributes (Waltz, Strickland & Lenz, 2005). The scales contained ordinal 5 and 7-point unipolar Likert-type items ranging between 5 (denoting very likely) to 1 (denoting very unlikely) and bipolar ranging between -2 and 2. Cronbach's alpha was used for each subscale to determine if the items measured the same domains. Cronbach's alpha reliability coefficients below 0.5 represented poor reliability and therefore not eligible for factor analysis, and 0.5 to 0.7 suggested moderate reliability coefficients greater than 0.7 represented strong reliability (Field, 2007).

Item-level Statistics: Simple descriptive statistics (sum, mean, minimum, maximum, range and variance), were computed and analyzed for each item. If the majority of subjects scored similarly on an item, then the item range and variance would be skewed. In this case, the item would fail to discriminate respondents due to either a homogenous sample (the sample might possess the same level of the attribute being measured) or poor item quality.

Inter-item Statistics: Inter-item (Pearson's Moment) Correlations were used to determine agreement between items on a scale that measured the same attribute, and to determine redundancy between items. Items in a scale were expected to correlate well if they were homogenous and are measuring the same attribute. Inter-item correlations of 0.80 and above were considered redundant (Nunnally & Burnstein, 1994). The decision to delete redundant items was evaluated carefully based on conceptual meaningfulness and utility for the instrument. *Item-to-total Statistics*: This provided an indication of how well an item functioned statistically in

relation to all other items in a scale (Strickland, 1996). The corrected item-to-total correlation between the item scores for an individual item and the sum of scores for the remaining items on the scale was examined. A corrected-item-to-total correlation of 0.3 or above indicated that the item had a good fit on the scale. The alpha-if-item-deleted statistics determined how well the item contributed to the whole scale. If the difference was greater than 0.05, the item was considered for deletion, otherwise the item was considered a contributor to the reliability of the instrument and was therefore retained. The decision to delete items that indicate small differences based on these criteria was carefully evaluated for each scale based on conceptual meaningfulness and utility to the construct being measured.

Construct Validity Testing

Validity testing assessed the extent to which an instrument measured what it was intended to measure (Portney & Watkins, 2000). Construct validity was conducted to determine if the instruments measured abstract concepts or constructs based on the theoretical definitions of the Theory of Planned Behavior constructs. The items and scales on the developed instruments measured abstract concepts that were not directly observable. The definitions addressed the construct of the theoretical conceptualization of HPSC. Construct validity assessment was conducted through confirmatory factor analysis using principal components analysis to determine the latent variables. Hypothesis testing was also conducted through hierarchical linear and hierarchical logistic regression analyses to determine relationships among scales for further construct validation.

Factor Analysis

Exploratory factor analysis (EFA) was conducted using principal components analysis. The procedure was conducted to ensure that the theoretical dimensions on the modified scales were supported by empirical findings. The purpose of EFA was to explore the interrelationships among items and to group them into smaller sets of related underlying factors that explain the correlations within a set of observed variables and the most variance among them. The assumptions were that: a) observed items in the scales were linear combinations of some normally distributed unobservable underlying factors with common variance, and b) some factors were common to two or more items. EFA involved factor extraction, selection and rotation.

Factor Extraction

A correlation matrix was created automatically through the factor command on SPSS. The correlations were inspected to locate highly correlated factors and to rule out multicollinearity. High correlations above 0.8 indicated multicollinearity and low correlations below 0.5 indicated low collinearity, meaning that the items were not redundant and were factorable (Field 2007).

Principal components analysis helped to determine the variation observed. The eigenvalues and the screeplots were examined to determine the number of factors for extraction and rotation. The criteria used for determination of factors were the number of eigenvalues which were one or above, along with the scree plot. When examining the scree plot, the number of factors was considered the number that appears prior to the flattening of the tail of the screeplot.

Factor Selection and Rotation:

The variables with eigenvalues greater than 1 were rotated by Varimax and/or Oblimin rotation to compare the outcomes of these two procedures as advised by Field (2007), to redefine the factors that were not correlated and to derive factor loadings (Waltz, Strickland & Lenz, 2005). The choice of the procedure depended on the nature of the measure and normality assumptions of the data. There was a preference for Varimax rotation for long measures with low inter-item correlations. The factor loadings ranged from -1 to +1 and represented the degree to which the variables were correlated with the factor. High factor loadings indicated good correlation between the factor and its variables. The minimum acceptable factor loading was 0.30 (Kachigan, 1991). The derived factors were critically analyzed conceptually to determine common patterns for naming. Items that did not load onto any factor were classified according to where they made the most conceptual sense.

Hypothesis Testing

The purpose of hypothesis testing was to further validate the measures, by determining if the data supported the theoretical framework underlying construction of the items (Waltz,

Strickland and Lenz, 2005). The objectives were to describe the nature, direction and magnitude of relationships among the scales using correlation (Pearson r or Spearman r). Another objective was to predict or explain the variance in the value of the dependent scales/subscales as an effect of the predictor scales on the dependent variable, and the strength of the relationship using regression analysis and Analysis of Variance (ANOVA). Correlations were run between predictor, covariates and outcome scales. Hierarchical linear regression analysis procedures with block wise entry were used to test the predictive relationship among predictor variables (scales 5, 6, 7, 8 and 9) and covariates of income and age differences, and participant and partner's HIV status, on the outcome variables of scales 2, 10 and 11. This procedure was preferred because it helped determine the most efficient or accurate prediction model controlling for covariates. The covariates were entered in the first block, and the predictors in the second block. The covariates were selected based on significant correlations with predictors. These regression scales were represented by the general regression equation $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + E$, where Y is the dependent variable β_0 is the intercept and β_1 to β_5 represented the slope for each independent variable X_1 to X_5 entered into the equation, taking into account the error term E. Regression diagnostics were evaluated to determine if regression assumptions were met. Spearman's rho correlations were used where such violations were detected. The categorical and outcome scales that violated the assumptions were re-coded using binary dummy coding and were analyzed using hierarchical logistic regression analysis. These analyses were represented by the equation for probabilities:

$$P = \frac{1}{1 + e^{-[(B_0 + B_1(X_1) + B_2(X_2) + (B_3(X_3) + B_4(X_4) + B_5(X_5))]}}$$

The hypotheses tested are listed in Chapter 1 and Chapter 4.

Other Measurement Issues

To further reduce measurement error, items and instructions were written as clearly as possible to reduce ambiguity and to ensure that they were easily readable and comprehensible to

participants. Researchers' influence during participants' questionnaire completion was avoided by using bracketing. This involved identification of and setting aside personal preconceived ideas that could influence the participants' behavior and responses, and hence the study outcomes. The researchers read all questions and recorded participants' response during structured interviews. Scoring rules were made clear and precise. The length of the questionnaires was brief enough to decrease participant burden and fatigue, so that reliability was not likely to be compromised. Protocol rules for the administration of the measures were followed strictly to reduce errors in administration.

SUMMARY

The study design and methods were described for all aspects of this multistage multimethod study in six distinct phases that lead to development of items and psychometric evaluation of 11 HPSC measures. The methodological aspects of the research were discussed, including sampling, setting, procedures for data collection and analysis, and protection of human subjects in research. Summary tables provided a succinct presentation of the different aspects of the chapter.

CHAPTER 4

RESULTS

Introduction

This chapter provides the results of the psychometric properties of the HPSC scales developed for young women in Gaborone, Botswana for HIV prevention. In the first part of the chapter the description of the socio-demographic characteristics of the sample are presented. This is followed by internal consistency reliability assessments, and construct-validity estimates of the 11 measures based on factor analysis and hypotheses testing. A diagram of the scree plot is presented only to facilitate clarification where there is inconsistency between eigenvalues and factors numbers reflected by the scree plot.

Overview of the HPSC Scales

The measures included the socio-demographic questionnaire, which measures sociodemographic and other personal characteristics. Eleven scales pertain to HPSC. Of these, eight scales (Scale 1, 3, 4, 5, 6, 7, and 8) measured independent variables while 3 others (2, 10 and 11) measured outcome variables. More details will be presented for the scales used in testing Theory of Planned Behavior hypotheses later in the chapter.

Description of the Socio-demographics and other Personal Characteristics

All 280 participants who volunteered met the eligibility criteria for the study. This could be attributable to the fact that the criteria were explained during recruitment flyers and sessions. The socio-demographic questionnaire items focused on the respondent and partner's characteristics, relationship factors, HIV testing and status and discussions of HPSC. All of the women were between 21 and 35 years of age, had current male sexual partners, obtained services at the selected clinics, resided in Gaborone, were physically well enough to participate, willing to talk about their sexual communication details with the study team, and consented to participate in the study. The socio-demographics are presented in Table 6 below.

Characteristic	Categories	Total	Frequency	Percentage
1. Respondent's Age	<27 years		155	55.40
	>27 Years	Total	125 280	44.60 100
2. Partner's Age	<32 years		131	46.80
	> 32 years		149	53.20
		Total	280	100
3. Respondent's Income per month	< P500.00 (U\$ 77.29)		141	50.40
monui	> P 500.00		139	49.60
		Total	280	100
4. Partner's Income per month	< P1700.00 (U\$ 270.33)		152	54.3
	> P1700.00		148	45.70
		Total	280	100
5. The number of sexual	1		264	94.30
partners	More than 1		16	5.70
		Total	280	100
6. Respondent's description of	Main		251	89.60
the partner type	Casual		29	10.40
		Total	280	100
7. Quality of the relationship	Respectful: YES		258	92.10
	NO		22	7.90
		Total	280	200
	Loving: YES		234	83.60
	NO		46	16.40
		Total	280	100

Table 6, Characteristics of the Sample (N=280)

Characteristic	Categories	Total	Frequency	Percentage
8. Marital status	Single		192	69.50
	Single cohabiting		61	21.80
	Married		21	7.50
	Divorced		4	1.40
	Widowed		2	0.71
		Total	280	100
9. Educational level of	Less than standard 7		31	11.10
respondents	(grade 7) Form 1 to form 3		79	28.20
	(grade 8 to 10) Form 4 to form 5		109	38.90
	(grade 11 to 12) Some vocational		45	16.10
	training University education		16	5.70
		Total	280	100
10. Employment (respondent)	Employed fulltime		126	45.00
	Employed part-time		10	3.60
	Self-employed		15	5.40
	Unemployed		129	46.10
		Total	280	100
11. Educational level (partner).	Less than standard 7		34	12.14
	(grade 7) Form 1 to form 3		62	22.14
	(grade 8 to 10) Form 4 to form 5		111	39.65
	(grade 11 to 12) Some vocational		43	15.36
	training University education		30	10.71
		Total	280	100
12. Employment status	Employed fulltime		203	82.14
(partner)	Employed part-time		10	3.57
Characteristic	Categories	Total	Frequency	Percentage
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	Self-employed		41	14.64
	Unemployed		26	9.29
		Total	280	100
13. Whether partner has an	Yes		190	67.90
HIV test	No		61	21.80
	Don't know		29	10.30
		Total	280	100
14. HIV status (respondent)	Negative		182	65.00
	Positive		70	25.00
	Don't know		28	10
		Total	280	100
15. HIV status (partner):	Negative		159	56.79
	Positive		30	10.71
	Don't know		89	31.79
	Don't want to say		2	0.71
		Total	280	100
16. Whether respondent and	YES		272	97.14
partner ever discussed safer sex	NO		8	2.86
		Total	280	100
17. Who in the relationship initiates safer sex	Respondent		163	58.21
communication	Partner		16	5.72
	Both		101	36.07
		Total	280	100

The women's mean age was 27.5 years and (sd=4.06), and the partners' age was 32.6 years and (sd=5.68). The women's mean monthly income was P805.03 (about USD 132.00) and (sd= P1, 365.56 or USD 224.60). The partners' mean monthly income was P2, 921.36 (+/- USD 479.00) and (sd=P3, 608.83 or USD 593.56). Mean length of relationship among partners was 5.05 years, (sd= 3.76). Twenty-five percent of the women were HIV positive while 10.7% of their partners were HIV positive. Ninety-seven percent of the women said they discussed safer sex with their male sexual partners. Over 58% of the women said they initiated safer sex discussions, while 36.1% said both they and their partners did, and 5.7% said only their partners did.

Psychometric Properties of Scale 1, Meaning of HPSC

Description of Scale 1, Meaning of HPSC

The characteristics of this scale are described in Table 4.

A very high percentage of women (98.6%) agreed that HPSC meant asking the partner to use safer sex practices, and 95% said it meant talking to partner about risky sexual behaviors. Only 61.4 % thought it meant initiating safer sex discussions, 57.1 thought it meant letting partner start discussions, 71.4% said letting partner know about their personal histories, and 73.3 said asking partner his personal history. Thus, conceptualization of the meaning of HPSC focused on talking about risky behaviors and the requesting the use of safer sex practices.

Tests for Normality Assumption

Histograms, normal Q-Q plots and Kolmogorov-Smirnov analysis showed non-normally distributed data, with some items being bimodal, requiring the use of non-parametric statistics to test hypotheses.

Reliability Assessment for Scale 1, the Meaning of HPSC

Inter-item Correlations

Inter-item correlation ranged between -0.09 and 0.87, with a mean of 0.18. The correlation matrix indicated a high positive correlation of 0.87 between items 4 and 5, indicating possible redundancy for these two items. However, conceptually these items addressed different

behaviors and were both retained. All other items met the criteria for non-redundancy and were measuring the same domain.

The item means ranged between 3.53 and 4.94 with an overall mean of 4.27. The scale means indicated that women tended to respond on the positive side of the scale, and that they had high understanding of the meaning of HPSC. The scale mean was 29.91 and standard deviation was 5.05 with a variance of 25.52. All modes were equal to five, showing that responses tended to be on the higher end of the Likert scale, and that data were negatively skewed, also confirmed by the skewness statistics. Items 2, 6 and 7, were highly negatively skewed, reflecting high level of agreement of the participants.

Item and Scale Statistics

Table 7 below displays individual item and scale statistics

Variable	Item mean	Item sd	Item skewness	Scale mean if item deleted	Scale variance if item deleted	Corrected item-to-total correlation	Cronbach's alpha if item deleted
HPSC means:							
1. Initiating safer sex discussions.	3.68	1.77	-0.73	26.23	17.87	0.30	0.52
2. Making sure both are in a relaxed mood.	4.93	0.51	-7.16	24.98	24.68	0.12	0.57
3. Letting your partner start discussions.	3.53	1.81	-0.56	26.38	17.97	0.28	0.54
4. Letting your partner know about your personal sexual history.	3.96	1.71	-1.11	25.95	16.17	0.47	0.43
5. Asking partner his personal history.	4.04	1.66	-1.24	25.86	17.50	0.38	0.48
6. Talking to partner about risky behaviors.	4.83	0.81	-4.51	25.08	22.71	0.28	0.54
7. Asking partner to use safer sex practices.	4.94	0.48	-8.23	24.96	23.92	0.30	0.55
Total/criterion	4.27	+/1.38	+/-2	29.91	25.52	0.30	0.56

 Table 7, Item Statistics for Scale 1, for the Meaning of HPSP Scale (N=280)

The scale means and variances if item-deleted were all below the scale mean and variance of 29.91 and 25.52 respectively. Corrected item-to-total correlations for the scale were close to or equal to the criterion of 0.30, except for item 2. Cronbach's alpha for the overall scale was 0.56. According to Nunnally and Bernstein (1994), a low Cronbach's alpha is more likely for scales with fewer than 10 items, and lack variability in responses. Cronbach's alpha-if-item deleted were equal to or less than the overall scale alpha except for item 2, which was 0.57, indicating that this item did not contribute much to the scale reliability because the scale alpha increased when it was deleted. A critical analysis of the conceptual significance of item 2 was made and the item was deleted because it did not conceptually fit in the domain. The resulting scale contained 6 items. Chronbach's alpha for the 6-item scale was 0.57.

Construct Validity Testing for the Reduced 6-item Scale 1, Meaning of HPSC

Factor Analysis

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was at the acceptable criterion of 0.50. Bartlett's test of sphericity was significant, (Chi Sq =738.71, df =15, p<0.001), indicating that the inter-item correlations matrix was significant and could be legitimately factored. The determinant was close to 0, indicating less multicollinearity between items. Item anti-image correlations ranged between 0.28 and 0.64. Only one item had an anti-image correlation above the criterion of 0.6 (item 5). Therefore, most items were not very sensitive indicators of the women's understanding of HPSC.

Factor Extraction

Principal components analysis procedure was used to determine the linear components within the data set (Field, 2007). Communalities were inspected to determine the extent to which an item correlated with all other items. All item extraction communalities ranged between 0.80 and 0.94. These were above the criterion of 0.60 and they were acceptable (Field, 2007) for sample sizes greater than 250.

Three eigenvalues were greater than 1 and together they accounted for 85.8 % of the variance explained for Scale 1. The Scree plot in Figure 3 below presents a visual display of the eigenvalues and extracted factors.

Figure 3 Scree Plot for Scale 1, HPSC Meaning of HPSC.



The point of inflexion was at component 4 (eigenvalues 0.5), indicating four possible components. However, this 4th component was below an eigenvalue of one and a high percentage of scale variance was explained by 3 components.

Factor Rotation

Oblimin factor rotation with Kaiser Normalization was conducted to allow more flexibility on the rotation angle and permit explanation of the more logical relationships that exist between factors, and to maximize variance explained. The factors derived from the pattern matrix, with the factor loadings and names are displayed in Table 8.

Naming the Factors

Factor 1 consisted of 2 items, both relating to sharing personal histories, and thus the factor was named **"Sharing personal sexual histories"**. Factor 2 consisted of two items, both relating to taking responsibility for initiating safer sex discussions. This factor was named

"Initiating safer sex discussion". Factor 3 consisted of 2 items relating to negotiating safer sex, and was named **"Negotiating safer sex"**. Based on literature review, these factors conceptually reflected what health protective sexual communication meant to the women in the sample. Although all components were related to the main domain, the first two were closely related. In other words, when one shared personal histories, by implication, they had also initiated safer sex discussions. However, the third factor represented high level behavior that may or may not have occurred with the other two.

Items	Component/Fact	tors	
	1 Sharing personal sexual histories	2 Initiating safer sex discussion	3 Negotiating safer sex
HPSC means:			
1. Initiating safer sex discussions	0.96		
3. Letting partner start discussions	0.96		
4. Letting your partner know about your personal sexual history		0.92	
5. Asking partner his personal history		0.92	
6. Talking to partner about risky behavior			0.89
7. Asking partner to use safer sex practices			0.86

Table 8, Pattern Matrix for Scale 1, Meaning of HPSC (N=280)

a. Extraction Method: Principal Components Analysis.

b. Rotation Method: Oblimin with Kaiser Normalization.

c. Rotation converged in 4 iterations.

Psychometric Properties of Scale 2, HPSC Content Discussed

Scale Description

Scale 2 characteristics are presented in Table 4. The scale is presented in Appendix G.

Tests for Normality of the Data

Histograms indicated non-normal data, with bimodal distributions. The K-S statistic and

normal Q-Q plots also confirmed violations of the normality assumptions.

Reliability Assessment for Scale 2 HPSC Content Discussed

Inter-item Correlations

A high positive correlation of 0.84 was observed between items 6 and 7 and they were considered redundant. However, they conceptually different and were both retained.

Item and Scale Statistics

The item means ranged between 1.09 and 4.8 with an average of 2.23. Items1, 8, and 16 had high means greater than 4 and modes of 5. Thus women were highly likely to report having discussed present and past sexual histories, HIV testing and the use of male condoms. Frequency distribution indicated that 94.3% of the women were likely to have discussed the use of the male condom, and 90% for HIV testing with their partner. Frequencies were far below 50% for the agree option for the remaining 17 items, suggesting that women were less likely to have discussed that content in the past 3 months. However, given the way the scale was developed it was not clear if they had ever discussed this content with their partner prior to the 3 months period. Low standard deviations suggested a narrow distribution of responses by this sample. Items 3, 5, 8, 9, 12, 13, 14, 15, 16, and 20 were highly skewed, indicating a high homogeneity in women's responses. These items conceptually addressed critical safer sex content and were retained.

The scale mean was 49.15, and the variance was 135.20. The corrected item-to-total correlation was below but close to the criterion of 0.3 for item 1 (0.27). Items 3, 5, 8, 9, 12, 13, 15, 16, 17 and 20 had corrected item-to-total correlations below the criterion of 0.3. However, all of these items were retained because although they did not generate a broad array of responses, they addressed conceptually meaningful and important safer sex issues for discussion. Cronbach's alpha for the scale was 0.69, indicating moderate internal consistency reliability. Items 16 and 19 had a Cronbach's alpha-if-item deleted of 0.70, slightly higher than the scale alpha, suggesting that these items made minimal contributions to the scale reliability. However, deletion of these items would sacrifice their conceptual importance. All other items had alphas close to or below the criterion and were retained. Table 9 below displays the item and scale statistics.

Item	Item mean	Item sd.	Item skewness	Scale mean if Item deleted	Scale variance if item deleted	Corrected item-to-total correlations	Cronbach's alpha-if item-deleted
1. Present and past number of sexual partners.	4.18	1.51	-1.47	44.97	123.78	0.27	0.68
2. Changing partners frequently.	3.00	1.96	-0.01	46.15	114.74	0.40	0.67
3. Exchanging sex for money or goods.	1.50	1.29	2.30	47.65	129.15	0.15	0.69
4. History of relationships with partners who had sex with other partners.	1.93	1.65	1.26	47.21	118.87	0.38	0.67
5. History of having sex with a person who sells sex for money and goods.	1.13	0.70	5.33	48.02	132.73	0.12	0.69
6. History of STI.	2.33	1.80	0.70	46.81	118.36	0.35	0.67
7. Having taken an STI treatment.	2.37	1.85	0.66	46.78	119.17	0.31	0.68
8. HIV testing and status.	4.72	0.95	-3.43	44.43	132.74	0.07	0.69
9. History of street drug use.	1.29	1.02	3.29	47.85	131.20	0.13	0.69
10. History of alcohol abuse.	2.04	1.67	1.10	47.11	119.96	0.34	0.67
11. History of having sex with a person who abused drugs or alcohol.	1.90	1.65	1.33	47.25	117.67	0.42	0.66

Table 9, Item Statistics for Scale 2, HPSC Content Discussed (N=280)

Item	Item mean	Item sd.	Item skewness	Scale mean if item deleted	Scale variance if item deleted	Corrected item-to-total correlations	Cronbach's alpha-if item-deleted
12. Homosexual behavior.	1.16	0.75	4.67	47.99	131.20	0.20	0.69
13. Bisexual behavior.	1.51	1.28	6.43	48.06	131.83	0.23	0.69
14. History of oral sex.	1.09	0.57	2.24	47.64	123.37	0.36	0.67
15. History of anal sex.	1.24	0.92	3.74	47.91	132.84	0.07	0.69
16. Use of a male condom.	4.80	0.85	-4.18	44.35	136.45	-0.20	0.70
17. Use of female condom.	2.89	1.87	0.42	46.55	122.76	0.22	0.69
18. Male circumcision.	2.68	1.90	0.32	46.47	117.55	0.34	0.67
19. Abstaining from sex while apart from each other.	2.35	1.73	0.66	46.79	117.67	0.36	0.70
20. Using drying agents in the vagina.	1.43	1.15	2.49	47.72	131.20	0.18	0.69
21. Vigorous sex that may be rough.	2.17	1.74	0.89	46.98	131.83	0.37	0.67
22. Vaginal cleansing.	1.75	1.51	1.58	47.39	123.37	0.40	0.67
Total/criterion	2.23	+/-1	+/-2	49.15	135.20	0.30	0.69

Construct Validity Testing for Scale 2, HPSC Content Discussed

Factor Analysis

The KMO was 0.61 and Bartlett's statistic was significant (Chi Sq =1455.89, df =231and p<0.001), indicating that the inter-item correlations matrix was significant and could be legitimately factored. Item anti-image correlations were all close to or greater than the criterion of 0.6, confirming legitimacy of all item factor for analysis. The determinant was close to 0 indicating limited multicollinearity between items.

Factor Extraction

Item extraction communalities for Scale 2 ranged between 0.42 and 0.89. Items 1, 4, 9, 10, 16 and 22 had communalities, which were close to the criterion of 0.60 and were accepted as reliable. Seven items (items 3, 5, 8, 14, 15, 17 and 19) had communalities ranging between 0.30 and 0.48 which were below 0.60, suggesting poor reliability of these items. This finding was likely due to low variance in the population responses. All other items had acceptable communalities close to or above the criterion. There were seven eigenvalues above the criterion of 1.0. Together these eigenvalues accounted for 58.67% of the total variance in scale 2 scores. These findings were confirmed by a Scree plot that showed a point of inflection at seven.

Factor Rotation

Oblimin rotation with Kaiser Normalization was run for factor analysis procedure to ensure strictness in the angle of rotation, but rotation failed to converge in 25 iterations. Hence, Varimax rotation was used. Items 1 and 4 had primary loading and fitted well at Factor 2, where they were allocated. Item 14 had double loadings and it was allocated to Factor 1 where it good conceptual fit. Item 16 had double loading but fitted well in Factor 6, and item 9 also had double loadings but fitted well and was allocated at Factor 4. Item 22 had double loadings but it was allocated to factor 5 for conceptual fit.

The component score covariance confirmed that these factors were independent.

				Component/Fa	actors		
	1. Risky Sexual Practices	2. Risky Sexual Relationships	3. History of STI and Treatment	4. Substance Abuse	5. Genital Health Concerns	6. Risky Sexual Behavior and Desire for Self-Protection	7. Use of Safer Sex Practices
13. Bisexual behavior	0.84						
12. Homosexual behavior	0.81						
3. Exchanging sex for money or goods	0.51						
15. History of anal sex	0.39						
14. History of oral sex	*0.33						0.33
2. Changing partners frequently		0.75					
4. History of relationships with partners who had sex with other partners		*0.64		0.35			
1. Present and past number of sexual partners.		*0.63					0.40

Table 10, Pattern Matrix for Scale 2, HPSC Content Discussed (N=280)

				Compo	nent		
	1. Risky Sexual Practices	2. Risky Sexual Relationships	3. History of STI and Treatment	4. Substance Abuse	5. Genital Health Concerns	6. Risky Sexual Behavior and Desire for Self-Protection	7. Use of Safer Sex Practices
6. History of STI.			0.93				
7. Having taken an STI treatment.			0.92				
10. History of alcohol abuse.				0.75			
11. History of having sex with a person who abused drugs or alcohol.				0.74			
20. Using drying agents in the vagina.					0.79		
21. Vigorous sex that may be uncomfortable.					0.79		
22. Vaginal cleansing.		0.39			*0.56		
16. Use of a male condom.	-0.31					*-0.67	
5. History of having sex with a person who sells sex for money and goods.						0.63	

	Component/Factors								
	1. Risky Sexual Practices	2. Risky Sexual Relationships	3. History of STI and Treatment	4. Substance Abuse	5.Genital Health Concerns	6. Risky Sexual Behavior and Desire for Self-Protection	7. Use of Safer Sex Practices		
8. HIV testing and status.						-0.61			
9. History of street drug use.				*0.42		0.53			
18. Male circumcision.							0.71		
19. Abstaining from sex while apart from each other.							0.62		
17. Use of a female condom.							0.37		

A Rotation converged in 25 iterations. *Asterisked bolded factor loadings indicate where factors with double loadings were allocated.

Psychometric Properties of Scale 3, Influence Tactics

Scale Description

Scale 3 characteristics are presented in Table 4.

Tests for Normality

The right-tailed and sometimes bimodal histograms, significant K-S statistics, and curvilinear (cubic and quadratic) patterns of Normal Q-Q plots confirmed the non-normality of the data distribution, requiring the use of non-parametric tests for hypotheses testing with this scale.

Reliability Assessment of Scale 3, HPSC Influence Tactics

Inter-item Correlations

A high correlation of 0.84 was observed between items 4 and 5, indicating that these items were redundant. However, these items did not necessarily have the same conceptual meaning, and so they were all kept for further analysis. All other correlations were below the criterion for inter-item redundancy (0.80).

Item and Scale Statistics

A summary of the item and scale statistics is presented in Table 11 below. The item means for Scale 3 ranged between 1.21 and 4.87 with an overall average of 2.73. Items 1, 12, 13, and 14 had high means greater than 4. Therefore, women were highly likely to demand discussions boldly, persist with requests for safer sex, reason logically and state things in a gentle manner. Items 4, 5, 6 and 16 had means greater than 3.0. Thus, women were also fairly likely to use other tactics such as flattery, affection and using fear of the disease. The item variance ranged between 0.43 and 3.64 with an average of 2.12. Items 12, 13, and 14 had high modes of 5. Items 13, and 14 were negatively skewed below the criterion of -2, and items 17, 18 and 19 were positively skewed above the criterion of 2.

Item	Item mean	Item sd.	Item skewness	Scale mean if-item deleted	Scale variance-if item deleted	Corrected item-to-total correlations	Alpha if item deleted
1. Demand discussions in a bold and straightforward manner.	4.62	1.04	1.04	47.18	140.41	0.07	0.76
2. Drop hints and suggestions.	2.88	1.89	1.89	48.92	130.20	0.22	0.76
3. Threaten to leave the relationship.	1.75	1.48	1.48	50.05	130.67	0.31	0.75
4. Flatter him until he agrees to talk.	3.82	1.74	1.74	47.96	120.63	0.51	0.73
5. Use affection to get partner to talk.	3.78	1.76	1.76	48.01	119.64	0.54	0.70
6. Plead with partner to talk.	2.65	1.86	1.86	49.15	118.94	0.52	0.73
7. Offer to talk about something else other than safer sex.	2.74	1.91	1.91	49.06	117.52	0.54	0.73
8. Lie about HIV status.	1.66	1.43	1.43	50.14	126.50	0.46	0.74
9. Withhold sex until discussions occur.	1.49	1.22	1.22	50.31	126.89	0.54	0.74
10. Throw temper tantrums.	1.67	1.44	1.44	50.13	129.07	0.37	0.75
11. Cry to get partner to talk about safer sex.	1.52	1.26	1.26	50.28	129.22	0.44	.074
12. Persist with requests for safer sex.	4.37	1.23	1.23	47.43	138.52	0.11	0.76
13. Reason with partner logically.	4.87	0.66	-5.38	46.93	142.09	0.05	0.76

Table 11 Item Statistics for Scale 3, Influence Tactics (N=280)

Item	Item mean	Item sd	Skewness	Scale mean if-item deleted	Scale variance-if item deleted	Corrected item-to-total correlations	Alpha if item deleted
14. State things in a gentle manner.	4.56	1.21	-2.52	47.24	141.42	0.02	0.77
15. Seek help from someone to persuade partner.	1.93	1.65	1.28	49.87	129.50	0.30	0.75
16. Use fear of the disease.	3.49	1.88	-0.52	48.31	130.93	0.21	0.76
17. Not talking to him until he agrees to discuss safer sex.	1.43	1.17	2.49	50.36	131.51	0.39	0.75
18. Make suggestive action such as sneaking a condom in partner's pocket, luggage, or side drawer.	1.37	1.12	2.83	50.43	131.99	0.39	0.75
19. End the relationship.	1.21	0.89	3.99	50.58	141.23	0.06	0.76
Total/criterion	2.73	+/-1	+/-2	51.804	143.32	0.30	0.76

All scale means and variances if-items deleted were below the scale means and variances of 51.80 and 143.32 respectively. Corrected item-to-total correlations were below 0.3 for 7 items (1, 2, 12, 13, 14, 16, and 19), indicating that they could either be measuring a different domain or were not sensitive indicators of influence tactics for the sample of women in the study. However, considering their conceptual meaningfulness, these items were retained. Cronbach's alpha for the total scale was 0.76, indicating moderate and acceptable internal consistency reliability. All Cronbach's alphas-if-items deleted were equal to or close to the scale alpha, indicating that all items were significant contributors to the scale alpha.

Construct Validity Testing for Scale 3, Influence Tactics

Factor Analysis

Scale 3 had a KMO statistic of 0.74 and Bartlett's score was significant ($\chi 2=1399.85$, df=171, p=0.00), confirming sample size adequacy and the existence of factorable variables. The determinant for this scale was close to 0.00, demonstrating less multicollinearity among variables. Anti-image covariance statistics were all greater than the criterion of 0.6, except for items 5 (0.26), and 6 (0.25), showing poor sampling adequacy for these items.

Factor Extraction

Principal components analysis was used to extract factors. Extraction communalities were close to 0.60 for items 1, 7, and 17, and were acceptable for item reliability. Items 3, 6, 8, 12, 13, 15, 16, 18 and 19 had communalities below 0.5 and thus had low reliabilities. All other items had communalities equal to or greater than 0.60. Six eigenvalues were greater than 1, accounting for a total of 59.88% of variance explained, confirmed by the scree plot below with the point of inflection at eigenvalue 6. However because one factor had only one item, 5 factors were forced. The factors are presented in Table 12 below.

Factor Rotation

Varimax rotation with Kaiser Normalization was run because of low inter-item correlations. Items 10, 11, 15 and 18 had double loadings. Item 10 and 11 were assigned to factor

1 where they primarily loaded and were most conceptually meaningful. Item 13 had a factor loading below the criterion of 0.4, which was not recorded, but the item makes more conceptual sense for factor 2, where it was assigned. The factor loadings are displayed in Table 12 below, with factor names.

 Table 12, Rotated Component Matrix for Scale 3, Influence Tactics (N=280)

			Component/Facto	rs	
To get my partner to talk about safer sex I would	1. Manipulation	2. Bargaining	3. Decisiveness	4. Confrontation	5. Aggressive Persistance
9. Withhold sex until safer sex discussion occurs.	0.77				
17. Not talking to him until he agrees to discuss safer sex.	0.68				
11. Cry to get partner to talk about safer sex.	*0.68				-0.45
8. Lie about HIV status.	0.65				
18. Make suggestive action such as sneaking a condom in his pocket, luggage, or side drawer.	0.60				
10. Throw temper tantrums to get partner to talk about safer sex.	*0.59				048
3. Threaten to leave the relationship.	0.43				
5. Use affection to get partner to talk.		0.94			
4. Flatter him so that he can talk.		0.91			

		Component/Factors							
To get my partner to talk about safer sex I would	1. Manipulation	2. Bargaining	3. Decisiveness	4. Confrontation	5. Aggressiv Persistence				
6. Plead with partner to talk.		0.69							
7. Offer to talk about something else other than safer sex.		0.62							
14. State things in a gentle manner.			0.78						
19. End the relationship.			-0.63						
16. Use fear of disease.			0.56						
15. Seek help from someone to persuade partner.			-0.47						
2. Drop hints and suggestions.				-0.71					
1. Demand discussion in a bold and straightforward manner.				0.70					
12. Persist with requests for safer sex discussions.					-0.68				
13. Reason with partner logically		Not recorded							

c. Rotation converged in 14 iterations.
*Asterisked bolded items that have double loadings assigned based on conceptual meaningfulness

Figure 4 Scree Plot for Scale 3, Influence Tactics





Psychometric Properties of Scale 4, Influencing Factors

Scale Description

Characteristics of Scale 4 are presented in Table 4. All participants responded to all the items in the scale.

Tests for Normality of the data

Non-normal histograms, non-normal probability plots with superimposed Loess and cubic plots showed curvilinear and cubic relationships. The K-S statistic was significant, confirming non-normal distribution of the data.

Reliability Assessment for Scale 4 HPSC Influencing Factors

Inter-item Correlations

Low-to-moderate inter-item correlations between 0.50 and 0.63 were observed for 21 items. Moderate correlations between 0.66 and 0.75 were observed for 16 items. High correlations between 0.75 and 0.87 were observed for 7 items in the scale. These correlations indicated that the items were fairly related and measured the same domain.

Item and Scale Statistics

Item means ranged from 1.90 to 4.89, with an average of 4.07. Items 10, 11, 12, 22, 25, 27 and 29 had means below the average. Twenty-two of the 29 items on this scale had means above 4.00, and 25 items had significant item skewness above +/-2.0. These data indicated highly homogenous responses by respondents. Most women's responses were at the extreme ends of the Likert scale with a mode of 5.00 for 22 items 1.00 for the remaining 7 items (10, 11, 12, 22, 25, 27 and 29). All skewed items were negatively skewed except for items 10, 12 and 27.

The scale mean was 117.94, variance 151.58 and SD 12.31. Corrected item-to-total correlations were below the criterion of 0.30 for items 10, 11, 12, 22, 24, 25, 26, 27, 28 and 29. Of these items, 24, 26, 27 and 28 had corrected item-to-total correlations close to the criterion of 0.30. These items were also conceptually meaningful and were retained. Cronbach's alpha for the scale showed a high internal consistency reliability of 0.82. In addition to having very low item-to-total correlations, Cronbach's alpha if-items deleted was 0.83 for items 10, 11, 12, 22, 25 and 29, all above the scale alpha. Rather than focus on communication behaviors, these items focused on partner characteristic behaviors, indicating that they did not belong in this domain, and they were deleted. When these items were deleted, the total scale alpha increased to 0.90. The resulting scale contained 23 items. The scale statistics are presented in Table 13 below.

Item	Item means	Item sd	Item skewness	Scale mean- if item deleted	Scale variance-if Item Deleted	Corrected Item-to-total correlation	Cronbach's alpha if item deleted
Partner is:							
1. Easy to talk to.	4.58	0.95	-2.21	113.36	140.36	0.46	0.81
2. Loving.	4.79	0.70	-3.52	113.15	141.51	0.57	0.81
3. Respectful.	4.77	0.79	-3.71	113.17	142.40	0.46	0.81
4. Focuses on our future together.	4.71	0.90	-3.20	113.23	139.64	0.52	0.81
5. Understanding.	4.66	0.87	-2.83	113.27	138.17	0.62	0.81
6. Partner is willing to listen.	4.70	0.82	-3.01	113.24	140.82	0.52	0.81
7. Wants to be with me.	4.69	0.95	-3.15	113.25	140.57	0.45	0.81
8. A well established relationship.	4.69	0.90	-3.08	113.25	138.77	0.57	0.81
9. A long-term sexual relationship with my partner.	4.66	1.02	-3.00	113.27	141.11	0.39	0.81
10. He is younger.	1.39	1.18	2.75	116.55	151.15	-0.03	0.83
11. He is older.	2.60	1.96	0.40	115.33	139.00	0.19	0.83

Table 13, Item Statistics for Scale 4, HPSC Influencing Factors (N=280)

Item	Item means	Item sd	Item skewness	Scale mean- if item deleted	Scale variance-if Item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
12. We are the same age.	1.47	1.29	2.38	116.47	148.89	0.03	0.83
13. My prior knowledge of STIs and HIV transmission.	4.71	0.97	-3.37	113.22	142.39	0.36	0.81
14. My prior knowledge about safer sex practices.	4.82	0.76	-4.43	113.12	141.58	0.52	0.81
15. My prior knowledge of ART.	4.87	0.65	-5.20	113.07	141.11	0.66	0.81
16. My prior knowledge of people who have AIDS or died from it.	4.89	0.59	-5.66	113.05	142.29	0.63	0.81
17. My partner's prior knowledge of STI and HIV transmission.	4.88	0.61	-5.37	113.06	141.47	0.68	0.81
18. My partner's prior knowledge about safer sex practices.	4.85	0.66	-4.92	113.09	141.52	0.61	0.81
19. My partner's prior knowledge of ART.	4.84	0.69	-4.78	113.10	141.07	0.61	0.81
20. My partner's prior knowledge of people who have AIDS or died from it.	4.86	0.68	-5.03	113.08	141.35	0.61	0.81
21. My fears about the threat of HIV/AIDS.	4.80	0.83	-4.13	113.14	141.86	0.46	0.81

Item	Item means	Item sd	Item skewness	Scale mean- if item deleted	Scale variance-if Item deleted	Corrected item-total correlation	Cronbach's alpha if item deleted
22. My participating in HIV prevention programs.	1.90	1.65	1.33	116.04	142.43	0.16	0.83
23. My desire to keep healthy.	4.88	0.66	-5.43	113.06	145.41	0.36	0.82
24. Use of influence tactics.	4.76	0.91	-3.71	113.18	144.60	0.28	0.82
25 Obtaining help from others to get him to talk.	2.23	1.83	0.84	115.71	139.68	0.20	0.83
26. My partner's perceived threat of HIV/AIDS.	4.78	0.87	-3.93	113.16	145.63	0.25	0.82
27. My partner's participation in HIV prevention programs.	1.58	1.39	2.04	116.36	141.13	0.26	0.82
28. My partner's desire to keep healthy.	4.85	0.73	-4.98	113.09	146.16	0.28	0.82
29. Support from other people.	1.73	1.53	1.67	116.21	142.08	0.20	0.82
Total/criterion	4.07	+/-1	+/-2	117.94	151.58	0.30	0.82

Construct Validity Assessment for 23-item Scale 4, HPSC Facilitating Factors

Factor Analysis

The scale had a KMO statistic of 0.83 indicating sampling adequacy and compact factors that could be extracted. Bartlett's score was significant (Chi Sq =4467.96, df 253, p< 0.001), indicating that some relationships between variables existed and could be factored. The determinant was close to 0.0 indicating less possibility of multicollinearity, and that the factors were independent. Item anti-image correlations were all greater than 0.6, indicating adequate reliability.

Factor Extraction

Extraction communalities ranged between 0.39 and 0.83. Communalities were below the criterion of 0.60 for 6 items (3, 9, 10, 18, 19, and 22) indicating low item reliability possibly due to variance among item responses for this population attributable to homogenous responses. There were 5 eigenvalues greater than 1.00, which together accounted for a total of 68.05% of variance explained. The scree plot confirmed extraction of 5 factors. Reproduced correlations indicated that there were 79 (28%) non-redundant residuals with absolute values greater than 0.05, indicating limited multicollinearity.

Factor Rotation

Oblimin rotation with Kaiser Normalization was preferred because the data were highly skewed. Item 15 had its primary loading at Factor 1, where it was allocated for conceptual fit . Item 8 had its primary loading at Factor 2 where it also conceptually fitted and was allocated. These items were allocated where that had better conceptual fit as shown by bolded asterisked item loadings. The factors are presented in Table 14 below.

	Component/Factors								
	1 Couple's Knowledge about HIV/AIDS and STI prevention and control	2 Relationship Characteristics	3 Partner's Relational Characteristics	4 Partner's Perceived Health Concerns	5 Respondent's Desire to be healthy				
16. Respondent's knowledge of people who have AIDS or died from it.	0.85								
17. Partner's knowledge of STI and HIV transmission.	0.84								
19. Partner's knowledge of ART.	0.81								
20. Partner's knowledge of people who have AIDS or died from it.	0.81								
18. Partner's knowledge about safer sex practices.	0.79								
15. Respondent's knowledge of ART.	*0.76		0.42						
14. Respondent's knowledge about safer sex practices.	0.74								
21. My fears about the threat of HIV/AIDS.	0.72								

Table 14, Rotated Component Matrix for Scale 4, HPSC Influencing Factors

	Components/Factors							
	1 Couple's Knowledge about HIV/AIDS and STI prevention and control	2 Relationship Characteristics	3 Partner's Relational Characteristics	4 Partner's Perceived Health Concerns	5 Respondent's Desire to be healthy			
13. Respondent's knowledge of STIs and HIV transmission.	0.54							
4. Partner focuses on our future together.		0.82						
7. Partner wants to be with me.		0.78						
3. Partner is respectful		0.71						
8. Well established relationship.		*0.71	0.41					
9. A long-term sexual relationship with my partner.		0.56						
6. Partner is willing to listen.			0.81					
1. Partner is Easy to talk to.			0.79					
5. Partner is understanding.			0.79					
2. Partner is loving.			0.74					

Components/Factors							
	1 Couple's Knowledge about HIV/AIDS and STI prevention and control	2 Partner's Relational Characteristics	3 Relationship Characteristics	4 Partner's Perceived Health Concerns	5 Respondent's Desire to be healthy		
26. Partner's perceived threat of HIV/AIDS.				0.79			
28. Partner's desire to keep healthy.				0.75			
27. Partner's participation in HIV prevention programs.				-0.64			
24. Use of influence tactics.					0.76		
23. My desire to keep healthy.					0.61		

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 6 iterations.

Psychometric Properties of Scale 5, Attitudes towards HPSC

Description of the Scale

Scale 5 characteristics are presented in Table 4. The last four items (8, 9, 10, and 11) were reverse scored since they were worded negatively.

Tests for Normality of the Data

Histograms, curvilinear normal Q-Q plots, significant K-S statistics Tests for normality, high means and modes, low standard deviations, and high negative skewness statistics indicated non-normal distribution for the data. These statistics also indicated little variance and extreme homogeneity of the sample responses.

Reliability Assessment for Scale 5, Attitude towards HPSC

Inter-item Correlations

There were very high inter-item correlations greater than 0.80 between item 1 and 2, 1 and 3, 2 and 3, 5 and 6, suggesting that these items were redundant. However, these items addressed different issues conceptually and so they were retained.

Item and Scale Statistics

Table 15 below displays Scale 5 statistics. The item means ranged between 1.91 and 1.99 and the average was 1.94. The high means indicated respondent's strong positive attitudes towards discussing safer sex with their male sexual partners. The mean scores indicated agreement on the items by most participants. All items in this scale were highly negatively skewed, demonstrating homogeneity of the sample responses.

Discussing safer sex with my partner would	Item means	Item sd	Item skewness	Scale mean- if item deleted	Scale variance-if item deleted	Corrected item-to-total correlation	Cronbach's alpha-if-item deleted
1. Be beneficial.	1.91	0.55	-6.74	19.42	7.24	0.92	0.83
2. Help protect us against HIV and STIs.	1.91	0.56	-6.53	19.43	7.24	0.90	0. 83
3. Encourage us to discuss issues that affect our lives.	1.93	0.49	-7.58	19.40	7.68	0.86	0.83
4. Draw us closer together.	1.91	0.54	-6.23	19.43	7.67	0.77	0.84
5. Help us to understand each other.	1.96	0.36	-10.45	19.37	8.69	0.69	0.85
6. Promote health.	1.97	0.34	-11.77	19.36	8.81	0.67	0.85
7. Prevent death.	1.94	0.48	-8.23	19.39	8.73	0.47	0.86
8. Be embarrassing	1.96	0.36	-8.23	19.38	10.19	-0.23	0.89
9. Bring up issues of infidelity.	1.91	0.49	-5.30	19.43	9.01	0.34	0.87
10. Break us up.	1.99	0.17	-11.77	19.35	10.19	0.04	0.88
11. Cause conflict between us.	1.94	0.39	-6.93	19.39	9.06	0.44	0.86
Total/criterion	1.94	+/-1	+/-2	21.34	10.26	030	0.87

Table 15, Item Statistics for Scale 5, Attitudes towards HPSC (N=280)

The scale had high internal consistency reliability, with a Cronbach's alpha of 0.87 for 11 items. Cronbach's alpha if-item deleted was higher than the scale alpha for item 8, and 10, and so these items did not make a good contribution to the scale reliability. Corrected item-to-total correlations were below the criterion of 0.3 for items 8 and 10, therefore these items were not sensitive indicators of attitudes towards HPSC. Although these items conceptually addressed important attitudinal issues in safer sex communication, they had very poor statistics and were unstable, and therefore they were deleted, resulting in a 9-item scale with alpha of 0.90.

Construct Validity Testing for the 9-Item Scale 5, Attitude towards HPSC

Factor Analysis

The KMO statistics was 0.87, with a highly significant Bartlett's score (Chi Sq = 2835.98, and df=36, α =. 0.00) for 9 items, indicating that the inter-item correlation matrix was significant and could be factored. Anti-image correlations were all greater than 0.60 for all items, confirming adequacy of the sample and reliability of items. The determinant for the scale was close to 0.00, and so there was less multicollinearity among items, and more independence of factors. The reproduced correlation matrix showed that 11 (30.0%) non-redundant residuals had absolute values greater than 0.05 also confirming low multicollinearity among items.

Factor Extraction

The extraction communalities were all greater than 0.60 and therefore the items fitted in the domain. There were two eigenvalues greater than 1.00 which cumulatively accounted for 86.88% of the total variance explained for Scale 5. The scree plot in Figure 7 below shows the point of inflexion at 3, suggesting 3 possible factors extracted. However, only 2 eigenvalues were greater than 1, confirming that there were only 2 factors extracted.

Figure 5, Scree Plot for Scale 5, Attitudes towards HPSC



Scree Plot

Although Oblimin rotation with Kaiser Normalization was preferable for this highly skewed data with moderately correlated items, Varimax rotation was also run to determine independence of factors for further hypothesis testing. Two factors were extracted as displayed in Table 16, which shows items and factor loadings and given factor names. Items 3 and 4 had primary loadings at factor 1, but they were allocated to factor 2 concerned with relationship benefits of HPSC where they were more conceptually meaningful. Item 1 was assigned to factor 2 where it had its primary loading and was more conceptually meaningful. Item 2 made more conceptual sense under factor 1 concerned with health benefits of HPSC.

Table 16, Items, Factor Loadings and Names for the Revised Scale 5, Attitude

towards HPSC (N=280).

Items:	Components/Factors					
Discussing safer sex would	1 Health Benefits of HPSC	2. Relationship Benefits and Concerns				
5. Help us to understand each other.	0.96					
6. Promote health.	0.95					
7. Prevent death.	0.79					
3. Encourage us to discuss intimate issues that affect our lives.	0.74	*0.55				
4. Draw us closer together.	0.68	*0.55				
11. Cause conflict between us.		0.88				
9. Bring up issues of infidelity.		0.80				
1. Be beneficial.	0.66	*0.71				
2. Help protect us against HIV and STIs.	*0.65	0.70				

a. Extraction Method: Principal Components Analysis.

b. Rotation Method: Oblimin with Kaiser Normalization.

c. Rotation converged in 12 iterations.

* Bolded asterisked items with double loadings were assigned by conceptual meaningfulness.

Psychometric Properties of Scale 6, Perceived Subjective Norm

Scale Description

Scale 6 characteristics are presented in Table 4. The response rate was 100%.

Tests for Normality of the Data

Histograms, normal Q-Q plots and a highly significant K-S statistic were significant at

0.001, indicating that the distribution was highly skewed and non-normal.

Reliability Estimates for Scale 6, Perceived Subjective Norm

Inter-item Correlations

Inter-item correlations ranged between -0.27 and 0.82. Items 3 and 4 had a high correlation of 0.84 that indicated redundancy between the two items. However, these items addressed the women's perceptions about the influence of two different individuals on HPSC, and made it conceptual sense to keep in the scale.

Item and Scale Statistics

Individual item statistics are presented in Table 17 below. The item means ranged between -1.61 and 1.95, with an average of 1.11. The possible scores for this scale ranged between -2 and +2, and hence negative item means were meaningful and indicated general lack of agreement by respondents with the item scores. Most items for this scale had very high means indicating high agreement of responses among the women with all items except item 7. Item 7 "I really don't know what most people important to me think about my discussing safer sex with my partner", had a negative mean, indicating that women knew what important others thought. Item 2 and 8 had very low SD,

The responses for this scale resulted in negative item skewness indicating high agreement. Items 1 and 4 did not meet the criterion of +/-2 for extreme skewness. Items 2 and 6 had very high skewness. Item 7 was highly positively skewed. Corrected item-to-total correlations were low for items 2 and 6, indicating that these items were not sensitive indicators of the influence of significant others in safer sex communication for this sample of women. Cronbach's alpha for the scale was 0.67, which reflected moderate internal consistency reliability. Cronbach's alpha increased to 0.83 when item 7 was deleted, indicating that it had very little contribution to the scale reliability. Items 2 and 6 were kept for their conceptual relevance and item 7 was deleted. Therefore, the final Scale 6 contained 6 items.
Table 17, Item Statistics for Scale 6, Perceived Subjective Norm (N=280)

Item	Item mean	Item sd	Item skewness	Scale mean- if item deleted	Scale variance- if item deleted	Corrected item-to-total correlation
1. Most people important to me think I should discuss safer sex with my partner.	1.13	1.57	-1.37	6.62	12.04	0.65
2. My health care provider thinks I should discuss safer sex with my partner.	1.95	0.38	-9.13	5.80	20.75	0.20
3. My mother thinks I should discuss safer sex with my partner.	1.49	1.26	-2.25	6.26	13.09	0.76
4. My sister thinks I should discuss safer sex with my partner.	1.41	1.36	-1.99	6.34	12.30	0.78
5. My friend thinks I should discuss safer sex with my partner.	1.48	1.29	-2.23	6.27	12.73	0.78
6. My partner thinks I should discuss safer sex with him.	1.90	0.52	-6.47	5.85	20.50	0.17
7. I really don't know what most people important to me think about my discussing safer sex with my partner.	-1.61	1.09	2.69	9.36	25.68	-0.48
Total	1.11	+/-1	+/-2	7.75	21.58	0.30

Construct Validity for the 6-item Scale 6, Perceived Subjective Norm

Factor Analysis

The scale had a KMO of 0.75 and the Bartlett's score was highly significant (Chi sq. =976.25, df =15, p= 0.00) confirming adequacy of sample size and the legitimacy of factor analysis for the 6 items. Anti-image correlations were all above the criterion of 0.6 except for item 2 (0.50), and 6 (0.51), confirming poor but acceptable level of item sampling adequacy. The determinant for the scale was close to 0.00, indicating minimal multicollinearity and factorability of the scale. Communalities for all 6 items in Scale 7 were greater than the criterion of 0.60 (all > 0. 80) indicating that all items were reliable.

Factor Extraction

Two eigenvalues were greater than 1 and, together they accounted for a total of 80% variance explained. The Scree plot in Figure 8 below shows the point of inflection at 3, suggesting that there are three factors. However, only two factors were greater that the eigenvalues of 1 and they accounted for a high amount of scale variance. Therefore, only two factors were extracted. There were 6 (40%) non-redundant residuals with absolute values greater than 0.5 indicating a good fit of the observed model to the original model.





Scree Plot

Factor Rotation

Varimax Rotation with Kaiser Normalization was chosen to extract the most

meaningful factors because the inter-item correlations for the scale were low, indicating

that the factors could be independent. The factors, factor loadings and given names are

displayed below in Table 18. The component score covariance matrix confirmed

independence of extracted factors.

Items		Component
	1 Perceived influence of relatives and friends	2 Perceived Influence of partner and Health Care Provider
1. My sister thinks I should discuss safer sex with my partner.	0.92	
2. My mother thinks I should discuss safer sex with my partner.	0.90	
3. My friend thinks I should discuss safer sex with my partner.	.089	
4. Most people important to me think I should discuss safer sex with my partner.	0.81	
5. My health care provider thinks I should discuss safer sex with my partner.		0.91
6. My partner thinks I should discuss safer sex with him.		0.90

Table 18, Items, Factor Names and Factor Loadings for Scale 6, Perceived Subjective Norm(N=280)

a. Extraction Method: Principal Components Analysis.

b. Rotation Method: Varimax with Kaiser Normalization.

c. Rotation converged in 3 iterations

Psychometric Properties of Scale 7, Perceived Partner Response to HPSC

Description of the Scale

The description of Scale 7 is presented in Table 4. All women responded to all questions

in the scale typically within 14 minutes.

Test for Normality Assumption

Histograms, normal Q-Q plots and a significant K-S statistic indicated highly skewed, non-normal distribution of the data, prompting the use of non-parametric statistics for hypothesis tests with scores from the scale.

Reliability Assessment of Scale 7, Perceived Partner's Response to HPSC

Inter-item Correlations

Inter-item correlations ranged between 0.21 and 0.87. Most items in this scale were correlated, indicating that they measured the same domain, and they were homogenous across the sample of women in the study. High inter-item correlations were observed for items 4 and 8, (0.82); 9 and 10, (0.85); 17 and 18 (0.87); and 18 and 19, (0.87). These items were statistically redundant, but were retained for their unique conceptual meaningfulness.

Item and Scale Statistics

Item means for Scale 7 ranged from 1.36 to 1.96 with an overall average mean of 1.73. Item frequencies showed a high percentage of women (over 70%) who agreed with all items. Standard deviations were less than 1, indicating lack of variance. All items except item 7 were highly negatively skewed, indicating homogeneity of the responses and general agreement of respondents to the items.

Corrected item-to-total correlations were all above the cut point of 0.3, showing that all items were sensitive indicators of perceived partner's response to safer sex communication. Cronbach's alpha for the scale reflected a very high internal consistency reliability of 0.95. Cronbach's alpha-if-item-deleted were equal to or less than the scale alpha for all items, indicating that all items contributed to the scale's reliability. Individual item statistics are shown in Table 19 below.

Item:	Item mean	Item sd	Item Skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-to-total correlation	Cronbach's alpha if item deleted
If I asked my partner to talk about safer sex He would:							
1. Listen attentively.	1.78	0.67	-3.68	43.23	178.15	0.57	0.95
2. Add something to the discussion.	1.79	0.58	-3.49	43.21	177.02	0.73	0.95
3. Encourage me to continue with the discussion.	1.69	0.83	-3.04	43.32	172.477	0.71	0.95
4. Tell me that he is happy about the discussion.	1.68	0.84	-2.97	43.33	170.04	0.82	0.95
5. Argue in a logical manner.	1.72	0.73	-3.40	43.29	174.81	0.69	0.95
6. Show interest in further discussion.	1.62	0.92	-2.80	43.39	170.04	0.74	0.95
7. Ask me to postpone the discussion.	1.36	1.15	-1.38	43.65	172.82	0.48	0.95
8. Show discomfort about discussing sexual topics.	1.64	0.90	-2.24	43.37	172.70	0.64	0.95
9. Make me feel like I don't trust him.	1.64	0.90	-2.24	43.37	172.24	0.66	0.95
10. Make me feel like I'm unfaithful to him.	1.63	0.90	-2.19	43.38	171.84	0.68	0.95

Table 19, Item Statistics for Scale 7, Perceived Partner's Response to HPSC (N-280)

Item:	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-to-total correlation	Cronbach's alpha if item deleted
If I asked my partner to talk about safer sex He would:							
11. Make me feel like I don't love him.	1.68	0.86	-2.46	43.33	171.69	0.72	0.95
12. Try to convince me to stop or postpone the discussion.	1.60	0.95	-2.13	43.40	169.32	0.75	0.95
13. Try to change the topic.	1.68	0.87	-2.50	43.33	169.99	0.79	0.95
14. Plead or beg me to stop	1.63	0.93	-2.25	43.38	169.16	0.77	0.95
15. Flatter or use affection to avoid discussion	1.71	0.83	-2.62	43.30	172.66	0.71	0.95
16. Not respond or ignore me.	1.69	0.86	-2.57	43.38	169.16	0.77	0.95
17. Walk away from me.	1.76	0.75	-3.09	43.30	172.66	0.80	0.95
18. Threaten to withdraw material support if I bring up discussion again.	1.89	0.52	-4.93	43.32	170.70	0.66	0.95
19. Threaten to leave me.	1.93	0.45	-5.97	43.24	172.43	0.64	0.95
20. Withhold sex.	1.91	0.50	-5.50	43.11	179.14	0.50	0.95
21. Throw temper tantrums.	1.87	0.55	-4.32	43.08	180.77	0.71	0.95

Item:	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-to-total correlation	Cronbach's alpha if item deleted
If I asked my partner to talk about safer sex He would:							
22. Retreat from the discussion in a gentle manner.	1.63	0.97	-2.27	43.10	181.73	0.48	0.95
23. Be angry with me.	1.87	0.57	-4.40	43.14	178.05	0.66	0.95
24. Hit me.	1.96	0.36	-8.23	43.38	175.48	0.47	0.95
25. End the relationship.	1.93	0.45	-6.12	43.14	178.18	0.42	0.95
26. He would use safer sex practices.	1.75	0.93	-3.63	43.05	183.97	0.53	0.95
Totals/criterion	1.73	+/-1	+/-2	45	188.64	0.30	0.95

Construct Validity Testing of Scale 7, Perceived Partner's Response to HPSC Factor Analysis

The KMO statistic was very high (0.92) for the scale with a highly significant Bartlett's score (Chi Sq = 6494.74, df =325.0 and p<0.001), indicating the presence of latent variables and legitimacy of factor analysis. Item anti-image correlations were 0.60, which confirmed the adequacy of items for factor analysis.

Factor Extraction

All communalities were above the criterion of 0.6, except for items 7 (0.53), 8 (0.50), 22 (0.54), and 25 (0.54), all very close to the criterion and the items were all retained because of their conceptual relevance to the domain measured. Principal components analysis resulted in four eigenvalues that were greater than 1, which accounted for 69.61%.of the total variance explained. This was confirmed by the scree plot with the point of inflection at 4. Reproduced diagonals indicated that 85 (28%) non-redundant residuals had absolute values greater than 0.05, thus confirming the fit of the observed model correlations to that of the predicted model.

Factor Rotation

Oblimin rotation with Kaiser Normalization was preferred because of the non-normality of the data and evidence of inter-item correlations. The items, factors, factor loadings and names are presented in Table 20 below. Item 5 had double loadings, but it was meaningfully assigned to factor one since it addresses manipulative behavior.

Items:	Factor Name			
If I asked my partner to talk to talk about safer sex	1 Manipulation	2 Aggression	3 Engaging	4 Compliance with Use of safer sex practices
1. He would make me feel that I don't trust him.	0.93			
2. He would make me feel like I'm unfaithful.	0.93			
3. He would make me feel like I don't love him.	0.86			
4. He would flatter or use affection to avoid discussions.	0.72			
5. He would retreat from me.	*0.63			0.40
6. He would try to change the topic.	0.61			
7. He would not respond or ignore me.	0.60			
8. He would plead or beg me to stop.	0.58			
9. He would show discomfort about discussing sexual topics.	0.57			
10. He would try to convince me to stop or postpone the discussion.	0.57			
11. He would walk away from me.	0.42			
12. He would threaten to leave me.		0.90		
13. He would withhold sex.		0.88		
14. He would end the relationship.		0.76		
15. He would threaten to withdraw material support.		0.75		

 Table 20, Items, Factors and Factor Names for Scale 7, Perceived Partner Response (N=280)

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Items:	Factor Name			
Items: If I asked my partner to talk to talk about safer sex	1 Manipulation	2 Aggression	3 Engaging	4 Compliance with Use of safer sex practices
17. He would throw temper tantrums.		0.70		•
18. He would be angry with me.		0.54		
19. He would tell me that he is happy about the discussion.			-0.82	
20. He would add something to the discussion.			-0.81	
21. He would encourage me to continue with the discussion.			-0.80	
22. He would listen attentively.			-0.80	
23. He would show interest.			-0.73	
24. He would ask me to postpone the discussion.			-0.69	
25. He would argue in a logical manner.			-0.68	
26. He would use safer sex practices.				-0.60

a. Extraction Method: Principal Components Analysis.b. Rotation Method: Oblimin with Kaiser Normalization.

c. Rotation converged in 10 iterations.*Bolded asterisked factor loading had double loadings and was allocated under the relevant factor.

Psychometric Properties of Scale 8, Motivation to Comply with Wishes of Significant People Scale Description

A summary of the scale description is presented in Table 4. There was a 100% response rate to the scale items.

Tests for Normality of the Data

All items histograms were positively skewed, normal Q-Q plots were all curvilinear, and K-S statistics were highly positively skewed. Normal Q-Q plots were all curvilinear, and K-S statistics are all highly significant (0.00), indicating non-normality of the data.

Reliability for Scale 8, Motivation to Comply with Wishes of Significant Persons

Inter-item Correlations

High correlations greater than the criterion of 0.80 were observed between items 2 and 3 (0.83); and items 3 and 4 (0.81). These items were considered to be redundant, but they were retained because they are conceptually sound.

Item and Scale Statistics

A summary of the scale item statistics is shown in Table 21 below.

The item means were very high with an average group mean of 6.50. Items 1 and 5 had the lowest variances. All items had extreme modes of 7, and were highly negatively skewed, indicating homogeneity of the responses towards the extreme positive end of the scale. Corrected item-to-total correlations were below the criterion of 0.30 for items 1 and 5, indicating that they were not part of the scale's domain. The scale had adequate internal consistency reliability with Cronbach's alpha of 0.79. Cronbach's alpha if-item-deleted were above the scale alpha for items 1 and 5, showing that these items significantly lowered the scale's reliability. However these items were retained because of their conceptual fit.

Item:	Item mean	Item sd	Item skewness	Scale mean- if item deleted	Scale variance-if item deleted	Corrected item-to- total correlation	Cronbach's alpha if- item deleted
Generally speaking I would discuss safer sex with my partner							
1. If I think my health care provider would approve of it.	6.98	0.36	-16.73	25.54	31.96	0.23	0.83
2. If my mother approved of it.	6.28	1.91	-2.31	26.25	16.82	0.80	0.65
3. If my friend approved of it.	6.14	2.06	-2.03	26.39	15.01	0.87	0.62
4. If my sister approves of it.	6.28	1.87	-2.33	26.24	17.48	0.77	0.67
5. If my partner approves of it.	6.85	0.85	-5.89	25.67	30.02	.242	.822
Totals/criterion	6.50	+/-1	+/2	32.52	33.02	0.30	0.79

 Table 21. Item Statistics for Scale 8, Motivation to Comply (N=280)

Construct Validity Testing for Scale 8, Motivation to Comply with Wishes of Significant Persons

Factor Analysis

The KMO for Scale 8 was 0.71, and the Bartlett's score was significant (Chi Sq =695.92, df =10 and p= 0.001). This confirms that there were some related factorable variables, and that the sample size supports factorability. Item anti-image diagonals were close to or greater than 0.6 for all items, confirming adequacy of the sample size. The determinant was 0.08, indicating issues with multicollinearity among items, confirmed by the inter-item correlations.

Factor Extraction

Principal components analysis demonstrated that all communalities were greater than 0.6 indicating that all items were reliable. Two eigenvalues were greater than 1 and accounted for 79.60% of the cumulative total variance explained for Scale 8, which was confirmed by the scree plot. Reproduced residuals showed 3 (30%) non-redundant residuals greater than the absolute value of 0.05, confirming that the model fit was good.

Factor Rotation

Two factors were extracted by Oblimin rotation with Kaiser Normalization. The two factors were: Factor 1 consisting of 3 items (items 2, 3 and 4) pertaining to relatives (mother, sister and friend), and named **Motivation to comply with wishes of close female relatives and friends**. Factor 2 consisting of 2 items (1 and 5) pertaining to non relatives (health care provider and partner) and was therefore named **Motivation to comply with wishes of health and partner care provider**. The results are shown in Table 22 below.

	Con	nponent
Items:	1 Motivation to comply with wishes of close female relatives and friends	2 Motivation to comply with wishes of partner and health care provider.
Generally speaking I would discuss safer sex		
with my partner:	0.96	
1. If my friend approved of it.		
2. If my mother approved of it.	0.91	
3. If my sister approves of it.	0.91	
4. If I think my health care provider would approve of it.		0.85
5. If my partner approves of it.		0.83

Table 22, Pattern Matrix for the 5-item Scale 8, Motivation to Comply with Wishes of Significant People (N=280)

a. Extraction Method: Principal Component Analysis.

b. Rotation Method: Oblimin with Kaiser Normalization.

c. Rotation converged in 3 iterations.

Psychometric Properties of Scale 9, Perceived Self-Efficacy for HPSC

Description of the Scale

The scale is summarized in Table 4. Item 2 was worded negatively and therefore it was

reverse scored.

Tests for Normality of the Data

Histograms, highly positively skewed item means, highly significant K-S statistics and

curvilinear normal Q-Q plots confirmed non-normality of the data.

Reliability Assessment for Scale 9, Perceived self-efficacy for HPSC

Inter-item Correlations: All inter- item correlations ranged between 0.19 and 0.37 with a mean

of 0.31. All were below 0.5 and therefore they were considered relatively unrelated to each other.

Item and Scale Statistics

Item means ranged between 0.98 and 1.85 with an overall mean of 1.53. The standard deviations ranged from 0.75 to 1.41, and the variance 0.58 to 3.41. All items were negatively skewed, except item 2. The modes were all at 2 confirming this finding, and indicating the response homogeneity at the higher end of the scale. The scale mean was 4.59, variance was 4.72 and standard deviation was 2.17. Corrected item-to-total correlations were all above 0.3 indicating that all items were part of the same domain. Cronbach's alpha for the scale was 0.51, indicating low internal consistency reliability which could be an effect of the scale length and lack of variability in responses. Cronbach's alpha-if item deleted was greater than the scale alpha of 0.5 for item 2, indicating that this item lowered the scale's reliability, but it was retained because it was conceptually important. The results are shown in Table 23 below.

Item:	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance- if item deleted	Corrected Item- to-total Correlation	Cronbach's alpha if-item deleted
1. Discussing safer sex with my partner	1.76	0.76	-3.72	2.83	2.96	0.46	0.27
would be easy.							
2. Discussing safer sex with my partner	0.98	1.41	-0.67	3.61	1.56	0.33	0.54
would require more effort than expected.							
3. Discussing safer sex with my partner	1.85	0.75	-4.94	2.74	3.34	0.30	0.46
would help us to use safer sex practices.							
Totals/criterion	1.529	+/-1	+/-2	4.59	4.724	0.30	0.51

Table 23, Item Statistics for Scale 9. Perceived Self-efficacy for HPSC (N=280)

Construct Validity Assessment for Scale 9

Factor Analysis

Principal components analysis was used for factor analysis. The KMO was 0.59 and the Bartlett's score highly significant ($\chi 2$ =80.68, df =3, p=0.00). Anti-image diagonals were close to or greater than 0.6. The Reproduced correlation matrix showed 3 (100%) non-redundant residuals with absolute values greater than 0.05, indicating poor fit of the observed model to the predicted model correlations. The determinant was 0.75 indicating some worrisome multicollinearity. Thus this scale statistics did not support any factor extraction.

Psychometric Properties of Scale 10, Intentions for HPSC

Scale 10 is summarized in Table 4.

Tests for Normality Assumptions

The scale distribution was non-normal with highly skewed statistics, negative means, significant K-S statistics, curvilinear Q-Q plots and non-normal histograms.

Reliability Assessment for Scale 10, Intention for HPSC

Inter-item Correlations

High correlations greater than 0.8 were observed between items 6 and 7, (0.89); and 11 and 12, (0.88), indicating redundancy and they were considered for deletion.

Item and Scale Statistics

Table 24 below displays scale statistics. Of the 23 items, 17 items had negative means, indicating general disagreement by respondents with the items. Items 8 and 16 had high positive means, and high frequencies (94.5% and 94.6%, respectively) demonstrating the women's strong agreement about discussing HIV testing and male and condom use, which were direct HIV/AIDS protective strategies.

Item: I intend to discuss with my sexual partner	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-to-total Correlation	Cronbach's alpha-if item-deleted
1. Present and past number of sexual partners.	179	1.95	0.17	-10.53	244.66	0.43	0.83
2. Changing relationships frequently.	-1.08	1.65	1.27	-9.64	247.22	0.48	0.83
3. Exchanging sex for money or goods.	-1.70	1.05	3.24	-9.01	258.75	0.44	0.83
4. History of relationships with partners who had sex with many partners.	-1.43	1.05	2.02	-9.29	254.85	0.41	0.83
5. History of sex with a person who sells sex for money and goods.	-1.71	1.37	3.33	-10.53	259.34	0.42	0.83
6. History of STIs.	-0.81	1.03	0.88	-9.64	246.96	0.43	0.83
7. Having received STI treatment.	-0.72	1.84	0.76	-9.01	246.05	0.43	0.83
8. HIV testing and status.	1.80	0.85	-4.21	-9.29	271.18	0. 09	0.84
9. History of street drug use.	-1.10	1.67	1.32	-9.00	248.54	0.44	0.83

Table 24, Item Statistics for Scale 10, Intention for HPSC (N=280)

Item: I intend to discuss with my sexual partner	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-total correlation	Cronbach's alpha-if item-deleted
10. History of alcohol abuse.	-0.84	1.79	0.98	-9.90	241.89	0.53	0.82
11. History of having sex with a person who used street drugs or alcohol.	-0.69	1.87	0.73	-9.99	241.70	0.51	0.82
12. Homosexual behavior.	-1.68	1.08	3.10	-9.03	244.66	0.45	0.83
13. Bisexual behavior.	-1.69	1.06	3.20	-9.02	257.25	0.48	0.83
14. History of oral sex.	-1.60	1.20	2.68	-9.11	257.84	0.39	0.83
15. History of anal sex.	-1.60	1.20	2.68	-9.11	255.69	0.45	0.83
16. Male condom use.	1.83	0.79	-4.61	-12.54	272.22	0.06	0.84
17. Female condom use.	-0.88	1.76	-1.00	-11.59	247.77	0.43	0.83
18. Male circumcision.	0.89	1.74	-1.02	-11.60	257.08	0.26	0.84

Item: I intend to discuss with my sexual partner	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-total correlation	Cronbach's alpha-if item-deleted
19. Abstaining from sex while apart.	0.52	1.87	-0.55	-11.23	263.18	0.13	0.84
20. Having only one sex partner.	0.59	1.21	-2.61	-12.29	271.35	0.04	0.84
21. Dry sex.	0.53	1.90	0.55	-10.18	240.98	0.51	0.82
22. Rough sex.	-0.03	1.98	0.02	-10.69	236.00	0.57	0.82
23. Vaginal Cleansing.	-0.84	1.80	0.92	-9.87	241.62	0.53	0.82
Total/criterion	-0.47	+/-1	+/-2	-10.71	274.51	0.03	0.84

Ten other items had positive means close to zero, indicating weak agreement with the item by respondents, and moderate intentions for HPSC. Nine items (3, 4, 5, 8, 12, 13, 14, 15 and 16) were highly skewed. The scale mean was -10.71, suggesting overall low intentions for HPSC. Corrected item-to-total correlations were below the criterion of 0.3 for items 8, 16, 18, 19 and 20, raising questions about their fit with the conceptual domain. These items individually addressed different but conceptually relevant aspects of intention. The Cronbach's alpha showed high internal consistency reliability (0.84). All Cronbach's alphas if-item deleted were less than or equal to the scale's alpha, thus all contributed to the scale's reliability and were retained.

Construct Validity Testing for Scale 10, Intentions for HPSC

Factor Analysis

The KMO was 0.75 and Bartlett's score was highly significant ($\chi 2= 2823.94$, df=253 and p< 0.001), supporting sample size adequacy and factorability of the scale items. The determinant was close to 0.00 suggesting minimal inter-item multicollinearity.

Factor Extraction

Item communalities were at or greater than the criterion of 0.60 except for items 1, 4, 8, 16, 17, 19, 20 and 23. These items had low item reliability, but were retained for their conceptual fit and contribution to the scale alpha. Principal components analysis yielded seven eigenvalues greater than 1, which all together accounted for 66.81% of the total variance explained confirmed by the scree plot. However 5 factors were forced to eliminate single item factors.

Factor Rotation

Varimax rotation with Kaiser Normalization was used for factor rotation. Reproduced correlation matrix showed 61 (39%) non-redundant residuals with absolute values greater than 0.05 indicating a good fit between the observed and predicted models. Table 25 below displays the extracted 7 factors. Items 6, 7 and 23 had double loadings, but primarily loaded at Factor 3 where they were allocated for conceptual fit. Item 8 had factor loading below 0.40 and was not recorded, but it was allocated under factor 5 for conceptual fit.

	1 Unsafe Sexual Practices	2 Substance Abuse and Multiple Relationships	3 Genital Health Concerns	4 Commercial Sexual Practices	5 Safer Sex Practices
13. Bisexual behavior	0.88	`			
12. Homosexual behavior	0.82				
14. History of oral sex	0.76				
15. History of anal sex	0.76				
9. History of street drug use		0.72			
10. History of alcohol abuse		0.72			
11.History of having sex with a person who used street drugs or alcohol		0.72			
2. Changing relationships frequently		0.67			
1. Present and past number of sexual partners		0.45			
21. Dry sex			0.78		
6. History of STIs			*0.76	0.42	
7. Having received STI treatment			*0.74	0.43	

Table 25, Items, Factors Names and Loadings for Scale 10, Intentions for HPSC (N=280)

	1 Unsafe Sexual Practices	2 Substance Abuse and Multiple Relationships	3 Genital Health Concerns	4 Commercial Sexual Practices	5 Safer Sex Practices
22. Rough sex			0.71		
23. Vaginal Cleansing		0.41	*0.48		
5. History of sex with a person who sells sex for money and goods				0.70	
3. Exchanging sex for money or goods				0.67	
4. History of relationships with partners who had sex with many partners				0.60	
18. Male circumcision					0.73
19. Abstaining from sex while apart					0.61
20. Having only one sex partner					0.54
17. Female condom use					0.52
18. Male condom use					0.48
8. HIV testing and status	4 A				Not recorded

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 8 iterations.

Psychometric Properties of Scale 11, Safer Sex Practices

This was an outcome scale asking the women to indicate how frequently they have used the listed safer sex practices in the past 3 months. The scale is summarized in Table 4. The response rate was 100%, and the scale was completed in 2 minutes.

Tests for Normality

Tests for normality assumptions (histograms, curvilinear Q-Q plots, and highly significant K-S statistics) showed that the data distributions for items were non-normal.

Reliability Assessment for Scale 11, Safer Sex Practices

Inter-item Correlations

Inter-item correlations ranged between -0.21 and 0.33 and were very low, indicating poorly related items.

Item and Scale Statistics

Items 1 and 4 had very high means and very high negative skewness statistics, indicating very high agreement with these items by respondents. Therefore, most women agreed that they used male condoms, and maintained monogamous relationships in the past 3 months. Item 5 was about the use of microbicides, which were not known to most of the respondents at the time of the study, so it was deleted. This item also had high mean if item deleted, high variance if item-deleted, low corrected item-to-total correlation, and a high alpha-if item deleted than the scale alpha. Corrected item-to-total correlations were below the criterion of 0.3 for the remaining 4 items and therefore they may not be part of the domain. Therefore, the scale is likely to be an index of mutually exclusive safer sex practices. Cronbach's alpha-if-item deleted for item 5 was 0.33, which was greater than the scale alpha of 0.28. This probably resulted from the fact that there was high homogeneity of responses to this item in this sample and high agreement on none use of the method. Cronbach's alpha increased slightly to 0.33 when item 5 was deleted. Factor analysis was not conducted for this scale because it failed to meet the criteria for internal consistency reliability (Waltz, Strickland, & Lenz, 2005). The item statistics are shown in Table 26 below.

Items	Item mean	Item sd	Item skewness	Scale mean-if item deleted	Scale variance-if item deleted	Corrected item-to- total correlation	Cronbach's alpha if item deleted
I used the following safer sex practices with my male sexual partner in the past 3 months:							
1. Use of male condom.	4.78	0.86	-3.83	8.53	5.863	0.21	0.18
2. Use of female condom.	1.74	1.46	1.67	11.57	4.57	0.13	0.27
3. Use of abstinence.	2.07	1.35	0.91	11.24	4.75	0.15	0.23
4. Maintenance of a monogamous relationship.	4.73	0.98	-3.43	8.58	5.47	0.21	0.17
5. Use of Microbicides	1.02	0.25	14.4	13.31	7.50	-0.12	0.33
Totals/criterion	2.87	+/-1	+/-2	13.31	7.50	0.30	0.28

 Table 26, Item Statistics for Scale 11, Safer Sex Practices (N=280)

A Summary of Psychometric Properties of the HPSC Scales

The 11 HPSC scales were assessed for their internal consistency reliability and for their structure using factor analysis where appropriate. Seven of the scales had internal consistency reliability coefficients which were above the minimum criterion of 0.70 (Nunnally & Burnstein, 1994; Waltz et.al., 2005) for new scales. These included scales 3, 4, 5, 6, 7, 8 and 10. Scales 1, 2, and 9 had low internal consistency reliabilities between 0.51 and 0.69. These scales were characterized by highly homogenous responses, and kurtosis, which can result in spuriously low internal consistency reliability coefficients. Scale 11, Safer Sex Practices, had an internal consistency reliability of 0.33 after deletion of item 5. It also had low item-to-total coefficients. The items on this scale consist of relatively unrelated behaviors characteristic of a behavioral index. The structure of most of the scales was revealed to be multidimensional based on the results of factor analysis. None of the 11 scales reflected the presence of more than one dimension. A summary of the results of internal consistency reliability and factor analysis for the 11 scales is presented in Table 27.

Scale	Initial No. of Items	No. Items Deleted	No. Items Left	Evidence of Reliability (Cronbach's alpha)	Factor Analysis (no. factors that supported construct validity)	Extracted Factors and Factor Names
1. The Meaning of	7	1	6	$\alpha = 0.57$ for 6 items	3 conceptually relevant factors	1. Initiating Safer Sex
HPSC.						2. Sharing Past History
						3. Negotiating Safer Sex
2. HPSC	22 None 22 $\alpha = 0.70$ 7 conceptually relevant and		1. Risky Sexual Practices.			
Content.					culturally meaningful underlying factors	2. Risky Sexual Relationships.
						3. History of STIs and Treatment.
						4. Substance Abuse.
						5. Genital Health Concerns
						6. Risky Sexual Behavior and Desire for Self-Protection.
						7. Use of Safer Sex Practices

 Table 27, Summary of Reliability and Factor Analysis for the 11 HPSC Measures.

Scale	Initial No. of Items	No. Items Deleted	No. Items Left	Evidence of Reliability (Cronbach's alpha)	Factor Analysis (no. factors that supported construct validity)	Extracted Factors and Factor Names
3. HPSC Influence	19	None	19	α= 0.76	5 conceptually relevant culturally meaningful	1. Manipulation.
Tactics					underlying factors	2. Bargaining
						3. Decisiveness.
						4. Confrontation
						5. Aggressive Persistence.
4.HPSC Influencing Factors	29	6	23	α==0.90	5 conceptually relevant and culturally meaningful factors	1. Couple's Knowledge of HIV/AIDS and STI treatment, prevention, and control
						2. Relationship Characteristics.
						3. Partner's Relational Characteristics.
						4. Partner's Health Perceptions and Concerns.
						5. Respondent's Desire to be Healthy.
5. Attitude	11	2	9	α= 0.87	2 conceptually relevant and	1. Health Related Benefits of HPSC.
towards HPSC.					culturally meaningful factors	2. Relationship Benefits and Concerns.

Scale	Initial No.No.Evidence ofof ItemsItemsItemsDeletedLeft(Cronbach's Alpha)		Factor Analysis	Extracted Factors and Factor Names		
6. Perceived Subjective Norm.	7	1	6	α= 0.83	2 conceptually relevant and culturally meaningful factors	1. Perceived Influence of Relatives and Friends.
						2. Perceived Influence of Health Care Provider and Partner.
7. Perceived	26	0	26	α= 0.95	4 conceptually relevant and	1. Manipulation.
Partner's Response.	· c		culturally meaningful factors	2. Aggression.		
						3. Engaging.
						4. Compliance with Safer Sex Practices.
8. Motivation to Comply with wishes of	5	0	5	α= 0.79	2 conceptually relevant and culturally meaningful factors	1. Motivation to Comply with Wishes of Close Relatives and Friends.
significant others.						2. Motivation to Comply with Wishes of Health Care Providers and Partner.
9. Self- Efficacy for HPSC.	3	0	3	α= 0.51	Did not meet criteria for factor analysis	Did not meet criteria for factor analysis

Scale	Initial No. No. No. Evidence of of Items Items Items Reliability Deleted Left (Cronbach's Alpha			Factor Analysis	Extracted Factors and Factor Names				
10.Intentions for HPSC	23	0	23	α= 0.95	5 conceptually relevant and culturally meaningful factors	1. Unsafe Sexual Practices			
						2. Substance Abuse and Multiple Relationships.			
						3. Genital Health Concerns			
						4 Commercial Sex Practices.			
						5. Safer Sex Practices.			
11.Safer Sex Practices	5	1	4	α= 0.33 (An Index of safer sex pracices)	Did not support factor analysis (An Index of Safer sex Practices)	Not Applicable			

Hypothesis Testing for HPSC Scales

The following hypotheses were tested:

H 1: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with having discussed HPSC content with their male sexual partners in the past three months.

H 2: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with intention for HPSC before the next sexual encounter.

H 3: Women's perceptions (attitudes, perceived subjective norm, perceived male sexual partner's response, motivation to comply with wishes of significant others, and perceived self-efficacy) towards HPSC will be associated with having used safer sex practices (male condom, female condom, abstinence and monogamy) in the past three months.

Bivariate Correlations

The data for this analysis were highly skewed and violated regression assumptions. Therefore, correlation analysis was conducted using bivariate Spearman Rank correlations. The significant results are discussed below and presented in Table 28 indicating associations among the study variables.

- HPSC Content discussed was positively correlated with Intention, Perceived Subjective Norm, Motivation to Comply, and Perceived Self-efficacy, and negatively correlated with Partner's HIV Status such that when the HIV status was negative, there was increased discussion of HPSC content.
- Intention for HPSC was positively correlated with HPSC Content Discussed, Respondent's HIV status and Female Condom Use, and negatively correlated with Income Difference, Perceived Partner's Response and Perceived Self-efficacy (PSE).

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Stronger Intentions correlated with negative Perceived Partner's Response and negative Perceived Self-efficacy.

- Male Condom Use was positively correlated with Perceived Partner's Response and Monogamy (MG)
- 4. Female Condom Use was positively correlated with Intentions and Abstinence, and negatively correlated with Income Difference, Perceived Subjective Norm and Perceived Partner's Response. Female Condom use tended to be lower when the Income Difference was greater, and when Perceived Subjective Norm and Perceived Partner's Response were more positive towards the use of HPSC.
- 5. Abstinence (AB) was positively correlated with Female Condom Use and negatively correlated with Motivation to Comply.
- Monogamy was positively correlated with Attitude, Perceived Self-efficacy and Male Condom use.
- 7. Income Difference was positively correlated with Age Difference, Perceived Subjective Norm, Perceived Partner's Response, Motivation to Comply, Perceived Self-efficacy, and negatively correlated with Female Condom Use such that an increase in income Difference leads to a decrease in Female Condom Use.
- Respondents HIV Status is positively correlated with Intentions, and Partner's HIV status, and, negatively correlated with Perceived Subjective Norm. When the Respondent's HIV status was negative Perceived Subjective Norm tended to be greater.
- Attitude was positively correlated with Perceived Subjective Norm, Perceived Partner's Response, Perceived Self-efficacy and Monogamy.
- Perceived Subjective Norm was positively correlated with HPSC Content, Income Difference, Attitude, Perceived Partner's Response, Motivation to Comply and Perceived Self-efficacy. It was negatively correlated with Respondent's HIV status and Female

Condom Use such that when Perceived Subjective Norm was positive, Respondent's HIV status and Female Condom Use decreased.

- 11. Perceived Partner's Response was positively correlated with Income Difference, Attitude, Perceived Subjective Norm, Motivation to Comply, and Perceived Self-efficacy, Male Condom Use, and negatively correlated with Intentions and Female Condom Use, such that Perceived Partner's Response increased with decreased Intentions and Female Condom Use decreased.
- 12. Motivation to comply with wishes of significant others was positively correlated with HPSC Content discussed, Income Difference, Perceived Subjective Norm, Perceived Partner's Response and Perceived Self-efficacy, and negatively correlated with Abstinence, which decreased with high Motivation to Comply with wishes of significant others.
- 13. Age Difference was positively correlated with Income Difference.

The correlations are displayed I Table 28 below.

	1. Cont	2. Intent	3. AgeDif	4. IncDiff	5. RHIV	6. PHIV	7. Att.	8. PSN	9. PPR	10. Mot	11. PSE	12. MC	13. FC	14. AB	15. MG
. Cont.	1.00	0.39 **	-0.02	0.08	0.06	-0.14*	0.03	0.18**	0.05	0.19**	0.14*	0.01	0.07	-0.05	0.08
2. Int.		1.00	-0.11	-0.18**	0.13*	-0.03	0.02	-0.06	-0.18**	-0.08	-0.15*	-0.01	0.19**	-0.02	-0.10
3. AgeDif			1.00	0.23**	0.10	0.01	0.07	-0.03	-0.04	0.01	0.06	0.04	-0.09	-0.03	-0.03
IncDiff				1.00	-0.03	-0.10	0.11	0.16**	0.15*	0.16**	0.19**	-0.04	-0.13*	-0.03	0.01
5. RHIV					1.00	0.37**	0.01	-0.17**	-0.09	-0.12	-0.10	-0.01	-0.00	0.06	-0.03
6. PHIV						1.00	-0.02	-0.10	-0.08	-0.07	-0.08	-0.02	-0.11	0.08	-0.06
. Att.							1.00	0.15*	0.33**	0.09	0.16**	0.12	-0.03	-0.09	0.16 [;]
8. PSN								1.00	0.42**	0.70**	0.18**	-0.01	-0.15*	-0.09	0.00
. PPR									1.00	0.46**	0.35**	0.13*	-0.13*	-0.09	0.08
0. Mot.										1.00	0.23**	0.07	-0.08	-0.13*	0.06
1. PSE											1.00	0.11	-0.09	-0.09	0.18
2. MC												1.00	0.00	0.00	0.28
3. FC													1.00	0.34**	0.01
4. AB														1.00	0.06
5. MG															1.00

Table 28, Spearman Correlations between Predictors and Outcomes (N=280)

Acronyms in Table 28 are explained below

Content-HPSC Content Discussed

Int.-Intentions for HPSC

AgeDiff.-Age difference between respondent and partner

RHIV.-Respondent's HIV status

PHIV.-Partner's HIV status

Att.-Attitudes towards HPSC

PSN.-Perceived Subjective Norm

PPR.-Perceived Partner's Response

Mot.-Motivation to Comply

PSE.-Perceived Self-efficacy

MC,-Male Condom Use

FC.-Female Condom Use

AB.-Abstinence

MG.-Monogamy (Maintaining a monogamous relationship)

Regression Analyses

Hierarchical Regression Analyses

In order to efficiently analyze the hypotheses, each outcome was regressed on the five predictor variables of Attitude, Perceived Subjective Norm, Perceived Partner's Response, Motivation to Comply, and Perceived Self-efficacy. These independent variables were entered en block after the covariates of respondent's HIV status, partner's HIV status, age difference and income difference. Hierarchical linear regression was used to test the relationship between Attitude, Perceived Subjective Norm, Perceived Partner's Response, Motivation to Comply, and Perceived Self-efficacy with dependent variables of HPSC Content discussed and Intentions for HPSC. Hierarchical logistic regression was used to test the relationship between the independent variables and the four safer sex practices variables of Male Condom Use, Female Condom Use, Abstinence, and Maintenance of a Monogamous relationship or in short monogamy. Each of the safer sex practices in the Safer Sex Practices Scale was examined. These safer sex practices were dichotomized where "1" represented consistent use and "0" for inconsistent use.

Hierarchical Linear Regression Analyses Results

HPSC Content

Hierarchical linear regression helped to determine if the addition of predictors improved the significance of the relationship of HPSC content discussed beyond that of the covariates and Intention. Intention was added as a covariate due to the significant correlation with HPSC content discussed, and based on the relationships suggested by the conceptual model. In the first block, respondent and partner's HIV status were added. The model was significant with F change of 4. 88, p < 0.008 and adjusted R^2 =0.03. The partner's HIV status had a negative influence on HPSC content discussed. Next, Intentions was added and resulted in a significant increase in the R^2 to 0.14 and F change= 38.47, p < 0. 001. The final block of five independent variables showed a small increase in R^2 to 0.20 (20%) of the variance in HPSC content discussed, F change= 4.84, p < 0.001 as shown in Table 29 below.

Table 29. Model Summary for Predictors and Covariates of HPSC Content Discussed	ł
(N=280)	

			Change Statistics								
Model	R	R ²	Adj. R ²			F Change	Df 1	Df2	P-value		
1	0.18 ^a	0.03	0.03	10.71	0.03	4.88	2	277	0.008		
2	0.39 ^b	0.15	0.14	10.05	0.12	38.47	1	276	< 0.001		
3	0.47 ^c		0.20	9.72	0.07	4.84	2	271	<0.001	1.90	

a. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status.

b. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status, Intentions.
c. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status, Intentions, Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, Perceived Self-efficacy.

Dependent Variable: HPSC Content Discussed
ANOVA results confirmed the above findings as shown in Table 30 below.

Model	Sum of Squares (SS)		df	Mean Square(MS)	F	P-Value	
1	Regression	1118.65	2	559.32	4.88	0.008^{a}	
	Residual	31754.72	277	114.64			
	Total	32873.37	279				
2	Regression	5003.23	3	1667.74	16.52	0.001 ^b	
	Residual	27870.14	276	100.98			
	Total	32873.37	279				
3	Regression	7289.33	8	911.17	9.65	0.001 ^c	
	Residual	25584.04	271	94.41			
	Total	32873.37	279				

Table 30, ANOVA Results for HPSC Content Discussed (N=280)

a. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status.
b. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status, Intentions
c. Predictors: (Constant), Partner's HIV Status, Respondent's HIV Status, Intentions, Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, Perceived

Self-efficacy.

Perceived Subjective Norm, and Perceived Self-efficacy were significant contributors to the variance in HPSC Content Discussed beyond that of Partner's HIV Status, Respondent's HIV Status (negative contribution), and Intentions for HPSC as indicated in Table 31 below. When women had more positive perceived subjective norm and positive perceived self-efficacy, they were 2.7 times and 3.4 times more likely to report having discussed HPSC content in the past three months respectively. When the women had high intentions for HPSC, they were more likely to report having discussed HPSC content in the past 3 months. The women's positive HIV status increased the likelihood of having discussed HPSC content by 2.7 times, whereas the partner's positive HIV status decreased the likelihood of having discussed HPSC content by 1.6 times.

Model	Variables	Unstandar Coefficient		Standardized		
		Beta	STD Error	Beta	t	P-value
1	RHIV	2.49	1.03	0.15	2.42	*0.016
	PHIV	-2.03	0.75	-0.17	-2.72	*0.007
	Constant	51.64	0.86		60.11	*0.001
2	RHIV	1.90	0.97	0.12	1.96	0.051
	Int	0.23	0.04	0.35	6.20	*0.001
	PHIV	-1.58	0.71	-0.13	-2.24	*0.026
	Constant	54.00	0.89		60.56	*0.001
3	RHIV	2.67	0.95	0.17	2.79	*0.006
	PHIV	-1.57	0.68	-0.13	-2.29	*0.023
	Int	0.25	0.04	0.37	6.77	*0.001
	Att	-2.41	2.04	-0.07	-1.18	0.240
	PSN	2.71	1.18	0.17	2.30	*0.022
	PPR	-0.16	1.29	-0.01	-0.13	0.900
	Mot	-0.81	2.77	-0.02	-0.29	0.770
	PSE	3.36	0.99	0.20	3.39	*0.001
	Constant	49.79	4.42		11.23	*0.001

Table 31, Beta Coefficients for HPSC Content Discussed (N=280)

*Significant findings at P=0.05-0.001

The Durbin-Watson statistic for this model was 1.90, which was >1.5 and <3.5,

confirming that the regression assumption of independent errors was tenable. The output showed that the Variance Inflation Factor (VIF) ranged between 1.03 and 1.16, which is far less than the criterion of 10, denoting that there is no need to worry about multicollinearity. These diagnostics indicated that the results could be interpreted with reasonable confidence.

Intention for HPSC as an Outcome

Hierarchical regression was conducted to determine if the addition of the predictors improved the prediction of Intention beyond that of the covariates. The covariates entered in the first block made no significant contribution to the model. The 5 variables entered in the second block resulted in a significant model with adjusted R^2 of 0.03, F of 2.8 and p = 0.02. Results are displayed in Table 32 below.

Change Statistics										Durbin- Watson
Model	R	\mathbf{R}^2	Adj. R ²	SE	R ² Change	F Change	Df1	Df2	P- value	
1	0.22 ^a	0.05	0.03	16.31	0.05	2.80	5	274	0.02	1.38

Table 32, Model Summary for Predictors Intentions for HPSC (N=280)

a. Predictors: (Constant), Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, Perceived Self-efficacy. Dependent Variable: Intentions for HPSC.

The results are confirmed by the ANOVA Table 33 below.

Mode l		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3729.012	5	745.802	2.805	0.017 ^a
	Residual	72859.19 7	274	265.909		
	Total	76588.20 9	279			

Table, 33, ANOVA Results for Intention for HPSC (N=280)

a. Predictors: (Constant), Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, Perceived Self-efficacy. Dependent Variable: Int

The variables contributing to this change are Attitudes and Perceived Partner Response.

The biggest contributor to the variance explained was Attitude. Women with positive attitude

were 10.3 times more likely to have high intentions for HPSC before the next sexual encounter.

Perceived Partner's response had as negative influence on intentions such that when perceived

partner's response increased, intentions for HPSC decreased. Model 2 coefficients are shown in Table 34 below.

Durbin-Watson of 1.35 showed that the regression assumption of independent errors was met. The histogram showed a normal distribution, and the normal p-p plots indicated that regression assumptions were met confirming that the model fit was good. Tolerance and VIF were all within expected limits, indicating no collinearity among variables.

Model	Variables	Unstandard Coefficients		Standardized Coefficients		
		Beta	STD Error	Beta	t	P-value
1	Att	10.34	3.36	0.19	3.08	*0.002
	PSN	1.31	1.95	0.02	0.67	0.501
	PPR	-4.26	2.15	-0.14	-1.98	*0.048
	Mot	1.12	4.64	0.02	0.24	0.809
	PSE	-2.70	1.66	-0.10	-1.63	0.105
	Constant	-22.93	7.18		-3.19	*0.002

Table 34, Beta Coefficients for Intention for HPSC (N=280)

*Significant findings at p=0.05-0.001

Hierarchical Logistic Regression Analysis Results

Male Condom Use:

A test of the full model against the constant only model was statistically significant, with Chi Sq = 7.03, p = 0.008. Using Nagelkerke's R square the model accounted for 6% of the variance. Table 35 displays the regression co-efficient, Wald statistics, Exp.B or odds ratios (OR) and 95% confidence intervals for the variables in the equation. Based on the Wald statistic, only attitudes toward HPSC significantly predicted male condom use (p = 0.003). For every unit increase in attitude, the odds of having consistently used the male condom increased 3.56 times (or 250%).

	Variables	В	SE	Wald	df	Sig.	Exp B	95% CI fo	or Exp(B)
							(OR)	Lower	Upper
Step 1(a)	Att.	1.27	0.43	8.68	1	0.003	3.56	1.53	8.26
	Constant	0.20	0.81	0.06	1	0.80	1.22		

Table 35, Variables in the Equation for Male Condom Use (N=280)

a. Variables entered on step 1: Attitude

Female Condom Use

A test of the full model against the constant only model was statistically significant, with Chi Sq = 24.83, p < 0.001. Using Nagelkerke's R square the model accounted for 14.7% of the variance. Table 36 displays the regression coefficients, Wald statistics, odds ratios (Exp B) and 95% confidence intervals for the variables in the equation. Based on the Wald statistic, Intention, Perceived Subjective Norm, Perceived Partner's Response, and Motivation to Comply with Wishes of Significant Others were significant predictors of having consistently used the female condom use in the past 3 months. Both Perceived Subjective Norm and Perceived Partner's Response had negative influence on consistent female condom use, and odds ratios (Expn. B) of 0.52 and 0.49 respectively showed a slight decline in the odds of using a female condom use. Women with negative Perceived Subjective Norm and negative Perceived Partner's Response were half the time less likely to report having used a female condom in the past 3 months. Motivation accounted for the largest increase, with an odds ratio of 10.39. For every unit increase in motivation, there was a 10.39 times higher reported consistent use of female condoms.

Table 36, ^v	Variables in the l	Equation for Fema	le Condom	Use (N=280)
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								95.0% C.I. for EXP(B		
Variables		В	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper	
Step 1(a)	Int.	0.03	0.01	6.37	1	0.01*	1.03	1.01	1.05	
	Att.	1.03	0.90	1.31	1	0.25	2.81	0.48	16.50	
	PSN	-0.65	0.28	5.20	1	0.02*	0.52	0.30	0.91	
	PPR	-0.72	0.36	4.09	1	0.04*	0.49	0.24	0.98	

 Variables	В	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper	
 Mot.	2.34	0.87	7.17	1	0.01*	10.39	1.87	57.65	
PSE	-0.28	0.28	0.99	1	0.32	0.76	0.44	1.31	
 Constant	-3.16	1.93	2.68	1	0.10	0.04			

95.0% C.I. for EXP(B)

a. Variable(s) entered on step 1: Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, and Perceived Self-efficacy. *Significant findings are marked in asterisks

Abstinence as an Outcome

A test of the full model against the constant only model was not statistically significant, with Chi Sq = 4.54, p =0.48. Based on Nagelkerke's R square the model accounted for very negligible amount of 3.0% of the variance. Table 37 displays the regression coefficients, Wald statistics, odds ratios and 95% confidence intervals for the variables in the equation. Based on the Wald statistic, the model was not significant. None of the predictors or covariates were significantly related to having used abstinence in the past 3 months.

Table 37.	Variables in	the Equati	on for Abs	stinence (N=280)
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							95.0% C.	I. for EXP(B)
١	ariables	В	S.E.	Wald	Sig.	Exp(B) (OR)	Lower	Upper
Step 1(a)	RHIV	0.14	0.31	0.19	0.66	1.15	0.62	2.12
	PHIV	0.15	0.23	0.43	0.51	1.16	0.74	1.82
	Int.	-0.01	0.01	1.08	0.30	0.99	0.96	1.01
	Att.	0.01	0.07	0.02	0.90	1.01	0.88	1.16
	PSN	0.03	0.06	0.32	0.57	1.04	0.92	1.17
	PPR	-0.01	0.02	0.24	0.62	0.99	0.96	1.03
	Mot.	-0.06	0.05	1.25	0.26	0.95	0.86	1.04
	PSE	-0.04	0.09	0.23	0.63	0.96	0.81	1.14
	Constant	-19.54	19444.73	0.00	1.00	0.001		

a. Variable(s) entered on step 1: Partner's HIV Status, Respondent's HIV Status, Intentions, Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, and Perceived Self-efficacy.

Df = 1 for all variables.

Monogamy as an Outcome

A test of the full model against the constant only model was statistically significant, with Chi Sq = 30.31, p =0.001. Based on Nagelkerke's R square the model accounted for 24.20% of the variance. Table 38 displays the regression coefficients, Wald statistics, odds ratios (Exp B) and 95% confidence intervals for the variables in the equation. Based on the Wald statistic, Intentions for HPSC, Attitude towards HPSC and Perceived Self-efficacy were significant contributors of having maintained a monogamous relationship. Intention had negative influence on monogamy. Therefore, women with low intentions were less likely to report having maintained monogamous relationships in the past 3 months. Women with positive Attitude were 10.12 times more likely to have maintained monogamous relationships in the past 3 months, and those with positive Perceived Self-efficacy were 2.34 times more likely to report having maintained a monogamous relationship in past 3 months.

							95.0% C.I	C.I. IOF EAP(B)	
,	Variables		S.E.	Wald	Sig.	Exp(B) (OR)	Lower	Upper	
Step1(a)	RHIV	-0.25	0.38	0.45	0.502	0.78	0.37	1.63	
	PHIV	-0.19	0.28	0.40	0.512	0.83	0.48	1.45	
	Int.	-0.03	00.01	4.42	*0.036	0.97	0.94	1.00	
	Att.	2.31	0.61	14.25	*0.001	10.12	3.04	33.64	
	PSN	-0.65	0.68	0.92	0.337	0.52	0.137	1.97	
	PPR	-0.70	0.58	1.44	0.230	0.50	0.16	1.55	
	Mot.	1.81	1.322	1.87	0.172	6.09	0.46	81.26	

Table 38,	Variables in	n the Eq	uation for	Monogamy	(N=280)

95.0% C I for EXP(B)

						95.0% C.I	. for EXP(B)
 Variables	В	S.E.	Wald	Sig.	Exp(B) (OR)	Lower	Upper
 PSE	0.85	.370	5.29	*0.021	2.34	1.13	4.83
Constant	-2.421	1.314	3.39	0.065	0.09		

a Variable(s) entered on step 1: Intention, Partner's HIV Status, Respondent's HIV Status, Intentions, Attitudes, Motivation to Comply, Perceived Subjective Norm, Perceived Partner's Response, and Perceived Self-efficacy.

*Significant findings are marked in asterisks, Df= 1 for all

Summary of Hypotheses Tests

Table 34 below presents a summary of hypotheses tested and major results.

Independent Variable	Dependent Variable	Test	Results
Attitude Towards HPSC	1. HPSC Content Discussed.	Hierarchical Linear Regression	There was inadequate evidence to conclude that women's attitude towards HPSC had an influence on having discussed selected HPSC content in the past 3 months.
	2. Intentions for HPSC		Women's positive attitude increased their likelihood of having high intentions for HPSC before the next sexual encounter 10.34 times (β =10.34, p= 0.002).
	3. Use of Safer SexPractices:a) Male Condom	Hierarchical Logistic Regression	Women's positive attitude increased the odds of reporting having used a male condom in past 3 months 3.56 times (Exp. B (O)=3.56, CI=1.53 to 89.26, p=0.003).
	b) Female Condom	"	There was inadequate evidence to conclude that women's attitude towards HPSC had an influence on having used a female condom in the past 3 months.
	c) Abstinence	"	There was inadequate evidence to conclude that women's attitude towards HPSC had an influence on reporting having used abstinence in the past 3 months.
	d) Monogamy		Women's positive attitude increased the odds of reporting having maintained monogamous relationships in the past 3 months 10.12 times (Exp. B (O)=10.12, CI=3.04 to 33.64, p=0.001).

Table 39. Summar	v of Hypotheses	s Tests Based on	Regression Analyses

Independent Variable	Dependent Variable	Test	Results
Perceived Subjective Norm	1. HPSC Content	Hierarchical Linear Regression	Controlling for intentions respondent's and partner's HIV status(Adjusted R^2 =0.20), women's positive perceived subjective norm for HPSC increased the likelihood of having discussed HPSC content in the past 3 months 2.71 times (β =2.71, p= 0.022).
	2. Intentions for HPSC	"	There was inadequate evidence to conclude that women's perceived subjective norm had an influence on their intentions for HPSC.
Perceived Subjective Norm (cont.)	3. Use of Safer SexPracticesa) Male Condom	Hierarchical Logistic Regression	There was inadequate evidence to conclude that women's perceived subjective norm had an influence on male condom use in the past 3 months.
	b) Female Condom	"	Controlling for intentions, women's negative perceived subjective norm decreased the odds of having consistently used female condoms by half in the past 3 months. (Exp. B (O) = 0.52 , CI= 0.30 to 0.91 , p= 0.02).
	c) Abstinence	"	There was inadequate evidence to conclude that a woman's perceived subjective norm had an influence on use of abstinence in the past 3 months.
	d) Monogamy	"	There was inadequate evidence to conclude that women's perceived subjective norm had an influence on having maintained monogamous relationships in the past 3 months.
Perceived Partner's Response	HPSC Content Discussed	Hierarchical Linear Regression	There was inadequate evidence to conclude that women's perceived partners' response had an influence on having discussed selected HPSC content in the past 3 months.
	Intentions for HPSC	"	Women's positive perceived partners' response decreased the likelihood of having intentions for HPSC before the next sexual encounter 4.26 times (β = -4.26, p=0.48).

Independent Variable	Dependent Variable	Test	Results
	Use of Safer S Practices a) Male Condo	Logistic	response had an influence on having used male condoms in the past 3
	b) Female Con	idom "	Controlling for intentions, women's negative perceived partners' response decreased the odds of having used female condoms in the past 3 months by half (Exp B=0.49, CI= 0.24 to 0.98 , p= 0.04).
Perceived Partner's Response (cont.)	c) Abstinence	Hierarchical Logistic Regression	There was inadequate evidence to conclude that women's perceived partners' response had an influence on the use of abstinence in the past 3 months.
	d) Monogamy	"	There was inadequate evidence to conclude that women's perceived partners' response had an influence on having maintained monogamous relationships in t past 3 months.
Motivation to Comply	1. HPSC Content Discussed	Hierarchical Linear Regression	There was inadequate evidence to conclude that women's motivation to comply with wishes of significant others had an effect on having discussed HPSC contering the past 3 months.
	2. Intentions for HPSC	"	There was inadequate evidence to conclude that women's motivation to comply with wishes of significant others had an influence on their intentions for HPSC before the next sexual encounter.
	Use of Safer Sex Practices a) Male Condom	Hierarchical Logistic Regression	There was inadequate evidence to conclude that women's motivation to comply with wishes of significant others had an influence on having used male condom the past 3 months.

Independent Variable	Dependent Variable	Test	Results
	b) Female Condom	"	Women's motivation to comply with wishes of significant others increased the odds of having used a female condom in the past 3 months 10.39 times (Exp. B (O)=10.39, CI= 1.57 to 57.65 , p=0.01).
	c) Abstinence	"	There was inadequate evidence to conclude that women's motivation to comply with wishes of significant others had an influence on having used abstinence in the past 3 months.
	d) Monogamy	"	There was inadequate evidence to conclude that women's motivation to comply with wishes of significant others had an influence on having maintained monogamous relationships in the past 3 months.
Perceived Self- efficacy	1. HPSC Content Discussed.	Hierarchical Linear Regression	Women's positive perceived self-efficacy increased the likelihood having discussed selected HPSC content in the past 3 months 3.36 times (β =-3.36, p=0.001).
	2. Intentions for HPSC.		There was inadequate evidence to conclude that women's perceived self-efficacy has an influence on their intentions for HPSC.
	 Use of Safer Sex Practices: a) Male Condom. 		There was inadequate evidence to conclude that women's perceived self-efficacy ha an influence on having used a male condom in the past 3 months.

Independent Variable	Dependent Variable	Test	Results
	b) Female Condom.		There was inadequate evidence to conclude that women's perceived self-efficacy had an influence on having discussed selected HPSC content in the past 3 months.
	c) Abstinence	"	There was inadequate evidence to conclude that women's perceived self-efficacy had an influence on having used abstinence in the past 3 months.
	d) Monogamy	"	Women's positive perceived self-efficacy increased the odds of having maintained monogamous relationships in the past 3 months 2.34 times. (Exp. B=2.34, CI= 1.13 to 4.83, p=0.02).

CHAPTER 5

DISCUSSION OF FINDINGS, IMPLICATIONS AND RECOMMENDATIONS Introduction

This chapter is concerned with discussion of findings from an analysis of the data from this instrument development study. The discussion covers psychometric properties of the developed measures, including the internal consistency reliability and construct validity estimates based on factor analysis and hypotheses testing. An overview of the study, summary of the findings, their implications, strengths and weaknesses of the study are presented.

Overview of the Study

This multi-stage, multi method-dissertation research project was designed to develop and evaluate the psychometric properties of health protective sexual communication (HPSC) measures on a sample of 280 young women aged 21-35 years attending selected maternal and child health services in Gaborone, Botswana. The results of the study were used to help identify issues related to HPSC in order to direct related future HIV prevention interventions. Development of the instruments was based on extensive review of literature of existing measures of HPSC, the Theory of Planned Behavior (Ajzen, 1991) constructs, and findings of a preliminary formative qualitative elicitation study on beliefs and perceptions about HPSC for a similar sample of young women in Gaborone, Botswana. The research was inspired by the high prevalence of heterosexually transmitted HIV among young women in Botswana, who often have difficulty asserting themselves for risk reduction and safer sex practices, and also by the unavailability of comprehensive, women-focused and culturally sensitive measures that could guide evidencebased interventions for this population.

Discussion of the Findings

Summary of Qualitative Study Findings

A formative qualitative study based on the Theory of Planned Behavior (Ajzen, 1991) constructs yielded themes that were used as questionnaire items for the measures. This study focused on exploring the social-cognitive components that were known to affect women's ability to initiate safer sex communication.

Twenty of the 42 women who participated in the study were involved in individual faceto-face interview based on semi-structured discussion that applied TPB constructs to elicit related themes and specific content. Another 22 women participated in focus group discussions guided by scripted progressive sexual behavior scenario vignettes developed by the researcher. The scenarios were derived through extensive literature review, the researcher's own experience working with women in maternity services in Botswana and were inspired by works of Kalichman (2001). Six major themes and 14 sub themes with specific content areas emerged as outlined in Table 3. The content generated by individual interviews and focus groups was used to develop items for the 11 HPSC scales.

Description of the Quantitative Study Sample Characteristics

Two hundred and eighty (280) young women aged 21-35 years, residing in Gaborone who attended selected MCH services were chosen to participate in the study through convenience sampling, based on eligibility criteria. The mean age for the women was 27.5 years and that of their partners was 32.7 years, with a mean age difference of 5.2 years. These results confirm that young woman were in heterosexual relationships with older men (Nkosana & Rosenthal, 2007). These older men may perceive themselves as having more power and may be more assertive in evading demands for protection by the younger women (Wetherall & Endley, 1995). These were low income women, who had been in long-term relationships and many of them not married, with the likely risk of instability in the relationships. The partners were more educated, earned more money, and therefore more likely to have greater control of decisions over the young women who

would most likely be dependent on the men for financial support. Income and education have been found to have influence on relationship power and the consistent use of condoms among women (Pulerwitz et al., 2002). In the old Botswana, culture men had more access to better education and hence better gainful employment. Preference for the education of boys came from the belief that boys sustained the family power and heritage and that girls got married and move on to serve a different family (Briton, 1993; Csap, 1983; Lifanda, 2005; Rosenzweig & Schultz, 1982; Temtime, 2002;). This culture also extended to the preferential allocation of inheritance of family wealth thus perpetuating gender disparities between men and women, male dominance and female insubordination that could still manifest today in the women's communication difficulties. The majority of the women in the current study, however, said they were able to initiate discussion on safer sex. This is understandable given the threat of HIV in the country. However, the depth, quality and effect of the communication on the use of safer sex practices still require attention.

The majority of the women regarded their partner as their main sexual partner (90%), and thought that their relationships were respectful (92%) and loving (84%). The majority of them knew their HIV status (87.5%). HIV prevalence (25%) in this group was higher than the national average of 17.1%, but lower than that for pregnant women (32.5%), and this calls for more intensive prevention programs. Only 57% knew their partner's HIV status, which corroborates with the findings that women often had sex with men whose status was unknown to them (AIDS, 2004; December, CDC, 2003; 2004; Harrison, Lurie and Wilkison, 1997; Morokoff et al., 1995;. Quinn & Overbaugh, 2005; Wong, 2000). Of those who reported partners' HIV status, 10% of the partners were HV positive. This could also reflect the lack of depth in HPSC discussions, and women may feel uncomfortable asking partners about their HIV status or suggesting HIV testing. The majority of the women said they initiated safer sex discussions (97%), but it was not established whether this lead to the use of protection.

Socio-demographic and other relationship characteristics indicated that women who were 26 to 30 years old were more likely to be in longer relationships, have been tested for HIV and be HIV positive. In addition, women whose partners were 26-30 years were more likely to be in relationships lasting five years or more. Evidently, younger women and their partners stayed in longer relationships, yet the women did not know partners' HIV status. The current national sero-prevalence begins to peak at this age group and reaches a peak at 31-35 years (National AIDS Coordinating Agency, 2005).

Summary of Quantitative Study Findings

The measures presented reflect a comprehensive application of the TBP constructs and definitions, and other factors from the literature and qualitative study that were particularly important for the sample of women in the study. The socio-demographic factors, the attitude towards HPSC, influence of other people in the woman's life, the partner's response, the woman's motivation to comply with the expectations of others, self-efficacy for HPSC, intentions, content discussed, and the actual use of the safer sex practices as an outcome of discussing safer sex with the male sexual partner were identified.

Of the 11 scales, 8 measures had good alpha reliability indicators ranging from 0.69 to 0.95, which supported factorability of the scales. Three other scales had Cronbach's alpha coefficients below 0.6: Scale 1, the Meaning of HPSC (α = 0.57), Scale 9, Perceived self-efficacy for HPSC, (α = 0.51), and Scale 11, Safer Sex Practices (α =0.33). All of these scales contained fewer than 10 items, highly skewed scores and therefore low internal consistency reliability, which was not unusual for such short scales (Nunnally & Bernstein 1994). After further review, Scale 11 was determined to be an index of safer sex practices. The items consisted of male and female condom use, abstinence and maintenance of a monogamous relationship, behaviors that are not typically expected to be necessarily correlated with each other, making it more characteristic of an index. Scale 1 and 9 however, supported further analysis for construct validity using factor analysis.

Factor analyses for scales 1 through 10 yielded results that supported further hypothesis testing. A summary of the reliability and factor analysis findings is presented in Table 29 in this report. The factors identified were conceptually meaningful and relevant to the conceptual framework of the HPSC instruments and definitions. They were also consistent with construct validity evidence and factor structures from previous research on similar scales for other populations (Howard, Blumstein & Schwartz, 1986; Mischovic, Pittman, Fisher & Fisher, (1998; Snell and Finney, 1990).

Discussion of the Findings in the Context of the Theory of Planned Behavior Based on Qualitative Study Findings

The TPB supported by information elicited about HPSC among young women attending selected MCH clinics in Gaborone, Botswana focusing on HIV prevention. The components below were identified through both in-depth individual interviews and focus groups during the elicitation qualitative pilot study.

Beliefs about the Consequences of HPSC (Behavioral Beliefs):

Women in the study believed that HPSC with their partners could be beneficial. Parish et al., (2001) found that communication between partners was pivotal in HIV prevention, especially for sero-discordant couples, and could establish intimacy between couples, forming a basis for condom use decisions. Nuss et al., (1995) had similar findings among HIV-positive hemophiliac adolescents regarding communication about safer sex and sero-status disclosure, who believed that communicating about safer sex is a moral thing to do. However, morality was not discussed by the women in the current study, who were motivated by the fact that HPSC was necessary given the threat of AIDS in Botswana.

A few women believed that HPSC could be difficult, and this is consistent with findings by Janneke et al., (1999). Among the positive consequences (benefits) the women identified was that it could result in partners' agreement to use safer sex practices, protecting them against HIV and STIs, promotion of health, and reduction in death. Some negative consequences identified were

that it could be embarrassing, could cause conflict between partners, and break the relationship, or make the partner to become angry. These were incorporated in Scale 5, Attitude towards HPSC.

Beliefs about the Influence of Significant Others (Normative Beliefs)

The qualitative pilot study findings revealed that women identified their mothers, sisters and friends as significant persons for their decisions to engage their partners in HPSC. These referents were included in Scale 7, Motivation to Comply with Wishes of Significant Referents. Dilorio et al., (2000) and Nuss et al., (1995) established the importance of the perception about the partners' response in safer sex communication. Svenson and Hanson (1998) found that high between-partner communication barriers predicted inconsistent condom use among young people at Lund University, Sweden.

Beliefs about Personal Capability for HPSC (Control Beliefs)

The qualitative pilot study findings revealed that although HPSC could be difficult, women believed that they were capable of talking to their male sexual partners about safer sex, consistent with findings by Huszti et al., (1995) that among other things, self-efficacy predicted consistent condom use. In a study that explored sero-positive individuals' willingness to communicate, self-efficacy and assertiveness prior to HIV infection (Crowell, 2004), participants reported high levels of self-efficacy. However, this did not translate to actual communication, which raises concerns about confidence in self-reported behavior. In addition, women reported that they encountered difficulties related to partners' non-response, and that could be a barrier to effective communication about safer sex.

Attitude towards HPSC

Women demonstrated positive attitudes towards discussing safer sex with their male sexual partners. Troth and Peterson (2000) established that women and non-virgin men had more positive attitudes toward safe-sex communication, which predicted having discussed condom use.

Perceived Subjective Norm on HPSC

Perception about the approval or disapproval of others was mentioned, but only as far as endorsing the plan for HPSC. Women in the focus groups and in individual interviews seemed to differ in the perceptions about the partner's response. At the individual level, women seemed to trust that their partners would respond positively and engage in HPSC. However, at the focus group level, there was inclination towards discussing fear of partner violence and rejection as a barrier towards HPSC. Knowledge about the partner and intimacy could be a factor in such responses (Cottrell et al., 2006).

Motivation to Comply with Wishes of Significant others

Although women expressed some difficulties with safer sex communication, it seemed apparent that they would disregard the partner's unresponsiveness or negative attitudes towards discussions and just go ahead and introduce the topic. The qualitative results showed that women's motivation came more from female relatives, coworkers, partner and friends. Little has been written on research evidence regarding motivation to comply as it relates with safer sex communication. Therefore, this warrants further research.

Perceived Self-efficacy

Women in individual interviews reported that HPSC would be easy, required little effort and would result in the use of safer sex practices. There were however, hints of difficulties and the need to use an indirect approach among some women in focus groups. In the US, 77% of women aged 45 years and above in heterosexual relationships reported that it was easy to talk to their male partner about safer sex (Moore et. al., 1995). The study supported this position held by younger women in Botswana who participated in this study, who were also as able to talk to their partners about safer sex.

Intention for HPSC

Intention for HPSC came up strongly as a need for all women. The women in the study indicated the desire, willingness and promise to communicate with their partners about selected

safer sex topics. Women listed the type of content they would include in future discussions, including obtaining sexual histories, sharing their own personal histories, insisting on HIV testing and test results, requesting of safer sex practices.

Use of Safer Sex Practices

Women agreed that they used safer sex practices in the past, including male and female condoms, maintaining monogamous relationships, and abstaining from sex when apart from each other. Use of microbicides was unknown to the group. It is currently being studied and not yet available to the general population.

Discussion of Individual Scales

Scale 1, the Meaning of HPSC

Seven items of this measure were developed from the formative qualitative study. A priori content evaluation showed good content validity with a CVI of 93%. Six items measured the same domain, but had a low reliability of 0.57, and were carried through factor analysis, and one item was deleted because of poor item reliability. The low reliability is common for scales that have less than 10 items and that have low variability of responses (Nunnally & Bernstein, 1994). This measure established a common conceptualization of the construct "health protective sexual communication" among the sample of women in the study, as a basis to continue with further development of other measures.

Three culturally meaningful and relevant underlying factors were identified and are displayed on Table 8. Two of the factors addressed related behavior and were mutually inclusive, while the third factor addressed a different higher level (safer sex negotiation) behavior. This suggests that although the factors were all related to the domain being measured, they were different and this could be an index rather than a scale. The descriptive statistics on this measure showed that a high percentage of women conceptualized HPSC as talking to their partners about risky sexual behavior and asking their partners to use safer sex practices. This suggests that women possessed the high level behavior of negotiating safer sex, but they were less likely to explore the partner's behavior or share their own histories. Perhaps women find benefit in focusing on what they need for themselves. No hypothesis testing was done for this scale. Because the Scale 1 items were not derived from the TPB, claim cannot be made for their support of the theory.

Scale 2, HPSC Content Discussed

This 22-item outcome scale explored whether the woman ever discussed specific safer sex topics with the male sexual partner in the past 3 months. Higher scores indicated more content discussed. Women were more likely to have discussed the use of male condoms and HIV testing, but were less likely to have discussed some of the most critical risky behaviors such as multiple sexual relationships, substance abuse. This is concerning because alcohol abuse has been reported as a major concern for HIV prevention in Botswana, and it can increase the risk of infection and is associated with multiple partners and less likelihood of using condoms (Molamu et. al., 1996; Weiser, et al., 2006). Women seemed to be almost evenly divided in reporting having discussed the use of the female condom and male circumcision. Content validity assessment yielded good results (CVI of 0.97). Internal consistency reliability was moderate, $(\alpha=0.69)$ and supported factorability of the scale. Seven factors were derived and they demonstrated conceptual relevance to the ones identified by Lane, (2006); Miscovich et al., (1999), and Williams et al, (2001) for a sample of young women in heterosexual relationships in the US. The factors were also culturally relevant for the sample of young women studied. Hypotheses tests using this scale as an outcome demonstrated support for the construct validity of the scale. Spearman rho correlations showed that HPSC Content discussed was positively correlated with Intentions for HPSC, Perceived Subjective Norm and Motivation to comply with wishes of significant others, and Perceived Self-efficacy. It was however, negatively correlated with Partner's HIV Status. Partner's negative HIV status increased the likelihood of reporting having discussed HPSC content in the past 3 months. Hierarchical linear regression analysis showed that women's positive perceptions about the influence of significant others, positive

Perceived Self-efficacy for HPSC, high Intentions for HPSC were associated with reporting having discussed specific safer sex content.

Scale 3: HPSC Influence Tactics

This 19-item scale measured the influence tactics that women were likely to use to get their partners to engage in HPSC with them. Women were highly likely to demand discussions boldly, persist with requests for safer sex, reason logically and state things in a gentle manner. Women were also fairly likely to use manipulative tactics such as dropping hints, flattery, affection, offer trade-offs and use of fear of the disease, which were described as weak tactics as opposed to the much stronger assertiveness tactics above (Steen, 1998).

The item variances ranged between 0.43 and 3.64 with an average of 2.12. The scale also had a moderate to high internal consistency reliability of 0.76, which was lower than that identified for a similar scale reported by Snell (1996). Content validity by experts indicated a high CVI of 0.95. All 19 items were retained. Factor analysis yielded five factors for this scale, one of which was similar to those derived by William (1996) for the AIDS Discussion Scale (manipulation). However, new factors emerged, and these were aggressive persistence, and decisiveness (a firm decision to do something to get the partner to talk, such as ending the relationship). Hypothesis testing for this scale was not conducted as the focus was on the TPB constructs.

Scale 4 HPSC Influencing Factors

This was originally a 29-item scale intended to measure the factors that helped women to initiate and maintain HPSC with their male sexual partners. Most of items came from the qualitative study themes, a few from the literature, and expert input. Objective evaluation of these items yielded a good CVI of 95% for all 29 items, and 100% from the pilot study. However, only 23 of the 29 items were internally consistent with Cronbach's alpha of 0.90, and 6 were deleted because of poor reliability indicators. Five factors were derived by principal component analysis. Moore et.al., (1995) identified that the level of HIV-related communication with the primary male

partner was associated with the woman's perceived risk for HIV and her rating of the openness with which she could communicate with her primary partner, freedom to communicate, length of the relationship, level of education of partner. Women in the current study had identified similar issues. The women did not seem to be worried about age factors and the seeking or receiving assistance from others. This is reasonable given that women used more high-level influence tactics that involved direct confrontation, negotiation and assertiveness. The scale was also not included in hypothesis testing because it was not directly linked to the Theory of Planned Behavior constructs.

Scale 5, Attitude towards HPSC

This scale originally consisted of 11 items that explored the attitude of young women in Botswana towards HPSC with their male sexual partners. Two of the 11 items were deleted because of poor item internal consistency reliability. A frequency table showed that over 93% of the women agreed with the items and therefore had positive evaluation of HPSC.

Nine items were retained and had excellent reliability of 0.90. This level of reliability indicated possible redundancy of items. However, reproduced correlations had 30% no-redundant residuals, which indicated low collinearity among items. Two factors were extracted as shown in Table 15. Hypothesis tests using the scale as a predictor for HPSC content discussed, intentions and individual safer sex practices (male condom use, female condom use, abstinence and monogamy), showed that attitude was a significant predictor of intentions for HPSC, male condom use, and maintenance of a monogamous relationship. Women's positive attitude increased the odds of reporting having used a male condom, and maintained a monogamous relationship in the past 3 months, and, having high intentions for HPSC before the next sexual encounter. Attitude has been demonstrated as a significant predictor of intention and behavior in previous research (Fezekas, Senn & Ledgerwood, 2001; Kasprzyk, Broglio, & Montano, 1998). There was inadequate information to conclude that attitude was a predictor of discussion of HPSC content, female condom use and abstinence in the past 3 months.

Scale 6, Perceived Subjective Norm

This 7-item scale was intended to explore the women's perception of the influence of significant others in her life towards HPSC with her male sexual partner. Six items were retained and had a high Cronbach's alpha of 0.83 with evidence of low collinearity among items. Two culturally relevant and meaningful factors were extracted. Hypotheses tests supported this scale as a positive predictor of HPSC content discussed, and lower odds of reporting having used a female condom use, such that women's positive perceptions about the influence of significant others increased the likelihood of reporting having discussed HPSC content with their male sexual partners. Women with negative perceptions about the influence of significant others were less likely to have used female condom in the past 3 months. Evidence from previous research demonstrated that perceived subjective norm, especially mothers' influence was a significant predictor of female, 2004). There was inadequate evidence supporting perceived subjective norm as a significant predictor of intention for HPSC, male condom use, abstinence or monogamy in the past 3 months.

Scale 7, Perceived Partner's Response

This 26-item scale was developed to explore the women's perception of their partners' response during HPSC. All 26 items were retained with a high reliability of 0.95. Even with such high reliability, there was evidence of non-redundancy of items. Four culturally relevant and meaningful factors were extracted. Hypotheses tests revealed that perceived partner's response was a significant predictor of intention for HPSC and have lower odds of reporting having used a female condom in the past 3 months. Women's negative perceptions about their partners' response increased the likelihood of having intentions for HPSC and decreased the likelihood of having used a female condom in the past 3 months. Perceived male partner's response did not have a significant relationship with male condom use, and this requires further research since this safer sex strategy is the most commonly used, requiring mutual agreement. Milhausen (2007)

showed that partner's related barriers to condom use significantly correlated with partner's sexual communication and this implied that the partner's response could be a factor. Other factors such as social desirability may have affected the responses. Also, women may feel some discomfort repeating content they had already discussed in the past. However, it may be necessary to reemphasize some of the content as affirmation for commitment to maintaining preventive behaviors, considering the risk of HIV and other STIs. Further research is needed to evaluate the impact of the partner's response on intentions for HPSC.

Scale 8, Motivation to Comply with Wishes of Significant Others

This scale had 5 items, which examined the woman's level of motivation to comply with the wishes of significant persons regarding HPSC with her male sexual partner. The five items had a good Cronbach's alpha of 0.79, with two culturally relevant and meaningful factors extracted. Spearman rho showed that Motivation to Comply was positively correlated with Income Difference, HPSC Content discussed, Perceived Subjective Norm, Perceived Partner's response and Perceived Self-efficacy, and it was negatively correlated with the use of abstinence. Hypotheses tests indicate that Motivation to Comply was a positive predictor of female condom use. Therefore, women's high Motivation to Comply with wishes of significant others increased the odds of reporting having used a female condom in the past 3 months. There was inadequate evidence to suggest that Motivation to Comply with wishes of significant others predicted the discussion of HPSC content, intentions, and abstinence in the past 3 months.

Scale 9, Perceived Self-efficacy

This scale assessed the woman's perceived level of self-efficacy for HPSC. The three-item scale was not internally consistent and therefore did not meet the requirements for further factor analysis. The low reliability of this scale could be attributable to its brevity, or that the items did not adequately explore the concept of self-efficacy. Further improvement could be achieved by adding conditions for self-efficacy from Scale 3 (HPSC Influence Tactics) and Scale 4 (HPSC Influencing Factors). For example, items could be reworded like "It's easy for me to talk to my

partner even if he is older than me," or "It's easy for me to talk to my partner even if he would be angry at me".

Hypotheses tests using this scale as a predictor demonstrated that it significantly correlated with HPSC content discussed. Women's positive perceived self-efficacy increased the likelihood of having discussed HPSC content in the past 3 months. Women's positive perceived self-efficacy increased the odds of reporting having maintained a monogamous relationship in the past 3 months. Jemmott and Jemmott (1992), and Sobo et al., (1995) also established that women with low self-efficacy were not likely to use condoms or insist on condom discussion with their partner. There was inadequate evidence that perceived self-efficacy predicted intentions, or previous use of male and female condom.

Scale 10, Intentions for HPSC

This 23-item scale successfully measured women's intentions for HPSC, had very good internal consistency reliability of 0.84, and yielded five culturally relevant and meaningful factors. The scale had a negative mean, indicating that women tended to have low intentions for HPSC. Most likely this could be due to women not wanting to discuss the things they had already discussed in the past, or that the partner's consistently behaved accordingly and therefore no need to address the behaviors again. However, given the fact that women hardly discussed some of the important safer sex content as shown in Scale 2 analysis, it is critical to address the need to continuously address important safer sex content even if it was discussed in past. . Hypotheses tests on this scale as both an outcome and covariate were conducted. Spearman rho correlations showed that Intentions had a positive correlation with HPSC Content discussed, Respondent's HIV status, and Female condom use, but it was negatively correlated with Income Difference, Perceived Partner's Response and Perceived self-efficacy for HPSC. Hierarchical Regression analyses showed that Intentions had significant influence on HPSC content discussed and having used a female condom. It had a slightly negative but influence significant influence on maintenance of a monogamous relationship. There was inadequate evidence supporting an

association between Intentions and male condom use. This arouses interest since the male condom is the most commonly used safer sex practice among young people in Botswana than the female condom National AIDS Coordinating Agency (NACA) and United Nations Development Programme (UNDP) (March, 2007).

It may also indicate the woman's reliance on the partner's cooperation, since it is a malecontrolled practice.

Scale 11, Safer Sex Practices

Women showed that they had used male condoms and maintained monogamous relationships most of the time, and that the Female condom was the least used safer sex practice. The concern is that this is the only female-controlled safer sex strategy, and perhaps more education is needed to deal with barriers to its uptake.

Items in this 4-item scale were not internally consistent, therefore not factorable. The scale items consisted of a list of individual safer sex practices that were more characteristic of an index rather than a scale. This should be more appropriately tested using test-re-test reliability rather than internal consistency analysis. Weinhardt, Carey, Maisto, Carey, Cohen, and Wickramasinghe, (1998) suggested the use of Timeline Follow-Back procedure is more appropriate for reliability-evaluation for studies involving single-item sexual behavior frequency questions that assess event-level information, especially for data that are highly skewed.

Tested individually as outcomes using logistic regression, Male condom use was positively associated with Attitude. Female Condom use was positively associated with intention and negatively associated with Perceived Subjective Norm, Perceived Partner's Response and Motivation to Comply. Abstinence was not associated with any of the predictors; and, Monogamy was positively associated with attitude, and Perceived Self-efficacy and negatively influenced by Intentions. Most women did not seem to consider Abstinence as an option in heterosexual relationships. This is consistent with the findings that Batswana women had little control on sexual decisions and felt the socio-cultural expectation to submit to their male sexual partners

(McDonald, 1996); Jack et al., 1999).

The final conceptual map of relationships that developed after these analyses, based on the

Theory of Planned Behavior, is displayed in figure 6 below.

Figure 6. The Conceptual Map of Relationships Based on the Regression Analyses



STRENGTHS OF THE STUDY

This study has a number of strong points. Extensive review and utilization of items from existing instruments is positive recognition of the previous works of other researchers in the field. The study also had a strong theoretical backing. The method triangulation of both qualitative and quantitative methods added value to the validity of the results. The elicitation research ensured that the content in the quantitative instruments represented ideas and views of the incumbent respondents. Within the qualitative component the use of several approaches of individual interviews and focus group discussions, and especially the use of scenarios provided a protective forum for open discussions of sensitive safer sex content, and thus enriched data collection and analysis.

The researcher's influence was controlled through bracketing, which was used to maintain objectivity and trustworthiness during the qualitative pilot study. The researcher also audio-recorded all responses and supplemented them with field notes to ensure representation of all participants' viewpoint and to improve trustworthiness of results. During focus group discussions, major points were summarized at the end of each key question addressed and validation of the sentiments expressed was sought from the participants. Direct quotations in the report (translated) further validated the expressions.

Posteriori content validation of the measures was achieved through evaluation by a team of experts in the field, and testing the measures among a group of women similar to the typical respondents. These set a good stage for further internal consistency reliability and construct validity testing. Further statistical evaluation of the instruments for reliability and validity provided evidence that they measured what they were intended to measure and were consistent with the TPB components, an important objective of measurement.

The research team implemented the study in an international cross-cultural setting that required translation and evaluation of the translated instruments. The process of translation ensured that the instruments were comprehensible, culturally relevant, clear and simple, increasing confidence in the measurement of the relevant constructs behaviors and/or attributes. The measures were also short enough to avoid participant fatigue. Scoring and administration procedures were clear. The international collaboration and coordination in the planning and implementation of the study provided a learning opportunity for the study team, especially meeting requirements for different IRBs and multisite international research setting requirements.

Well-prepared and elaborate study procedures including training of the research team ensured fidelity to the study methods and hopefully provided trust in the results of the study. The use of multiple sites (different clinics) for data collection ensured representation of different groups of women within the city of Gaborone. The large sample size of the quantitative study provided good power for data analysis of results using multiple procedures required for the study. The statistical procedures used were also relevant to the purpose, aims and hypotheses of the study, providing confidence in statistical conclusions. Many of the significant Betas were low, presumably due to the large sample size.

LIMITATIONS OF THE STUDY

Limitations of this study cannot be ignored. The use of convenience sampling introduced an element of bias in the results since the respondents were more self-selected. However, the selection criteria hopefully reduced this bias. Pedhazur and Schmelkin (1991) argue that when non-probability sampling is used, regardless of the reasons and procedures, it is not possible to estimate sampling error, and therefore the validity of inference to a population cannot be ascertained. The sample was selected only from the city, and, although most people within the city retain close contact with their rural villages and may still retain some rural behaviors, the possibility of the urban influence cannot be ruled out. The exclusion of private health facilities also reduced diversity of the study population. This makes generalizability of the study results to be limited to only the population of women who used public clinics in Gaborone, Botswana.

SUGGESTIONS FOR MODIFICATION OF MEASURES

The analysis showed that Scale 1, The Meaning of HPSC, should be shortened to six items to exclude the deleted item as indicated in the analysis. Scales 1 and 11, Safer Sex Practices could function as indices rather than scales. These measures are therefore more amenable to test-retest reliability rather than internal consistency reliability since the items were mutually exclusive as in indices. The modified Scale 1 is displayed in Table 40 below.

Items	SD	D	NS	Α	SA
	[1]	[2]	[3]	[4]	[5]
1. Initiating safer sex discussions with your a sexual partner.	1	2	3	4	5
2. Letting the partner start discussions about safer sex.	1	2	3	4	5
3. Letting your partner know about your personal sexual history.	1	2	3	4	5

Table 40, Modified Scale 1, The Meaning of HPSC

Items	SD	D	NS	Α	SA
	[1]	[2]	[3]	[4]	[5]
4. Asking your partner about his personal sexual history.	1	2	3	4	5
5. Talking to your partner about risky sexual behaviors.	1	2	3	4	5
6. Asking partner to use safer sex practices	1	2	3	4	5

Scale 4 should also be shortened by removing the deleted items that did not fit well in the scale,

and retaining 23 items. Modified Scale 4 is shown in Table 41 below.

Table 41, Modified Scale 4	, HPSCC Influencing Factors.
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Factors	N [1]	S [2]	ST [3]	MT [4]	AT 5]
Partner's personality: My male sexual partner is	[*]	[#]	[9]	["]	
1. Easy to talk to.	1	2	3	4	5
2. Loving.	1	2	3	4	5
3. Respectful.	1	2	3	4	5
4. Focuses on our future together.	1	2	3	4	5
5. Understanding.	1	2	3	4	5
6. Willing to listen.	1	2	3	4	5
7. Wants to be with me.	1	2	3	4	5
Type of relationship: Our relationship is					
8. A well established relationship.	1	2	3	4	5
Length of relationship:					
9. I have had a sexual relationship with my for a long time (more than 1 year).	1	2	3	4	5
My prior knowledge about					
10. STIs and HIV transmission.	1	2	3	4	5
11. Safer sex practices.	1	2	3	4	5
12. Drugs given to reduce the AIDS virus in a person's blood.	1	2	3	4	5

Factors	N [1]	S [2]	ST [3]	MT [4]	AT 5]
13. People who have AIDS or died from it	1	2	3	4	5
My male sexual partner's prior knowledge about					
14. STIs and HIV transmission.	1	2	3	4	5
15. Safer sex practices.	1	2	3	4	5
16. Drugs given to reduce the AIDS virus in a person's blood.	1	2	3	4	5
17. People who have AIDS or died from it.	1	2	3	4	5
18. My fears about the threat of HIV/AIDS.	1	2	3	4	5
19. My desire to keep healthy.	1	2	3	4	5
20. My use of influence tactics (ways to get a partner to agree with what you ask).	1	2	3	4	5
21. My partner's perceived threat of HIV/AIDS.	1	2	3	4	5
22. My partner's participation in HIV prevention programs.	1	2	3	4	5
23. My partner's desire to keep healthy.	1	2	3	4	5

Scale 5, Attitude towards HPSC should be shortened to remain with the nine reliable and

internally consistent items. The modified form of the scale is presented in Table 42 below.

Table 42, Modified Scale 5, Attitude towards HPSC.

Items	SD [1]	D [2]	NS [3]	A [4]	SA [5]
Discussing health protective sexual topics with my male sexual partner would					
1. Be beneficial.	-2	1	0	1	2
2. Help protect us against HIV and STIs.	-2	-1	0	1	2
3. Encourage us to discuss intimate issues that affect our lives.	-2	-1	0	1	2
4. Draw us closer together.	-2	-1	0	1	2

Items	SD [1]	D [2]	NS [3]	A [4]	SA [5]
5. Help us to know and understand each other.	-2	-1	0	1	2
6. Promote health.	-2	-1	0	1	2
7. Prevent deaths.	-2	-1	0	1	2
8. Bring issues of infidelity	-2	-1	0	1	2
9. Cause conflict between us.	-2	-1	0	1	2

Scale 6, Perceived Subjective Norm for HPSC should also be shortened to 6 items as

discussed in the analysis. The shortened scale is presented in Table 43 below.

Table 43, Shortened Scale 6, Perceived Subjective Norm.

Statements	SD [1]	D [2]	NS [3]	A [4]	SA [5]
1. Most people who are important to me think I should discuss safer sex (protection or ways to avoid unsafe sex) with my partner.	-2	-1	0	1	2
2. My health care provider thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
3. My Mother thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
4. My sister thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
5. My friend thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
6. My male sexual partner thinks I should discuss safer sex with him.	-2	-1	0	1	2

The Scale 9, Perceived Self-efficacy for HPSC responses tended to give a different picture than would be expected, for example failure of perceived self-efficacy to predict use of male condom, may be an indication of social desirability of responses. Item 3 did not conceptually seem to fit well with the other 2 since it addressed the benefits of HPSC rather than self-efficacy, and therefore should be deleted. In the future this scale could also be improved by combining the remaining two items with items from Scales 3, Influence Tactics and Scale 4, Influencing Factors, and the scale be reformatted such that the two items become the stems and completed by the items in Scales 3 and 4. For example "It's easy for me to reason logically when I talk to my male sexual partner about safer sex"; or "Talking to my male sexual partner would require less than expected effort if I had enough knowledge about HIV/AIDS."

CONCLUSION

The aims of this study have been realized. The qualitative women's communication elicitation study generated TPB-based themes that were useful in item development for a quantitative instrument development study for young women in Botswana. Reliability and validity tests also showed that most of the constructs were valid and reliable, demonstrating their usefulness in future research and interventions. However, the predictive ability of some measures was weak, with low variance explained, demonstrating partial support for the theoretical framework and proposed relationships among constructs. The implementation of measures by different people in other populations or on the same population might influence the results of the study because of different approaches to interviewing. Therefore, further, inter-rater reliability assessment is recommended. Also, the use of interviewing as opposed to self-administration of the questionnaire may have had influence on the responses, or even triggered possible social desirability. However, due consideration was given to individual differences in reading and comprehension, with possible omission of the more technical questions. Hence, interviews were selected as the better option for the sample of women under study to ensure coverage of all items. There was no indication of difference by sites or clinics since most responses were homogenous for most measures, indicating homogeneity of the population.

The scale scores tended to be highly skewed, demonstrating homogeneity of the responses and sample homogeneity. A more diverse sample might have yielded higher internal consistency reliability coefficients. Further research is required in a more diverse population in terms of urban/rural, age, income and education distribution, income and across genders to test the reliability and validity of the measures using different approaches.

IMPLICATIONS OF THE STUDY

Implications for Research

Cronbach and Meehl (1955) argue that no test developer can present predictive validities for all possible criteria; similarly, no developer can run all possible experimental tests of his proposed interpretation. In this regard evaluation of the measures presented is a continuous process. This project was the first step in testing the measures in this study. Hypothesis testing was focused only on scales that related to the TPB. Further research should therefore be conducted to test hypotheses on the remaining measures such as Scale 1 (the Meaning of HPSC), Scale 3 (Influence Tactics), and Scale 4 (HPSC Influencing Factors).

The results of this study present a first attempt to understand construct validity of the developed measures based on predictive validity. Further test-retest reliability of the measures is required to ascertain stability of the measures over time, particularly for Scale 11, Safer Sex Practices, and Scale 1, The Meaning of HPSC. Again, further construct validity assessment using different approaches such as convergent validity (evaluating similarities between the measures and others that measure similar constructs), using contrasted groups; and divergent validity (evaluating differences with measures for different constructs). The results showed that women do talk to their male sexual partners. Attention needs to be paid to ways to improve the quality and direction of discussions to achieve their preventive goal. This study set the stage for interventions, aiming at improving the effectiveness of HPSC between members of a couple through assertiveness, knowledge and skills training.

Implications for Education and Practice

The women's attitude towards HPSC was a significant predictor in their intentions for HPSC and male condom use. Health care providers need to strengthen positive attitudes towards initiating and sustaining safer sex discussion and male condom use. Perceived subjective norm was a significant predictor for discussion of content, and female condom use in the past 3 months. Peer group support especially with female relatives and friends could be beneficial in assisting
women to be more assertive for HPSC and female condom promotion. Health care providers need to incorporate this into women's health practice. The women's reluctance to discuss alcohol and issues related to multiple partners and risky sexual histories are most concerning given the associated threat of HIV and other STIs. Women need to appreciate the need to address these issues more frequently without nagging, even if they had been discussed previously with the male sexual partner, to the keep the level of consciousness consistently high. Therefore, health education is needed to help women to gain confidence and be assertive in raising the issues.

Perceived partner's response was significantly associated with intentions and use of female condom in the past 3 months. Women with negative perceived partner's response had lower intentions for HPSC and were less likely to use the female condom. Health care practitioners need to explore relationships at the couple level in order to recognize inhibitions from the partner's perspective and work with the couples to eliminate fear and promote positive relationships and communication about health protective behaviors. Couples need to be encouraged to adopt HIV preventive behaviors and to participate in HIV prevention programs.

Perceived self-efficacy was influential regarding intentions for HPSC. This has implications for assertiveness training to promote positive self-efficacy for HPSC and for use of safer sex practices, so that women could play a more pro-active role in protecting themselves against HIV and STI's. The above initiatives need to be incorporated in both pre-service and inservice programs for all health care provider education, so that conscious efforts are made at all levels of clinical practice to promote preventive behavior for both men and women.

Implications for Policy

Given the significantly positive effect of the partner's response to HPSC on intentions and use of the female condoms, policy changes are required to involve men when such issues are introduced. Men's endorsement of the use of the female condom is important and therefore its introduction should be approached from a couple's perspective. Wider community initiatives are needed to create acceptability of the female condom and any other newer strategies for HIV prevention. Remarketing of the female condom needs to undertaken more aggressively to give women an opportunity for a safer sex option and HIV prevention strategy that they can control. Funding will be required for this undertaking on a large scale, from government and nongovernmental organizations. Training and public service policies need to re-emphasize the significant issues.

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Appendix A-Permission Letters for the Qualitative Women's Communication Study

Please note that this permission is subject to the following conditions:

Any changes to the approved protocol, consent forms and all other documents will need to be resubmitted to the Health Research Unit in the Ministry of Health for re-approval.

Furthermore, you are requested to submit at least one hardcopy . and an electronic copy of the report to the Health Research Unit, Ministry of Health within 3 months of the availability of a bound MINISTRY OF HEALTH RESEARCH UNIT report. -5 JUL 2006 Thank you, PRIAG 0068 S. El-Halabi For Permanent Secretary Ministry of Health 2

EMORY UNIVERSITY

Institutional Review Board

Mable K. M. Magowe SON: School of Nursing Emory University 604 N. Crossing Way Decatur, Ga 30033

RE: NOTIFICATION OF PROTOCOL APPROVAL PI: Mable K. M. Magowe

(*REPLACEMENT LETTER)

 IRB ID:
 445-2006

 TITLE:
 Perceptions of Young Botswana Women about Health Protective Sexual communication

 DATE:
 July 19, 2006

. .

The research proposal referenced above was reviewed and APPROVED under the Full review process. This approval is valid from 5/3/2006 until 5/2/2007. Thereafter, continued approval is contingent upon the submission of a renewal form that must be reviewed and approved by the IRB prior to the expiration date of this study.

Any serious adverse events or issues resulting from this study should be reported immediately to the IRB and to any sponsoring agency (if any). Amendments to protocols and/or revisions to informed consent forms/process must have approval of the IRB before implemented.

All inquires and correspondence concerning this protocol must include the IRB number and the name of the Principal Investigator.

If you have any questions or concerns, please contact the IRB office at 404-712-0720 or at email address irb@emory.edu. Our web address is http://www.emory.edu/IRB. Thank you.

Sincerely,

James W. Keller, MD Chairman, Institutional Review Board

* This Notification of Protocol Approval replaces the Notification of Protocol Approval dated July 14, 2006 in order to correct the version date of the translated Informed Consent document.

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Tel 404.727.5646 Fax 404.727.1358 IRB@emory.edu

PAGE 2 of 2 - PROTOCOL APPROVAL

This approval is valid from 5/3/2006 until 5/2/2007.

IRB ID: 445-2006

DATE: July 19, 2006

The above referenced protocol was approved including the information below. Please review this information for accuracy. If there are any discrepancies, please notify the IRB office.

Informed Consents Associated v Version Date 6/27/2006	with this protocol: Description Informed Consent	
6 /27/2006	Informed Consent- trar	nslated
Personnel Strickland, Ora L.	Faculty Advisor	Human Subjects Education Certification Information CITI - MED 2, 7, 12, 13, 14 (19-Mar-2004) SHB 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (17-Mar-2004)
McDonnell, Marcia	Faculty Advisor	CITI - MED 11 (07-Apr-2004) SHB 1, 2, 3, 4, 5, 6, 14 (07-Apr-2004)
Magowe, Mable K. M.	Main Investigator	CITI - SHB 1, 2, 3, 4, 5, 6, 17 (02-Jun-2005)
Number of Approved Emory	Subjects 44 (Th	is number indicates the number of subjects you can consent.)

Appendix B: Qualitative Study Recruitment Materials

<u>B-1 Qualitative Women's Communication Study: Confidentiality Statement for</u> <u>Participants</u>

I, ______, agree to keep all information discussed in the group strictly confidential. I will not repeat anything discussed in this group to non-group members or anyone outside the group. I understand that the nature of some of the information that will be discussed is private and may have negative consequences if shared with non-group members. By signing my name below, I understand that it is my responsibility and the responsibility of other group members to keep the information discussed in this group private and confidential.

Print Full Name

Sign Full Name/ Signature

Date

Witness

Date

<u>Qualitative Women's Communication Study Translated Confidentiality Satements for</u> <u>Participants</u> Maikano a go Somarela Diphiri tsa ba Bangwe Mo Dipuisanong

Nna______, ke dumalana le go re ke tlaa somarela diphiri tsa batsaakarolo ka nna ba ke tseneletseng dipuisano tsa dipatlisiso le bone mo setlhopheng. Ke tlhaloganya ka botlalo gore go anamisa dikgang tsa ba bangwe kwa ntle ga setlhopha go ka nna diphatsa mo matshelong a bone. Ka go gatisa mokwalo o fa tlase fa, ke tsaya thwetso ya go somarela dikgang tsa setlopha se ke leng mogo sone, gape ke dumela gore le bone ba tlaa somarela di kgang ka ga me.

Leina:_____

Gatisa fa

Letsatsi

Letsatsi

B-2 Lesson Plan for the Women's Communication Study Session

<u>Title:</u> Health Talk for A Qualitative Study of Beliefs and Perceptions of Young Botswana

Women in Gaborone, Botswana about Health Protective Sexual Communication (HPSC) for

HIV/AIDS prevention.

Target Audience: Women receiving services at maternal and child health clinics in Gaborone **Expected number:** about 20-30 women at a time

Time: 30 minutes

Place: At each of the 2 clinics (2-3 per day for six days)

Delivered by: Mabel K.M. Kabomo-Magowe (RN, CM, MSc. Midwifery), Principal Investigator.

<u>General Objective:</u> To provide information about the women's communication study.

Specific Objectives:

Upon completion of the session, the women will demonstrate understanding of the purpose, specific aims/key research questions and how the data will be collected, potential participants, benefits of the study, benefits and risks for participating and how their rights will be protected.

Session Details:

Objective	Time in minutes	Content	Method and Material	Evaluation
Introduce the title and purpose of the study Define Health	2	Title: A Qualitative A Study of Beliefs and Perceptions of Young Women in Gaborone, Botswana about HPSC, for HIV/AIDS prevention.	Lecture/dis cussion using Flip	Women show that they understand the
protective sexual communication		Purpose: To explore the beliefs and perceptions of young women in Gaborone, Botswana regarding HPSC in order to guide the development of women-focused HPSC measures and interventions for HIV prevention.	chart	topic and purpose by nodding or responding to questions
Explain the specific aims/key research questions of the study		1. To describe how young women in Gaborone, Botswana define and understand HPSC.	"	Question and answer with correct
		2. To determine the content do women regard as important during HPSC with their sexual partners.		responses from women. Active
		3. To describe the influence tactics that women use to facilitate HPSC with their partners.		discussion.
		4. To explore the young women's beliefs about the consequences of engaging in HPSC with the male sexual partners.		
		5. To identify who the women regard as the significant people who can influence their decision to talk to their male sexual partners about HPSC.		
		6. To examine the attitudes of young women towards HPSC.		

Objective	Time in minutes	Content	Method and Material	Evaluation
		7. To determine the perceived influence of significant other people in the women's lives on their ability for HPSC.	Lecture/dis cussion using Flip	Asking women if they understand,
		8. To describe the women's perceptions about the male sexual partner's response to HPSC.	chart	positive responses from the women
		9. To explore the women's motivation to comply with the wishes of significant others, including their male sexual partners, regarding HPSC.		
		10. To explore the women's perceived self-efficacy for HPSC.		
		11. To determine the women's intentions for HPSC before their next sexual encounters.		
		12 To determine safer sex practices that women have used in the past 3 months.		
Describe potential participants of the study	1	Sexually active women aged 18-35 years receiving services at the Gaborone City clinics.	"	
Explain how the data will be collected	2	1. Individual in-depth interviews of 20 women at an office provided by the clinic authorities, with some flexibility for women to choose a suitable location if privacy is a concern (lasting 1-2 hours per person).		
		2. Focus group discussion of scenarios for 3 groups of 6-8 different women per group lasting 2-3 hours each.		

Objective	Time in minutes	Content	Method and Material	Evaluation
Explain the benefits of the study	2	1. Gaining information to use for developing and testing measures of HPSC.	"	"
		2. Using the measures for further research on HPSC.		
		3. Gaining information to develop culturally sensitive interventions to promote HPSC among women		
Explain benefits for participating	2	1. No direct benefits but the pleasure of contributing to HIV prevention and control may be a benefit for some women. Some incentives such as money for transport, and snacks.	"	"
Explain any potential risks, and protection of rights.	5	1. Women may feel that by sharing their information, they compromise their confidentiality.		"
		2. All information will be kept confidential and secure.		
		3. A confidentiality statement will be read at the start of focus groups to ensure that nothing is discussed outside the group meeting.		
		4. All information will be kept in a locked cabinet and locked office, and the tapes will be destroyed soon after data analysis.		
		5. Women will be informed that they have the right to refuse or withdraw participation at any time and this will not affect their receiving services at clinics.		

Objective	Time in minutes	Content	Method and Material	Evaluation
		6. A written consent form with details about the study and the researcher's contact details will be signed by women and they will keep a copy.	Lecture/dis cussion using Flip chart	Questions and Responses from women showing that they understand
		7. A confidentiality statement by the research team will also be read for the women and women they will be given a copy.		,
		8. Another confidentiality statement by women who participate in focus groups will also be read and signed by each group member at the start of focus group sessions.		
		9. Women do not have to give their names during interviews or focus groups. Only or fake names will be used.		
Conclusion and wrap up	5	Key issues discussed: study title, purpose, specific aims, potential participants, how the data will be collected, benefits of the study, potential benefits and risks of participating.		"
		Questions and feedback. Hand out flyers and contact information for the researcher.		

Translated Lesson Plan for the Women's Communication Study Session

Thuto-puisano ka ga Dipatlisiso

<u>Setlhogo sa Thuto-puisano:</u> Thuto-puisano ka dipatlisiso tsa dikakanyo le ditumelo tsa basadi ba banana ba Gaborone, Botswana mabapi le go buisana le banna kgotsa baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng.

Morutintshi ke: Mabel K.M. Kabomo-Magowe, Mooki le Mmelegisi.

Ba ba ka Tsenelelang thuto-puisano: Basadi botlhe ba ba tsenelelang tlhatlhobo kana kalafi mo dikokelwaneng tsa puso mo Gaborone.

Palo ya BatsenelelaThuto-puisano: Basadi ba kanna masome-mabedi kgotsa mararo (20-30) ka nako ele nngwe.

Nako e e Tlaa Dirisiwang mo Thuto-puisanong: metsotso ele masome-mararo.

Lefelo la Thuto-puisano: Mo dikokelwaneng tse pedi tsa puso mo Gaborone.

Maikaelelo-magolo a Thuto-puisano: Ka thuto-puisano e, re batla go fa basadi tlhaloso e e

tletseng ka dipatlisiso tse di tlaa dirwang tsa setlhogo se se tlhalositsweng

Maikalelo a Thuto-puisano ka Botlalo:

Kwa pheletsong ya thuto-puisano e, basadi ba tshwanetse gore ba bo ba tlhaloganya ka:

- 1. Maikaelelo a dipatlisiso.
- 2. Ditshetla tsa dipatlisiso ka botlalo.
- 3. Gore ke ba fe baba ka tsenelelang dipatlisiso
- 4. Bo mosola le bodiphatsa jo bo ka tlhagelang motsaa-karolo mo dipatlisisong.
- 5. Gore maduo a dipatlisiso a tlaa dirisiwa jang.
- Maina le megala ya babatlisisi, le ba go ka ikelwang kwa go bonne fa gona le mathata a a amanang le dipatlisiso.

Tshetla-kgolo	Nako e e Beilweng	Dintlha tse di Akarediwang	Tsamaiso ya Thuto-puisano	Netefatso ya gore basadi ba tlhalogantse
Tlhaloso ka setlhogo le maikaelelo le a dipatlisiso	Metsotso e mebedi	Setlhogo sa dipatlisiso: Dipatlisiso ka dikakanyo le ditumelo tsa basadi ba banana mo Gaborone, Botswana ka puisano ya bone le banna kgotsa baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng go thibela HIV.	Puisano/thuto go dirisiwa bolakaboroto jwa pampiri	Basadi ba ka supa ka go araba dipotso le ka go dumela gore ba atlhaloganya.
		Maikaelelo a dipatlisiso: Ke go sekaseka dikakanyo le ditumelo tsa basadi ba banana ba Gaborone mo Botswana ka puisano ya bone le banna ba bone mabapi le tlhakanelo-dikobo e e sireletsegileng mo go ka ba thusang go thibela mogare wa HIV.		
Tlhaloso ka ditshetla dingwe tsa dipatlisiso	Metstso e le lesome	 Dipotso tsa dipatlisiso di akaretsa tse di latelang: 1. Gore ditumelo tsa basadi ba Gaborone ke dife mabapi le puisano ya bone le banna/baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng. 2. Dintlha tse basadi ba dumelang gore ba tshwanetse go di ama fa ba buisana le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng. 3. Botsipa jo basadi ba baneng ba ka bo dirisa go rotloetsa puisano ya go nna jalo. 4. Tse dingwe tse ba ka di dirang go tlhofofatsa puisano. 		Karabo tsa dipotso le dikakgelo tsa basadi

Tse di tlaa akarediwang mo thuto-puisanong e:

Tshetla-kgolo	Nako e e Beilweng	Dintlha tse di Akarediwang	Tsamaiso ya Thuto-puisano	Netefatso ya gore basadi ba tlhalogantse
		5. Bomosola kgotsa bodiphatsa jo basadi ba akanayang gore bo ka nna teng fa ba tlhagisa kgang ya tlhakanelo-dikobo e e sireletsegileng.	Puisano/thuto go dirisiwa bolakaboroto jwa pampiri	Basadi ba ka supa ka go araba dipotso le ka go dumela gore baa atlhaloganya.
		6. Gore ke ba fe ba masika le ditsala ba ba ka amang go kgona ga mosadi go buisana le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng.		
		 7. Go re a basadi ba bona ba kgona puisano e le banna ba bone. 8. Gore basadi ba akanya gore banna ba bone ba ka reng ka kgang e. 		
		9. Gore Basadi ba bona ba rotloetsegile go le kae go ya le maikutlo a ba masika le ditsala, le bone banna tota, mabapi le puisano e.		
Tlhaloso ka ba ba ka tsaang karolo	Motsotso o le mongwe fela	Basadi ba dingwaga tse di lesome le bofera-bobedi go ya ko go masome a mararo le botlhano, ba ba tsayang kalafi ko dikokelwaneng tsa puso.	"	Karabo ya dipotso le dikakgelo tsa basadi
Tlhaloso ka tsamaiso ya dipatlisiso	Metsotso e metlhano	1. Basadi ba le masome mabedi batla botsolotswa ka bongwe ka bongwe, ko kokelong tse pedi, go tsewa oura go ya kwa go tse pedi le mosadi a le mongwe.		
		2. Go tlaa buisangwa le basadi ba le ditlhopha tse tharo, ba le bohera-bobedi mo setlhopheng, nako ya oura di le pedi go ya kwa go tse tharo.		
Tshetla-kgolo	Nako e e Beilweng	Dintlha tse di Akarediwang	Tsamaiso ya Thuto-puisano	Netefatso ya gore basadi ba tlhalogantse
---	---------------------------	--	---	--
Bomosola jwa dipatlisiso	Metsotso e le mebedi	1. Maduo a magolo mo go baba dirang dipatlisiso tse ke go gwetlha dintlha tsa dikgang tse ba ka di dirisang go tlhapa dipotso tsa go dira tse dingwe gape dipatlisiso tse di akaretsang basadi ba palo e kgolwane mo nakong e e tlang.	Puisano/thuto go dirisiwa bolakaboroto jwa pampiri	Basadi ba ka supa ka go araba dipotso le ka go dumela gore ba atlhaloganya.
		2. Gape re eletsa go tlhaloganya setso sentle bapapi le puisanyo ya baratani ka tlhakanelo-dikobo e e sireletsegileng, gore e re nako e e tlang re dire dipatlisiso tse di tsayang tsia setso sa rona sa Setswana, bogolo jang fa go tla mo go buisaneng le basadi.		
Bomosola jwa go tsenelela dipatlisiso	Metsotso e le mebedi	1. Tota ga gona maduo ape a go tsaa-karolo, fa ese fela gore go thusa babatlisisi le gore baithaupi jwa bo ka nna le seabe mo go kganeleng mogare wa HIV mo go tla solegelang ba bangwe molemo.	"	"
		2. Basadi ba tlaa atswiwa ka matsananyana a sepalamo le nakonyana e ba e tsereng, le diaganong tsa go tshwara mowa fa puisano e ntse e tsweletse.		
Bodiphatsa jo bo ka tlhagelang motsaa-karolo	Metsotso e le metlhano	1. Basadi ba ka nna ba kgoberwa maikutlo ke go ntsha diphiri ka matshelo a bone fa pele ga mmatlisisi-mogolo kgotsa fa pele ga basadi ba bangwe.		
		2. Re solofetsa gore re tlaa sireletsa diphiri tsa batsaa-karolo botlhe, le go itsa gore di seka tsa tlotlwa gope kwa ntle ga puisano.		

Tshetla-kgolo	Nako e e Beilweng	Dintlha tse di Akarediwang	Tsamaiso ya Thuto-puisano	Netefatso ya gore basadi ba tlhalogantse
		3. E tlaare ko tshimologong ya puisano, basadi ba tlaa balelwa ba bo ba gatisa maikano a go somarela dikgang ka ba bangwe ba setlhopha.	Puisano/thuto go dirisiwa bolakaboroto jwa pampiri	Basadi ba ka supa ka go araba dipotso le ka go dumela gore ba atlhaloganya.
		4. Diphiri tsotlhe tsa batsaa-karolo ditlaa lotlelelwa mo kobotong e e lotlelwang, mo ofising e e lotlelwang, mme ditlaa gagolwa fa go fediwa dipatlisiso.		
		5. Basadi bana le tshwanelo ya go gana go tsaa karolo, kgotsa go tlhanogela boithaopo ka nako nngwe le nngwe le fa ba setse ba gatisitse ditumalo. Mme tshwetso e o ga e kitla e ama tshwanelo ya kalafi kgotsa ditshwanelo dipe tse banang natso.		
		6. Maikano a go ithaopa go tsaa karolo a tla dirwa ka mokwalo o o akaretsang di aterese le megala ya babatlisisi le ba go ka ikuilwang ko go bone fa go na le mathata ka dipatlisiso. Baithaupi ba tlaa fiwa moruti wa maikano.		
		7. Ga go tlhokege gore batsa-karolo ba kwale maina a bone a boammaaruri. Mme go ka dirisiwa maina fela eseng difane, kgotsa a maitirelo.		
		8. Tsotlhe tse di ka senolang mosadi mo go ba bangwe di tlaa gagolwa kwa phetsong ya dipatlisiso. Mme ga go kitla go tsewa dikgang dipe ka ga ope, le fa e le ditshwantsho tsa ga ope wa batsaakarolo go ya ka tsone kwa ntle ga lefatshe leno.		

Tshetla-kgolo	Nako e e Beilweng	Dintlha tse di Akarediwang	Tsamaiso ya Thuto-puisano	Netefatso ya gore basadi ba tlhalogantse
Pheletso	Metsotso e le metlhano	Dintlha tse dikgolo mo thuto-puisanong ke tse: tlhaloso ka setlhogo sa dipatlisiso; maikaelelo le maduo a dipatlisiso; ba ba ka tsaang karolo; bo mosola jwa go tsaa karolo; masula a a ka tlhagelang motsaa-karolo; ka fa go tlaa sirelediwang diphiri tsa batsaa-karolo ka teng. Jaanong go ka tsewa dipotso le dikgakgelo tsa basadi ka se ba se utlwileng mo thuto-puisanong e. Go ka abiwa di mokwalo o o anamisang dipatlisiso tse, tse di nang le maina, di aterese le megala ya mmatlisisi-mogolo. Tse di ngwe di ka kokometswa mo mabating a diphapusi tsa kolelwana go ya ka taolong ya baeteledi-pele ba yone.	Puisano/thuto go dirisiwa bolakaboroto jwa pampiri	Basadi ba ka supa ka go araba dipotso le ka go dumela gore ba atlhaloganya.

Qualitative Women's Communication study: Participant Recruitment Flyer <u>Title of the study:</u> Beliefs and Perceptions of Young Botswana Women about Health Protective Sexual Communication for HIV/AIDS Prevention

Study Purpose: The purpose of this study is to explore women's beliefs and perceptions about discussing safer sex with their male sexual partners. The women will be asked the following information: how they understand safer se communication; what topics they think they should include, what tactics they will use to influence their partners to discuss safer sex and use safer sex practices; who among important people in their livescan influence their ability for discussion, how they think these people, including their male sexual partners, will react to such discussions and how willing they are to comply with such influences; wehther the women think they are capable of and if they have intentions for safer sex discussions before they have the next sexual encounter; and, safer sex they used in the past 3 months.

A total of 20 women will be interviewed individually at two clinics, one in the north and one in the south of Gaborone, or an acceptable location. An additional 24 women will be interviewed in 3 groups of 6-8 each at one of the two clinics. We ask that you to choose to participate either in an individual in-depth interviews of 1-2 hours or in a focus group interview of 2-3 hours with a group of 5-7 other women. The focus groups will discuss and respond to questions related to imaginary stories of cases developed by the researcher that are derived from life experiences of women in general regarding communication with their male sexual partners for HIV and STD prevention.

To participate, you must be...

- 1. Able to read and write Setswana (the vernacular)
- 2. Self-reporting to be having a sexual partner within the past 3 months
- 3. Aged 18-35 years
- 4. Residing in Gaborone
- 5. Receiving maternal and child health services at any of the 13 public health clinics in Gaborone.

Exclusion Criteria: You will not participate in the study if...

1. You have an apparent debilitating illness or cognitive impairment

2. You are younger than 18 years and wull need consent from your parents or guardian to participate in the study, or do not meet any of the criteria above.

Contact Information:

Name: Mabel Kabomo-Magowe:

Phone: 011-267-396-3041

E-mail: mmagowe@emory.edu or magowem@mopipi.ub.bw

<u>B-4 Qualitative Women's Communication study: Screener</u>

1. Study site (cl	inic number)				
2. Respondent's	s Identification n	umber	_•		
3. What is your	age in years?	Write years.			
4. Do you live i	n Gaborone?	Yes No			
5. Do you consi	der yourself a w	oman by birth?	Yes No		
6. Do you consi	ider yourself in g	ood general Heal	lth? Yes	No	
7. Is there anyth	ning in your healt	th (physical or er	notional that can	prevent you from	n
particip	pating in the study	y? 🔲 NO 🔛	ES. Please expla	uin	
8. Are you willi	ing to discuss ma	tters related to ta	lking to your par	tner about safer s	sex?
YES [NO				
9. Will you be v	willing to particip	pate in?			
Individ	ual in-depth inter	views? For	cus group discuss	sions with 5-7 oth	ner women?
If you wish to p	participate in the	focus groups plea	ase indicate with	a tick your prefe	rred schedule
below:					
Doto/Time	Mondov	Tuesday	Wednesday	Thursdow	Enidory
Date/Time	Monday	Tuesday	Wednesday	Thursday	Friday
Morning 9-12 am					

Afternoon 1-4 pm Evening 5-8 pm

243	
2 - 7 <i>.</i>)	

<u>Qualitative Women's Communication Study Translated Screener</u> Dipatlisiso tsa Puisano ya Basadi le Banna ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng Tlhaolelo go Tsenelela Dipatlisiso

- 1. Nomoro ya kokelwana_____.
- 2. Nomoro ya motsaa-karolo ______.
- 3. Dingwaga tsa gago di kae? _____Kwala dingwaga.
- 4. A o nna mo Gaborone? Ee Nnyaa.
- 5. A o mongwe yo itseng a tsetswe ele mosadi? Ee Nnyaa
- 6. A o bona o le mo botsogong jo bo itekanetseng? Ee Nnyaa
- 7. A gona le sengwe mo botsogong jwa gago, jwa mmele kgotsa jwa tlhaloganyo, se o

itseng se ka go kgoreletsa go tsenelela dipatlisiso tse? Nnyaa?

Ee: Tlhalosa_____

8. A o a ithaopa go ka tsaya dikgang ka puisano ya gago le monna wa gago le ba ba

tsamaisang dipatlisiso tse?		Ee		Nnyaa.
-----------------------------	--	----	--	--------

9. O eletsa go tsenelela lekgamu lefe la dipuisano? Tlhalosa se se itlhophelang fa.

Puisanyo le wena o le nosi?

Puisanyo le wena o kopane le basadi ba bangwe bale setlhopha?

Fa o batla puisano ya setlhopha, itlhophele letsatsi le nako e e go siametseng fa tlase fa.

Letsatsi/Nako	Mantaga	Labobedi	Laboraro	Labone	Labotlhano
Moso (9-12)					
Tshokologo 1-4)					
Maitseboa thata (5-8)					

Appendix C Women's Communication Study Consent Form <u>Emory University Graduate School</u> Consent to be a Research Subject

<u>**Title:</u>** A Qualitative Study of Beliefs and Perceptions of Young Women in Gaborone, Botswana about Health Protective Sexual Communication for HIV/AIDS prevention.</u>

Principal Investigator: Mabel K.M. Kabomo-Magowe: RN, CM, MSc. Midwifery

Purpose: You are being asked to volunteer for a research study to explore beliefs and perceptions of young women in Gaborone, Botswana about health protective sexual communication or simply safer sex communication with their male sexual partners. By a male sexual partner we mean a man who has a sexual relationship with a woman. The purpose of the study is to explore the women's beliefs and perceptions about talking to their male sexual partners about safer sex. This includes: how they understand safer se communication; what topics they think they should include, what tactics they will use to influence safer sex discussions; who among important people in their lives can influence their ability for such discussions, how they think these people, and their male sexual partners, will react and how willing they are to comply with such responses; whether the women think they are capable of and their intentions for safer sex discussions before they have the next sexual encounter; safer sex they used in the past 3 months.

The information will be used to derive themes that can be made into items for HPSC instruments addressing these topics. We plan to conduct in-depth individual interviews of 20 women at different clinics, or an acceptable location agreed upon with each participant. We also plan to conduct three focus groups with a total of 24 women at a facility allocated by authorities for the Gaborone city council clinics. We ask that you participate either in an individual in-depth interview of 1-2 hours, or in a focus group interview of 2-3 hours with a group of 5-7 other women. The focus groups will discuss and respond to questions related to scenarios of cases or imaginary stories developed by the researcher that are derived from life experiences of women in general regarding communication with their partners related to HIV prevention.

Procedures: Both the individual and the focus group interviews are a one-time event for each person and will be conducted at one of the clinics that will be allocated for conducting the study. The Principal Investigator will conduct all individual interviews. The Principal Investigator will conduct focus group interviews with the help of a trained research assistant who will assist with taking notes and other logistics during the interviews. The focus group discussions will also be used to validate or expand information from individual interviews. There is no right or wrong answer. What is important is that you answer honestly and openly in your responses and comments. Your comments will help us better understand the beliefs and perceptions of women regarding their ability to communicate with their partners about safer sex for the prevention of HIV and STD. We will also learn about the content women think they will include, and what they think the response of significant others and their partner's would be to this communication, and what tactics they may use when talking to their partners about these topics. All the interviews will be audio taped. At the beginning of the group session, each person will be asked to read and sign a confidentiality statement, which entails promise to keep things discussed in the group confidential. At the end of the interviews, you will be asked to complete a 10-minutes questionnaire about your personal information regarding your age, educational level, income, your partner's age, income and educational level, your marital status, and you and your partner's HIV status. There may be a need for us to follow-up with you if we missed something or a question of particular interest to the study discussed during individual interviews, and we ask for your permission to do so.

<u>Risks:</u> There are no risks of physical harm associated with this research project. However, a discussion of intimate sexual issues may cause embarrassment or discomfort for some women and may arouse emotional disturbance when women recall unpleasant events of their communication on sexual matters with their partners. You have the right not to talk about any topic or part of a topic if it makes you feel uneasy. The main risk associated with the study is breach of confidentiality, especially in focus groups with 5-7 other women. We ask that all persons use fake names only. We also ask that everything that is discussed in a group should not be discussed with others even if they know other members of the group. All information will be kept in a locked cabinet with limited access to prevent breaks in confidentiality. Your name will be kept in a separate file, which will also be locked.

Benefits: Taking part in this research study may not benefit you personally, but we, the researchers, may gain further understanding of what women's perceptions are regarding health protective sexual communication with their male sexual partners. Participating in the research study will allow us to develop question guides that will further explore these issues and to develop relevant culturally sensitive intervention programs for other women.

Confidentiality: All information will be kept private in a locked cabinet. Agencies that make rules and policies about how research is done have the right to review and study records. Agencies that pay for the study also have the right to review these records. Those with the right to look at your study records include the Emory University Institutional Review Board and The Ministry of Health Research and Development Committee in Botswana. Records can also be opened by court order. However, we will keep your records private to the extent allowed by law. We will do this even if an outside review occurs. We will use codes rather than your name on the study records where we can. Your name and other facts that might point to you will not appear when we present this study or publish its results. The results will be presented as a group. For ethical and legal reasons, we are obligated to report suspected or actual child abuse and/or neglect and to prevent you from carrying out threats of serious harm to yourself and others.

Compensation: There are no costs to you to participate in this project. You will be reimbursed \$5.00 for transport and for your time. Refreshments will be served during meetings. If an injury occurs related to this study, we will arrange medical care for you at a government facility. Emory University and Botswana government, have no funds to compensate for your care elsewhere. For more information about the research, contact Mabel Kabomo-Magowe at (011-267) 3163-041.

Contact Person: If you have any questions about the study, contact Mabel Kabomo-Magowe at 011-267-3163041. If you have any questions about your rights as a participant in this study call Shenaz El Halabi, Chairperson of the Ministry of Health Research and Publications Committee (the Institutional Review Board for health research in Botswana) at (011-267) 391-4467, or James W. Keller, Chairman of Emory University Institutional Review Board at (001)-404-712-0720.

Voluntary Participation and Withdrawal

Your participation is completely voluntary and you have the right to refuse to be in this study. You can stop at any time after giving this consent. This decision will not affect your current or future medical care or any other benefits you may be entitled to. The principal investigator and/or group leader may stop you from participating at any time if they decide it is in your best interest, or if you are disruptive or threatening to the group. We will give you a copy of this consent form. If you are willing to volunteer for this research study, please sign below.

Participant

Date

Time

Emory University Graduate School <u>Translated Consent to be a Research Subject</u> <u>Maitlamo a go Tsaaa Karolo mo Dipatlisisong</u>

Setlhogo sa Dipatlisiso: Puisano ka Ditumelo le Dikakanyo tsa Basadi ba Banana mo Gaborone, Botswana Mabapi le go Buisana le Banna Kgotsa Baratiwa ba Bone ka Tlhakanelo Dikobo e e Sireletsegileng, go Thibela HIV.

Mmatlisisi-mogolo: Mabel K.M.Kabomo-Magowe, Mooki le Mmelegisi

Maikaelelo a Dipatlisiso: O kopiwa go ithaopa go tsenelela dipatlisiso tsa go leka go tlhaloganya se basadi ba banana mo Gaborone, Botswana ba se akanyang mabapi le go buisana le banna kgotsa baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng go kganela HIV. Dipatlisiso tse di itebagantse le go senola tse di latelang: gore basadi ba akanya gore go tewa eng fa go buiwa ka puisano ya bone le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng; gore a ba bona ba ka kgona puisano eo; gore ba bona ba tshwanetse go akaretsa di fe dintlha mo puisanong eo; go re ba ka dirisa botsipa bo fe go rotloetsa banna go tsenelela le bone puisano eo; gore ba bona e le ba fe ba ba botlhokwa mo go bone ba ba ka nnang le seabe mo go kgoneng puisano eo le banna ba bone; gore basadi ba akanya gore bone batho bao ba ka reng fa puisano eo e ka direga gareng ga mosadi le monna wa gagwe; gore basadi ba akanya gore banna ba ka fetola bareng fa ba lebisiwa dintlha ka tlhakanelo-dikobo e e sireletsegileng; gore ba rotloetsegile go le kae go diragatsa dikeletso tsa batho baba botlhokwa mo go bone go akarediwa le ene monna, le gore a bana le maikaelelo a go dira puisano e mo nakong e e gautshwane e e tlang pele ga ba ka tlhakanelwa dikobo le banna ba bone. Re go kopa gore o tsenelele dipatlisiso tse, tse di tlaabong di dirwa ka makgamu a le mabedi. Lekgamu lantlha re tlaa buisana le basadi ba le masome-mabedi ka bongwe ka bongwe, mme re itebagantse le ka fa mosadi a akanyang ka teng ale nosi ka ditlhogo tse di builweng. Puisano le mosadi mongwe le mongwe e beetswe nako ya oura go ya kwa go tse pedi. Lekgamu la bobedi re tlaa kopanya basadi mo setlhopheng s abone ba kanna borataro go ya kwa go bohera-bo-bedi, ka dikarolo dile tharo tse di latelanang. Re tlaabo jaanong re itebagantse le diele tse eleng dikai tse digwetlhang baratani go buisana ka tsa itshireletso mo malwetseng a dikobo. Dikai tse dithapilwe ke Mmatlisisi-mogolo go ya ka fa kitsong ya gagwe le ka fa a tleng a bone matshelo a basadi kakaretso a ntseng ka teng fa go tla mo puisanong ya banna mogo tsa itshireletso. Dikai tseo ga di a lebaganngwa le botshelo jwa mongwe yo o itseweng, mme disoboka matshelo ka kakaretso fela gio sa tewe ope. Puisano e e tlaa tsaya dioura dile pedi goya ko borarung. Jaanong wena o ka itlhophela gore o batla go tsenelela lekgamu le fe, a la puisano le wena o le nosi kgotsa go o na le basadui ba bangwe ba le setlhopha ka nako ele nngwe.

Tsamaiso ya Dipatlisiso: Basadi ba tlaa tsaa karolo mo go ngwe ya dipuisano tse gangwe fela, tse di tlaabong di tswaretswe ko nngweng ya dikokelwana tsa puso ka fa go laotseng baeteledi pele ba dikokelwana tsa toropo ya Gaborone ka teng. Puisano ya basadi ka bongwe ka bongwe yone e ka tshwarelwa ko go tsone dikokelwana tse kgotsa ko lefelong le le haphegileng le go dumalanweng le mosadi ka lone. Dipuisano tsa motho a le mongwe di tlaa tsamaisiwa ke Mmatlisisi-mogolo, mme tsa ditlhopha o tlaa di dira a thusiwa ke mooki yo o rutetsweng tsamaiso ya dipuisano. Ga gona karabo e go ka tweng ga ya siama. Se se botlhkwa ke gore gore o buwe boammmaruri, o phuthulogile fa o akgela kgotsa o araba dipotso. Dikakgelo tsa gago di botlhokwa thata go re thusa go tlhaloganya ditumelo le dikakanyo kgotsa maikutlo a basadi ka puisano ya bone le banna ba bone ka tlhakanelo-dikobo e e sireletseguileng, le tse ba ka di akaretsang, le gore ba bona gore ba ggabo, kgotsa banna ba bone ba ka reng fa ba tlisa dikgang

eo, le gore ba ka kgona banna ba jang gore ba bue le bone. Dipuipisano tsotlhe ditlaabo di gatisiwa ka sekapa-mantswe. Ko tshimologong mongwe le mongwe wa basadi o tlaa kopiwa go bala le go gatisa maikano a gore tse di tla buiwang mo setlhopheng di felela gone mo phapusing e go tsenetsweng mo go yone, mme ga di kitla di bolelelwa ope gape. Mme e tlaare go fediwa mongwe le mongwe a neelwe mokwalo o o botsang ka tse di amanang le ene fela a le nosi, jaaka dingwaga tsa gagwe tsa matsalo, le tsa monna wa gagwe, fa ene le monna wa gagwe ba feletseng teng mo dithuthong, madi a ene le mnna ba a amogelang, gore a o nyetswe, le maduo a bone a go itlhatlhobela mogare wa HIV.

Mathata aa ka go Tlhagelang Matsaa-karolo: Tota ga re solofele go ka nna le mathata ape a tlisiwang ke dipatlisiso tse mo botsogong jwa motsaa-karolo. Fela basadi ba ka nna ditlhong kgotsa ba tlhabega maikutlo fa ba bua tse di amanang le tlhakanelo-dikobo. Bangwe kgotsa ba ka fuduwega maikutlo fa ba gakologelwa dipuisano tsa bone le banna ba bone ka itshireletso tse di kileng tsa ba direla mathata mo botshelong. O gakololwa gore o na le tshwanelo ya go tlhaola se o batlang go bua ka sone kgotsa go se tlola o sa tshabe sepe fa o bona se go tshwenya maikutlo. Mathata a magolo a a ka nnang teng ke go latlhegelwa ke diphiri tse o ka dibuwang ona ba bangwe mo setlhopheng. Re kopa gore mongwe le mongwe yo o tsaang karolo mo dipatlisisong tse a itse gore dikgang di felela fela magaring ga rona, mme ga a a tshwanela go di bolelela ope, le fa ele yo o itseng mongwe wa ba batsaa-karolo. Puisano yotlhe e e gatisitsweng kgotsa e kwadilwe ka ga gago e tlaa somarwelwa mo kobotong e e lotlelwang ko ofising ya Mmatlisismogolo e le yone e lotlelwang. Le leina la gago ga le na go tlhaga gope.

<u>Maduo a Dipatlisiso mo go Motsaa-karolo:</u> Ga gona maduo kgotsa dituelo dipe tsa go tsaa karolo, fa ese fela gore o thusa babatlisisi go tlhaloganya botoka ka ditumelo le maikutlo a basadi mabapi le puisano ya bone le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng, gore re tle re kgone go thusa ba bangwe mo nakong e e tlang.

Tshomarelo ya Diphiri tsa Batsaa-karolo: Dikgang tsotlhe tse di tlaa buiwang mo dipatlisisong tse di tlaa somarelwa ka go lotlelwa mo kobotong le mo ofising e e faphegileng. Balaodi ba dipatlisiso le ba ba ntshitseng madi gore di diriwe, ba kanna ba batla dikgang tse ka gonne ba na le tshwanelo ya go di tlhatlhoba. Ba molao le bone ba ka ntsha taolo ya gore ba di neelwe. Mme le gale maikano a rona ke go somarela diphiri tsa gago go ya kafa molao o re letlang ka teng, lefa e le mo go ba ba tlhatlhobang dipatlisiso tota. Leina la gago ga lena go tlhaga gope fa re setse re kwala ka maduo a dipatlisiso tse, mme go tlaa sobokwa dintlha tsa dikgang ka kakaretso. Re tlamega go bolelela ba molao fa gona le dipelaelo dingwe tsa kgokgontsho kgotsa tshotlo ya bana, kgotsa matshosetsi mangwe a botshelo jwa yo mongwe kgotsa jwa gago e e ka dirwang ke wena kgotsa ke mongwe wa fela.

Dikatso: Ga gona dituelo dipe tse di solofetsweng mo go wena go tsaa-karolo. Mme o tlaa atswiwa ka matsana a a kanaka USD \$5.00 kgotsa 25 Pula wa sepalamo. Fa o ka golafala mabapi le dipatlisiso tse, o tla isiwa mo nngweng ya dikokelo tsa puso. Mme puso ya Botswana kgotsa selokolo sa Emory ga dina madi a a ka go isang kalafing go sele. Fa ona le potso mabapi le botsaa-karolo o ka leletsa Mabel Kabomo-Magowe mo mogaleng wa (011-267) 3163-041.

Ba o ka Ikuelang mo go Bone fa Go na le Mathata: Fa o na le dipotso mabapi le patlisiso o ka leletsa Mabel Kabomo-Magowe komogaleng wa (011-267-3163041). Fa ona le mathata mabapi le ditshwanelo tsa gago mo dipatlisisong tse o ka leletsa Mme Shenaz El Halabi, yo e leng mokwaledi-mogolo wa lekgotla la tsamaiso-dipatlisiso le ditlhabololo tsa boranyane mo lephateng la botsogo mo Botswana, ko mogaleng wa (011-267) 391-4467, kgotsa Rre James W. Keller, modula-setilo wa lekgotsa la tsamaiso-dipatlisiso kwa sekolong sa Emory ko mogaleng wa (001) 404-712-0720.

Boithaopo le go fetogela Tumalano: O gakololwa gore go tsenelela dipatlisiso tse go a ithaopiwa le gore o na le tshwanelo ya go gana kgotsa go fetogela ditumalano tse di kwadilweng tse. Mme le fa o tsere tshwetso eo, o santse o na le tshwanelo ya go amogela kalafi kgotsa tshwanelo e nngwe fela e o ntseng o na nayo ka dinako tsotlhe, gompieno le nako e e tlang. Fela motsaa-karolo o ka emisiwa ke babatlisisi fa go na le dipalaelo tsa kgokgonthso ya bana, boitshwaro jo bo maswe, le matshosetsi mo matshelong a ba bangwe kgotsa o kgoreletsa tsamaiso ya dipuisano. Jaanong re tla go neela moriti wa nmokwalo o gore o o ipele. Fa o dumalana le go ithaopa botsaa-karolo mo ditlhotlhomisong tse, gatisa fa tlase fa.

Leina Motsaa-karolo	Letsatsi	Nako	
Motsamaisa-puisano	Letsatsi	Nako	

Rea leboga

Appendix D: Qualitative Women's Communication Study Measures

D-1 Demographic Questionnaire

Date: _____

Study site (clinic number) _____

Respondent's Identification number

Directions: Please answer the following questions about yourself. Please make a check by the response that you pick as correct. If you have more than one partner please answer for your main partner, the one you have the closest, most regular relationship with.

- 1. How old are you? _____Age in years.
- 2. Do you have a sexual partner?

YES.

- 3. If yes, how old is your partner? _____Age in years.
- 4. What is your level of education?

Form 1 to form 3.

Form 4 to form 5.

Completed some vocational/tertiary education.

Completed university education.

5. What is your partner's highest level of education?

Less that standard 7

Form 1 to form 3.

Form 4 to form 5.

Completed some vocational/tertiary education.

Completed university education.

5. What is your Marital Status? Are you...

Single?

Single living with partner?

	Married?
--	----------

Divorcd?

Widowed?

6. What is your employment status? Are you:

Employed full time?

Employed part-time?

Unmployed?

Self-employed?

- 7. What is your average monthly income in Botswana Pula?_____.
- 8. Does your partner work?



- 9. What is your partner's average monthly income in Botswana Pula?______.
- 10. Have you been tested for HIV?

YES.
NO.

11. What is your HIV status?

	Negative.
--	-----------

Positive.	
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- Don't know.
- Refuse to disclose.
- 12. Has your partner been tested for HIV?

YES.

NO.

Don't know.

- 13. What is your partner's HIV status?
 - Negative.
 - ☐ Positive.
 - Don't know.

Don't want to disclose.

- 14. How long have you been in this relationship with your current partner? ____Months.
 - ____Years.

Thank you for participating.

<u>Qualitative Women's Communication Study Translated Demographic Questionnaire</u> Dipatlisiso ka Puisano ya Basadi le Banna ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng

Dipotso ka ga gago

Kwala Letsatsi, kgwedi le ngaga ya gompieno fa:_____

<u>Dikaelo:</u> Araba dipotso tse di latelang tse ka ga gago. Fa ona le banna ba feta bongwe, araba dipotso o itebagantse le yo eleng wa mmakonokono. [Dira letshwao fa thoko ga karabo e e kgetilweng ke motsaa-karolo].

- 1. Dingwaga tsa gago tsa matsalo di kae?_____ *Kwala dingwaga fa*.
- 2. Dingawaga tsa rre yo o ratanang nae kgotsa yo o nyalaneng nae (moratiwa kgotsa monna wa gago) di kae?_____*Kwala dingwaga fa*.
- 3. O feletse fa kae mo dithutong tsa gago? Tlhopa ngwe ya tse di latelang.

	Ke feditse	lekwalo	la	bosupa.
--	------------	---------	----	---------

- Ke dirile Form 1 go fitlhela form 3.
- Ke dirile Form 4 go fitlhela form 5.
- Ke feditse sekolo sa go ithutela tiro ya diatla kgotsa di thuto tse di fa godimo.
- Ke feditse dithuto tsa mmadikolo.
- 4. Moratiwa/monna wa gago ene o feletse fa kae mo dithutong tsa gagwe.
 - O feditse lekwalo la bosupa.
 - O dirile Form 1 go fitlhela form 3.
 - O dirile Form 4 go fitlhela form 5.
 - O feditse sekolo sa go itnutela tiro ya diatla kgotsa di thuto tse di fa godimo.
 - O feditse dithuto tsa mmadikolo.
- 5. Bolela ka seemo sa gago sa nyalo.
 - Ga ke a nyalwa.
 - Ga ke a nyalwa mme ke nna le moritiwa wa me.
 - Ke nyetswe.
 - Ke tlhadile(lwe).
 - Ke swetswe ke monna.
- 6. Bolela ka seemo sa gago sa tiro.
 - Ke bereka Letsatsi lotlhe (nako ya pereko e e \beilweng ke mohiri).

Ke bereka ka nakonyana e khutswhane fela bontlha bongwe jwa Letsatsi.

Ga ke bereke.

	Ke a ipereka.
7.	O amogela bokae ka Dipula mo kgweding?Kwala madi ka Dipula fa.
8.	A moratiwa/monna wa gago o a bereka?
	Ee.
	Nyaa.
9.	Moratiwa wa gago o amogela bo kae ka Dipula mo kgweding?
10.	A o tlhatlhobetswe mo gare wa HIV?
	Ee.
	Nyaa.
11.	Maduo a gago sa tlhatlhobelo- morago wa HIV ke sefe ?
	Kena le mogare.
	Ka kena mogare.
	Ga ke itse seemo same.
	Gake batle go bolela.
12.	A moratiwa wa gago o tlhatlhobetswe mogare wa HIV?
	Ee.
	Nyaa Nyaa
13.	Maduo a moratiwa wa gago a tlhatlhobelo-mogare wa HIV ke sefe?
	Ga ana mogare
	Ona le mogare
	Ga keitse maduo a gagwe
	Ga ke batle go bolela
13. Le n	a le sebaka se se kae lentse le ratana kgotsa le nyalane le rre yo?kwala dikgwedi.

Re lebogela gore o bo o tsere karolo

Qualitative Women's Communication Study

D-2 Interview Guide for In-depth Individual Interviews

Introduction and Welcome Script:

Greetings (in Setswana): My name is_____.

I would like to start by welcoming you to this meeting and thank you very much for your interest in participating. I would like to remind you that you have volunteered to participate in this individual interview meeting. This discussion is part of a study that seeks to explore your thoughts regarding talking to your male sexual partner about safer sex. By male sexual partner, we mean the men you have a sexual relationship with. I would like to learn from you about how you understand and define safer sex communication; if you think you can talk to your male sexual partner about safer sex; what content you think should be included when discussing safer sex; what you think are the consequences of talking to your partner, what tactics you would use to get him to talk; who you think are important people to you who can influence your ability to engage in safer sex discussions with your partner, including what you think they/he will say about that. We are interested to know about your intentions to talk to your partner about safer sex before the next sexual encounter and whether you have used safer sex practices before. I will ask further questions during the discussion depending on what you tell me. If I have any further questions that we might have left out I would like to get your permission to make a follow-up with you to explore any of it further. When all interviews are completed, I will then compile this with information from other women to understand how women in Gaborone, Botswana generally think about these topics. Please feel free to talk and give as much information as you can in response to the questions. Also, feel free to ask questions where you think you need clarification on the questions and discussions.

Line of Questioning:

1. Tell me your understanding what it means to you by "talking to your partner about safer

sex".

- 2. How easy or difficult would it be for you to communicate with your partner about safer sex? Please explain your response in detail.
- 3. Please explain in detail the information you would include in talking to your partner about safer sex.
- 4. How easy or difficult would it be to talk to your partner about each of the topics listed?
- 5. Who are the important people to you who you think can influence your decision and ability to discuss safer sex with your partner?

- 6. What do you think they are likely to say or do when they know about you discussing safer sex with your partner?
- 7. What do you think your partner would say, and tactics would you use to get him to talk about safer sex.
- 8. How motivated are you to go along with what important people to you would say?
- 9. Think of a time when you talked to your partner or attempted to talk to him about safer sex. How difficult or easy was it to talk to him about safer sex? What topics did you include in the discussion? What was his response?
- 10. What do you think your partner's response would be if you talk to him about specific topics related to safer sex with him?
- 11. How you would handle the way he responds to you. Please explain
- 12. How likely are you to discuss safer sex with your partner before the next sexual encounter? Please explain.
- 13. Tell me about the safer sex practices you and your partner have used in the past 3 months.By safer sex practices, we mean things that are used or taken to prevent the exchange of body through sexual contact fluids between two people, thus preventing HUIV and STD.

Women's Communication study Translated Individual Interview Guide

Kamogelo le madume:

Dumela Mma. Nna ke bediwa _

Ke tlaa simolola ka go go amogela keba ke go leboga gore o bo o ithaopetse go tsaa karolo mo dipuisanong tse. Ke go gakolola gore o ikgethetse go tsaa karolo mo puisanang ya me le wena re le babedi fela eseng ya setlhopha. Dipuisano tse ke bontlha bongwe jwa dipatlisiso tse di gwetlhang dikakanyo le ditumelo tsa basadi ba mo Gaborone, Botswana ka fa ba buisanang ka teng le banna kgotsa baratiwa ba bone mabapi le tlhakanelo-dikobo e e sireletsegileng. Ke eletsa go ithuta mo go wena mabapi le tse; gore o akanya jang ka go buisana le monna wa ga go ka tlhakanelo-dikobo e e sireletsegileng; gore o bona bomosola kgotsa go bodiphatsa jwa puisano e e ka nna eng; gore ke ba fe ba ga eno ba ba botlhokwa mo go wena ba ba ka nnang kgwetlho kgotsa sekgoreletsi mo go buisaneng gaga le monna wa gago ka kgang e; gore a o bona a ka kgona go simolola puisano e o, gore ke dife dintlha tsa dikgang tse o bonang o ka di akaretsa fa o bua le monna wa gago ka sone setlhogo se, le gore lo akanya gore monna wa gago o oka reng fa o ntsha kgang e; gore o ka dirang ka phetolo ya gagwe; le gore o ka rotloetsa monna wa gago jang gore lo tsweledise kgang e gore e lo solegele molemo.

O kopilwe go tsaa karolo ka ole mme yo onang le monna, mme ke itse fa o na le kitso e e fetang yame ka fa o ka buisanang kgotsa o setseng o kile wa buisana le monna wa gago ka teng mabapi le tlhakanelo-dikobo e e sireletsegileng. Re solofela go ithuta mo go wena gore re tle re kgone go itse ka fa dipuisano tsa basadi le banna ba bone di tsamayang ka teng. Ga gona karabo e go ka tweng ga se yone sentle. Se se botlhokwa ke gore buwe boammaruri jotlhe jo o bo itseng o phuthuloge fa o araba dipotso kgotsa o dira dikakgelo. Gakologelwa gape gore ga o patikwe ka gope go araba kgotsa go akgela mo dintlheng dingwe tsa dikgang tse o sa batleng go akgala mo go tsone. Gape o ka emisa puisano e ka nako nngwe le nngwe fa o bona o tlhabega maikutlo. Mme se o se mpolelelang sone ke tla se somarela thata mme ga ke kitla ke ntsha sephiri sepe sa gago.

Dipotso:

- 1. Mpolelela kafa o akanyang ka teng fa ke buwa ka kgang ya go buisana ga mosadi le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng.
- 2. O dumela gore bomosola kgotsa bodiphatsa jwa go buisana le monna wa gago ka tlhakanelo-dikobo e e sireletsegileng ke eng?
- 3. Ke bafe ba gaeno kgotsa ba masika le ditsala ba ba ka nnang le kgwetlho kgotsa sekgoreletsi mo go mogopolong wa gago gore o kgone go buisana le monna wa gago kgang e.
- 4. Tlhalosa gore o bona go ka nna motlhofo kgotsa go ka nna thata go le kahe mo go wena gore o buisane le monna wa gago ka tlhakanelo-dikobo e e sireletsegileng.
- 5. O dumela gore monna wa gago o ka reng fa o ka mo lebisa kgang e ya tlhakanelo-dikobo e e sireletsegileng.
- 6. O ka dirang ka phetolo kgotsa ka se o akanyang monna wa gago a ka se dira fa o buwa le ene ka kgang e?

- 7. Tlhalosa ka botlalo dintlha tse o bonang o ka di akaretsa fa o buisana le monna wa gago ka tlhakanelo-dikobo ee sireletsegileng.
- 8. Tlhalosa gape ka botlalo kafa o bonang nngwe le nngwe ya dintlha tse o di buileng e ka nnang motlhofo kgotsa bokete ka teng go e tlhagisa mo puisanong ya gago le monna wa gago ka setlhogo se.
- 9. Tlhalosa gore ke bofe botsipa jo o ka bo dirisang go atlisa puisano e ya gago le monna wa gago.
- 10. Leka go gakologelwa nako nngwe mo botshelong jwa lona mmogo e o kileng wa leka kogotsa wa bo wa diragatsa puisano e le monna wa gago. Gono go le motlhofo kgotsa bokete gole kahe go bua ka kgang e?
- 11. O ne wa akaretsa dife dintlha tsa dikgang?
- 12. Monna wa gago o ne a fetola jang kgotsa a dirang fa o buisana le ene ka kgang e?
- 13. Tlhalosa gore one wa dirang ka phetolo ya gagwe kgotsa mabapi le se a neng a se dira fa a utlwa mafoko a.

Qualitative Women's Communication Study

D-3 Scenarios for Focus Group Discussions

Introduction and Welcome Script:

Greetings (in Setswana): My name is_____

I would like to start by welcome you to this session and thank you very much for your interest in participating. This discussion is part of a study that seeks to explore beliefs and perceptions of young women in Gaborone, Botswana regarding talking to their partner about safer sex. We the research team have developed some imaginary stories intended to stimulate your thoughts about situations in which safer sex communication needs to be initiated or sustained to enable you to discuss the issues without necessarily referring to yourselves, but how you think women in general may or should respond in the given situation. The stories do not refer to any one person. However, they are based on real life stories of some women and may be possible occurrences for some of you. We would like to learn from you the possible answers you would have if you were in a similar situation. Please give as much information as you can in response to the questions that follow each story. We will read each of the stories and then ask you questions on the possible responses of women as you think about each situation presented. The questions focus on what you think about the woman initiating safer sex discussion with their male sexual partners. By a male sexual partner, we mean a man who is in a sexual relationship with a woman. We would like to know what information the women woman should include, what you think her partner might say or do, and how she should address thes responses. We would like to know who you think the important people are, who could possibly influence her ability to discuss safer sex with her partner, and how these people could influence her decisions to talk to him.

There is no right or wrong answer. We would like to hear your honest views on these questions and to contribute as much as you can so that we can get to know what women in general would think or say. Please remember that you do not have to speak or respond to any question if you do not feel comfortable, and you can stop participating at any time. Also, feel free to ask questions at any time if the information we give you is unclear or questions that follow are unclear. By health protective sexual communication, it means information that has of health protective consequences introduced during intimate partner discussions to prevent HIV and STDs.

Scenario Vignettes with Questions for Discussion

Vignette 1: Potential Sex Partner:

Imagine that a young woman has just met Mr. A who is definitely indicating that he wants to get closer to her. She senses that he is also interested in having sex with her as he is aggressively making definite sexual advances. She is not yet used to this man but she thinks that it is important to talk about safer sex with him before being involved sexually with him. Please respond to the following questions based on this scenario.

Do you think she would be able to engage in health protective sexual communication with this man? Please explain.

Tell us what you would suggest to her to engage him in safer sex discussion.

What tactics would you suggest to her to initiate or sustain the discussion?

What topics would you suggest she should address in this discussion?

How do you think Mr. A's response would be when she brings up safer sex discussions?

What suggestions do you have for her to deal with his responses?

What difficulties do you anticipate she may have talking to him about safer sex and why?

How would you suggest she deals with these difficulties? Please give specific examples and approaches.

Who do you think could be the important people in her life who might influence her decision to talk about safer sex with this man, and what do you think would be their response?

Vignette 2: Current Sex Partner

Imagine this young woman and Mr. A. have already had unprotected sex on several occasions, and she is really concerned about this, because she was at the clinic just this morning where discussions about safer sex and HIV prevention were addressed in a public health talk. She wants to make sure that the next sex episode is protected, and she prepares to talk to him about that. There have been no plans for long-term commitment or marriage in this relationship.

How would you advice her to approach this situation differently from or in addition to the responses given for questions in vignette 1 above?

Vignette 3: Committed Sex Partner, Marriage is Anticipated, but Partner is Slick:

Mr. A. is now engaged to the young woman above and they are discussing about their anticipated happy life together. They have never really included safer sex in their discussions. Mr. A is a very nice and loving person who is well versed with HIV/AIDS information, but has a tendency to gloat over safer sex discussions and simply ignores the use of safer sex strategies.

What do you think about her discussing safer sex at this point?

What additional or different information and approaches would you suggest she use in this situation to discuss safer sex with him?

Vignette 4: Stable Married, Mature Middle-aged Couple:

Mr. D. and a young woman are in a long-term committed relationship, or even married for many years, and they have children. The couple is not planning to have any more children and they have had surgical sterilization. However, she has heard discussions that the risk of HIV among married and long-term partners is increasing in Africa. The couple has never discussed safer sex nor ever had a reason to suspect infidelity with one another, but she wants to talk about safer sex anyway just in case.

What do you think about her starting this conversation with him? How do you suggest she

approach him?

What additional or different information and approaches would she use in this situation to

discuss safer sex with him?

Vignette 5: Married couples: partner suspected to be unfaithful:

The young woman married to Mr. D. in vignette 4 above has heard rumors and suspects that Mr. D might be cheating on her.

What additional or different information or approaches would you suggest she should consider in discussing safer sex with this man?

Vignette 6: Married or Committed Relationship, Partner Has Had an STD or is HIV Positive:

The young woman who is married to Mr. D. above discovers from his outpatient record that he has been diagnosed with an STD or that he has been tested for HIV and is positive.

How would you suggest she brings this up this issue for discussion in the context of safer sex? What additional or different information or approaches would you suggest she should address during this discussion with this man?

Qualitative Women's Communication Study Translated Vignettes

Dikai tse go ka Buisanngwang ka Tsone ka Tlhakanelo-dikobo e e Sireletsegileng

Kamogelo le madume:

Dumelang Bomma. Nna ke bediwa____

Ke tlaa simolola ka go lo amogela ke ba ke lo leboga gore lo bo lo ithaupile go tsaa karolo mo dipuisanong tse. Dipuisano tse ke bontlha bongwe jwa dipatlisiso tse di gwetlhang dikakanyo le ditumelo tsa basadi ba banana mo Gaborone, Botswana ka go buisana le banna kgotsa baratiwa ba bone mabapi letlhakanelo-dikobo e e sireletsegileng. Re le babatlisisi re thapile dipolelwana tse re di dirisang e le dikai tsa go supa tse di gwetlhang puisano magareng ga baratani ka tlhakanelo-dikobo e e sireletsegileng. Dipolelwana tse ga di buwe ka ope motho, me di dirilwe go beilwe mo kitsong ya mmatlisis-mogolo ka fa tlhaloganyang matshelo a basadi ka teng fa go tla mo go buisaneng le banna ba bone mabapi le setlhogo sa rona. Mme legale e kare kgotsa ka tsela nngwe mongwe a tlhabega fa a bapisa dipolelwana tse le matshelo a gagwe, maikaelelo a dipatlisiso tse, ga se go buwa ka ope kgotsa go lebaganya mafoko le ope wa lona.

Ga gona karabo kgotsa kakgelo e pe e go ka tweng ga se yone sentle. Re lo kopa gore mongwe le mongwe wa lona a phuthologe mme a arabe dipotso kgotsa a dire dikakgelo tsa gagwe ka boammaruri. Re lebagantse kgang thata le puisano ya mosadi le monna wa gagwe ka tlhakanelo-dikobo e e sireletsgileng. Re eletsa go ithuta mo go lona ka fa lo itseng ka teng mo go tse di atleng di di direge kgotsa kafa dipuisano di ka tsamayang ka teng gareng ga baratani mabapi le setlhogo sa rona. Re eleletsa go itse tse; gore a lo akanya gore mosadi yo o buiwang mo polelwaneng e o ka buisana le monna ka tlhakanelo-dikobo e e sireletsegileng; gore ene mosadi yoo a lo bona a ka kgona go simolola puisano eo; gore ke dife dintlha tsa dikgang tse a tshwanetseng go di ama fa a bua le monna wa gagwe ka sone setlhogo sa rona, le gore lo akanya gore monna yoo otla reng fa a lebisiwa mafoko a; gore mosadi o ka dirang ka phetolo ya monna yo kgotsa se se ka diragalangng fa a utlwa mafoko a; gore mosadi o ka rotloetsa monna yo jang gore ba tsweledise kgang e. Re eletsa gape go itse gore ke bafe ba lo bonang ba le botlhokwa mo mosading yo, ba dikakanyo tsa gagwe ka bone di ka mo kgoreletsang kgotsa tsa mo rotloetsa mo go buweng le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng.

Setlhogo se se raya puisano ya mosadi le monna wa gagwe fa ba le ko bothokong jwa bone mme ba buisana ka go sireletsa botsogo jwa bone fa ba tlhakanela-dikobo go thibela HIV le malwetse a mangwe a dikobo. Jaanong re kopa gore lo nne lo ntse lo akanya ka tlhaloso tse di farologanyeng fa lo balelwa dipolelwana le fa lo botswa dipotso.

Polelwana Ya Ntlha:

Akanya ka kgang ee tshwanang le e e latelang. Mosadi mongwe ke gone fela o kopanang le Rre A, yo o supang kgatlhego mo go ene, mme e bile rre yo a supa thata fela gore o batla go robalana le ene. Mosadi ga a tlwaela Rre A, mme o bona go tshwanela gore a buisane le ene ka tlhakanelo-dikobo ee sireletsegileng ba ise o tsamaele ko go tsa tlhakanelo-dikobo. Bolela gore a o bona mosadi yo a ka kgona go buisana le Rre A ka tsa itshirelotso mo malwetseng a dikobo? Tlhalosa ka botlalo.

Re bolelele kafa o ka mo gakololang ka teng gore a buisane le rre yo ka tlhakanelo-dikobo e e sireletsegileng.

Ke di fe dintlha tsa di kgang tse o bonang a ka di akaretsa tse di amanang le tlhakanelo-dikobo e e sireletsegileng?

O ka gakolola mosadi yo gore a dirise botsipa bofe gore a tsenye monna yo mo puisanong ka tlhakanelo-dikobo e e sireletsegileng?

O bona gore Rre yo o tla reng fa mosadi a buwa le ene ka tlhakanelo-dikobo e e sireletsegileng?

Ke mathata a fe a o bonang a ka tlhagela mosadi yo fa a buisana le monna yo ka tlhakanelodikobo e e sireletsegileng? Mosadi ene oka ka dirang fa mathata a a ntseng jaana a ka mo tlhagela fa a buisana le monna yo tlhakanelo-dikobo e e sireletsegileng?

Polelwana ya Bobedi: Batho Ba Ba Ratanang Go sena tsa Nyalo

Akanya jaanong fa mosadi yo le Rre A ba setse ba ratana ebile ba tlhakanetse dikobo gantsinyana mo nakong e e fetileng ba sa itshireletsa. Mme mosadi yo o tshwenyegile thata ka seemo se, ka ebile e rile mo mosong a bo ane ale kwa kokelwaneg go buiwa ka tsa itshireletso mo malwetseng a dikobo le HIV. Mosadi yo o batla gore tlhakanelo-dikobo ya bone mo sebakeng se tlang e bo sireletsegile, jaanong o batla go ntsha kgang e mo monneng wa gagwe. Ga gogo ise go nne le puisano ya nyalo kgotsa go tshela mmogo ka boleele magareng ga bone, le fa e le ka tlhakanelo-dikobo e e sireletsegileng.

A o bona mosadi yo a tshwanetse go tlhagisa mafoko a tlhakanelo-dikobo e e sireletsegileng? Tlhalosa karabo ya gago ka botlalo.

Ke dife dintlha tse di ngwe tse o ka di tlatsang go gakololang mme yo go buisana le Rre A ka tsone fa ba buisana ka tlhakanelo-dikobo e e sireletsegileng, le kafa a ka rotloetsang puisano mmogo kateng.

<u>Polelwana ya Boraro: Baratani ba Lenyalo le le Gautshwane Mme yo Mongwe o</u> <u>Botlhajana:</u>

Rre A o beeleditse mosadi yo go mo nyala, mme ba tshwere puisano kafa lo ratanang thata ka teng e bile ba eletsa go tshela mmogo ka boitumelo. Mme ga ba ise ba ko ba tshware gope ntlha ya tlhakanelo-dikobo e e sireletsegileng. Rre A ke motho yo o nang le kitso e e tletseng ka bolwetse jwa HIV/AIDS mme mathata ke gore o na le go kgabodisa ka boheho fa go tla mo go buisaneng ka tsa itshireletso mo malwetseng a dikobo, le go tila tiriso ya tse di itshireletsang mo go one.

Bolela kafa o bonang mosadi yo a ka kgonang monna wa gagwe ka teng, le tse dingwe tse a ka di tlatsang mo go tse di setseng di builwe fa ba buisana ka tlhakanelo-dikobo e e sireletsegileng.

Polelwana ya Bone: Banyalani Ba Ntse Mmogo Ka Iketlo Go Sena Dipaelelo tsa Tsietso

Mosadi mongwe ontse a ratana le Rre D ka sebaka se se leele, kgotsa ebile ba nyalane dingwaga tse dintsi gape ba na le bana. Mme bobeding jwa bone ga ba na kakanyo ya go tlhola ba tshola bana gape, e bile ba ikemisitse ka loaro. Mme le gale mosadi o utlwile go buiwa ka bolwetse jwa HIV/AIDS le kafa bo golelang pele ka teng mo Africa bogolo jang mo go baba nyalaneng kgotsa baba rataneng lobaka lo loleele. Mosadi yo le Rre D ga ba ise ba ko ba belaele gore mongwe wa bone o ka tsietsa yo mongwe, mme le gale mosadi o batla gore ba buisane ka tlhakanelo-dikobo e e sireletsegileng go itsa mathata a a ko pele.

Ke dife dikgang tse dingwe gape tse o bonang mosadi yo a ka di ama go tlatsa tse di setseng di builwe ka tlhakanelo-dikobo e e sireletsegileng.

<u>Polelwana ya Botlhano: Ba Ba Nyalaneng Mme Go na le Dipelaelo Tsa gore Rre o</u> <u>Matlhomatlho:</u>

Mosadi yo o nyetsweng ke Rre D. yo re tswang go buwa ka ene jaanong o belaela gore Rre D o a mo tsietsa ka basadi ba bangwe.

Ke dife gape tse o bonang mosadi yo a ka di tlatsa kgotsa a di dira tse di farologanang kgotsa di tlatsa tse di setseng di builwe go lebaganya Rre D. le kgang ya tlhakanelo-dikobo e e sireletsegileng?

Polelwana ya Borataro: Monna O na le Malwetse a Dikobo Kgotsa O na le Mogare wa HIV

Mosadi yo go tswang go buiwa ka ene wa ga Rre D o bone mo dikarateng tsa kokelo tsa ga Rre D gore monna yo ona le malwetse a dikobo kgotsa ana le mogare wa HIV.

Ke dife tse o bonang a ka ka di bua kgotsa a di dira tse di farologanang kgotsa di tlatsa tse di setseng di builwe go lebaganya Rre D. le kgang ya tlhakanelo-dikobo e e sireletsegileng?

<u>Appendix E, Correspondence for Translators and Evaluators for the Qualitative Pilot</u> <u>Study Materials</u> E-1 Letter to Back-translators

604. N. Crossing Way, Decatur GA 30033_

To Whom It May Concern:

Re: Back-translation of Research Material for A Qualitative Study on Perceptions and Beliefs of Young Women in Gaborone, Botswana about Health Protective Sexual Communication for HIV/AIDS Prevention.

Dear Colleague,

I am conducting a study on the above topic in Botswana and I'm requesting you to assist in the back-translation of the materials for a proposed dissertation research, which have been translated into Setswana. You have been chosen because you speak both English and Setswana fluently and you have familiarity with the culture in which the research will be conducted. Your input will therefore be highly invaluable in ensuring that this study is culturally sensitive, relevant and acceptable to the intended participants, who are also women like yourself. The documents stated below are attached for you to back-translate from the source language (English) to the recipient language (Setswana).

- 1. The consent form
- 2. The confidentiality statement
- 3. The demographic questionnaire
- 4. The individual interview guide
- 5. The focus group interview guide.

Please read carefully and pay special attention to the meaning, cultural relevance and acceptability of the language for the women of the ages intended, ease of reading (at standard seven or grade 7 reading level), and relevance to the intended objectives and overall goal of the study. I have also attached the study proposal to facilitate the process, and a profile of your demographic information that I would like you to complete.

The completed work should be sent to me by mail or e-mail at the address below:

Mabel K.M. Magowe-Kabomo 604 N. Crossing Way,

Decatur, Georgia, 30033.

USA.

Phone: 404-315-1676 (home) 404-712-2396 (office)

E-mail: mmagowe@emory.edu

Thank you for participating.

Mabel K.M. Magowe-Kabomo

<u>E-2 Personal Profile of Reviewers/Translators for Study Material for the Women's</u> <u>communication Study</u>

<u>**Title:</u>** A Qualitative Study on Perceptions and Beliefs of Young Women in Gaborone, Botswana about Health Protective Sexual Communication for HIV Prevention.</u>

Instructions: Please make a tick or write your response beside the relevant item.

1.	What	is	your	age?	
----	------	----	------	------	--

2. What is your highest Level of education?

Primary
Secondary
Some tertiary or technical education
University masters Degree Junior degree
University PhD
Other: please explain
3. What is your occupation? Please write
4. What position do you hold? Please write here
5. Have you ever worked with women in your carrier?
Yes
No
If yes, please explain
6. How do you rate your Setswana proficiency on a scale of 0 to 10? Please circle your choice:
0 1 2 3 4 5 6 7 8 9 10

7. How would you rate your English proficiency in a scale of 0-10? Please circle your response:

0 1 2 3 4 5 6 7 8 9 10

E-3 Letter to Evaluators/Reviewers for the Qualitative Pilot Study Materials

604 N. Crossing Way, Decatur GA____30033_

To Whom It May Concern:

Re: Evaluation of Research Material for the Qualitative Study on Perceptions and Beliefs of Young Women in Gaborone, Botswana about Health Protective Sexual Communication for HIV/AIDS Prevention.

Dear Reviewer,

I am conducting a study on the above topic in Botswana and I am requesting you to evaluate the materials prepared to conduct my dissertation study. You have been chosen because you speak both English and Setswana fluently and you have familiarity with the culture in which the research will be conducted. Your input will therefore be highly invaluable in ensuring that this study is culturally sensitive, relevant and acceptable to the intended participants who are also women like yourself. The following documents are attached.

1. The study proposal to give you an overview of what is being studied:

The documents below are also translated into Setswana and I would like you to evaluate the translated version against the English version.

- 2. The Consent form
- 3. Demographic questionnaire
- 4. The individual interview guide
- 5. The focus group interview guide
- 6. A brief questionnaire of your demographics

Please read the material carefully and complete the attached evaluation form and send the package back to me either by mail or by e-mail (preferably) at the address below. I would also like you to complete the attached demographic questionnaire.

Mabel K.M. Magowe-Kabomo 604, N. Crossing way Decatur, GA, 30033 USA e-mail <u>mmagowe@emory.edu</u> Phone: 404-315-1676 (home); 404-712-2396 (office).

Thank you for participating

Sincerely

Mabel K.M. Magowe-Kabomo

E-4 Evaluation form for the Qualitative Pilot Study Material

Research Topic: Perceptions of Young Botswana Women about Health Protective Sexual Communication for HIV/AIDS Prevention.

Please rate the materials presented to you using the criteria below. Circle the number that represents your selected response for each item. Also, write comments as necessary for any suggested changes on any questions or statement. Remember to please specify any item numbers and scales/questionnaire or section you are commenting about and suggested changes you would like to see. If the space is not enough, please use the backside of this instrument or an additional sheet of paper.

Key: 1=Strongly disagree 2=Disagree 3=Not Sure 4=Agree 5=Strongly Agree

Item	1	2	3	4	5	Comments for changes
1. Study objectives and	1	2	3	4	5	
purposes are:						
a) Relevant to the needs of	1	2	3	4	5	
women in Botswana.						
b) Address key health issues	1	2	3	4	5	
c) Results have potential for	1	2	3	4	5	
utility.						
2. The consent forms is:						
a) Easily readable at standard 7	1	2	3	4	5	
level.						
b) Culturally sensitive and	1	2	3	4	5	
acceptable.						
c) Relevant for the intended	1	2	3	4	5	
participant.						
d) Relate to the purpose	1	2	3	4	5	
objectives of the study.						
e) Equivalent to the English	1	2	3	4	5	
version.						
3. The Demographic questions						
are:						
a) Easily readable at standard 7	1	2	3	4	5	
level.						
b) Culturally sensitive.	1	2	3	4	5	
c) Relevant and acceptable for	1	2	3	4	5	
the intended participant.						
d) Relate to the purpose	1	2	3	4	5	
objectives of the study.						
e) Equivalent in meaning to the	1	2	3	4	5	
English version.						
4. The key qualitative research						
questions are:						

Item	1	2	3	4	5	Comments for changes
a) Easily readable at standard 7	1	2	3	4	5	
level.						
b) Culturally sensitive	1	2	3	4	5	
c) Acceptable for the intended	1	2	3	4	5	
participant.						
d) Relate to the purpose	1	2	3	4	5	
objectives of the study.						
e) Equivalent in meaning to the	1	2	3	4	5	
English version.						
5. The scenario vignettes are:						
a) Easily readable at standard 7	1	2	3	4	5	
level.						
b) Culturally sensitive	1	2	3	4	5	
c) Acceptable for the intended	1	2	3	4	5	
participant.						
d) Relate to the purpose	1	2	3	4	5	
objectives of the study.						
e) Equivalent in meaning to the	1	2	3	4	5	
English version.						

Appendix F: Instrument Development Study Permissions to Use Existing Measures

F-1 Permission from Dr. Seth Noar to the Influence tactics Scale

file:///Cl/DOCUME~1/mmagowe/LOCALS~1/Temp/~LWF0000.txt

Page 1 of2 From: "Noar, Seth" <noar@uky.edu> To: "Mabel Magowe" <mmagowe@emory.edu> Sent: Saturday, April 05, 2008 9:40... PM Attach: PH17(6).pdf; JASP34.8.pdf Subject: RE: Permission to Adapt Items from your scale Hi Mabel-Thanks for writing. YES - you certainly have permission to adapt them however you like. Also, I'll attach a couple articles on the scale, some of which you may not have seen. Good luck! All the best, ': Seth Seth M. Noar, Ph.D. Assistant Professor Department of Communication 248 Grehan Building University of Kentucky Lexington, KY, 40506-0042 Phone: 859-257-7809 Fax: 859-257-4103 Email: noar@yky.edu Web: www.yky.edu/---snoar2 Original Message From: Mabel Magowe [mailto:mmagowe@emory.edu] Sent: Saturday, April 05, 2008 3:59 PM To: Noar, Seth Cc: mmagowe@emory.edu Subject: Permission to Adapt Items from your scale Greetings! I'm a doctoral student at the Nell Hodgson Woodruff School of Nursing at Emory University. My dissertation is entitled "Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women aged 21-35 Years Attending

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Selected MCH Clinics in Gaborone, Botswana for HIV Prevention". I've been trying to get in touch with you to request permission to adapt some items from your Influence Tactics Scale. I look forward to hearing from you. Attached is a formal letter of request. Mabel Magowe (RN. CM., Bed. Nursing, MSc 7/14/2008.

F-2 Permission from Dr. Steve Misovich to Adapt Items from the AIDS Behavior Prevention

file:///Cl/DOCUME~1/mmagowe/LOCALS~1/Temp/~LWF0002.txt

Page 1 of 1 From: "Steve Misovich" <misovich@hartford.edu> To: "Mabel Magowe" <mmagowe@emory.edu>.. Sent: Monday, April 30, 2007 1:14 PM Attach: evalmat.pdf Subject: Re: Permission to use items from your scale Mabel, You have permission to make use of the items from the scale you reference in your letter. If you have any questions or issues you would like to discuss please email me. I've also attached the evaluation materials we developed for a high school intervention project (published as Fisher et al., 2002 I think in Health Psychology) that some researchers have found useful. Steve Misovich Stephen J. Misovich, Ph.D. Associate Professor, Psychology Hillyer College, The University of Hartford 200 Bloomfield Avenue West Hartford, CT 06117 phone: (860) 768-4721 fax: (860) 768-5085 misovich@hartford.edu httD:/ /uhaweb .hartford.edu/misovich Original Message From: "Mabel Magowe" <mmagowe@emory.edu> To: <misovich@mail.hartford.edu> Cc: <mmagowe@emory.edu> Sent: Monday, April 30, 2007 12:59 PM Subject: Permission to use items from your scale > Helo! My name is Mabel Magowe and I'm a doctoral candidate at Emory > University School of Nursing. Attached is a letter seeking permission > to use items from your scale on AIDS behavior prevention for my

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> dissertation. > > Thank you > > Mabel > 7/15/2008

F-3 Permission from Dr. Snell William to Adapt the AIDS Discussion Strategies Scale

file:///Cl/DOCUME~1/mmagowe/LOCALS~1/Temp/~LWF0003.txt

Page 1 of2 From: "Snell, William" <wesnell@semo.edu> To: "Mabel Magowe" <mmagowe@emory.edu>...Cc: "Snell, William" <wesnell@semo.edu> Sent: Monday, April 30, 2007 1 :14 PM Subject: RE: Permission to adapt your scale - From: Mabel Magowe [mailto:mmagowe@emory.edu] Dear Mabel, You are more than welcome to adapt the AIDS Discussion Strategies Scale in whatever way best fits your research needs. Contact me if I can be of future assistance. Best wishes, Bill Snell --William E. Snell, Jr., Ph.D. Department of Psychology-- MS5700 SE Missouri State University One University Plaza Cape Girardeau, Missouri 63701 USA Email: wesnell@semo.edu Phone: 573.651.2447 Fax: 573.651.2176 Confidentiality Notice: This email message, including any and all I attachments, is for the sole use of the intended recipient(s). There may be confidential and privileged information included. If you are not the intended recipient, please contact the sender immediately and destroy all copies of the original message. Experience Southeast...Experience Success Personal, Professional, Practical Original Message From: Mabel Magowe [mailto:mmagowe@emory.edu]

file:///Cl/DOCUME~1/mmagowe/LOCALS~1/Temp/~LWF0003.txt (1 of 2)7/15/2008 12:59:13 PM file:///Cl/DOCUME~1/mmagowe/LOCALS~1/Temp/~LWF0003.txt

Sent: Monday, April 30, 2007 12:06 PM To: Snell, William Cc: mmagowe@emory.edu Subject: Permission to adapt your scale Hello! As we discussed this morning, I have attached a formal letter requesting your permission to adapt some item from your AIDS Discussion Strategies Scale. Thank you. Mabel 7/15/2008 \$ Page 2 of 2 604 N. Crossing Way, Decatur, GA, 30033, USA 04/30/2007 Dr. William Snell, Department of Psychology, SE Missouri University, One University Plaza, Cape Girardeau, Missouri 63701. Re: Permission to Use Items from Your Instrument Dear/Professor, I am a doctoral candidate at the Nell Hodgson Woodruff School of Nursing at Emory University. I am developing measures of health protective sexual communication for young women in Botswana for my doctoral dissertation. I found your measure on AIDS Discussion Strategies Scale in a handbook of sexuality related measures and I would like request your permission to adapt some of the items in this measure for my dissertation. Thank you. Mabel Magee [RN, CM, PhD(c)] 7/15/2008.

<u>F-4 Permission from Dr. Joseph Catania to Adapt the Health Protective Sexual Communication</u> and the Dyadic Sexual Communication Scales

WebMail :: Inbox: RE: Perssi ... Page 1 of 1 Date: Sun, 6 Apr 2008 20:00:39 -0700 [04/06/08 11:1 From: "Catania, Joseph" <Joseph.Catania@oregor To: Mabel Magowe <mmagowe@emory.edu> Subject: RE: Perssion to adapt Scales 2 unnamed [text/html] 1.37 KB No problem, joe ---Original Message----From: Mabel Magowe [mailto:mmagowe@emory.edu] Sent: Sat 4/5/2008 1:01 PM ... To: Catania, Joseph Cc: mmagowe@emory.edu Subject: Perssion to adapt Scales Greetings! I'm a doctoral student at the Nell Hodgson Woodruff School of Nursing at Emory University. My dissertation is of Nursing at Emory University. My dissertation is entitid "Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention: Tive trying to get in touch with you to request permission to adapt some tierms from your Health Protective Sexual Communications and Dyadic Sexual Communication Scale described in Clive et al (1998). Attached is a formal letter for the request. I'll be delighted to here from you soon. Thank you. Mabel K.M. Magowe (RN., CM., Bed. Nursing, MSc Midwifery) https://webmail.service.emory.... 7/15/2008

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Appendix G: Instrument Development Study Permission Letters



Institutional Review Board

- FROM: Susan M. Ray, MD Vice Chair Emory University IRB
- TO: Mabel Magowe Principal Investigator

CC	Holstad	Marcia	Nursing - Main
CC:	Strickland	Ora	Nursing - Main

DATE: June 29, 2007

RE: Notification of Expedited Approval

IRB00004088

Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women in Gaborone, Botswana for HIV prevention

This is your notification that your above referenced study was reviewed and APPROVED under the Expedited review process per 45 CFR 46.110(3) and 21 CFR 56.110. The approval is valid from **5/18/2007 until 5/17/2008**. Thereafter, continued approval is contingent upon the submission of a continuing review request that must be reviewed and approved by the IRB prior to the expiration date of this study.

Any reportable events (serious adverse events, breaches of confidentiality, protocol deviation or protocol violations) or issues resulting from this study should be reported immediately to the IRB and to the sponsoring agency (if any). Any amendments (changes to any portion of this research study including but not limited to protocol or informed consent changes) must have IRB approval before being implemented.

All correspondence and inquiries concerning this research study must include the IRB ID, the name of the Principal Investigator and the Study Title.

Sincerely,

Susan M. Ray, MD Vice Chair Emory University Institutional Review Board *This letter has been digitally signed*
Tel: 404.712.0720 - Fax: 404.727.1358 - Email: irb@emory.edu - Web: http://www.emory.edu/irb An equal opportunity, affirmative action university



Institutional Review Board

- FROM: Aryeh Stein, PhD Designated Reviewer Emory University IRB
- TO: Mabel Magowe Principal Investigator

CC:	Holstad	Marcia	Nursing - Main
	Strickland	Ora	Nursing - Main

- DATE: September 25, 2007
- RE: Notification of Amendment Approval AM1_IRB00004088 Amendment 1 for IRB Study #IRB00004088 Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women Aged 21-35 Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention

This is your notification that your above referenced amendment was reviewed and APPROVED

by the IRB on 9/24/2007.

Changes to Consent Form(s): Revised Confidentiality Pledge version date 9/10/2007, Consent Form in English version date 9/10/2007, and Translated Consent Form version date 9/10/2007.

Changes to Protocol Document(s): Revised Lay Summary and revised Protocol version dated 9/10/2007.

Changes to Advertisements: Revised Lesson Plan in English version date 9/10/2007, Recruitment Flyer in English version date: 9/10/2007, Translated Lesson Plan version date 9/10/2007, and Translated Recruitment Flyer version date 9/10/2007.

Changes to Study Team members: Removed Ellen Rannoba from study staff. Added Mophuti Liwambano to study staff.

Changes to funding or funding sources: Obtained funding from Graduate School of Arts and Sciences, Women's Club Memorial Graduate Research Funding, University of Botswana.

Other Changes: Changed Title of study. Changed Data Safety Monitoring Plan version 9/10/2007. Moved documents from SHB Research Section to appropriate sections. Uploaded CITI Certification for Mophuti Liwambano.

All correspondence and inquiries concerning this research study must include the IRB ID, the name of the Principal Investigator and the Study Title.

Sincerely,

Aryeh Stein, PhD Designated Reviewer Emory University Institutional Review Board *This letter has been digitally signed*

> Emory University 1599 Clifton Road, 5th Floor - Atlanta, Georgia 30322 Tel: 404.712.0720 - Fax: 404.727.1358 - Email: irb@emory.edu - Web: http://www.emory.edu/irb An equal opportunity, affirmative action university

Apendix H, Instrument Development Study Protocol Checklist

<u>**Title:**</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measure for Young Women Aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention

Read and understand all research documents and clarify any issues prior to the study.
Sign the confidentiality pledge (witnessed by the Principal investigator).
Conduct initial visits to Gaborone City Council clinics.
Make sure that all required copies of documents are made and arranged in an orderly manner according to use, and all equipments are available (files, pens, pencils, labels etc). Meet with clinic authorities and discuss the study, request for space allocation.
Give Health Talks at each clinic. Using the provided lesson plan for participants
Place flyer on notice board with permission from clinic staff.
Proceed to allocated space and prepare for participants, including sitting arrangements, ordering of paper work, and arranging for handing out incentives.
Greet, welcome and invite women into the room individually for individual interviews.
Introduce yourself and explain the study using the study script and formally ask the women to participate. Be sure to observe all cultural gestures to show respect.
Conduct screener using the screening instrument.
If the woman meets the criteria and agrees to participate, explain the study in details.
Read the consent form for the woman or give it to her to read if she prefers.
Ask the woman to initial every page and sign and date the last page.
Sign and date on the "Witness section".
Give the each participant her copy of the consent form.
Explain the interview process and start the interview when the participant is ready, using the interview script.
Number appropriately and completely all aspects of the instrument as indicated.
Take notes for any eventualities including refusal or withdrawal from participation.
Put participants' information in well labeled folders.
Attend all progress review meting (each day for the first week and weekly thereafter) to share the day's progress and any emerging concerns. Lock up all data folders in the research filling cabinets. Enter data into SPSS version 15.

Appendix I: Instrument Development Study Recruitment Materials and Consents

I-1 Participant Recruitment Flyer

<u>**Title:**</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measure for Young Women Aged 21-35 years, Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention.

Invitation to participate:

You are being asked to volunteer for a research study to gather information on beliefs and perceptions of young women in Gaborone, Botswana regarding talking to their partners about safer sex. By a partner, we mean a sexual partner or a man whom the woman has a sexual relationship with. You and 279 other women will be interviewed individually by one of three members of the research team.

Study Purpose:

The purpose of the study is to evaluate question guides to measure women's beliefs and perceptions concerning talking to their male sexual partners about safer sex. These include practices that they think could prevent contact with a sex partner's body fluids and prevent HIV; how women understand health protective sexual communication. Women will also be asked whether they think they can talk to their partners; what they think are the advantages and disadvantages of talking to their partners, the topics that they include when they talk to their partners, ways in which they persuade their partners, what they think other people, including their partners, would say with regard to talking to their partners about safer sex, and if they have intentions to go ahead with such discussions before the next sexual encounter. You will also be asked about the safer sex practices you have used in the past 3 months.

To participate you must:

- 1. Be able to read and write Setswana
- 2. Self-reporting to be having a sexual partner
- 3. Be aged 21-35 years
- 4. Reside in Gaborone.
- 5. Be receiving maternal and child health services at any of the 13 local clinics in Gaborone.

Exclusion criteria: You will not participate in the study if:

1. You have an apparent debilitating illness or mental illness

2. You are younger than 21 years and may need consent from your parent or guardian to participate in the study.

Contact Information: Name: Mabel Kabomo-Magowe: Phone: 011-267-396-3041

E-mail: <u>mmagowe@emory.edu</u> or <u>magowem@mopipi.ub.bw</u>

Version: 04/17/2007

Page 1 of 1

<u>Setlhogo sa dipatlisiso:</u> Go thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga Tse di Masome-mabedi le Motso go ya Kwa go di Masome-mararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng Mo Gaborone ka go Buisana le Banna Ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng go thibela HIV.

Taletso ya go tsenelela Dipatlisiso:

O kopiwa go ithaopa go tsenelela dipatlisiso tse go tlaa bong go tsewa ditumelo le maikutlo a basadi ba ba banana mo Gaborone, Botswana, mabapi le go buisana le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng. Banna re raya ba ba tlhakanelang dikobo nabo. Wena le basadi ba ba bangwe ba le makgolo-mabedi le masome a supa, le metso e fera bongwe, mme lo tlaa bo lo botsolotswa ka bongwe ka bongwe ke babatlisisi mabapi le kgang e.

Maikaelelo a dipatlisiso:

Maikaelelo a dipatlisiso ke go sekaseka dipotso tse di dirilweng go leka go tlhaloganya ditumelo le maikutlo a basadi ba banana mo Gaborone ka go buisana le banna kgotsa baratiwa ba bone ka tsa itshireletso. Ke tlaa go botsa dipotso di le mmalwanyana ka gago, le ka monna/moratiwa wa gago. Dingwe tsa dipotso di tlaabo di itebagantse le maikutlo a gago ka go buisana le monna/moratiwa wa gago ka tlhakanelo-dikobo e e sireletsegileng, go re a o bona o ka kgona puisano e, le dilo tse di ka amang go kgona puisano e ga gago, le tse di ka dirang puisano ya lona gore e nne motlhofo. Ke tlaa go botsa gape gore o akanyang ka dikakanyo tsa batho ba ba botlhkowa mo go wena ka puisano e ya gago le monna/moratiwa wa gago, gore ene o ka reng ka yone le gore o rotloetsegile go le kae go ya le dikakanyo tsa gago ka maikutlo a bone.

Ba ba ka Tsenelelang Dipatlisiso:

- 1. Ke ba ba itseng go kwala le go bua Setswana.
- 2. Ba ikaya bana le banna ba ba tlhakanelang dikobo nabo.
- 3. Ba le dingwaga tse di 21 go ya kwa go 35.
- 4. Ba nna mo Gaborone.
- 5. Ba tsamaya kalafi ya basadi ko dikokelwaneng tsa Gaborone.

Ba ba ka Tsaang Karolo mo Dipatlisisong:

1. Fa mosadi a lwala thata mo go mo kgoreletsang go tsaa karolo mo dipatlisisong.

2. Mosadi yo o dingwaga di kwa tlase ga 21, mme go tlhokega gore a fiwe tetla ke motlhokomedi wa gagwe go re o ka tsee karolo mo dipatlisisong.

O ka itshwaraganya le: Mabel Kabomo-Magowe kwa mogaleng wa: 011-267-396-3041

E-mail: <u>mmagowe@emory.edu</u> or <u>magowem@mopipi.ub.bw</u> **Re a leboga!!!!!**

Version: 04/17/2008

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I-2 Instrument Development Study: Lesson Plan for Participants

Title: Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women Aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention.

Target Audience: Women receiving services at outpatient clinics in Gaborone

Expected number: 20-30 women at a time

Time Allocated: 30 minutes

Place: At each of the 13 clinics (2 per day for six days)

Delivered by: Mabel K.M. Kabomo-Magowe (RN, CM, MSc. Midwifery, and Principal

Investigator), Lesego Mokganya (RN, MSN Women's Health) and Mophuti Liwambano, (RN,

BSN).

<u>General Objective:</u> To provide information about the instrument development study.

Specific Objectives:

Upon completion of the session, the women will be able to demonstrate understanding of the purpose, specific aims/key research questions and how the data will be collected, potential participants, benefits of the study, benefits and risks for participating and how their rights will be protected.

Session Details:

Objective	Time frame In Minutes	Content	Evaluation
1. Introduce the title and purpose of the study	4	<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measures for Young Women Aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention. <u>Purpose:</u> To implement the instruments that explored the women's beliefs and perceptions about discussing safer sex with their male sexual partners.	Women show that responding to questions
2. Explain the specific aims/key research questions of the study	10	 Determine how women define and understand HPSC. Identify the safer sex information that women are likely to have discussed with their partners in the 3 months. 	Question and answer with correct responses from women.
		3. Identify the ways in which women persuade their partners to talk about safer sex.4. Describe the factors that influence women's ability to engage in HPSC.	Active discussion.
		6. Determine attitudes of women towards (advantages and disadvantages).7. Describe the thoughts of women regarding other people's possible response when the women talk to their partners about safer sex and if they think they would be willing to go along with these responses.	
		8. Describe the women's thoughts about the partners' likely response to the discussion of safer sex.	
		9. Explain what women think about their ability to engage in HPSc with their male sexual partners.	
		10. Determine the women's intentions for safer sex discussions with their male sexual partners before the next sexual encounter.	
		11. Describe the safer sex practices that women may have used with their partners in the last 3 months to prevent HIV and STDs.	

Objective	Time frame In Minutes	Content	Evaluation
3. Describe potential participants for the study	1	 Who can participate in the study: Age: 21-35 years. Reporting to have current sexual partner. Residing in Gaborone. Receiving services at any of the clinics in Gaborone. Willing to participate in the study. 	Asking women if they understand, and women's correct positive
4. Explain how the data will be collected	5	Structured individual interviews conducted by a research team of three. Consent procedures, and participants' rights will be explained	"
Explain the benefits of the study	2	No Direct benefits. Incentives include BP 10.00 (USD 1.60) for transport, and snacks during interviews.	
5. Explain any potential risks, and protection of rights	5	No anticipated risks. Some participants may feel discomfort revealing their personal sexual information. Further explanation will be given about freedom to withdraw if they feel so, and counseling will be sought with the clinic authorities as needed.	"
6. Conclusion and wrap up	5	 Major discussion points: Purpose of the study and specific aims Potential participants Potential benefits and risks for participating Participant's rights and how they will be protected 	Questions and Responses from women showing that they understand

Instrument Development Study: Translated Lesson Plan for Participants Thuto-puisano ya Basadi ba ba Tlaa Tsenelelang Dipatlisiso

<u>Setlhogo sa Dipatlisiso</u>: Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone, Botswana ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng go Thibela HIV.

Batsenelela Thuto-puisano: Basadi ba banana ba ba tsayang kalafi mo dikokelwaneng tsa Gaborone

Palo ya Batsenelela Thuto-puisano: basadi ba le masome-mabedi go ya kwa go masome-mararo

Nako ya Thuto-puisano: metsotso e le masome-mararo

Lefelo la Thuto-puisano: Nngwe le nngwe ya dikokelwana tsa Gaborone

<u>Ba Tsamaisa Thuto-puisano</u>: Mabel Kabomo-Magowe (Mooki le Mmelegisi, yo eleng Mmatlisisi-Mogolo), Lesego Mokganya, Mophuti Liwambano (Bathusa-Mmatlisisi)

Maikaelelo a Thuto-puisano: Go tlhalosa ka dipatlisiso.

<u>Tlhaloso ya Maikaelelo a Thuto-puisano:</u>

Keletso ke gore fa go hetswa thuto-puisano e, basadi babo ba tlhaloganya maikaelelo le kgankgolo, le gore ke bomang ba ba tshwanetseng go tenelela dipatlisiso, maduo le bodiphatsa jwa go di tsenelela, le ba go ka ikuelwang kwa go bone fa go na le mathata a a amanang le go di tsenelela.

Page 1 of 3

Tlhaloso ya Thuta-puisano

Maikaelelo a Thuta-puisano	Nako e e Beilweng	Kgangkgolo	Tlhatlhobo ya gore go utlwetse
1. Go itsise basadi ka setlhogo le moono wa dipatlisiso	Metsotso e le mene	 <u>Setlhogo sa Dipatlisiso</u>: Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga tse di Masome-mabedi le Motso go ya kwa go Masome-mararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone, Botswana ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng, go Thibela HIV. <u>Maikaelelo a dipatlisiso:</u> Go kanoka dipotso tse di thapilweng go gwetlha maikutlo le ditumelo tsaa basadi ka puisano le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng, go thibela mogare wa HIV. 	Basadi ba tlaa supa fa ba tlhaloganya se se builweng ka go araba dipotso.
2. Go tlhalosa ka maikalelo ka boleejana,	Metsotso e le lesome	 Go sekaseka ka fa basadi ba tlhaloganyang ka teng fa go buiwa ka puisano ya mosadi le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng. Go senola tse basadi ba di akaretsang ha ba buisana le banna ba bone ka 	Basadi ba tlaa supa ha ba tlhaloganya ka go araba dipotso
		tlhakanelo-dikobo e e sireletsegileng. 3. Go batlisisa gore basadi ba ka dirisa botsipa bo fe go rotloetsa puisano ya bone le banna ba bone, le tse dingwe tse di thusang.	le dikakgelo tsa bone.
		4. Go tlhaloganya gore basadi ba bona bo mosola kgotsa bodiphatsa jwa go buisana le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng e le eng.	
Page 2 of 3		5. Go gwetlha dikakanyo tsa basadi ka gore batho baba botlhokwa mo go bone ba ka reng fa ba ka itse gore mosadi o buisana le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng, le gore a basadi ba ka ineela mo go diragatseng dikakanyo tse.	Version:04/17/2 007

Maikaelelo a Thuta-puisano	Nako e e tlaa dirisiwang	Kgangkgolo	Tlhatlhobo ya gore go utlwetse
		6. Gore basadi ba akanya gore banna ba bone ba ka reng ka puisano e.	
		7. Go batla itse go re a basadi ba na le maikaelelo a go tshwara puisano le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng mo nakong e e gautshwane e e tlang pele ga ba tlhakanela dikobo.	
		8. Go nankola tse basadi ba kileng ba di dirisa fa ba tlhakanela- dikobo le banna ba bone mo kgweding tse tharo tse di fetileng, go kganela HIV.	
		7. Go gwetlha tse dingwe gape tse di ka amang go kgona ga basadi go diragatsa puisano e le banna ba bone.	
3. Go tlhalosa ka ba ba ka tsenelelang dipatlisiso.	Motsotso o le mongwe	 Ba ba ka tsenelelang dipatlisiso ke basadi ba banana mo Gaborone ba ba: Dingwaga di 21 go ya kwa go 35 Ba ikaya fa ba na le banna ba ba tlhakanelang dikobo nabo Ba tsenelela kalafi mo dikokelwaneng tsa Gaborone Ba le mo botsogong jo bo sa kakeng jwa kgoreletsa tsamiso ya dipatlisiso. Ba ithaopa go tsenelela dipatlisiso 	Basad i ba tlaa supa gore ba tlhaloganya se puisano ka dikarabo tse di di amogelesegang.
4. Go tlhalosa ka tsamaiso ya	Metsotso e le metlhano	Go tlaa dirisiwa dipotso tse di thapilweng go tsaya maikutlo a basadi. Mme dipatlisiso di tlaabo di tsamaisiwa ke babatlisisi ba le bararo. Basadi ba tlaa	

Go tlaa dirisiwa dipotso tse di thapilweng go tsaya maikutlo a basadi. Mme dipatlisiso di tlaabo di tsamaisiwa ke babatlisisi ba le bararo. Basadi ba tlaa tlhalosediwa ka mokwalo wa maikano a bone a go ithaopela go tsenelela dipatlisiso, le ka fa go tlaa sireletswang ditshwanelo tsa bone tsa botsaa-karolo.

Maikaelelo a Thuta-puisano	Nako e e tlaa dirisiwang	Kgangkgolo	Tlhatlhobo ya gore go utlwetse
5. Go tlhalosa ka tse di ka akolwang ka go ithaopela go tsenelela dipatlisiso.	Metsotso e mebedi	Ga gona dikatso dipe. Batsaa-karolo ba tlaa neelwa matsana a sepalamo hela a eleng P10.00, (USD 1.60), le lemmenyana la diaganong go tshwara mowa fa dipatlisiso di tsweletse.	
6. Go tlhalosa ka bodiphatsa jwa tsenelela dipatlisiso le dikgato tsa go bo thibela	Metso e le metlhano	Ga gona diphatsa dipe tse di amanang le go tsaya karolo mo dipatlisisong, fa e se fela gore bangwe ba ka tlhabiswa ke ditlhong go buwa ka tlhakanelo-dikobo le ka matshelo a bone a go ratana. Legale re gakolola gore motho o na le tshwanelo ya go emisa kgotsa go sa tsweledise dipatlisiso, kgotsa go gana go araba dipotso dingwe tse a sa batleng go di araba. Fa mongwe a tlhabegile maikutlo thata mo tsamaisong ya dipatlisiso mo a tlhokang kalafi, o tlaa isiswa mo go tsone dikokelwana tsa puso.	
7. Pheletso	Metsotso e le metlhano	Tshoboko ya dintlha tsotlhe ka: setlhogo sa dipatlisiso, ba ba ka di tsenelelang, tse di tlaa dirwang, bomosola kgotsa bodiphatsa jwa go tsaa karolo, le tlhaloso ka maduo le ditshwanelo tsa ba tsaa-karolo.	

Page 3 of

Version: 04/17/20073

<u>I-3 Instrument Development Study Screener</u>

<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measures for Young Aged 21-35 Years, Attending Selected MCH Clinics in Women in Gaborone, Botswana for HIV Prevention
1. Study site (clinic number)
2. Respondent's Identification number
3. What is your age in years? Write years at the last birthday.
4. Do you live in Gaborone? YES NO
5. Do you consider yourself a woman by birth? \Box YES \Box NO
6. Do you consider yourself in good general Health? $\Box_{\text{YES}} \Box_{\text{NO}}$
7. Is there anything in your health (physical or emotional) that can prevent you from participating
in the study? YES. Please explain.
NO.
8. Are you willing to discuss matters related to talking to your partner about safer sex?
\Box YES \Box NO
9. Do you have a current sexual partner?
YES NO

Instrument Development Study Translated Screener

Setlhogo: Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga tse di Masome-mabedi le Motso go ya kwa go Masomemararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng, go Kganela Mogare wa HIV.

1. Nomoro ya kokelwana:
2. Nomoro ya motsaa-karolo:
3. Dingwaga tsa gago di kae?
4. A o nna mo Gaborone? 🗌 Ee 🗌 Nyaa
5. A o ikitse o tsetswe o le mosadi? 🗌 Ee 🗌 Nyaa
6. A o ikitse o le mo botsgong jo bo lolameng ? 🗌 Ee 🗌 Nyaa
7. A gona le sengwe ka botsogo jwa ga go se se ka go kgoreletsang go tsweledisa dipatlisiso tse?
Ee, e tlhalose ka botlalo.
No.
8. A o dumalana le go ithaopela go bua ka matshelo a gago a tlhakanelo-dikobo le monna wa
gago le ka tsa itshireletso? 🗌 Ee 🔤 Nyaa
9. A ka nako e ona le monna yo o tlhakanelang nae dikobo?
Ee Nyaa

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I-4 Instrument Development Study Confidentiality Pledge for Research Team

Research Team's Pledge of Confidentiality

<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measure for Young Women Aged 21-35 Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention

I will be (Please specify your role by making a check at the appropriate space)

1. Principal Investigator _____

2. Research Assistant _____

I will not know the names of the participants, but if I could recognize information that enables me to identify any of the participants, I agree to maintain their confidentiality. By signing this agreement I pledge to keep all information strictly confidential. I will not discuss any identifying information about participants with any person for any reason. I understand that to violate this agreement may impact on the lives of the participants and would constitute a serious and unethical infringement on the informant's right to privacy.

Signature of Study Team Member

Date

Date

Signature of Principal Investigator

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J-Instrument Development Study Consent Form Emory University Graduate School Consent to be a Research Subject

<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measures for Young Women Aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention

Principal Investigator: Mabel K.M. Kabomo-Magowe: RN, CM, MSc. Midwifery

Purpose: You are being asked to volunteer for a research study to gather information on beliefs and perceptions of young women in Gaborone, Botswana regarding talking to their partners about safer sex. By a partner we mean a man that a woman has sexual relationship with. This could be a casual (one you do not have serious commitment with) or main partner (one closest to you, who you consider to be a long-term partner). The purpose of the study is to test instruments that have been developed by the investigator to explore women's beliefs and perceptions about the following: how women define and understand health protective sexual communication; topics to that women have included during safer sex discussions with their male sexual partners in the past three months; safer sex practices that women may have used in the past three months to prevent HIV transmission; what they think people important to them, including their partner, would say about their discussing safer sex; and ways in which they persuade or convince their partners to discuss safer sex with them. The study also asks what women think are the advantages and disadvantages of talking to their partners about safer sex, whether they think they are able to talk to their partners about safer sex. Women will also be asked to indicate their intention to discuss each safer sex topic with their partners before the next sexual contact. The results of the study will be used to develop programs that can help Batswana women to negotiate safer sex and prevent HIV infection. We ask that you participate in an individual structured interview of one to one and half hours, conducted by trained interviewers (the investigator or other research team members).

Procedures: The individual interviews are a one-time event for each person and will be conducted at one of the thirteen public clinics in Gaborone. The interview data will be recorded on a questionnaire that has response options, reflecting your response choices, and then entered into the computer. We plan to interview 280 women. We ask you to be honest and open in your responses because they will help us to better understand the perceptions of women regarding their communication with their male partners about safer sex. We will also learn about what the women think their partner's response would be, what topics the women are likely to include, and what tactics they may use when talking to their partners about these topics. At the beginning of the interviews, each person will be asked to read, initial, sign and date this consent to indicate that they understand the information given and they agree to participate freely in the study.

<u>Risks</u>: There are no risks of physical harm associated with this research project. However, a discussion of intimate sexual matters may cause embarrassment or discomfort for some women and may arouse emotional disturbance when women recall unpleasant events of their communication on sexual matters with their partners. You have the right to refuse to talk about any topic or part of a topic if it makes you feel uneasy. Your name will not be used in any part of the study and only numbers will be used to label papers containing your information.

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All information will be kept in a locked cabinet with access limited only to the research team to prevent breaks in confidentiality.

Benefits: Taking part in this research study may not benefit you personally, but we, the researchers, may gain further understanding of what women's perceptions are regarding health protective sexual communication with their partners. Participating in the research study will allow us to develop relevant culturally sensitive intervention programs for other women in the future to promote safer sex communication with partners and HIV prevention.

Confidentiality: All information will be kept private in a locked cabinet in the Principal Investigator's office. Agencies that make rules and policies about how research is conducted have the right to review and study the records. Agencies that pay for the study also have the right to review these records. Those with the right to look at your study rerecords include the Emory University Institutional Review Board and The Ministry of Health Research and Development Committee in Botswana, and The University of Botswana. Records can also be opened by court order. However, we will keep your records private to the extent allowed by law. We will do this even if an outside review occurs. We will use fake names rather than your name on the study records where we can. Your name and other facts that might point to you will not appear when we present this study or publish its results. The results will be presented as a group. All identifiers will be destroyed at the end of the study, and no identifying information or pictures will be transported from the research site to any other place. For ethical and legal reasons, we are obligated to report suspected or actual child abuse and/or neglect and to prevent you from carrying out threats of serious harm to yourself and others.

Compensation: There are no costs to you to participate in this project. You will be reimbursed P10.00 or US \$1.60 for transport, and you will be provided with refreshments during an interview. If an injury occurs because of this study, we will arrange medical treatment for you at a government facility. Emory University, The University of Botswana and Botswana government, have no funds to compensate for your care elsewhere. For more information about the research and research related risks, please contact Mabel Kabomo-Magowe at 011-267-3163041.

<u>Contact Persons</u>: If you have any questions about the study, contact Mabel Kabomo-Magowe at (011-267) 355-2360 (office) or (011-267-3163041 (home). If you have any questions about your rights as a participant in this research study call Shenaz El Halabi, Secretary of the Ministry of Health Research and Scientific Review Committee (which constitutes the Institutional Review Board for health research in Botswana) at (011-267) 391-4467, or Dr. Colleen Dilorio, Chair, of Emory University Institutional Review Board at (001-404) 712-0720.

<u>Voluntary Participation and Withdrawal:</u> Your participation is completely voluntary and you have the right to refuse to be in this study. You can stop at any time after giving this consent. This decision will not affect your current or future medical care or any benefits you may be entitled to. The study investigator may stop you from taking part in this study at any time if they decide it is in your best interest, or if you are disruptive or threatening to the group. We will give you a copy of this consent form to keep. If you are willing to volunteer for the study, please sign below.

Participant	Date	Time
Person Obtaining Consent	Date	Time

Study No.: IRB00004088

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	IRB use only	5/17/2008
Instrume	nt Development Study Tra	nslated Consent Form
	Emory University Gradu	ate School

<u>Maikano a go Ithaopela go Tsaya Karolo mo Dipatlisisong</u> <u>Setlhogo sa Dipatlisiso:</u> Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga Tse di Masome-mabedi le Motso go ya kwa go

Tse di Masome-mararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone, ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelodikobo e e Sireletsegileng, go Thibela HIV.

Mmatlisis-mogolo: Mabel K.M. Kabomo-Magowe, Mooki le Mmelegisi (Mmatlisisi-mogolo)

Maikaelelo a Dipatlisiso: O kopiwa go ithaopa go tsenelela dipatlisiso tsa go leka go tlhaloganya se basadi ba banana ba Botswana mo Gaborone ba se akanyang mabapi le go buisana le banna kgotsa baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng go thibela HIV le malwetse a mangwe a dikobo. Dipatlisiso tse maikaelelo a tsone ke go thapa dipotso tse di ka thusang go sekaseka ditumelo le maikutlo a basadi ba banana mo Gaborone ka le banna kgotsa baratiwa ba bone ka tlhakanelo-dikobo e e sireletsegileng. Monna re raya yo mosadi a tlhakanelang dikobo nae, mme e ka nna wa nakwana (yo o tsamaisang nako ka ene fela), kgotsa wa konokono yo o tsayang gore ke ene yo o ka tshelang le ene ka sebaka se se se leele. Mme maikaelelo a magolo ke go kanoka dipotso tse di thapilweng go re thusa go senola tse di latelang: gore basadi ba tlhaloganya jang kgang ya setlhogo se; gore a ba bona ba kgona go tsaya kgang e le banna ba bone; tse batleng ba di akaretse fa ba buisana le banna ba bone ka kgang e; le gore ba dirisa botsipa bo fe go rotloetsa puisano e; gore ba akanya gore batho ba ba botlhokwa mo go bone, go akarediwa le bone banna ba bone, ba ka reng ka go tsaya kgang e le banna ba bone, le gore a basadi o ka ya le dikeletso tsa gonna jalo. Basadi ba tlaa bodiwa gape gore ba bona bomosola kgotsa bodiphatsa jwa puisano e; le gore ba akanya gore batho ba ba botlhokwa mo go bone, go akarediwa le bone banna ba bone, ba ka reng mabapi le puisano ya gonna jalo, le tse basadi ba kileng ba dirisa go iphemela mo mogareng wa HIV mo kgweding tse tharo tse di fitileng. Basadi ba tlaa kopiwa gape go kaa maikaelelo a bone go buisana le banna ba bone ka dintlha dingwe tsa setlhogo se, pele ga ba tlhakanela dikobo mo nakong e e tlang. Maduo a dipatlisiso tse a tlaa thusa go thapa mananeo a a ka rotloetsang bomme go ipuelelela le banna ba bone gore ba ba hemele mo mogareng wa HIV. Re go kopa gore o tsenelele dipatlisiso tse, tse eleng gore di tlaa dirwa ka go botsolotsa basadi ka bongwe ka bongwe, e tsamaisiwa ke ba ba rutetsweng go dira dipatlisiso.

Tsamaiso ya Dipatlisiso: Basadi ba tlaa tsa karolo mo go ngwe ya dipuisano tse gangwe fela, mme di tlaabo di tswaretswe ko dikokelwaneng. Dikarabo tse di kgethilweng ke mosadi mongwe le mongwe di tlaa kwalwa mo pampering go supa se eleng dikakanyo tsa gagwe. Re eletsa go buisana le basadi ba le makgolo-mabedi le masome a hera bobedi mo Gaborone. Re go kopa gore o buwe boammmaruri o phuthulogile go re thusa go tlhaloganya dikakanyo kgotsa maikutlo a basadi ka puisano ya bone le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng go kganela HIV. Re tlaa ithuta ka fa basadi ba akanyang ka teng mabapi le diphetolo tsa banna ba bone ha ba ba lebisa kgang e, gore basadi ba ama dintlha dife mo puisanong e; gore ba dirisa motsipa bo fe go rotloetsa puisano magareng ga bone le banna ba bone. Ko tshimologong ya dipatlisiso mosadi mongwe le mongwe o tla kopiwa go bala a bo a gatisa ditumalano tse, e le se supo sa gore o tlhaloganya se se kwadilweng le gore o a ithaopa a sa patikwa ke ope.

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Mathata a a ka go Tlhagelang Motsaa-karolo: Ga re solofele go ka nna le mathata ape a tlisiwang ke dipatlisiso tse mo botsogong jwa gago. Basadi bangwe ba kanna ditlhong kgotsa ba tlhabega maikutlo fa ba tsaya dikgang tse di amanang le thobalano. Bangwe kgotsa ba ka fuduwega maikutlo fa ba gakologelwa dipuisano tsa bone le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng tse di kileng tsa ba direla mathata mo botshelong. Go ka nna ga nna le dipelaleo tsa go latlhegelwa ke diphiri fa di bolelelwa yo mongwe. Re go tshepisa go re se o se re bolelelelang se tlaa somarelwa thata e le sephiri. O gakologelwe gore o na le tshwanelo ya go tlhaola se o batlang go bua ka sone kgotsa go se tlola o sa tshabe sepe fa o bona se go tshwenya maikutlo. Puisano yotlhe e e kwadilweng ka ga gago e tlaa lotlelelwa mo kobotong le mo ofising ya Mmatlisis-mogolo.

<u>Maduo a Botsaa-karolo:</u> Ga gona maduo kgotsa dituelo dipe tsa go tsenelela dipatlisiso tse, mme o re thusa go tlhaloganya botoka ka dikakanyo le maikutlo a basadi mabapi le puisano ya bone le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng, gore re tle re kgone go thusa bangwe mo nakong e e tlang.

Tshomarelo ya Diphiri tsa Motsaa-karolo: Dikgang tsotlhe tse di tlaa buiwang mo dipatlisisong tse di tlaa somarelwa ka go lotlelelwa mo kobotong le mo ofising e e faphegileng. Balaodi ba dipatlisiso le ba ba ntshitseng madi gore di diriwe, ba ka nna ba batla dikgang tse ka gonne ba na le tshwanelo ya go di tlhatlhoba. Ba molao le bone ba ka ntsha taolo ya gore ba di neelwe. Ba ba nang le tshwanelo e o ke ba lephata la tlhatlhobo-dipatlisiso la sekolo sa Emory le ba lekgotla la tsamaiso dipatlisiso le ditlhabolo tsa boranyane mo lephateng la botsogo, le ba Mmadikolo ko Botswana. Mme legale maikano a rona ke gore re somarele diphiri tsa gago go ya kafa molao o re letlang ka teng, lefa e le mo go ba ba tlhatlhobang dipatlisiso tota. Tsela nngwe e re ka sireletsang diphiri tsa batsaa-karolo ka yone ke go dirisa dika-maina mo mekwalong ya rona. Leina la gago ga lena go tlhaga gope fa re setse re kwala ka maduo dipatlisiso tse, mme go tlaa sobokwa dintlha tsa dikgang ka kakaretso. Re tlamega go bolelela ba molao fa gona le dipelaelo dingwe tsa kgokgontsho kgotsa tshotlo ya bana, kgotsa matshosetsi mangwe a botshelo jwa yo mongwe kgotsa jwa gago e e ka dirwang ke wena kgotsa mongwe fela.

Dikatso: Ga gona dituelo dipe tse di solofetsweng mo go wena go tsaa karolo mo dipatlisisong tse. Mme o tlaa atswiwa ka USD \$1.50 kgotsa 10 Pula wa sepalamo le lemmenyana la diaganong go tshwara mowa fa dipuisano di ntse di tsweletse.

Fa go ka direga gore o golafale mabapi le dipatlisiso tse, o tlaa isiwa mo nngweng ya dikokelo tsa puso. Mme puso ya Botswana le selokolo sa Emory ga dina madi a a ka go isang kalafing gosele. Fa ona le potso mabapi le go tsaa-karolo ga gago o ka leletsa Mabel Kabomo-Magowe mo mogaleng wa (011-267) 3163041.

Ba o ka Ikuelang mo go Bone fa Gona le Mathata: Fa ona le dipotso ka dipatlisiso o ka leletsa Mabel Kabomo-Magowe mo mogaleng wa (011-267) 3163041. Fa ona le mathaata le ditswanelo tsa gago tsa go mo dipatlisisong tse o ka leletsa Mme Shenaz El Halabi, yo e leng mokwaledi-mogolo wa lekgotla la tsamaiso ya dipatlisiso le boranyane mo lephateng la botsogo mo Botswana, ko mogaleng wa (011-267) 391-4467, kgotsa Ngaka Colleen DiIorio, modula-setilo wa lekgotsa la tsamaiso-dipatlisiso kwa sekolong sa Emory ko mogaleng wa (001-404-712-0720).

Boithaopo le go Fetogela Tumalano e: Gakologelwa gore go tsenelela dipatlisiso tse go a ithaopiwa le gore o na le tshwanelo ya go gana kgotsa go di tlhanogela le fa o setse o gatisitse ditumalano tse di kwadilweng tse. Mme le fa o tsere tshwetso ya gonna jalo, o santse o na le tshwanelo ya go amogela kalafi kgotsa tshwanelo nngwe le nngwe fela e o ntseng o na le yone ka dinako tsotlhe, gompieno le nako e e tlang. Fela o ka emisiwa ke babatlisisi ka lebaka la boitshwaro jo bo maswe, jo bo matshosetsi mo matshelong a ba bangwe kgotsa jo bo kgoreletsang tsamaiso ya dipatlisiso. Jaanong re tlaa go neela moriti wa mokwalo o gore o e ipele. Fa o dumalana le go ithaopa go tsaa-karolo mo dipatlisisong tse, gatisa ka mokwalo fa tlase fa.

Motseledi wa dipuisano	Letsatsi	Nako	
Mogatisi/Mosainisi	Letsatsi	Nako	_
Rea leboga			
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Appendix K: Instrument Development Study Measures K-1-Study Script

<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measures for Young Women Aged 21-35 Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention

Instructions: The script below is to be read to participants following signing of the consent form. Please use a pencil or pen to circle numbers that represent the appropriate responses, or use the responses given to fill in the blank spaces. Please make sure that there are no missing responses. You can clarify the questions but do not provide answers for anyone.

Good morning/afternoon. My name is

Welcome and thank you for agreeing to participate in this study. Before we start, I would like to go over some details with you about what we are going to do today. I would like to briefly explain what this study is all about. This study is entitled "Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women Aged 21-35 Years Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention" in short we will refer to it as the instrument development study. It is intended to find out women's beliefs and perceptions regarding discussing safer sex with their partners. I will ask you a number of questions about yourself, about your partner and what your beliefs and perceptions are regarding talking to him about safer sex. Some of questions address how you define and understand safer sex communication; the topics you would include when you talk to him, whether you think you are able to discuss this topic with him, the things that affect your ability to talk to him, and the things you might do to make it easier to talk to him. I will also ask you what you think other people in your life may think when you talk to your partner about safer sex, how motivated you are to comply with their wishes, your intention to discuss safer sex before the next sexual encounter, and if you have used safer sex practices in the past 3 months. This interview will take about 1 ¹/₃ hours. Do you have any questions so far? [PAUSE]

Now I would like to talk about what we will do during the interview. First, everything that you tell me in this interview will be kept very confidential. At the start of the interview, I will give you a consent form to read or if you would like me to read it to you, I will do so. The consent form is a statement that explains all the details about the study, including the purpose, procedures, risks and benefits associated with your participation in the study, and contact information for the researchers (SHOW THE CONSENT FORM). If you agree to participate then I will ask you to write your initials on each page of the consent form and sign on the last page, which I will also sign as a witness. I will go through each section of the questions and ask you to respond freely and honestly to each question. There is no right or wrong answer, but what is important is that you answer honestly

When the interview is over, I will take an additional 5 minutes to ask you your thoughts regarding the questions, items, or statements you just responded to during the interview, to help us make improvements. (ONLY FOR THOSE 10 WOMEN PARTICIPATING IN THEQUANTITATIVE PILOT STUDY).

Again, I would like to remind you to be open and honest. When we finish I will give you P10.00 for your transport. You will also get a snack during the interview. Any questions before we start the interview?

Now I would like you to read this information (HAND OUT THE CONSENT). If you like, I can read it for you. (READ THE CONSENT FORMS IF THE PARTICIPANT ASKS).

I will now start asking you questions in this form (SHOW THE INSTRUMENTS). Translated Script

Dipatlisiso tsa go Dira le Go Tlhatlhoba Dipotso

Setlhogo: Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga Tse di Masome-mabedi le Motso go ya kwa go Tse di Masome-mararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone, Botswana ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng go Thibela HIV.

Ditaelo: Mokwalo o o latelang o tshwanetse go balelwa motsaa-karolo pele ga go simololwa puisano le ene. Tsweetswee dirisa pensele go agelela nomoro e e bapileng le karabo e e kgethilweng ke motsaa-karolo jaaka fa o ntse o mmotsa dipotso, kgotsa o kwale tse di tlhokegang mo di tselaneng. O ka tlhalosa dipotso, mme o seka wa arabela ope.

Dumela mma. Nna ke bediwa __

Ke a go amogela gape ke go lebogela go tsaa karolo mo dipatlisisong tse. Pele ga ke simolola ke batla go go lebisa dintlha dingwe tse re tlaa di dirang tsatsi jeno. Ke tlaa go tlhalosetsa ka maikaelelo a dipatlisisotse. Setlhogo sa dipatlisiso tse ke "Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga Tse di Masome-mabedi le Motso go ya Kwa go Tse di Masome-mararo le Botlhano ba ba Tsayang Kalafi mo Dikokelwaneng tse di Kgethilweng mo Gaborone, Botswana ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng go Thibela HIV". Dipatlisiso tse maikaelelo a tsone ke sekaseka dipotso tse di dirilweng leka go tlhaloganya maikutlo le ditumelo tsa basadi ka setlhogo se. Re eletsa go itse gore o tlhaloganya jang kgang e; gore a o bona o kgona go e tsaya le monna wa gago; tse o tleng o di akaretse fa o buisana le ene yone; gore odirisa botsipa bo fe go mo rotloetsa mo puisanong e; gore o bona batho ba ba botlhokwa mo go wena, go akarediwa le monna wa gago, ba ka reng fa o tsaya kgang e nae, le gore a o bona o ka tsamaisana le maikutlo ao a bone. Ke tlaa go botsa gape gore o bona bomosola kgotsa bodiphatsa jwa puisano e e le eng; le tse o kileng wa didirisa mo kgweding tse tharo tse di fitileng go iphemela mo mogareng wa HIV; maikaelelo a gago ka bua le monna pele ga le tlhakanela dikobo mo nakong e e tlang. A ona le dipotso? [PAUSE...]

Sa ntlha ke gore, sengwe le sengwe se o tlaa se mpolelelang mo puisanong e, e tlaa nna sephiri. Pele ga re simolola dipuisano ke tlaa go neela mokwalo wa maikano a gago a go tsaakarolo mo dipatlisisong tse. Mokwalo o o tlhalosa dipatlisiso ka botlalo, maikaelelo le tsamaiso ya tsone, maduo, mathata a a ka tlhagelang motsaa-karolo, le ba o ka ikuelang mo go bone kgotsa ba ba ka arabang dipotso mabapi le dipatlisiso. [SUPA PAMPRI YA MOKWALO WA MAIKANO].

Fa o dumalana le go tsaa karolo mo dipatlisisong, ke tlaa go kopa gore o kwale ntlha ya leina le ya sefane sa gago mo tsebeng nngwe le nngwe, o bo o gatisa tsebe ya bofelo. Le nna ke tlaa gatisa ke le mosupi sa gore o ithaupile. Ke tlaa tsaya dipotso ka karolo nngwe le nngwe. Ga gona karabo e gotweng e phoso. Se se botlhokwa ke gore o bue boammaruri jo o bo itseng. Morago ke tlaa tsaya metsotso e le metlhano go re o mpolelele gore dipotso tse di ne dintse jang, one o di tlhaloganya jang, gore re tle re di tokafatse go dirisiwa mo nakong e e tlang. (FA GO TEWA BATSAA-KAROLO MO TEKELETSONG YA DIPATLISISO BABA LESOME FELA). Ko bofelong ke tlaa go neela P10.00 (\$1.60) wa sepalamo. A ona le dipotso pele ga re simolola? [PAUSE...] Jaanong ke tlaa go neela mokwalo wa maikano a go tsenelela dipatlisiso. [MO NEELE

MOKWALO WA MAIKANO A GO TSENELELA DIPATLISISO O BO O LETLA METSOTSO GORE A BALE, KGOTSA O MMALELE FA A BATLA]. Ke tlaa simolola go go botsa dipotso tse. [MMONTSHE PAMPIRI YA GO TSAMAISA DIPUISANO.

K-2: Socio-demographic Questionnaire

<u>Title:</u> Development and Psychometric Evaluation of Health Protective Sexual Communication Measures for Young Women Aged 21-35 Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention.

Today's date: _____ [Text] Respondent ID#____ [Text] Facility #____ [Text]

<u>Part 1</u>

Directions: In this section, I will ask you questions about yourself.

1. How old are you? (Please tell me your age in years at the last birthday)_____ [Text].

2. Do you have a male sexual partner? NO [0] YES [1]

3. How many sexual partners do you have?

I only have one sexual partner [0]

I have more than one sexual partner [1]

Please answer the following questions if you have one male sexual partner.

4. Do you consider this man to be your....

Casual partner (the man you have sex with on a casual basis, and are not in a

serious relationship with)? [0]

Main (the partner you consider to be closest to you or your steady partner that you

hope to have the a long committed relationship with)? [1]

The following questions (5 and 6) refer to your main male sexual partner. By main sexual partner, we mean the one you have a committed relationship with and you consider as your long-term sexual partner, or married to. If you only had casual sexual partner do not answer these questions.

5. How long have you been in a sexual relationship with this partner?

_____Months [0] _____Years [1]

6. The quality of the relationship with this partner is a.....

A. Respectful Relationship.] NO [0]		YES	[1]	
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B. Loving? NO [0] YES [1]

7. What is your level of education?

- [2] Forms 1 to form 3
- \square [3] Form 4 to form 5
- [4] Some vocational/tertiary education
- [5] University education
- 8. What is your marital status?
 - [1] Single, never married
 - [2] Single living with partner
 - [3] Married
 - [4] Divorced
 - [5] Widowed

9. What is your employment status?

- [0] I am unemployed
- [1] I am employed part-time
- [2] I am employed full time
- [3] I am self-employed
- 10. What is your average monthly income in Botswana Pula?

- 12. What is your HIV status?
 - [0] I am negative.
 - [1] I am positive.
 - [3] I don't want to say.
 - [8] I don't know.

13. Have you ever discussed safer sex topics with your partner? Safer sex topics include talking about avoiding unsafe sex, using protection during sex, avoiding alcohol and drugs,

discussing sexual histories and behaviors that can expose you to HIV and Sexually

Transmitted Infections. NO [0] YES [1]

14. Who in your relationship takes responsibility for starting safer sex discussions? (This

refers to discussions that can assist you to protect yourself from unsafe sex and adopt safer

sex practices such as the use condoms, to prevent HIV and sexually transmitted infections).

My partner [0]	Myself [1]	Both of us [2]]
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Part 2:

<u>Directions</u>: Now I will ask questions about your main male sexual partner. By main male sexual partner, we mean the man you have sex with that you have a committed relationship with and you consider as your long-term sexual partner. If you only have a casual partner, you do not need to answer these questions.

- 1. How old is your partner? _____Age in years [Text].
- 2. What is your partner's highest level of education?
 - [1] Less that standard 7
 - [2] Form 1 to form 3
 - [3] Form to form 5
 - [4] Vocational/tertiary education
 - [5] University education
- 3. What is your partner's employment status?
 - [0] He is unemployed
 - [1] He is employed part-time
 - [2] He is employed full time
 - [3] He is self-employed
- 4. What is your partner's average monthly income in Botswana Pula? _____ [Text]
- 5. Has your partner been tested for HIV? No [0] Yes [1] I don't know [8]
- 6. What is your partner's HIV status?

[0] Negative

	[1] Positive
	[2] don't want to say
\square	[3] don't know

Translated Socio-demographic Questionnaire

Karolo Ya Ntlha: Dikgang ka ga Gago Le ka Monna wa Gago

<u>Ditaelo tsa Motsamaisa-puisano:</u> Tsweetswee dirisa pensele go tshwaya nomoro e e bapileng le karabo e e kgethilweng ke motsaa-karolo jaaka fa o ntse o mmotsa dipotso, kgotsa o kwale tse di tlhokegang mo di tselaneng. O ka tlhalosa dipotso, mme o tlhokomela gore o seka wa arabela ope dipotso.

Letsatsi la gompieno:_____ Nomoro ya motsaa-karolo: _____

Nomoro ya kokelwana e le leng mo yone ka nako eno _____

Karolwana ya Ntlha: Dipotso ka ga gago

Ditaelo: Dipotso tse di latelang ke ka ga gago.

- 1. Dingwaga tsa gago di kae? (Go ya ka letstai la matsalo le le fetileng gautshwane)
- 2. A ona le monna yo o tlhakanelang-dikobo nae? Ee [0] Nyaa [1]
- 3. O tlhakanela dikobo le banna ba le kae? A le mongwe [0] Ba feta bongwe [1]

Ditaelo: Tsweetswee araba dipotso tse di latelang fa ele gore o tlhakanela dikobo le monna a le mongwe.

4. Monna yo o mo tsaya e le...:

Wa nakwana (yo o itiyatiyang ka ene e se wa tlhomamo) [0]

Wa konokono (yo o mo tsaya ele ene wa tlhomamo yo le ka tshelang mmogo ka lobaka lo lo leele). [1]

Dipotso tse di latelang (ya botlhano le ya borataro) di itebagantse le monna yo eleng wa tlhomamo.

5. O na le lobaka lo lo kae o ntse o tlhakanela dikobo le monna yo?

Dikgwedi [0]	Dingwaga [1]
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6. Tlhalosa ka seemo sa lorato la lona le rre yo. Re ratana ...

Mo go tlotlegileng 🗌 Nyaa [0] 📄 Ee [1]
Mo go tona Nyaa [0] Ee [1]
 7. O feletse fa kae mo dithutong? Ga ke a fetsa lekwalo la bosupa. [1] Ke dirile form 1 go ya kwa go form 2. [2] Ke dirile form 3 go ya kwa go form 5. [3] Ke dirile dithuto tsa tiro ya diatla. [4] Ke dirile dithuto tsa mmadikolo. [5]
 8. Seemo sa gago sa nyalo ke sefe? Ga ke a nyalwa. [0] Ga ke a nyalwa mme ke nna le monna. [1] Ke nyetswe. [2] Ke tlhadilwe. [3] Ke swetswe ke monna. [4]
 9. Seemo sa gago sa tiro ke sefe? Ga ke bereke. [0] Ke bereka bontlha ja letsatsi. [1] Ke bereka letsatsi lotlhe. [2] Ke a ipereka. [3]
10. O amogela bo kae ka kgwedi? (Ka Dipula)
11. A o tlhatlhobetswe mogare wa HIV? Nyaa[0] Ee [1]
12. Seemo sa gago sa HIV ke sefe? Ga kena mogare. [0] Ke na le mogare. [1] Ga ke itse. [2] Ga ke batle go bua. [8]

13. A o kile wa buisana le monna wa gago ka dintlha tse di amang tlhakanelo-dikobo e e sireletsegileng. Dintlha tse di akaretsa tse di dirisiwang go thibela kabelano ya matute a mmele fa go tlhakanelwa dikobo, jaaka go dirisa sekausu, go ikitsa thobalano fa yo mongwe a seyo, le go itebaganya le motho a le mongwe, e le go leka go itsa go abelana mogare wa HIV le malwetse a mangwe a dikobo.

Nyaa [0] Ee [1]

14. Ke mang mo bobeding jwa lona yo o di etelelang pele fa go tla mo puisanong ya lona ka tlhakanelo-dikobo e e sireletsegileng? Puisano ya tlhakanelo-dikobo e e sireletsegileng go tewa e e thusang baratani go ikitsa go tlhaakanela dikobo mo go borai, kgotsa go dirisa tse di ka ba hemelang go abelana mogare wa HIV le malwetse a mangwe a dikobo.

Ke nna [1] Ke monna wame [2] Ke rona rotlhe kgotsa mongwe wa rona fela [3]

Karolwana ya Bobedi: Dipotso ka Monna/Moratiwa wa gago

<u>Ditaelo:</u> Jaanong ke tlaa go botsa dipotso ka monna/moratiwa wa gago tlhomamo. Monna wa gago wa tlhomamo go tewa yo eleng gore o mo tsaya gore ke ene wa konokono yo le ka tshelang lobaka lo lo leele mmogo.

- 1. Monna wa gago o dingwaga di kae? ? (Go ya ka letstai la matsalo lele fetileng gautshwane) _____
- 2. Monna wa gago feletse fa kae mo dithutong?

Γ	Ga aa fetsa lekwalo la bosupa. [1]
t	O dirile form 1 go ya kwa go form 2. [2]
	O dirile form 3 go ya kwa go form 5. [3]
	O dirile dithuto tsa tiro ya diatla. [4]
Γ	O dirile dithuto tsa mmadikolo. [5]

3. Seemo sa monna wa gago sa tiro ke sefe?

Ga a bereke [0]
O bereka bontlha ja letsatsi. [1]
O bereka letsatsi lotlhe. [2]
O a ipereka. [3]

4. Monna wa gago o amogela bokae kakgwedi? _____kwala ka Dipula.

5. A monna wa gago o tlhatlhobetswe mogare wa HIV? Nyaa [0] Ee [1]

6. Seemo sa monna wa gago sa HIV ke sefe?

Ga ana mogare. [0]
O na le mogare. [1]
Ga ke itse. [2]
Ga ke batle go bua. [8]

K-3: Health Protective Sexual Communication Measures

<u>Title:</u> Development and Psychometric Evaluation of a Health Protective Sexual Communication Measures for Young Women Aged 21-35 Attending Selected MCH Clinics in Gaborone, Botswana for HIV Prevention.

Scale 1: The Meaning and Understanding of Health Protective Sexual Communication

<u>Directions:</u> Now I will read statements about what people may think health protective sexual communication means to them. I will ask you to tell me how much you agree with each statement that I read (READ THE KEY BELOW).

Items	SD [1]	D [2]	NS [3]	A [4]	SA [5]
1. Initiating safer sex discussions with your a sexual partner.	1	2	3	4	5
2. Making sure that both you and your partner are relaxed to facilitate discussions about safer sex.	1	2	3	4	5
3. Letting the partner start discussions about safer sex.	1	2	3	4	5
4. Letting your partner know about your personal sexual history.	1	2	3	4	5
5. Asking your partner about his personal sexual history.	1	2	3	4	5
6. Talking to your partner about risky sexual behaviors.	1	2	3	4	5
7. Asking your partner to use safer sex practices.	1	2	3	4	5

Key: SD=Strongly Disagree; D=Disagree; NS=Not Sure; A=Agree; SA=Strongly Agree

Scale 2: Health Protective Sexual Communication Content

<u>Directions</u>: At this point, I will read some statements about the information that people may think should be included when women talk to their male sexual partners about safer sex. I will now ask you to tell me how frequently you included these topics when you discussed safer sex with your main male sexual partner during the past 3 months (READ THE KEY BELOW).

Key: N=Never; S=Seldom; ST=Sometimes; MT=Most of the Time; AT=All of the Time

Content Included in Safer Sex Discussions	N [1]	S [2]	ST [3]	MT [4]	AT [5]
1. Present and past number of sexual partners.	1	2	3	4	[5] 5
2. Changing sexual partners every now and then within short periods (a few months).	1	2	3	4	5
3. Exchanging sex for money or goods.	1	2	3	4	5
4. History of sexual relationships with partners who had sex with many partners.	1	2	3	4	5
5. History of sex with a person who sells sex for money and goods.	1	2	3	4	5
6. History of having sexually transmitted infections (STI).	1	2	3	4	5
7. Receiving treatment for an STI.	1	2	3	4	5
8. HIV testing and status.	1	2	3	4	5
9. History of using street drugs.	1	2	3	4	5
10. History of excessive use of alcohol.	1	2	3	4	5
11. History of relationships with persons who used drugs or alcohol.	1	2	3	4	5
12. Homosexual behavior (having sex with a man if you are a man or with a woman if you are a woman).	1	2	3	4	5
13. Bisexual behavior (having sex with both men and women).	1	2	3	4	5
14. History of having oral sex.	1	2	3	4	5
15. History of having anal sex.	1	2	3	4	5
16. Male condom use.	1	2	3	4	5
17. Female condom use.	1	2	3	4	5
18. Male circumcision.	1	2	3	4	5
19. Abstaining from sex while apart from partner.	1	2	3	4	5
20. Dry sex (use of drying agents in the vagina.	1	2	3	4	5
21. Rough sex (vigorous sex that may be uncomfortable).	1	2	3	4	5
22. Vaginal cleansing (use of water and/or chemicals to clean inside the vagina).	1	2	3	4	5

Scale 3: Influence Tactics

Directions: I will now read some tactics or strategies women may use to get their male sexual partners to discuss safer sex with them. I would like you to tell me how frequently you used each of the tactics when you talk to your main male sexual partner about safer sex in the past 3 months (READ THE KEY BELOW).

Influence Tactics	N [1]	S [2]	ST [3]	MT [4]	AT [5]
1. Demand discussion in a bold and straightforward manner.	1	2	[3] 3	4	[5] 5
2. Drop hints and suggestions.	1	2	3	4	5
3. Threaten to leave the relationship.	1	2	3	4	5
4. Flatter him so that he can talk.	1	2	3	4	5
5. Use affection to get him to talk.	1	2	3	4	5
6. Plead with him to talk.	1	2	3	4	5
7. Offer to talk about something else other than safer sex.	1	2	3	4	5
8. Lie about HIV or STD status.	1	2	3	4	5
9. Withhold sex until we discuss the issue.	1	2	3	4	5
10. Cry to get him to talk.	1	2	3	4	5
11. Throw temper tantrum.	1	2	3	4	5
12. Be persistent with my request.	1	2	3	4	5
13. Reason with him logically.	1	2	3	4	5
14. State things in a gentle manner.	1	2	3	4	5
15. Get someone to help persuade him.	1	2	3	4	5
16. Use fear of the disease.	1	2	3	4	5
17. Not talking to him until he agrees to discuss safer sex.	1	2	3	4	5
18. Suggestive action (sneak a condom in pocket, luggage, or side drawer to indicate that there is a need to talk).	1	2	3	4	5
19. End the relationship.	1	2	3	4	5

Key: N=Never; S=Seldom; ST=Sometimes; MT=Most of the Time; AT=All of the Time

Scale 4: HPSC Influencing Factors.

<u>Directions:</u> At this time, I will read statements that describe factors that might affect women's ability to discuss safer sex with their male sexual partners. I would like you to tell me how much each factor affects you (READ THE KEY BELOW).

Factors	N [1]	S [2]	ST [3]	MT [4]	AT 5]
Partner's personality: My male sexual partner is	[*]	[=]		[']	
1. Easy to talk to.	1	2	3	4	5
2. Loving.	1	2	3	4	5
3. Respectful.	1	2	3	4	5
4. Focuses on our future together.	1	2	3	4	5
5. Understanding.	1	2	3	4	5
6. Willing to listen.	1	2	3	4	5
7. Wants to be with me.	1	2	3	4	5
Type of relationship: Our relationship is	1	2	3	4	5
8. A well established relationship.					
Length of relationship:					
9. I have had a sexual relationship with my male sexual partner for a long time (more than 1 year).	1	2	3	4	5
Age difference:					
10. He is younger.	1	2	3	4	5
11. He is older.	1	2	3	4	5
12. We are the same age.	1	2	3	4	5
My prior knowledge about					
13. STIs and HIV transmission.	1	2	3	4	5
14. Safer sex practices.	1	2	3	4	5

Key: N=Never; S=Seldom; ST=Sometimes; MT=Most of the Time; AT=All of the Time

Factors	N [1]	S [2]	ST [3]	MT [4]	AT 51
15. Drugs given to reduce the AIDS virus in a person's blood.	1	2	3	4	5]
16. People who have AIDS or died from it	1	2	3	4	5
My male sexual partner's prior knowledge about	1	2	3	4	5
17. STIs and HIV transmission.					
18. Safer sex practices.	1	2	3	4	5
19. Drugs given to reduce the AIDS virus in a person's blood.	1	2	3	4	5
20. People who have AIDS or died from it.	1	2	3	4	5
Other factors:	1	2	3	4	5
21. My fears about the threat of HIV/AIDS.					
22. My participating in HIV prevention programs.	1	2	3	4	5
23. My desire to keep healthy.	1	2	3	4	5
24. My use of influence tactics (ways to get a partner to agree with what you ask).	1	2	3	4	5
25. Obtaining help from other people.	1	2	3	4	5
26. My partner's perceived threat of HIV/AIDS.	1	2	3	4	5
27. My partner's participation in HIV prevention programs.	1	2	3	4	5
28. My partner's desire to keep healthy.	1	2	3	4	5
29. Receiving support from other people.	1	2	3	4	5

Scale 5: Attitude toward Health Protective Sexual Communication:

<u>Directions</u>: Now I will read statements that represent attitudes that women may have towards health protective sexual communication with a sexual partner. I would like you to tell me whether you agree with these attitudes. I will read the key that you will use (READ THE KEY BELOW).

Key: SD=Strongly disagree; D=Disagree; NS=Not Sure; A= Agree; SA= Strongly Agree

Discussing safer sex topics with my male sexual partner would	SD [1]	D [2]	NS [3]	A [4]	SA [5]
1. Be beneficial.	-2	1	0	1	2
2. Help protect us against HIV and STIs.	-2	-1	0	1	2
3. Encourage us to discuss intimate issues that affect our lives.	-2	-1	0	1	2
4. Draw us closer together.	-2	-1	0	1	2
5. Help us to know and understand each other.	-2	-1	0	1	2
6. Promote health.	-2	-1	0	1	2
7. Prevent deaths.	-2	-1	0	1	2
8. Be embarrassing.	-2	-1	0	1	2
9. Bring up issues of infidelity.	-2	-1	0	1	2
10. Cause arguments.	-2	-1	0	1	2
11. Cause us to break up.	-2	-1	0	1	2

Scale 6, Perceived Subjective Norm for Health Protective Sexual Communication:

<u>Directions</u>: The next set of statements represent possible beliefs about what women may think important people in their lives are likely to think regarding the woman's discussing safer sex with her male sexual partner. I would like you to tell me how much you agree with the statements. I will read the answer key to you first (READ THE KEY BELOW).

Key: SD= Strongly Disagree; D= Disagree; NS= Not Sure; A= Agree; SA= Strongly Agree

Statements	SD [1]	D [2]	NS [3]	A [4]	SA [5]
1. Most people who are important to me think I should discuss safer sex (protection or ways to avoid unsafe sex) with my partner.	-2	-1	0	1	2
2. My health care provider thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
3. My Mother thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
4. My sister thinks I should discuss safer sex with my partner.	-2	-1	0	1	2
5. My friend thinks I should discuss safer sex with my partner.	-2	-1	0	1	2

Statements	SD [1]	D [2]	NS [3]	A [4]	SA [5]
6. My male sexual partner thinks I should discuss safer sex with him.	-2	-1	0	1	2
7. I really don't know what most people important to me think about my discussing safer sex with my male sexual partner.	-2	-1	0	1	2

Scale 7, Perceived Partner's Response to Health Protective Sexual Communication:

<u>Directions</u>: The statements I will read now are about what women may think their main male sexual partners would say or do when they talk about safer sex. Tell me how likely or unlikely you think your main male sexual partner would say or do when you discuss safer sex with them. I will read the answer key to you first (READ THE KEY BELOW).

Items	VU [1]	U [2]	NS [3]	L [4]	VL [5]
If I asked my male sexual partner to talk about safer sex he				. 1	
would: 1. Listen to me attentively	-2	-1	0	1	2
2. Add something to the discussion	-2	-1	0	1	2
3. Encourage me to continue with the discussion	-2	-1	0	1	2
4. Tell me that he is happy about the discussion	-2	-1	0	1	2
5. Argue in a logical manner	-2	-1	0	1	2
6. Show interest in talking further	-2	-1	0	1	2
7. Ask me to postpone the discussion	-2	-1	0	1	2
8. Show discomfort about discussing sexual topics	-2	-1	0	1	2
9. Make me feel like I don't trust him	-2	-1	0	1	2
10. Make me feel like I'm unfaithful to him	-2	-1	0	1	2
11.Make me feel like I don't love him	-2	-1	0	1	2
12. Try to convince me to stop or postpone the discussion	-2	-1	0	1	2
13. Try and change the topic	-2	-1	0	1	2
14. Plead or beg me to stop	-2	-1	0	1	2

Key: VU= Very unlikely; U= Unlikely; N=Not Sure; L=Likely; VL= Very Likely

Items	VU [1]	U [2]	NS [3]	L [4]	VL [5]
15. Flatter or use affection to avoid discussion	-2	-1	0	1	2
16. Not respond or ignore me	-2	-1	0	1	2
17. Walk away from me.	-2	-1	0	1	2
18. Threaten to withdraw material support if I bring up the discussion again.	-2	-1	0	1	2
19. Threaten to leave me.	-2	-1	0	1	2
20. Withhold sex.	-2	-1	0	1	2
21. Throw temper tantrums.	-2	-1	0	1	2
22. Retreat from the discussion in a gentle manner.	-2	-1	0	1	2
23. Get angry with me.	-2	-1	0	1	2
24. Hit me.	-2	-1	0	1	2
25. End the relationship.	-2	-1	0	1	2
26. Use safer sex practices.	-2	-1	0	1	2

Scale 8: Motivation to Comply with the Wishes of Significant Referents Regarding Talking to Partner about Safer Sex:

<u>Directions:</u> Now I will read statements that describe how motivated women may feel to comply with what they think important people in their lives would say/do when they communicate safer sex with their main male sexual partner. Tell me how true the statements are about how motivated you are to comply with the wishes of people important to you (READ THE KEY BELOW).

Key: NT=Not at all true; **AT**=A little true; **ST**=Somewhat True; **FT**=Fairly True; **QT**= **Quite True**; **DT**=Very True; **ET**=Extremely True

Items	NT	AT			QT	VT	ЕТ
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Generally speaking I would discuss safer sex with my partner if I think							
1. My health care provider would approve of it.	0	1	2	3	4	5	6
2. My mother would approve of it.	0	1	2	3	4	5	6
Items	643				QT		
--	-----	-----	---	-----	----	-----	---
		[2]		[4]		[6]	
3. My friend would approve of it.	0	1	2	3	4	5	6
4. My sister would approve of it.	0	1	2	3	4	5	6
5. My male sexual partner if I think he would approve of it.	0	1	2	3	4	5	6

Scale 9: Perceived self-efficacy for Health Protective Sexual Communication with a Sexual Partner:

<u>Directions</u>: I will now read the statements that represent common thoughts that women may have about their ability to engage insafer sex dicussions with their main male sexual partner. Tell me how much you agree with these statements (READ THE KEY BELOW).

Key: SD= Strongly Disagree; D= Disagree; NS= Not Sure; A= Agree; SA= Strongly Agree

Statements	SD [[1]	D [2]	NS [8]		SA [4]
1. Discussing safer sex with my male sexual partner would be easy.	-2	-1			2
2. Discussing safer sex with my partner would require a lot more effort than I would expect.	-2	-1	0	1	2
3. Discussing safer sex with my partner would be helpful for us to use safer sex strategies.	-2	-1	0	1	2

Scale 10: Intentions to Engage in Health Protective Sexual Communication with a Partner.

<u>Directions</u>: Statements that I will read next represent women's intentions to discuss each safer sex topic with their male sexual partners. I would like you to tell me how likely or unlikely you think you will discuss each of these topics with your main male sexual partner before your next sexual encounter (READ THE KEY BELOW).

I intend to discuss the following with my partner before the next sexual encounter:	VU [1]	U [2]	NS [3]	L [4]	VL [5]
1. Present and past number of sexual partners.	-2	-1	0	1	2
2. Changing relationships frequently.	-2	-1	0	1	2
3. Exchanging sex for money or goods.	-2	-1	0	1	2

Key: VU= Very unlikely; U= Unlikely; N=Not Sure; L=Likely; VL= Very Likely

I intend to discuss the following with my partner before the next sexual encounter:	VU [1]	U [2]	NS [3]	L [4]	VI [5]
4. History of sexual relationships with partners who had sex with many partners.	-2	-1	0	1	2
5. History of sex with a person who sells sex for money and goods.	-2	-1	0	1	2
6. History of having a sexually transmitted disease (STI).	-2	-1	0	1	2
7. Receiving treatment for an STI.	-2	-1	0	1	2
8. HIV testing and status.	-2	-1	0	1	2
9. History of using street drugs.	-2	-1	0	1	2
10. History of using alcohol excessively.	-2	-1	0	1	2
11. History of relationships with persons who used drugs or alcohol.	-2	-1	0	1	2
12. Homosexual behavior (having sex with a man if you are a man or with a woman if you are a woman).	-2	-1	0	1	2
13. Bisexual behavior (having sex with both men and women).	-2	-1	0	1	2
14. History of having oral sex.	-2	-1	0	1	2
15. History of having anal sex.	-2	-1	0	1	2
16. Male condom use.	-2	-1	0	1	2
17. Female condom use.	-2	-1	0	1	2
18. Male circumcision.	-2	-1	0	1	2
19. Having only one sex partner at a time.	-2	-1	0	1	2
20. Abstaining from sex while apart from partner.	-2	-1	0	1	2
21. Dry sex (use of drying agents in the vagina).	-2	-1	0	1	2
22. Rough sex (vigorous sex that may be uncomfortable).	-2	-1	0	1	2
23. Vaginal cleansing (use of water and/or chemicals to clean inside the vagina).	-2	-1	0	1	2

-2 -1 0 1 2

1. Safer Sex Practices Measure

<u>Directions:</u> Safer Sex practices are those sexual activities that can prevent contact with genital body fluids during sexual intercourse. I would like you to tell me how frequently you and your partner used any of these safer sex practices in the last 3 months (READ THE KEY BELOW).

Safer Sex Practices: In the past three months, I have used	N [1]	S [2]	ST [3]	M [4]	AT [5]
1. Male condom.	1	2	3	4	5
2. Female condom.	1	2	3	4	5
3. Abstinence.	1	2	3	4	5
4. Maintaining a monogamous relationship.	1	2	3	4	5
5. Microbicides (medicines or jells inserted in the vagina to prevent HIV during sexual contact with a partner presumed to be infected).	1	2	3	4	5

Key: N=Never; S=Seldom; ST= Sometimes; M=Most of the Time; AT= All of the Time

Karolo ya Boraro: Translated Health Protective Sexual Communication Measures

Dipotso ka Puisano ka Tlhakanelo-dikobo e e Sireletsegileng

Scale 1, The Meaning of HPSC

Karolwana ya Ntlha: Tlhaloso Ka fa o Tlhaloganyang ka Teng Fa go Buiwa ka Tlhakanelodikobo e e Sireletsegileng

<u>Ditaelo:</u> Janong ke tlaa go balela diele tse di tlhalosang ka gore fa go buiwa ka tlhakanelodikobo e e sireletsegileng go tewa eng. Ke tlaa go kopa gore o mpolele gore a o a dumalana kgotsa nyaa le se se buiwang mo seeleng sengwe le sengwe se ke se balang (BALA DIKAELO TSE DI FA TLASE).

Dikaelo: 1. Ga ke dumalane; 2. Ke a dumalana mme ga ke tlhomamise; **3.** Ke dumalana go se kae; **4.** Ke a dumalana; **5.** Ke dumalana thata

Tlhakanelo-dibo e e seriletsegileng e raya kgotsa e akaretsa	[1]	[2]	[3]	[4]	[5]
1.Go simolola puisano le monna wa gago ka tlhakanelo-dikobo e e sireletsegileng.	1	2	3	4	5
2. Go tlhomamisa gore wena le monna wa gago le mo seemong se se iketlileng pele ga lo simolola puisano ka tlhakanelo-dikobo e e sireletsegileng.	1	2	3	4	5
3. Go letla gore monna wa gago e nne ene a simololang puisano ka tlhakanelo-dikobo e e sireletsegileng.	1	2	3	4	5
4. Go itsise monna wa gago ka botshelo jwa gago jo bo fetileng jo bo amanang le tlhakanelo-dikobo le ba bangwe.	1	2	3	4	5
5. Go botsolotsa monna wa gago ka botshelo jwaa gagwe jo bo fetileng mabapi le tlhakanelo-dikobo le ba bangwe.	1	2	3	4	5
6. Go bua le monna wa gago ka matshelo a tlhakanelo-dikobo a a botlhabetsi.	1	2	3	4	5
7. Go kopa monna wa gago gore lo dirise diitshireletsi fa lo tlhakanela dikobo.	1	2	3	4	5

Scale 2, Health Protective Sexual Communication Content Discussed

<u>Karolwana ya Bobedi:</u> Tse di Akarediwang Fa go Buiwa ka Tlhakanelo-dikobo e e Sireletsegileng

<u>Ditaelo:</u> Tse di latelang di itebagantse le dintlha tse go buisanngwang ka tsone ka tlhakanelodikobo e e sireletsegileng. Mpolelela gore wena le monna wa gago a le kile la ama dintlha tse fa lo buisana ka tlakanelo-dikobo e esireletsegileng mo sebakeng sa dikgwedi tse thataro tse di fitileng (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Ga re ise re buisane ka tsone; **2.** Re kile ra di ama go le go nene fela; **3.** Re atle re di ame fa gongwe; **4.** Re di ama gantsi; **5.** Re di ama nako tsotlhe.

Nna le monna wa me rekile ra buisana ka tse di latelang tsa tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. Go bolelana ka batho ba re rataneng le bone gompieno le nako e efitileng.	1	2	3	4	5
2. Go tlhakanela dikobo le batho ba le bantsi.	1	2	3	4	5
3. Go ithekisa go bona madi kgotsa dilwana.	1	2	3	4	5
4. Go bo o kile wa tlhakanela dikobo le bangwe ba tlhakenelang dikobo le batho ba le bantsi.	1	2	3	4	5
5. Go bo o kile wa tlhakanela dikobo le batho ba ba ithekisang go dira madi kgotsa go amogela dilwana.					
6. Go bua ka malwetsi a dikobo a o kileng wa nna le one.	1	2	3	4	5
7. Go bo o kile wa alafelwa malwetsi a dikobo.	1	2	3	4	5
8. Go itlhatlhobela mogare wa HIV le go amogela maduo a gone.	1	2	3	4	5
9. Go bo o kile wa dirisa diritibatsi thata.	1	2	3	4	5
10. Go bo o kile wa bo o o nwa bojalwa mo go feteletseng.	1	2	3	4	5
11. Go bo o kile wa tlhakanela dikobo le motho yo o neng a dirisa diritibatsi kgotsa dinno-tagi .	1	2	3	4	5
12. Go tlhakanela dikobo le monna yo mongwe o le monna kgotsa le mosadi yo mongwe o le mosadi.	1	2	3	4	5
13. Go tlhakanela dikobo le baratani ba banna le basadi.	1	2	3	4	5
14. Go tlhakanelwa dikobo ka tsenngwa bonna mo molomong.	1	2	3	4	5
15. Go tlhakanela-dikobo ka go tsenngwa bonna mo maragong.	1	2	3	4	5

Nna le monna wa me rekile ra buisana ka tse di latelang tsa tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
16. Go dirisa sekausu sa banna.	1	2	3	4	5
17. Go dirisa sekausu sa basadi.	1	2	3	4	5
18. Go rupisiwa ga banna.	1	2	3	4	5
19. Go ikitsa tlhanelo-dikobo gotlhelele bogolojang fa yo mongwe a seyo.	1	2	3	4	5
20. Go itsa go phaphalatsa bosadi.	1	2	3	4	5
21. Go itsa go gotlhega.	1	2	3	4	5
22. Go itsa go tlhatswa boteng jwa bosadi ka go dirisa melemo le tse dingwe fela jalo.	1	2	3	4	5

Scale 3, Influence Tactics

Karolwana ya Boraro: Botsipa jwa go Tsamaisa Puisano

<u>Ditaelo:</u> Janong ke tlaa go balela di ele tse di buang ka botsipa jo basadi batleng ba bo dirise go rotloetsa puisano ga reng ga bone le banna/baratiwa ba ka tlhakanelo-dikobo e e sireletsegileng. Ke kopa gore o mpolelele gore o atle o dirise tse ke tlaa di balang ka selekanyo se se ka e (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Ga nke ke dira jalo; **2.** Ke a tle ke dire jalo ka sewelo; **3.** Ke dira jalo Fa gongwe; **4.** Ke dira jalo gantsi; **5.** Ke dira jalo nako tsotlhe.

Gore monna wa me a tsenelele le nna puisano ka tlhakanelo dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. Ke papamatsa mafoko fela ke tlhamaladitse.	1	2	3	4	5
2. Ke gakolola ka go latlhela mafokonyana fale le fale.	1	2	3	4	5
3. Ke dira matshosetsi a go mo tlogela.	1	2	3	4	5
4. Ke mo tlakisa ka mafokonyana a a monate gore a bue.					
5. Ke mo neela lorato gore a dumele go buisana le nna.	1	2	3	4	5
6. Ke a mo rapela.	1	2	3	4	5
7. Ke bua ka di sele tse dingwe dikgang pele ga moono- mogolo.	1	2	3	4	5
8. Ke mo aketsa ka seemo sa me sa mogare wa HIV kgotsa sa malwetse a mangwe a dikobo.	1	2	3	4	5

Gore monna wa me a tsenelele le nna puisano ka tlhakanelo dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
9. Ke mo tima dikobo go fitlhela a dumela go bua le nna ka setlhogo se.	1	2	3	4	5
10. Ke a ichakgatsa.	1	2	3	4	5
11. Ke a itidisa.	1	2	3	4	5
12. Ke tswelela fela ka go gwetlha kgang gantsi.	1	2	3	4	5
13. Ke mo fa mabaka ka kopo ya me.	1	2	3	4	5
14. Ke bua le ene ka bonolo.	1	2	3	4	5
15. Ke kopa thuso mo go mongwe gore a mo sokasoke.	1	2	3	4	5
16. Ke dirisa matshosetsi a a tshwanang le bodiphatsa jwa bolwetse jwa AIDS.	1	2	3	4	5
17. Ga ke mmuisi go fitlhela a dumela go buisana le nna ka setlhogo se.	1	2	3	4	5
18. Ke latlhela dikausu mo dipateng, le mo mesobaneng kgotsa mo dikobotong tsa gagwe gore a bone dikai tsa gore ke batla puuisano.	1	2	3	4	5
19. Ke fedisa lorato la rona.	1	2	3	4	5

Scale 4, Factors the Influence Women's Ability to Engane in HPSC

<u>Karolwana ya Bone:</u> Ditshetla tse di ka Amang go Kgona ga Basadi go Buisana le Banna ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng

<u>Ditaelo:</u> Ka eno nako ke tlaa go balela dingwe tse di ka amang go kgona dipuisano ga basadi ka tlhakanelo-dikobo e e sireletsegileng. Ke tlaa kopa gore o mpolelele gore nngwe le nngwe ya dintlha tse e ama go kgona puisano ya gago le monna wa gago go le kae (BALA DIKAELO TSE DI FA TLASE FA).

Dikaelo: **1.** Ga e nkame gotlhelele; **2.** E nkama ka sewelo; **3.** E nkama fa gongwe; **4.** E nkama gantsi; **5.** E nkama nako tsotlhe.

Go kgona game go buisana le monna wame ka tlakanelo-dikobo e e sireletsegileng go dirwa ke	[1]	[2]	[3]	[4]	[5
Botho jwa gagwe:	1	2	3	4	5
1. O motlhofo go bua le ene.	1	2	3	4	3
2. O lorato.	1	2	3	4	5
3. O na le tlotlo mo go nna.	1	2	3	4	5
4. O kgatlhegela thata bokamoso jwa rona mmogo.	1	2	3	4	5
5. O tlhaloganya ka pele.	1	2	3	4	5
6. O kgatlhegela go retesa.	1	2	3	4	5
7. O batla go nna le nna.	1	2	3	4	5
Mohuta wa go ratana ga rona: Goratana ga rona:	1	2	3	4	5
8. Ke mo go lolameng.					
<u>Sebaka se re se Ntseng re Ratana</u>	1	2	3	4	5
9. Ke na le sebaka se se leele ke ntse ke tlhakanela dikobo le monna	1	2	3	4	5
yo. Pharologanyo ya Rona ya Dingwaga tsa Matsalo 10. O monnye mo go nna.	1	2	3	4	5
11. O motona mo go nna.	1	2	3	4	5
12. Re balekane mmogo.	1	2	3	4	5
Gore ke bo kena le kitso ka	1	2	3	4	5
13. Malwetsi a dikobo le mogare wa HIV di abelanwang ka teng.					
14. Ditsela tsa go itshireletsa mo malwetsing a dikobo.	1	2	3	4	5
15. Kalafi e e fiwang go ritibatsa mogare wa HIV.	1	2	3	4	5
16. Batho bangwe ba ba lwalang kgotsa baba bolailweng ke AIDS.	1	2	3	4	5
Gore monna wa me a bo a na le kitso ka					
17. Malwetsi a dikobo go akarediwa le HIV le fa a abelanwang ka teng.	1	2	3	4	5
		2	3	4	5

Go kgona game go buisana le monna wame ka tlakanelo-dikobo e e sireletsegileng go dirwa ke	[1]	[2]	[3]	[4]	[5]
19. Kalafi e e fiwang go ritibatsa mogare wa HIV.	1	2	3	4	5
20. Batho bangwe ba ba lwalang kgotsa ba ba bolailweng ke AIDS.	1	2	3	4	5
Tse Dingwe:	1	2	3	4	5
21. Ka fa ke bonang bodiphatsa jwa mogare le bolwetse jwa HIV/AIDS ka teng.					
22. Go ithaopela bodiredi mo mananeong a go thibela mogare wa HIV.	1	2	3	4	5
23. Go kgatlhegela go tshela ka nonofo.	1	2	3	4	5
24. Go dirisa botsipa jwa go rotloetsa puisano gareng ga me le monna wame ka tlhakanelo-dikobo e e sireletsegileng.	1	2	3	4	5
25. Go kopa thuso ya batho bangwe ba re tshelang nabo.	1	2	3	4	5
26. Ka fa monna wame a bonang ka teng matshosetsi kgotsa bodiphatsa jwa HIV le AIDS ka teng.	1	2	3	4	5
27. Go dira ga monna wa me mo mananeong a go thibela mogare.	1	2	3	4	5
28. Go eletsa botshelo jo bo nonofileng ga monna wa me.	1	2	3	4	5
29. Go amogela thuso mo go ba bangwe.	1	2	3	4	5

Scale 5, Attitude toward HPSC

<u>Karolowana ya Botlhano:</u> Maikutlo a Gago Ka Puisano ya go Itshireletsa mo Tlhakanelong-Dikobo

<u>Ditaelo</u>: Jaanong ke tlaa go balela maikutlo kgotsa dikakanyo tsa basadi ba bangwe ka tlhakanelo-dikobo e e sireletsegileng. Ke tlaa go kopa gore o mplelele selekanyo sa kafa o dumalanang kgotsa o sa dumalaneng ka teng le diele tse ke tlaa di balang. Ke tla a go balela dikaeolo tse o di dirisang go araba (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Ga ke dumalane gotlelele; 2. Ga ke dumalane; 3. ke a dumalana ga ke na bosupi; 4. Kea dumalana; 5. Ka dumalana thata.

Puisano ya mosadi le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. E na le mosola.	-2	-1	0	1	2
2. E ka re thusa go thibela mogare wa HIV le malwetse a mangwe a dikobo.	-2	-1	0	1	2
3. E ka re kgothatsa go buisana le ka matshelo a mangwe a rona.	-2	-1	0	1	2

Puisano ya mosadi le monna wa gagwe ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
4. E ka aga lorato la rona.	-2	-1	0	1	2
5. E thusa baratani go itsanye sentle.	-2	-1	0	1	2
6. E thusa batho go tlamela botsogo jwa bone.	-2	-1	0	1	2
7. E ka thusa go fokotsa dintsho.	-2	-1	0	1	2
8. E tlhabisang ditlhong.	-2	-1	0	1	2
9. E ka tlisa dipelaelo tsa go tsietsana.					
10. E ka tlisa kgothang ma gareng ga baratani.					
11. E ka kgaoganya baratani.					

Scale 6, Perceived Subjective Norm

<u>Karolwana ya Borataro:</u> Dikakanyo tsa Gago ka Gore Batho ba ba Botlhokwa mo go Wena ba Kareng ka Puisano ya Gago le Monna Wa Gago ka Tlhakanelo-dikobo e e Sireleltsegileng

<u>Ditaelo:</u> Ka nako eno ke tla go botsa kakanyo ya gago ka fa o bonang ka teng gore batho ba ba botlhokwa mo go wena ba ka reng fa ba ka itse go re o tle o buisane le monna wa gago ka tlhakanelo-dikobo e e sireletsegileng, Bolela gore o dumalana go le kae le diele tse ke tlaa di baling. Ke tlaa go balela dikaelo tse selekanyo sa dikarabo tse o ka di dirisang (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Ga ke dumalane gotlhelele; **2.** Ga ke dumalane; **3.** Ga kena bosupi; **4.** Ke a dumalana; **5.** Ke dumalana thata.

Tse di latelang di kaya dikaknyo tsa megore batho ba ba botlhakwa mogo nna ba se akanyang fa ke buisana le monna wame ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. Bontsi jwa batho ba ba botlhokwa mo go nna ba akanya gore ke tshwanetse go buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2
2. Ba botsogo ba akanya gore ke tshwanetse go buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2
4. Nkgonne/nnake o akanya gore ke tshwanetse go buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2
5. Tsala ya me e akanya gore ke tshwanetse go buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2

Tse di latelang di kaya ka fa ke akanyetsang ka teng ka se batho ba ba botlhakwa mo go nna ba ka reng fa ke buisana le monna wame ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
6. Monna wa me o akanya gore ke tshwanetse go buisana le ene ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2
7. Ga ke itse gore bontsi jwa batho ba ba botlhokwa mo go nna ba ka reng fa ke buisana le monna wame ka tlhakanelo-dikobo e e sireletsegileng.	-2	-1	0	1	2

Scale 7, Perceived Partner's Response

<u>Karolwana ya Bosupa:</u> Kakanyo ka Phetolo ya Monna Mabapi le Puisano ka Tlhakanelodikobo e e Sireletsegileng.

<u>Ditaelo</u>: Diele tse di latelang di itebagantse le ka fa basadi bangwe ba ka akanyang gore banna ba bone ba ka ba fetola ka teng fa ba tlhagisa puisano ka tlhakanelo-dikobo e e sireletsegileng. Ke tlaa kopa go re o mpolelele gore a tse di latelang di ka direga fha o buisana le monna wa gago ka tlhakanelo-dikobo e e sireletsegileng (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Seo ga a kake a se dira gotlhelele; **2.** Seo ga kake a se dira; **3.** Ga ke itse gore o ka reng; **4.** Seo o ka se dira; 5. Seo o ka dira tota.

Fa ke Buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. O ka reetsa thata.	-2	-1	0	1	2
2. O ka akgela mo puisanong.	-2	-1	0	1	2
3. O ka rotloetsa go re re tsweledise puisano.	-2	-1	0	1	2
4. O ka itumela gore puisano e bo e nnile teng.	-2	-1	0	1	2
5. O ka kanoka kgotsa a sekaseka kgang sentle.	-2	-1	0	1	2
6. O ka tsweledisa puisano ya rona.	-2	-1	0	1	2
7. O ka re re beele puisano nako e e tlang.	-2	-1	0	1	2
8. O ka supa go sa itumeleng ka puisano e.	-2	-1	0	1	2
9. O ka ntira gore ke ikutlwe o kare ga ke motshepe.	-2	-1	0	1	2
10. O k a ntira gore ke ikutlwe o kare ga ke tshepahale.	-2	-1	0	1	2
11. O ka ntira gore ke ikutlwe o kare ga ke mo rate.	-2	-1	0	1	2
12. O ka kopa gore re sekaseke go emisa kgotsa go seegela kgang fa thoko	-2	-1	0	1	2

Fa ke Buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
13. O ka leka go fetola kgang	-2	-1	0	1	2
14. O ka nthapela gore ke emise puisano	-2	-1	0	1	2
15. O ka ntlakisa ka lorato go tila puisano.	-2	-1	0	1	2
16. O ka nna a seka kgota a ntheetsa.	-2	-1	0	1	2
17. O ka tswa fa tlase ga me a tsamaela go sele.	-2	-1	0	1	2
18. O ka dira matshosetsi a go emisa dithuso tsa gagwe mo go nna fa ke tswelela ka kgang e.	-2	-1	0	1	2
19. O ka dira matshosetsi a go fedisa lorato lwa rona.	-2	-1	0	1	2
20. O ka gana ka dikobo.	-2	-1	0	1	2
21. O ka nna a galefa go fitlhela ke emisa puisano e.	-2	-1	0	1	2
22. O ka itidimatsa hela ka bonolo.	-2	-1	0	1	2
23. O ka nkgalefelela.	-2	-1	0	1	2
24. O ka mpetsa.	-2	-1	0	1	2
25. O ka fedisa lorato/nyalo.	-2	-1	0	1	2
26. O ka dumela go dirisa di itshireletsi mo malwetseng a dikobo.	-2	-1	0	1	2

Scale 8, Motivation to Comply with Wishes of Significant Others

Karolwana ya Bohera-bobedi: Thotloetsego ka go Dumalana le Dikakanyo tsa ba Bangwe ka Puisano ya Tlhakanelo-dikobo e e Sireletsegileng, go Akarediwa le Monna.

<u>Ditaelo</u>: Jaanong ke tlaa go balela diele tse di tlhalosang thotloetsego ya basadi go diragatsa dikeletso tsa batho ba ba botlhokwa mo go wena ka go buisana le banna ba bone ka tlhakanelo-dikobo e e sireletsegileng. Tsweetswee mpolelela selekanyo sa ka fa o boning o rotloetsegile ka teng go ka dumalane le dikakayo tse di latelang tsa ba masika le ditsala (BALA DIKAELO TSE DI FA TLASE FA).

Dikaelo: **1.** Ga ke a rotloetsega gotlhelele; **2.** Ke rotloetsegile go le gonneyenyane thata; **3.** Ke rotloetsegile go le gonnye; **4.** Ke rotloetsegile; **5.** Ke rotloetsegile go le go golwane; **6.** Ke rotloetsegile go le gotona; **7.** Ke rotloetsegile go le go tona thatathata.

Fa ke soboka kgang ka kakaretso nkare fela ka re.	[1]	[2]	[3]	[4]	[5]	[6]	[7]
1. Ke ka buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng fa ke akanya gore moooki o ka dumalana le nna go dira jalo.	1	2	3	4	5	6	7
2. Ke ka buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng fa ke akanya gore mme o ka dumalana le nna ka go dira jalo.	1	2	3	4	5	6	7
3. Ke ka buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng fa ke akanya gore nkgonne/nnake wa mosadi o ka dumalana le nna ka go dira jalo.	1	2	3	4	5	6	7
4. Ke ka buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng fa ke akanya gore tsala ya me e ka dumalana le nna ka go dira jalo.	1	2	3	4	5	6	7
5. Ke ka buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng fa ke akanya gore le ene o ka dumelana le nna ka go dira jalo.	1	2	3	4	5	6	7

Scale 9, Perceived Self-efficacy for HPSC

<u>Karolwana ya Bohera-bongwe:</u> Tumelo ya Basadi ka Go Kona Ga bone Puisano ka Tlhakanelo-dikobo e e Sireletsegileng le Banna b bone.

<u>Ditaelo:</u> Ke tlaa go balela diele ka dikakanyo dingwe tse basadi bangwe ba ka nnang le tsone ka go kgona go buisana le banna ka tlhakanelo-dikobo e e sireletsegileng. Mpolelela gore o dumalana gole kae le diele tse (BALA DIKAELO TSE DI FA TLASE FA).

<u>Dikaelo:</u> 1. Ga ke dumalane gotlhelele; **2.** Ga ke dumelanane go se kae; **3.** Ga ke tlhomamise; **4.** Kea a dumalana; **5.** Ke dumelana thata.

Go buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
1. Go ka nna motlhofo.	-2	-1	0	1	2
2. Go ka mpatla go tsenya moko mo nameng go feta ka fa ke neng ke solofetse ka teng.	-2	-1	0	1	2
3. Go ka re thusa thata go dirisa tsa itshireletso mo malwetseng a dikobo.	-2	-1	0	1	2

Scale 10, Intention for HPSC

<u>Karolwana ya Lesome</u>: Maikaelelo ka Puisano le Monna ya Tlhakanelo-dikobo e e Sireletsegileng

<u>Ditaelo:</u> Diele tse ke tlaa di go balelang, di bua ka maikaelelo a o nang le one go buisana le monna wa gago ka ka ntlha nngwe le nngwe ya tlhakanelo-dikobo e e sireletsegaleng pele ga le ka tlhakanela dikobo mo nakong e e gautshwane e e tlang. Mpolelela selekanyo se o bonang puisano e e ka kgonega ka sone (BALA DIKAELO TSE DI FA TLASE FA).

Dikaelo: 1. Ga go kake ga direga jalo gotlhelele; **2.** Ga go kake sa direga jalo; **3.** Ga ke itse gore a go ka direga jalo; **4.** Go ka nna ga direga jalo; **5.** Go ka direga jalo fela thata.

Ke ikaelela go buisana le monna wame ka tlhakanelo-dikobo e e sireletsegileng pele ga re tlhakanela-dikobo mo nakong e e gautshwane e e tlang, ke akaretsa	[1]	[2]	[3]	[4]	[5]
1. Go bua ka ba re rataneng le bone mo nakong e e fetileng le ba gompieno.	-2	-1	0	1	2
2. Go tlhakanela dikobo le batho ba le bantsi.	-2	-1	0	1	2
3. Go ithekisa go bona madi kgotsa dilwana.	-2	-1	0	1	2
4. Go tlhakanela dikobo le motho yo o o tlhakanelang dikobo le batho ba bantsi.	-2	-1	0	1	2
5. Go tlhakanela dikobo le batho ba ba ithekisang.	-2	-1	0	1	2
6. Seemo sa me se se fetileng sa malwetse a dikobo.	-2	-1	0	1	2
7. Go alafelwa malwetse a dikobo nako e e fetileng.	-2	-1	0	1	2
8. Go itlhatlhobela mogare wa HIV le go amogela maduo.	-2	-1	0	1	2
9. Go dirisa diritibatsi.	-2	-1	0	1	2
10. Go itshiela thata kgotsa go nwa bojalwa mo go feteletseng.	-2	-1	0	1	2
11. Go tlhakanela dikobo le batho ba ba dirisang diritibatsi kgotsa ba ba itshielang thata.	-2	-1	0	1	2
12. Go tlhakanela dikobo le mosadi yo mongwe o le mosadi, kgotsa le monna yo mongwe o le monna.	-2	-1	0	1	2
13. Go tlhakanela dikobo le motho yo o kopakopanyang banna le basadi.	-2	-1	0	1	2
14. Go bo o kile wa tlhakanela dikobo ka go isa bonna mo molomong.	-2	-1	0	1	2

Fa ke Buisana le monna wa me ka tlhakanelo-dikobo e e sireletsegileng	[1]	[2]	[3]	[4]	[5]
15. Go bo o kile wa tlhakanela dikobo ka go tsenngwa bonna mo maragong.	-2	-1	0	1	2
16. Go dirisa sekausu sa banna.	-2	-1	0	1	2
17. Go dirisa sekausu sa basadi.	-2	-1	0	1	2
18. Go rupisiwa ga banna.	-2	-1	0	1	2
19. Go tlhakanela dikobo o itebagantse le motho a le mongwe.	-2	-1	0	1	2
20. Go ikitsa tlhakanelo-dikobo gotlhelele.	-2	-1	0	1	2
21. Go dirisa tse di omeletsang bosadi fa go tlhakanelwa dikobo.	-2	-1	0	1	2
22. Go gotlhega mo bosading fa go tlhakanelwa dikobo.	-2	-1	0	1	2
23. Go tlhatswa boteng ja bosadi thata pele ga go tlhakanelwa dikobo.	-2	-1	0	1	2

Scale 11, Safer Sex Practices

Karolo ya Boraro: Methale ya go Itshireletsa mo Malwetseng a Dikobo.

<u>Ditaelo</u>: Tse di latelang ke tse motho a ka di dirisang go kganela kabelano ya matute a mmele go thibela HIV le malwetse a dikobo. Mpolelela ka fa o dumalanang ka teng gore wena le monna wa gago lo kile lwa dirisa tse di latelang mo sebakeng sa kgwedi tse tharo tse di fetileng go itshireletsa (BALA DIKAELO TSE DI FA TLASE FA).

Dikaelo: 1. Ga re ise re se dirise; 2. Re se dirisitse ka sewelo; 3. Re se dirisitse fa gongwe; 4. Re se dirisitse gantsi; 5. Re se dirisitse ka nako tsotlhe.

Tse nna le monna wa me re kileng ra di dirisa mo kgweding tse tharo tse di fitileng fa re tlhakanelwa dikobo go thibela mogare wa HIV.	[1]	[2]	[3]	[4]	[5]
1. Sekausu sa banna.	1	2	3	4	5
2. Sekausu sa basadi.	1	2	3	4	5
3. Go ikitsa tlhakanelo-dikobo gotlhelele.	1	2	3	4	5
4. Go tlhakanela dikobo o itebagantse le motho a le mongwe.	1	2	3	4	5
5. Go dirisa ditlolo tse di tsenngwang mo bosading go kganela mogare wa HIV o lebile gore mongwe wa lona o ka bo a na le mogare.	1	2	3	4	5

Administration Evaluation of Measures by Participants

<u>Directions</u>: Now I would like to ask you questions regarding what you think about the interview questions that you just answered. Please feel free to respond to these additional questions. There is no right or wrong answer, but the information will help us to improve the questions.

	Questions	YES	NO
	Did any item(s) question(s) or statement(s) seem confusing?		
	If YES, which item(s) and what was/were confusing?		
	Did you find any item(s) with no correct or appropriate answer?		
	If YES, which item(s) and what was/were the answer(s)?		
	Did you find any item(s) with more than one correct or appropriate		
	answer?		
	If YES, which item(s), and what was/were the answer(s)?		
•	Were there any word(s) or abbreviation(s) in the items that were unclear?		
	If YES, what was/were the unclear word(s) or abbreviation(s).		
•	Were there any item(s) you did not want to answer?		
	If YES, which item(s) did you not want to answer?		
	Did any item(s) offend you: If YES, which item(s), and why was/were they offensive?		
•	Did the order of the items seem logical and appropriate? If NO, what was wrong with the order?		
	Is there any item(s) that should have been included, but was/were not? If YES, which item(s) should be added?		
•	Did you understand the directions (my instructions) for answering the questions? If NO, what directions were unclear?		

Version: 04/17/2007

Translated Post Administration Evaluation of Measures by Pilot Participants

<u>Setlhogo sa Dipatlisiso</u>: Go Thapiwa le go Sekaseka Dipotso tse di Gwetlhang Ditumelo le Maikutlo a Basadi ba Banana ba Dingwaga tse di Masome-mabedi le Motso go ya kwa go tse di Masome-mararo le Botlhano ba ba Tsayang Kalafi mo dikokelwaneng tse di Kgethilweng mo Gaborone ka go Buisana le Banna/baratiwa ba Bone ka Tlhakanelo-dikobo e e Sireletsegileng go Thibela HIV.

Ditaelo: Jaanong ke batla dikakanyo tsa gago mabapi le dipotso le dikarabo tsa gago mo puisanong ya rona. Ke go kopa gore o arabe o phuthulogile gape. Ga gona karabo e go tweng ga se yone, mme se se botlhokwa ke gontsha maikutlo a gago a boammaruri go re thusa go baakanya dipotso go di dirisa gape mo nakong e e tlang..

	Dipotso	EE	NYAA
1.	A go na le potso nngwe e e neng e go tsietsa? Fa e le teng bolela go re ke e fe.		
2.	A go na le potso e o neng o bona e sena karabo e e tshwanetseng? Fa e le teng, ke e fe karabo e e neng e tlhaela?		
3.	A go ne go na le potso e e nang le dikarabo tse di fetang bongwe? Fa a le teng ke e fe?		
4.	A go ne go na le mafoko kgotsa diele dingwe tse di neng di sa tlhaloganyesege? Fa di le teng, ke di fe?		
5.	A gone go na le dipotso dingwe tse o neng o sa batle go di araba? Fa di le teng ke di fe?		
6.	A go na le dipotso dingwe tse di go tenneng kgotsa di sa go itumedisang? Fa di le teng, ke di fe, le gore ke eng di ne di sa go itumedise?		
7.	A o bona thulaganyo ya dipotso e tlhamaletse? Fa e le gore e ne e sa tlhamalala ke fa kae fa go neng go sokame?		
8.	A gona le nngwe potso e e sa tshwanelang gore e kabo e tsentswe? Fa e le teng ke e fe?		
9.	A o ne o tlhaloganya dikaelo tsame gore o kgone go araba dipotso? Fa o ne o sa di tlhaloganye, ke di fe ditaelo tse o di neng o sa di tlhaloganye?		
V	ersion: 04/17/2008		

Appendix L: Abstracts of Papers Presented

Women's Vulnerability to HIV and the Role of Health Protective Sexual Communication: The Botswana Perspective: a Podium Presentation at the Association of Nurses in AIDS Care Research Conference, Held in San Antonio, Texas, 11th-13th April 2007

Purpose

HIV infection among women in Botswana is very high compared to that of men and for the general population. Factors that fuel the epidemic for women need to be explored and solutions worked out. Health protective sexual communication between sexual partners is particularly important in curbing the epidemic. This paper presents a review of literature on factors associated with women's vulnerability to HIV, focusing on among young women in Botswana, identifies strategies to curb the epidemic and the role of health protective sexual communication.

Methods

An integrative literature review was conducted using OVID MEDLINE, CINHAUL, EMBASE and Googlescholar.com.

Results

Young women are especially vulnerable to HIV infection because of unprotected heterosexual intercourse with infected men. Some socio-demographic factors such as age education, marital status, income; and sexual behavioral practices such as intergenerational sex, multiple partners, serial relationships, the culture of silencing, and excessive use of alcohol seem to fuel the epidemic. Other factors include cultural traditional healing practices, playful sex among relatives, vaginal hygiene practices such as dry sex, vaginal cleansing, and lack of circumcision among men. Inadequate communication between sexual partners is another issue, requiring health protective sexual communication between sexual partners, to enhance the effectiveness of other prevention strategies.

Conclusion and Discussion

Young women continue to be vulnerable to HIV infection at alarming rates. Some factors that fuel the epidemic were identified, especially poor communication among partners, the reasons for low rates of circumcision among males, and some of the traditional practices. Some strategies adopted in Botswana to prevent and control the epidemic were identified. Gaps were identified in relation to the effectiveness of these strategies. Further research is required to explore the factors that affect women's vulnerability, and to guide women specific and culturally sensitive and relevant interventions for the women and/or their male sexual partners.

Key Words

Women's vulnerability to HIV; Health protective sexual communication; socio-cultural practices.

<u>A Qualitative Study of the Perceptions and Beliefs about Health Protective Sexual</u> <u>Communication among Young Women in Gaborone, Botswana, for HIV Prevention: a Podium</u> <u>Presentation at the 18th Sigma Theta Tau International Nursing Research Congress, Focusing on</u> <u>Evidence-based Practice, held in Vienna July, August 11th-14th, 2007</u>

Introduction

Botswana, with a rate of 33.5 % among pregnant women, ranks second in HIV infection worldwide. Increased heterosexual transmission among young women is especially concerning. The use of health protective sexual communication (HPSC) that has health protective consequences between intimate sexual partners), can enhance the use of other HIV preventive methods.

Purpose

This paper presents results of a qualitative study conducted in Gaborone, Botswana, June-August 2006 to explore perceptions and beliefs of young women about HPSC for HIV prevention. The Theory of Planned Behavior guided the study.

Methods

The study used the qualitative description method. The sample consisted of 42 women aged 18-35 years with current male sex partners who attended maternal/child clinics in Gaborone. Twenty individual interviews were conducted using a semi-structured interview guide, and three focus groups of 6-8 women using a scripted discussion guide with six sexual behavior scenarios. Data were content analyzed for themes and sub-themes.

Results

Main themes were: the meaning of, beliefs about, perceptions about, and outcomes of HPSC. Key sub-themes were: advantages and disadvantages of, ease or difficulty with, and effectiveness of HPSC in adhering to safer sex practices, facilitators and barriers to HPSC, and outcome behaviors (sexual practices). Their sexual partners were the most significant referents influencing safer sex discussions. Women used different strategies to talk about safer sex, but did not always obtain cooperation from their partners to use safer sex strategies. Facilitators of HPSC were: a loving committed partner, a long-term relationship, knowledge about HIV/AIDS/STD transmission and antiretroviral therapy, knowing someone who had AIDS, social support, and participating in prevention programs. Barriers were partner's non-response and failure to comply with safer sex practices.

Discussion

This data will be used to derive items for the development of an instrument to measure HPSC in young Botswana women to guide interventions to promote HPSC.

<u>Lived Experiences of Young Women in Batswana While Engaging in Health Protective Sexual</u> <u>Communication with Their Male Sexual Partners; a Podium Presentation at the Association of</u> <u>Nurses in AIDS Care Conference, Held in Orlando Florida, 8th to 12th, November, 2007</u>

Introduction

The high heterosexual transmission of HIV for young women in Botswana requires recognition of HIV prevention as an interpersonal issue. Women need to assert themselves for sexual protection, but they have problems engaging in such discussions with their male partners. Information is lacking on how women experience health protective sexual communication (HPSC) with their male sexual partners.

Purpose

The purpose of this paper is to share lived experiences of young Batswana women while they talked to their male sexual partners about safer sex. The theory of planned behavior guided the mode of questioning.

Methods

This report is based on analysis of a single item that was part of a cross-sectional descriptive pilot conducted in Gaborone, Botswana preliminary to an instrument development dissertation. Forty-two sexually active young women aged 18-35 years who were able to read and write Setswana (the vernacular) were recruited from two Gaborone city clinics, selected through purposive sampling using maximum variation. The women responded to semi-structured face-to-face in-depth interviews. Participants were asked to recall a time when they talked to their male sexual partners about safer sex. Grounded theory approach was used to explore women's reactions and further exchanges and/or outcomes of the communication. Data were content-analyzed for emerging themes and sub-themes. *Results*

Major themes were: conditions for self-assertion; high self-efficacy for HPSC; enabling factors for HPSC; ability to address critical issues; fears and concerns; identification of the need for social support.

Conclusions

Women recognize the need for and can assert themselves for sexual protection. Women experience difficulties with their partners pertaining to none-responses and poor adherence to safer sex practices. Some women expressed fear of potential violence although none had such experiences. Some were ignored, or verbally abused. Women expressed the need for empowerment through education and skill development, and social support. *Implications for Practice*

Nurses can provide women focused education and support for women and couples to encourage HPSC. Further research is needed on factors that can enable women to be effective in gaining partner attentiveness, respect, and agreement to discuss safer sex and use protection against HIV.

Key words: Lived experiences, Health Protective Sexual Communication, HIV prevention; enabling factors.