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A Qualitative Exploration of HIV Risk Factors among Serodiscordant Married Couples in
Gujarat, India

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Bachelor of Arts
Rice University
2015

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Abstract

A Qualitative Exploration of HIV Risk Factors among Serodiscordant Married Couples in Gujarat, India
By Sajani Patel

India has the third largest HIV epidemic in the world. About 40% of new infections in India occur among married women ages 15-49. Over 85% of HIV transmission in India is via unprotected sex and the main risk factor for married women has been sexual contact with usually just their spouse, suggesting that women in India are contracting HIV from their husbands. However, few studies have examined HIV transmission risk factors among serodiscordant married couples in India and only a couple have examined these factors among couples in the state of Gujarat. This study aimed to conduct a secondary data analysis of qualitative data collected during the Positive Jeevan Saathi study to determine what HIV risk factors for serodiscordant married couples in Gujarat are and to determine to the extent to which the Theory of Gender and Power fits to this specific context. Key HIV risk factors included the desire to have a child, intimate partner violence, and husband's alcohol use. Some protective factors against HIV included women's greater economic contribution, joint-sleeping arrangements, and knowledge of non-penetrative sex methods. The Theory of Gender and Power was not a perfect fit to this context and there was counterevidence present for each structure of the theory.

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Introduction

India has the third largest HIV epidemic in the world (AVERT: AVERTing HIV and AIDS, 2015a) with twice the number of HIV-positive people than are currently living in the United States (AVERT: AVERTing HIV and AIDS, 2015b). In India HIV infection specifically among married women has been increasing (AVERT: AVERTing HIV and AIDS, 2015a; Ghosh et al., 2011). About 40% of new infections in India occur among married women ages 15-49 (Silverman, Decker, Saggurti, Balaiah, & Raj, 2008; United Nations General Assembly Special Session, 2010). Notably, about half of women in India are married by the age of 18, demonstrating how large this at-risk group is (UNICEF, 2013). Over 85% of HIV transmission in India is via unprotected sex and the main risk factor for married women has been sexual contact with their sex partner, usually only their spouse (Gangakhedkar et al., 1997; Mehra, Bhalla, Rawat, & Kishore, 2015). This suggests that women in India are primarily contracting HIV from their husbands (Mehra et al., 2015; United Nations General Assembly Special Session, 2010). A few studies in India have assessed factors that affect HIV transmission risk among serodiscordant couples (Kumarasamy et al., 2010; Marfatia, Naik, Singhal, & Naswa, 2013; Saggurti, Mahapatra, Sabarwal, Ghosh, & Johri, 2012). However, only a couple of studies have studied these risk factors among couples in the state of Gujarat (Marfatia et al., 2013; Patel et al., 2014), which has seen an increase in HIV prevalence among married couples (National AIDS Control Organisation, 2015). One such risk factor is consistent condom use, which is still low among married couples in India; which puts HIV-negative

married women in serodiscordant couples at particularly high risk for HIV infection due to potentially repeated unprotected sex (Bhattacharya, 2004). There is a great need for research and subsequent interventions that address prevention of HIV transmission from seropositive husbands to seronegative wives (Bhattacharya, 2004; Godbole & Mehendale, 2005; Solomon, Buck, Chaguturu, Ganesh, & Kumarasamy, 2003; Solomon, Chakraborty, & Yepthomi, 2004). Notably, public health recommendations in India have suggested creating interventions that focus on preventing HIV transmission from high-risk men to their female partners (Khan, Mishra, & Morankar, 2007; Kumarasamy et al., 2010; UNAIDS, 2013). Understanding the sexual risk behaviors and relationship dynamics of married couples is important to guiding the creation of tailored HIV-prevention interventions for these couples.

Purpose

The purpose of this study is to describe HIV-acquisition risk factors for HIV-negative wives in serodiscordant relationships living in Gujarat, India. A qualitative approach will be used to describe the experiences of this high-risk group using the Theory of Gender in Power, and the Patel model “Main pathways that protect against and place wives at risk for HIV, among serodiscordant couples in Surat, India” (S. N. Patel et al., 2016). Specifically, in this paper the themes will be described in a manner highlighting how they align with the theory and/or model. Any themes that are unique to this situation that do not fit within either will also be highlighted as such. This study will provide further insight into

the sexual behaviors of serodiscordant couples in India and the effects of serodiscordance on a marriage and relationship roles. The results of this study will fill a knowledge gap surrounding HIV risk for this particular group and will guide the creation of targeted interventions specifically for this type of serodiscordant couple in similar cultural settings. As such, the following research questions guided this study:

1. **What gender and power factors influence sexual behavior decision-making among serodiscordant, married couples in India?**
2. **What are the main HIV risk factors that seronegative, married women in India in serodiscordant couples face?**
3. **To what extent do the HIV-risk factors for HIV-negative, married women in serodiscordant relationships align with the Theory of Gender and Power?**

Background

HIV in India

2017 marks 30 years since the first cases of HIV in India were found among commercial sex workers in the state of Tamil Nadu (Simoes et al., 1987). While there has been dramatic progress in HIV prevention and treatment in India, the problem still persists. Based on the latest estimates from December 2015, the HIV prevalence rate in India is 0.26 (AVERT: AVERTing HIV and AIDS, 2015a). Because the population of India is so large, this equates to about 2.1

million HIV infected people (AVERT: AVERTing HIV and AIDS, 2015a). This is twice the number of HIV-positive people living in the United States (AVERT: AVERTing HIV and AIDS, 2015b). Notably, the epidemic has slowed in the number of new HIV infections and AIDS-related deaths have decreased between 2005 and 2013 (AVERT: AVERTing HIV and AIDS, 2015a). However, about 130,000 people still died of AIDS-related illnesses in 2013 and India accounts for 51% of all AIDS-related deaths in the Asia/Pacific region (UNAIDS, 2014). Thus, HIV/AIDS is still a severe public health issue in India.

While northern India has three times the population of southern India, most of the HIV-related research, surveillance, and prevalence efforts in India have been concentrated in southern India (Alary et al., 2014; Kumar, Mohanraj, Rao, Murray, & Manhart, 2015; Rao, Ganguly, Mehendale, & Bollinger, 2004; Vassall et al., 2014). However, due to the vast cultural and demographic differences between people in northern and southern India, this HIV information gathered cannot be generalized to situations in northern India. Notably, due to the rise of HIV incidence in the northern states, rigorous monitoring and evaluation have increased in recent years (National AIDS Control Organisation, 2016). One such northern state is Gujarat, with a high HIV prevalence of 5.6%, which is twice the national prevalence (National AIDS Control Organisation, 2016).

Country-Context

The state of Gujarat, with a total population of 60.3 million, is in the western part of the country and borders Pakistan (Government of Gujarat, 2014).

The largest city in Gujarat is Ahmadabad, with a population of about 6.3 million (Government of Gujarat, 2014). The next two largest cities include Surat, with a population of 4.5 million, and Vadodara, which has a population of about 1.7 million (Population.City, 2015). Based on the 2011 Census, 89% of people in Gujarat are Hindus, and 10% are Muslims (Census Population 2015 Data, 2015a). Additionally, about 70% of women and 78% of men in Gujarat are literate (Census Population 2015 Data, 2015a). While Gujarat is considered to be one of India's most socially and politically conservative states, it has one of India's strongest economies. While accounting for only 5% of India's population and 6% of India's land, Gujarat is responsible for 16% of India's industrial production, 24% of Indian exports and 7.3% of India's total Gross Domestic Product (India Investment Guides, 2016). This strong economy has also led to an influx of migrant workers, most of who migrate internally from other parts of India. For example, migrant workers comprise nearly 50% of Surat's population (United Nations Educational Scientific and Cultural Organization (UNESCO), 2013). This rise in migrant workers led to a concurrent rise in the number of commercial sex workers in the area. These demographic shifts are key factors that influenced the HIV transmission dynamics in Gujarat and specifically the city of Surat (V. K. Desai et al., 2003; Kadri & Kumar, 2012; United Nations Educational Scientific and Cultural Organization (UNESCO), 2013).

Directionality of HIV Risk

Globally, heterosexual sex is the most common route of HIV transmission (Lane & Palacio, 2006). This includes unprotected sex between migrant workers

and HIV-infected commercial sex workers and between HIV-infected migrant workers and their wives (Saggurti, Nair, et al., 2012; Saggurti et al., 2008). In India, migrants are perceived to be at high risk for HIV and are considered a “bridging group” that allows for increased HIV transmission to the general population (National AIDS Control Organisation, 2010). India has even developed a national HIV prevention strategy that focuses on migrants. Relatedly, married women in India are increasingly at risk for HIV infection. About 40% of new infections in India occur among married women ages 15-49 (Silverman et al., 2008; United Nations General Assembly Special Session, 2010).

Notably, about half of women in India are married by the age of 18, demonstrating how large this at-risk group is (UNICEF, 2013). The main risk factor for this group has been sexual contact with their only sex partner, usually their spouse (Gangakhedkar et al., 1997). One study in North India found that more than half of couples affected by HIV were serodiscordant; meaning only one partner had HIV. Among 72% those couples, males were the HIV-infected partner (Mehra et al., 2015). Research in India also suggests that among serodiscordant couples, HIV-negative wives have higher risk for contracting HIV from their HIV-positive husbands than HIV-negative husbands contracting from HIV-positive wives (Decker et al., 2009; Godbole & Mehendale, 2005; McGrath et al., 2007). Thus, there is a great need for research and subsequent interventions that address preventing HIV transmission from seropositive husbands to seronegative wives (Bhattacharya, 2004; Godbole & Mehendale, 2005; Solomon

et al., 2003; Solomon et al., 2004). Understanding the sexual risk behaviors and the relationship dynamics of married couples is an important and necessary step in the creation of tailored HIV-prevention interventions for serodiscordant, Indian couples.

HIV Risk Factors

HIV risk factors can be at the individual level or at the couple-level. Couple-level, or dyadic, HIV-risk factors are ones where characteristics or behaviors of both partners together influence risk (Albarracin, Tannenbaum, Glasman, & Rothman, 2010). One such dyadic risk factor is consistent and correct condom use, defined as using a condom 100% of the time for all sexual acts (Medical Institute for Sexual Health, 2017), and knowledge of HIV status, can help reduce HIV transmission to others (Cohen et al., 2011; Marks, Crepaz, & Janssen, 2006). However, consistent condom use among married couples in India is low (Chakrapani, Newman, Shunmugam, & Dubrow, 2010). One study in India found that 70% of males continued to have unprotected sex with their wives even after knowing they had an STI (Bentley et al., 1998). In a study of specifically serodiscordant, married couples in Gujarat, only 47% consistently used condoms (Marfatia et al., 2013). This study did not differentiate condom use between couples where the wife was positive and couples where the husband was positive. Thus it is unclear if the gender of the HIV-positive partner affects consistency of condom use among Gujarati couples. However, a different study of serodiscordant, Gujarati couples where the husband is HIV-positive found that a majority of participants did consistently use condoms (S. N. Patel et al., 2016).

One study of Indian participants in a mix of serodiscordant and seroconcordant relationships found that reasons for inconsistent condom use included the belief that condoms were unnecessary (especially while taking HIV medication), lack of sexual satisfaction with condoms, and husband's alcohol use (Chakrapani et al., 2010).

Additional dyadic, couple-level factors such as the desire to have a child or lack of safe sex communication may also affect condom use (Godbole & Mehendale, 2005; S. Patel et al., 2016). Furthermore, gender-based power dynamics and sexual behaviors may limit women's ability to use protective methods such as condoms, as men are the primary sexual decision makers (Blankenship, West, Kershaw, & Biradavolu, 2008; Patel et al., 2014). This sexual decision making could be influenced by cultural factors, perceived lack of ability to control life events, perceived risk of the disease, and the desire to that maintain harmony in the marriage (Blankenship et al., 2008; Bloom, Agrawal, Singh, & Suchindran, 2015; Radhika Ramasubban, 1995; Tolley et al., 2006). For many women, the potential for physical violence or emotional abuse prevents communication or sexual negotiation with their spouse (Bhattacharya, 2004; S. N. Patel et al., 2016; Solomon et al., 2009). However few studies have examined if and how these factors affect HIV transmission risk between HIV-negative women and their HIV-positive husbands in Gujarat (S. Patel et al., 2016; Patel et al., 2014).

Another HIV-risk factor for married women in India is intimate partner violence (IPV), which includes physical, verbal, sexual, and emotional violence

(S. Desai, 2005; S. N. Patel et al., 2016; Silverman et al., 2008; Stephenson, Koenig, & Ahmed, 2006). Husbands who have extramarital affairs are significantly more likely to be abusive towards their wives (Silverman et al., 2008). Furthermore, coercive or unprotected sex forced by an HIV-positive husband can lead to transmission of HIV and other STIs to seronegative wives (Silverman, Decker, Kapur, Gupta, & Raj, 2007; Silverman et al., 2008) Based on a recent national survey, 20% of women in Gujarat have faced some type of violence from their spouse (Ministry of Health and Family Welfare, 2017). Furthermore, 57% of wives and 74% of husbands in Gujarat felt physical harm to the wife was justified in at least situations like burning food, disrespecting in-laws, neglecting children, suspecting infidelity, arguing with husband, refusing sex, or going out without telling the husband (International Institute for Population Sciences and Macro International, 2008). Notably, being financially dependent on a male partner is associated with increased IPV due to the creation of a power imbalance favoring the husband (Macmillan & Gartner, 1999). However, for HIV serodiscordant couples, where the husband is HIV positive, he may already feel vulnerable and this may be exacerbated if a wife is earning more income. This feeling may lead a husband to use IPV to reassert power over his wife. However, the effect of disparities on relationship power and how it affects risky sexual behavior among serodiscordant couples is not well understood. Relatedly, husband's alcohol use is associated with physical violence in the relationship and increased risky sexual behaviors. (Berg et al., 2010; Bloom et al., 2015). However, it is unclear whether alcohol consumption decreases after HIV-

diagnosis and if it is still an important factor to consider when determining HIV-risk factors for serodiscordant couples.

Finally, HIV-risk could also be influenced by the desire to have children. One study in South India found that 40% of women were willing to risk HIV-acquisition to conceive (Solomon et al., 2003). However, it is unclear how willing husbands are to expose their wives and future children to the disease. Women in India may also feel pressure from their in-laws or extended family to have a child. There may be particular pressure on women to conceive a son to help their family maintain status in society. However, there is little evidence surrounding how the desire to conceive and familial pressures to conceive influence HIV-risk among serodiscordant couples.

Theoretical Framework

This study is guided by the Theory of Gender and Power (TGP), which has previously been used to elucidate HIV risk factors among females (Nyamhanga & Frumence, 2014; Weine et al., 2013). Wingood and DiClemente adapted the original TGP to understand gender-based inequalities that affect women's HIV risk (Wingood, Camp, Dunkle, Cooper, & DiClemente, 2002). The TGP contextualizes the dyadic nature of HIV risk behaviors and how power structures may influence these behaviors among married couples. Specifically, it allows for understanding these influences through the lens of the local cultural context. While the TGP has been used in a variety of contexts to understand HIV risk factors for women (Conroy, 2015; DePadilla, Windle, Wingood, Cooper, &

DiClemente, 2011; Kershaw et al., 2006), it has not yet been used to understand HIV risk among HIV-negative, married, Indian women in serodiscordant relationships. Even more broadly, it has not been used among any group of women in India. Thus, this will be the first study to analyze HIV-risk behaviors and the social factors influencing them using the TGP in the Indian context.

Under the TGP, risk is understood via three interrelated structures that illustrate how gender impacts relationships between men and women (Wingood et al., 2002). The three main structures include: sexual division of labor, sexual division of power, and cathexis.

Sexual Division of Labor

The sexual division of labor structure addresses disparities in income or education that women may face in their relationships. According to this structure, economic inequality favors men thus making women more dependent on men for financial support. Furthermore, women who have lower education levels, especially when compared to their male partner, are more likely to be affected negatively by the sexual division of labor. Thus, they will be more likely to have worse sexual health outcomes. This structure argues that the more financially dependent women are on men, the more likely they are to engage in risky sexual behaviors for financial gain (Wingood et al., 2002; Wingood & DiClemente, 1998).

Sexual Division of Power

According to Wingood and DiClemente, 'Power' includes the power, or ability, to act or change, and having power over others. It underlies and shapes

all social relationships between men and women and is also a central component of intimate, heterosexual relationships. This structure also takes into consideration hegemonic masculinity. Hegemonic masculinity is the form of masculinity that is dominant in a particular setting. It is the systematic subordination of women via men's behaviors and beliefs that establish them as dominant in society. Hegemonic masculinity is expressed as males' privilege over females and often manifests as societal imbalances that favor men (Wingood et al., 2002). In such relationships where women have less power, women lack control or authority and are unable to bargain for low-risk sexual behaviors. This could include being unable to negotiate for no sex, for non-penetrative sex, or for condom use. This theory posits that as the power difference in a relationship increases in favor of the man, the woman's ability to make sexual choices and decisions will decrease leading to worse health outcomes and greater risk for HIV (Wingood et al., 2002).

Structure of Cathexis

The structure of cathexis focuses on social norms and cultural beliefs that dictate how a woman should behave sexually. Further, it highlights the emotional and sexual attachments that women have with intimate, male partners. A focus is placed on society and its expectations regarding a woman's sexuality. This structure also examines how institutions, such as the family, influence a woman's sexual behaviors. Social mechanisms and biases exist that influence how men and women express their sexuality. Generally there are more taboos surrounding a woman's sexuality than a man. This structure argues that women who are

more accepting of conventional societal norms and beliefs surrounding their sexual behaviors are more likely to have worse health outcomes and are at greater risk for HIV (Wingood et al., 2002).

Conceptual Model

This study will also use the conceptual model created Patel et.al. called “Main pathways that protect against and place wives at risk for HIV, among serodiscordant couples in Surat, India” (S. N. Patel et al., 2016) as a guide to understanding HIV risk. This model was developed using grounded theory to analyze dyadic level data to determine HIV risk among serodiscordant, married couples in Gujarat, India. This model highlights five protective and risk pathways for HIV-transmission for serodiscordant couples. The first pathway leads to safe sex, the second pathway leads to no sex, and the third pathway also leads to no sex after one of the partners either avoids or refuses sex. While risky sexual behaviors do not occur in these three pathways, safe sex or no sex can lead to unfulfilled sexual desire among either one or both partners. This unfulfilled desire could lead to extramarital sex, which increases the risk for STI acquisition and for HIV transmission to the wife. Pathway four occurs when a wife’s attempts to avoid or resist sex actually leads to coercive sex, which could also be unprotected sex. Finally, pathway five simply leads to unprotected sex. Both coerced and unprotected sex can increase HIV transmission to wives. The model also includes factors that influence the occurrence of safe sex and no sex. These factors are: positive sex communication, mutual respect and understanding, a

wife's fear of getting HIV, a wife's assertiveness, and a husband's desire to protect his wife from HIV. The factors that influence the occurrence of coerced sex or unprotected sex are: IPV or fear of IPV, a husband's alcohol use, condom displeasure, and the desire for children. This conceptual model nicely complements the TGP because it takes the risk factors highlighted by the theory and maps them to the actual risky behaviors. It allows for a complete understanding of risk factors and risky behaviors specifically among serodiscordant married couples in Gujarat. See Figure 1 for the full conceptual model. This study used both the TGP and this conceptual model to understand HIV risk factors for serodiscordant couples in Gujarat.

Based on the information presented above, this study aimed to answer the following:

- 1. What gender and power factors influence sexual behavior decision-making among serodiscordant, married couples in India?**
- 2. What are the main HIV risk factors that seronegative, married women in India in serodiscordant couples face?**

3. To what extent do the HIV-risk factors for HIV-negative, married women in serodiscordant relationships align with the Theory of Gender and Power?

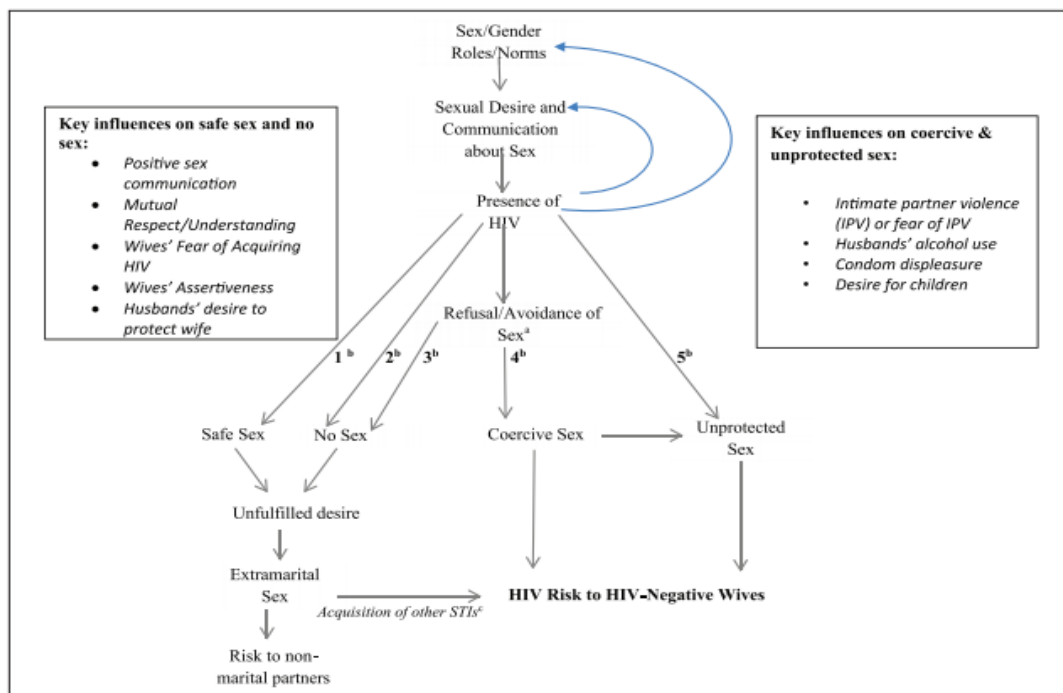


Figure 1. Conceptual model demonstrating the main pathways that affect HIV risk among serodiscordant couples. Adapted from S. N. Patel et.al., 2016.

Methods

Research Design

This study is a secondary analysis of data collected during the Positive Jeevan Saathi study, a study of HIV risk factors for HIV serodiscordant couples in Gujarat, India. The study used a phenomenological qualitative approach. Semi-structured, in-depth interviews (IDIs) were conducted to collect factors related to sexual risk among serodiscordant couples. The results of this analysis will guide future treatment recommendations and interventions aimed at decreasing HIV transmission among serodiscordant, married couples in Gujarat. This study did not meet Human Subjects Research criteria and thus was exempt from review by the Emory University Institutional Review Board.

Study Location

The original study was conducted in Surat, Gujarat. Surat, with a population of about 4.5 million people, is one of India's largest economies and the fourth fastest growing city in the world (Census Population 2015 Data, 2015b; City Mayors Statistics). Surat is a major contributor to the Indian export industry, especially in diamonds and textiles (Sen, Solanki, & Kisan, 2013; Thomas, 2015). Based on the most recent statewide HIV surveillance report, HIV positivity in Surat is 14.4% among high-risk patients at STI clinics, and 0.75% among low-risk patients at antenatal clinics (Gujarat State AIDS Control Society, 2008). These numbers are much higher than the overall HIV prevalence in Gujarat, which is about 0.44% (National AIDS Control Organisation, 2015). This particularly high prevalence is thought to be influenced by the large number of migrants that have been attracted to the area by the strong economy and increased need for unskilled labor (Banerjee). A national report of migrants found that 52% of male migrants are motivated by employment opportunities. This same report found that Surat is home to 58% of the total migrant population which is more than any other city in India (United Nations Educational Scientific and Cultural Organization (UNESCO), 2013). Migrant workers who are living away from their families and are having unprotected sex with female sex workers are believed to be contributing to HIV prevalence among married men in India (Saggurti et al., 2011). This route of transmission then contributes to HIV risk for married women (Thappa, Singh, & Kaimal, 2007). Surat also has the largest chapter of the Gujarat State Network of Positives (GSNP+) and the largest Voluntary Testing

and Counseling Center (VCTC) in the state (GSNP-Positive, 2015). Notably, about 75% of cases of serodiscordant, married couples from GSNP+ and VCTC have HIV-positive husbands and HIV-negative wives (S. Patel et al., 2016). Thus, this area of Gujarat was ideal for studying the transmission of HIV among married couples.

Participant Recruitment

For the original study, participants were recruited from the VCTC at the Government Medical College in Surat and the GSNP+ drop-in center. Between February 2010 and November 2010 married, serodiscordant couples were recruited to participate in the IDIs. Couples were eligible to participate in the study if they were 1) serodiscordant with the husband being HIV-positive, 2) married for at least six months, 3) sexually active with each other in the past six months, 4) recruited via the VCTC or the GSNP+, 5) both at least 18 years old. An iterative sampling and analysis process was used to determine when thematic saturation of interviews had been reached. Furthermore, this iterative process allowed for purposive recruitment of couples with varied characteristics such as length of marriage, time since HIV diagnosis, and number of children.

To avoid potentially breaching confidentiality, only husbands who were confirmed by VCTC or GSNP+ staff as being HIV-positive, being in a married, serodiscordant relationship, and having disclosed his status to his wife were referred to study staff. Study staff screened potential couples for eligibility based on the above criteria, and willingness to participate in the study. Couples were only enrolled in the study if both partners agreed to participate and were eligible.

Written consent was obtained in Gujarati, Hindi, or English prior to the interview. Consent documents were stored separately from de-identified data to minimize the risk of loss of confidentiality. A small incentive of 150 rupees and a meal was offered to offset expenses incurred from participating in the study.

Study Instrument and Data Collection

Semi-structured IDI guides were created with input from community members in India and researchers in America so that questions were culturally sensitive and guide translations to Hindi and Gujarati were accurate and appropriate. Tailored guides were created for husbands and wives. The IDI guides were pilot tested with three couples, and updated as necessary after each interview based on problems with question wording and gaps in information. Four research assistants in India were trained on research ethics, administering interviews, appropriate probing, data collection, and data storage procedures. Prior to the interviews, consent for audio-recording the IDIs was obtained. After the interview, the research team reviewed these recordings to ensure that questions were not leading and were delivered in a consistent manner to both husbands and wives.

The IDIs were conducted in either Gujarati or Hindi, based on the participant's preference. Each interview was conducted individually in a private room with two gender-matched interviewers. This was to reduce bias and ensure that participants felt comfortable sharing sensitive information. The IDIs started with general, rapport building questions and then moved to more detailed questions related to HIV and sexual behaviors. Certain key terms were defined

and clarified to maintain consistent discussions between interviews. See Appendix A for the complete interview guide. The audio recordings were transcribed into either Gujarati or Hindi and then translated to English. The research team regularly reviewed the quality of transcriptions and translations of randomly selected interviews and made corrections as necessary.

Data Analysis

While interviews were conducted with both husbands and wives, this secondary analysis will only include transcripts of IDIs conducted with HIV-negative wives. This data has already been analyzed at the dyadic level and via case study method, thus analyzing just the wives would provide a unique perspective into this data. Inductive and deductive coding was used to create a preliminary list of codes based on common themes found in a subsample of four randomly selected transcripts. These codes and codes based on the Theory of Gender and Power were included in the preliminary codebook. This codebook was used to code all of the interviews. Any new codes that arose during the first round of coding were added to the codebook. This iterative process was used until the codebook was exhaustive and all of the transcripts were coded once. See Appendix B for the final codebook. Whenever new codes were added to the codebook, the initial coding was reviewed and updated as necessary. Once the codebook was complete, all transcripts were coded a second time using the finished codebook. All transcripts were hand-coded with at least two weeks between each round of coding. After the second round of coding, consistency of

coding was checked to ensure intra-coder reliability, and all discrepancies between coding from rounds one and two were addressed.

During the coding process, salient themes and recurring topics that arose during the interviews were noted. Relevant quotes that offered unique perspectives were also noted so they could be presented in the study findings. Additionally, an excel database was created that highlighted demographic characteristics of each interview participant. This information was used to compare common themes between participants with differing demographic characteristics.

Results

Participants

A total of 23 HIV-negative wives who were married to HIV-positive husbands participated in the study. A majority of the wives were between the ages of 26 and 35 (n = 13), had completed some amount of secondary education (n = 11), and were Hindu (n = 20). On average, it had been about 4.4 years since husbands' HIV diagnoses and participants had an average monthly salary of 5,500 rupees. Most wives (n = 17) had been married for over 10 years and most (n = 19) also had an arranged marriage. More than half of participants (n = 12) had at least two kids and three participants had no children at the time of the interview. Almost all participants (n = 21) were in their first marriage. Many participants (n = 14) were living with just their nuclear family. See Table 1 for full demographic information.

Deductive Themes

The following themes arose during deductive analysis guided by the TGP. These themes will be organized under the three TGP structures: Sexual Division of Labor, Sexual Division of Power, and Social Cathexis. Both themes that support the TGP structures and those that provide counter-evidence to or oppose the structures will be presented.

Sexual Division of Labor

Based on the Sexual Division of Labor structure, an imbalance in earning forces wives to be dependent on their husbands leading to increased vulnerability for social problems or diseases. This analysis did not find any themes that supported this structure. No wives expressed feelings of financial dependence on their husbands or a lack of economic autonomy in their marriages. However, one wife experienced financial dependence on someone outside of the marriage whom she was having an extra-marital affair with.

Increased economic contributions

Wives shared that they had greater economic contributions to the family, after their husbands were diagnosed with HIV, demonstrating the opposite of what this structure normally argues. For example, one wife stated

I am working from the time I came to know about his sickness. It has been more than two years now, because of sickness.

Prior to their husband's diagnosis, some participants did not work and relied on their husband for money, as traditionally exemplified by the sexual division of labor structure.

“I wished [to work] but he [husband] used to say he earns [enough] so why should [you] work? He used to say this [smiles]. I wanted to work.”

Commonly, after HIV diagnosis many husbands became too weak and unable to work. Participants described how their husbands had jobs or the skills to do craft labor, but could not because of their illnesses.

“Even now he knows how to do that work, but he cannot work now. His body shivers so he cannot work properly.”

“He went, he sat in the house. There was some land in the village. But he could not work because he was very sick. I and the children used to say you sit we will work for you. I also went in the forest to work. He would stay alone in the house. 2 to 13 months passed in that way. Then he came back to this house and again went into the whitewashing work. So his health deteriorated even more. Then he left this job.”

However, not all participants would have worked if given the choice. Some felt that without the HIV diagnosis they would not have ever gone outside of the house for a job.

“Interviewer: Meaning, since 6 years you are working outside.

Participant: Yes, it has been approximately six years since I am working.

Interviewer: If your husband did not have HIV would you go outside to work?

Participant: No. I would never have done it than. Sometimes a healthy person gets sick. So I went to work.”

Notably, among these participants, having a job and working was a protective factor against having sex with their husbands. Many participants felt tired or stressed due to their jobs thus leading to fewer sexual desires. They were able to use these reasons to negotiate not having sex with their husbands.

“I do not wish [for sex]. I become very worried, I have so much work stress that I fall asleep. I do not wish [for sex].”

“Sometimes I have a wish and sometimes I do not like it. I might have worked for the whole day so I do not have a wish for it.”

Transactional Sex

Only one participant stated that she was having an extramarital affair. Her husband could no longer work because of his HIV and she was not making enough money on her own to support her family's expenses. She started having transactional sex with a distant uncle, who was also her boss. He would give her extra income regularly and also cover the cost of any unexpected expenses. She did not want to have this affair but felt that she had no other options and this was the only way that she could support her family.

“I did not have any support. I was earning 60 rupees. I could not feed the children with that money. I kept [extra-marital] relations because I did not have any other alternative. I did not keep such relations because I was fond of it. The children need 1 KG flour in the morning. There are 7 persons in the family. There are 5 children. The elder daughter is 20 years old. The son is also studying he is not going to work. I do not have any support. Neither my parents nor my in-laws support me ... I did not go to

anyone because I was fond of it. Now I give my dignity so he gives me some money.”

However, this wife was not able to negotiate condom use with the person she was having transactional sex with. He does not like the feeling of condoms and she does not think she can force him to use them because he is giving her money.

“He directly refuses for it. He says that if you have any sickness I will take care of your expenses but I will not use a condom.”

Sexual Division of Power

The Sexual Division of Power structure examines power differences in a couple. It argues that in a heterosexual marriage men exert power over their wives via coercion. This analysis found that the key themes related to a husband’s sexual coercion of his wife included husband’s alcohol use, abuse in the relationship (including verbal, physical, and psychological), and wife’s lack of sexual negotiation abilities.

Husband’s alcohol use

About one-third of participants cited that their husbands had ever consumed alcohol. All but one of these participants said that their husband’s alcohol consumption decreased after HIV diagnosis for health reasons. For many of these husbands, a doctor recommending less alcohol consumption was a key factor in their decision to stop drinking alcohol.

“[Now] he has no other addiction other than chewing tobacco. Before he was drinking alcohol. [He drank alcohol] sometimes before he got this

[HIV] disease. The doctor told him that if you start [drinking alcohol] again then you die soon. So he does not touch alcohol now.”

However, one participant said that her husband increased alcohol consumption after HIV diagnosis. This participant was also one of the participants whose husband physically abused her after consuming alcohol.

“He says that he [drinks alcohol] because of HIV [related] tension. I don’t know [whether] he used to take alcohol before or not. When I tell him he says I have tension so I take [alcohol] because I don’t get sleep ... there are problems now ... sometimes there is even a fight ... anything he has in hand he hits me [with it]. [She again laughs to make light of the situation.] And [when] he wakes up in the morning he asks, did I do anything [to you]? ... He was doing it earlier now also he is doing it [even more]. After knowing about HIV he has started doing more.”

Relationship Abuse

Other participants also cited verbal or physical abuse when their partners drank alcohol. When asked if her husband used to beat her, one participant responded,

“He used to beat me up. He used to throw utensils ... after drinking, he used to get into an argument with anybody.”

Another participant stated that when her husband would drink he would have verbal arguments with her and swear at her.

“Interviewer: How is his behavior- physically and verbally?”

Participant: They are good. Now when he comes home drunk, at that moment arguments do happen, like that. (Laughs while making this statement)

Interviewer: What does he say when he argues? ... What comes from his mouth, when he starts arguing?

Participant: Nothing. He just abuses.

Interviewer: What exactly does he say while abusing?

Participant: Like motherfucker, sister fucker and nothing else. (Speaks in a low voice)”

In addition to physical and verbal abuse, participants also cited other types of abuse in their relationship. One participant stated an example of subtle psychological abuse by her partner who threatened to go outside of the marriage for sex when she refused him. She actually did not mind if he had an affair because then she would not have to have sex. In this sense she was able to gain some power in her relationship, opposing the traditional TGP structure.

“He does not [pressurize me for sex]. He tells me that he will go outside [for sex]. I tell him to go [ahead and go]. ... He [the husband] says but I think he does not go. Even if he goes [outside for sex] let him go. [At least] I am safe.”

Participants also reported physical violence in their relationship that was not related to sex or alcohol consumption. One participant cited an example of her husband hitting her for making a mistake in applying medicine to his leg. He even

stated that he purposefully removes his anger on his wife because that helps him manage his anger.

“[He] beat me on the first day of marriage ... His leg was wounded [so] he told me to apply medicine. ... The wound was in one place and I applied the medicine on the other side. So he slapped me ... [He beat me on] the first day [of marriage] when I did not know [him] well ... He would be angry even if it is his mistake. [He says] then on whom will I remove my anger if I do not remove it on you? Then he says my heart becomes light [when I remove my anger on you].”

Another participant responded that her husband would become angry with her when she would scold or get mad at their daughter.

“If I scold the children he beats me. He otherwise does not beat me. He loves the children very much, even though she is a daughter. He has a lot of love for her. He loves the daughter very much. In the morning I scolded the daughter. So he scolded me he said why are you scolding the children.”

Only one of the participants stated that she retaliates physical violence against her husband when he hits her. This retaliation is something that started after his HIV diagnosis. While this is only one participant, it provides counter-evidence to what is normally found in this structure of the TGP.

“When I get angry I do not let him have [sexual] relations. ... When he gets angry he even slaps me. So I also get wild and in anger I do anything now [after HIV]. I throw anything on him and beat him ... if there is a

wooden stick or plastic I throw it on him. He says you have gone mad ... I tell him to go away from the house.”

Ability to Negotiate Sex

Many participants were unable to negotiate sex after their husbands would consume alcohol. If they tried to refuse sex, there was often some type of physical repercussion. A participant was asked about what would happen when her husband came home drunk and wanting to have sex, and she stated,

“He was [wishing to have sex]... [He used to] beat [me] if I do not listen to him then he would beat me.”

Another participant stated that when her husband used to drink, he would come home in a mood to have sex. She said that she would give into his wishes. She knew that if she tried to refuse him, he would bother her and potentially start a fight. She also felt it was her obligation or duty to do so since she was his wife and she knew he was not going to someone outside of the marriage for sex.

“[When he drank alcohol] he was in his senses but he had the mood [to have sex]. He would tell [me] to have sex [with him] ... If he told me to have [sex] I would allow him, I would not refuse him. [I would think] let it be ... if I become stubborn he will harass me because he is drunk. ... What will one do? He is my husband so he will come. Where else can he go? He does not go to any man or woman [for sex] then where will he go? He will come to me [to have sex].”

Even when there was no alcohol involved, participants were not always able to negotiate sexual relations with their husbands and were forced to have sex. For

some participants, these forced sexual relations also included other forms of physical violence such as hitting.

“He does not avoid it. He has [sex] with me forcefully ... He slapped me. He said you might be going somewhere else to get satisfied ... I do not allow to have [sex] in menses. ... I would think that it is better if my husband does not come near me. Once it so happened that I had menses and he told me to have [sex]. I directly refused him and said go to sleep peacefully so he slapped me.”

Social Cathexis

The Social Cathexis structure refers to a woman’s sexual behaviors that are influenced by or related to societal norms and expectations. This analysis found that the key themes related to the social cathexis among these participants include the desire to have more children, desire to protect the family from social repercussions, and discussions about sex and marriage with other females.

Desire to have more children

The desire to have a child contributed to unprotected sex. Couples who knew about the husband’s positive HIV status and were regularly using condoms still had unprotected sex so that they could conceive. After becoming pregnant, participants would start using condoms again. One participant stated that it was her decision to stop using condoms even though she knew her husband had HIV. He was feeling stressed about her or the child contracting the disease and thus was less interested in trying to conceive.

“I [wanted a child] ... so I told him [to have sex] without using a condom. After marriage we were using condom regularly. But after that I wanted to have a child so we had sexual relations not using a condom 3 to 4 times ... He does not think anything. He had a little tension that you might also get HIV. So he was thinking in that way. ... Everybody wanted a child but he thought that I have this problem so my child might also have HIV. So he had less wish for children. He said that I do not want to spoil the life of my son or daughter. But I told him that nothing will happen to him and nothing will happen to me. I said if you have faith in God nothing would happen ... we are regularly using condoms now because we do not want another child. We just want one child.”

However, not all couples that were wishing for children had unprotected sex. If one of the people in the couple felt strongly enough about condom use or HIV prevention, they preferred not to have the child and refused to have unprotected sex. As demonstrated by the following participant, the person to refuse to have unprotected sex was not always the wife.

“Interviewer: You said that you do not have children. Do you wish for children?”

Participant: I am wishing for a child. I went to the hospital for that. The doctor saw all the reports and told me not to have it...

Interviewer: Out of the two of you who takes the decision of having or not having children?”

Participant: I want to have [a child] but [the husband] refuses me ... because of HIV."

When deciding whether or not to try and conceive, fear of the new child being born with HIV was a common reason for at least one person in the couple not wanting to pursue pregnancy. The following two participants describe this:

"[The doctor] refuses he says we already have two. The doctors have said if you have such [sexual] relation you will have a child. The doctor had said that do not keep such [sexual] relations, if something happens the child will also have [HIV] and your wife will also have [HIV] and I am very afraid of such a disease. I am afraid of these things in that case I do not let such [sexual] relations happen. I refuse it ... He [the husband] says instead of taking anyone's child; give birth to your own child ... He wishes for one child. I also wish [for a child] but I am afraid. If I get [HIV] then it is all right, but what has the innocent child done. If he comes in the world and he has this disease then what will we do?"

"I am happy with 1 child. I made him [husband], understand that if the second child comes, he will also get this disease and anything can happen, so don't say anything else ... I made him understand"

When deciding whether or not to conceive, participants also cited concerns of what family or society members may say if they do not have a child. A recently married participant discussed how she was worried that others would gossip

about why she did not have a child if she and her husband decided not to have a child because of his HIV.

“Right now people do not talk anything. But in case they might say that why is she not getting pregnant. The people in our area might say why is she not getting pregnant.”

One participant secretly used in-vitro fertilization (IVF) to conceive a child with her brother-in-law's sperm because of the societal pressure she felt to have a child. Because of her husband's positive HIV status, she did not want to have unprotected sex with him and risk their child contracting the disease. However, she could not share this reasoning with others in her community since her husband's HIV status was a secret. Thus, she faced large amounts of external pressure to have a child and decided to secretly use IVF rather than take the risk of having a child with her husband.

“My husband had HIV so it came in my life ... There is a little bit of mental tension ... On the top of it people will not allow us to forget these things by saying that we do not have a child. They ask why I am not having a child. There might be a problem. A number of questions would crop up. I cannot tolerate that. I cannot tolerate anyone's words it makes me feel sad. I get mental tension very quickly. It is better to do [IVF] rather than hearing the people. This problem is such that I cannot tell this out. If I do that I can feel better but the thing is such that I cannot tell this to anyone. I cannot say that this thing is there. We do not want a child but the people do not allow me to forget it. So I did [IVF] to get rid of my mental tension. This was a

solution so I took it. I thought that there will be happiness in the family if I will have a child and because of the child my sadness will disappear.”

Notably, one protective factor against some of these couples having unprotected sex to conceive a child is a recommendation from a doctor not to do so. Some participants mentioned that they did not try and have a child, even if they wanted one, because their doctor said not to. However, as the couple below demonstrated, not all couples received additional counseling on safe conception methods available.

“Interviewer: What does your husband think about [having a child]?”

Participant: [The husband] thinks that there should be at least one child.

There should be at least one child.

Interviewer: What happened to your child related wish after HIV?

Participant: What would happen? We were very disappointed. The [doctor] said that one cannot have a child. ... [The husband] cried a lot.

Interviewer: The doctor said that one cannot have a child what else did she say?

Participant: She did not say anything else. She said that if you want to stay together you would have to take precautions.

Interviewer: Have you got any counseling regarding children? Is anything explained to you?

Participant: We were not explained anything.”

Desire to protect from social repercussions

Participant's desire to protect either their children or themselves from negative social repercussions as a result of the positive HIV was commonly cited. Those who had unmarried children often discussed what the potential effect of others knowing about the HIV status would be on their child's marriage prospects. One participant mentioned how her husband did not want her to discuss his HIV status with anyone outside of their immediate family because both of their children still had to be married. She acknowledged the fact that she did not believe it was bad to have the disease but if others found out about it, they would think differently about the family.

"He [husband] told me not to let anyone know about it. We had to get our son and daughter married. There is nothing in this disease but if people come to know about it they would not think good of us."

Similarly, another participant also did not disclose her husband's HIV status to members in their community out of fear of social isolation.

"Nobody knows [my husband's HIV status] ... it can happen that if someone comes to know then they will come to our house to inquire. Our area is such ... because otherwise nobody will come in the house, nobody will keep a relation with us."

Even when participants felt upset by their husband's HIV status and considered leaving, they did not because of societal repercussions. The following participant explained that while she was angry with her husband for getting HIV and did consider leaving him, she ultimately did not. She was worried about what would

happen to her and her children because she believes that unmarried women are not considered highly in society. She even points out that the character of her husband does not affect how a woman is viewed in society; it is only affected by whether or not she has a husband.

“I felt angry when I came with him that he committed such a mistake. But on the other side I was thinking that if I do not be with him then [his health] will get spoilt and if something happens to him then what will happen to us [me and my children]. A woman without a man is not seen with good eyes. Even if he is a drunkard or lame [it can do]. But without a man there is no prosperity.”

Discussions with other females

Participants' sexual behaviors were influenced by advice around sex and marriage given by other females. One newly married participant was hesitant to have sex with her husband and was refusing him. Her grandmother told her it was her duty to have sex with her husband whenever he wished for it since she was a woman. This conversation affected her ability to negotiate sex in the future with her husband.

“When I was newly married there was a fight ... he came and left me at my grandmother's place. ... My grandmother said, she thinks that she is a woman so she is refusing. ... So my grandmother explained to me once that in our community it is such that we [women] cannot refuse the man. Whenever the husband says [have sex], whether it is day or night. In our religion it is a sin.”

Another participant's friend gave information about how to maintain and behave in her marriage. This advice was given two days before her wedding and generally recommended always doing what the husband wanted.

"Information [about relations after marriage] was given by my friend. When we are married we should do whatever the husband says. We should never refuse the husband [anything]. ... My friend had told to obey the husband completely and let him do anything he wants."

Female family members also gave advice on how to have sex after finding out about the husband's HIV status. After one participant's husband was diagnosed with HIV, her older sister advised her to make sure to use condoms when having sex with her husband.

"My elder sister knows [about HIV], since I told her once. ... She asked me to exercise caution while having relationships."

Inductive Themes

The following themes were found during inductive data analysis. These are themes that are relevant to HIV risk acquisition for participants but do not fit into the constructs of the TGP. There was also opposing evidence that was presented under the relevant deductive themes.

Ability to procure and use condoms

Not all participants were using condoms before their husband's HIV diagnosis. However, all participants reported regular condom-use after HIV diagnosis. All participants stated that it was the husband's duty to bring the condom home and to physically put it on.

“Her father [the husband] brings of good quality. He brings it [of value] of 10 rupees. I like it. It does not tear ... those that are given from [the hospital], [stinks] a lot. I find it dirty. So I refuse that I do not like those of Civil [hospital].”

“[We take care that while having sex] the condom might not tear or come out. Care should be taken about that. We take care about that. ... He himself puts the condom. He takes care of that himself. He takes more care than me about that.”

However, the decision of whether to use the condom or not was many times made by the participants. One participant stated that her husband did not like the feeling of condoms, but she would not let him have sex with her without it because she was afraid of contracting the disease.

“I take the decision of using condoms. I have the fear that if the male has [HIV] the wife will also have HIV and the children will also have it. ... [If] he has a wish to have [sex] he uses [condom] if he does not have a wish he goes to sleep.”

Another participant even made her husband use two condoms at a time in order to have extra protection in case the condom tore or came off.

“I take care about [condom use]. I do not even let him touch me, [if he does not put a condom] ... I never allow him to do [sex] without a condom and I tell him not to use one condom but two condoms ... we are using [double condoms] at our own will.”

Only one participant reported any barriers to accessing condoms. This participant and her husband both felt shy when buying condoms. She and her husband spend months apart and when they are together they suppress their desires and do not have sex as often as they would like to. They worry about others judging them for how many condoms they are using.

“Who will go to buy condoms every time [we want to have sex]? There is also shame in buying that we need [condoms]. He [the husband] [goes to buy the condom]. He feels shy [to buy condoms]. If we buy [condoms] from one shop the shop keeper will also think that why is he buying condoms so many times.”

Sleeping Arrangements

The sleeping arrangements of participants and their families influenced the frequency of sexual relations between participants and their husbands. Many participants lived in small houses and slept in the same room as their children or other family members. The following participant lived in a house with only two rooms: a bedroom and a kitchen. When family members visit, the participant and her husband are unable to have sex since everyone sleeps in the same room.

“[When in-laws visit] we do not meet [to have sex]. My husband and my son sleep on the floor and my in-laws sleep on the bed. What can I do? There is no place to sleep in the kitchen. We sleep on the bed. When my brother-in-law and sister-in-law come they sleep on the bed. We both sleep on the floor. We have a little trouble.”

Even when there are no visitors, participants reported a decline in sexual activity because they slept in the same room as their children. One participant stated that the desire to have sex went down for both she and her husband, as their kids became older because they were afraid of waking their children.

“We have started keeping [sex] less number of times ... there are children in the house. Matured children sleep in the house, so how can we maintain relationship? ... Interest [for sex] has declined in the sense that my daughter sleeps along with us so I am uncomfortable. I have a daughter and what if she sees? I always have the feeling that my daughter will wake up anytime.”

Sleeping in close proximity to other family members served as a protective factor for participants who did not want to have sex with their husbands. Participants would use the fact that others were sleeping nearby as an excuse to not have sex.

“If I want to avoid [sex] I say whatever I have to say. I say that I am tired today or that I am not enjoying...I say that because the family [sleeps] together [we should not].”

Use of non-penetrative sex practices

Few participants reported using methods of non-penetrative sex (i.e. masturbation, body rubbing) in place of penetrative sex. Participants who did report using these methods did so when they did not desire to have sex but their husbands did. As noted by the participant below, by helping their husband

masturbate, she was able to fulfill his desires while also maintain her desire of not having sex.

“Interviewer: Can you avoid sex when you don’t want to have sex?”

Participant: Yes I can avoid sex.

Interviewer: What do you do for that?

Participant: Fulfill his wish through hands. [Masturbations]. His wish also gets fulfilled and our wish also remains fulfilled.”

Notably, very few participants reported using this method to avoid sex. One participant stated that she did know that non-penetrative methods of pleasure were even possible.

“Interviewer: Have you ever done sex in this way like body rubbing, thigh sex, breast, masturbation or sex in any other way?”

Participant: No. I do not know about that...Intelligent woman have sex in that way. I do not even know that one can have physical relation in that way. I am not so intelligent so how will I know?”

Table 1. Participants’ demographic characteristics (N = 23)

Characteristics	n (%)
Age	
18-25	5 (21.7)
26-35	13 (56.5)
36+	5 (21.7)
Highest education level	
Illiterate	4 (17.4)

Primary	7 (30.4)
Secondary	11 (47.8)
College and higher	1 (0.04)
Religion	
Hindu	20 (87.0)
Muslim	3 (13.0)
Years married	
≤3 years	3 (13.0)
4-9 years	3 (13.0)
≥ 10 years	17 (74.0)
Marriage type	
Arranged	19 (82.6)
“Love”	4 (17.4)
Number of children	
0	3 (13.0)
1	8 (34.8)
≥ 2	12 (52.2)
Family type	
Joint/extended	9 (39.1)
Nuclear	14 (60.9)
Average years since husband's HIV diagnosis	4.4 years
Average household monthly	5,500 (2,500 – 20,000)

income in rupees (income range)	
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Discussion

While there has been a significant amount of research surrounding HIV-risk among women in India (Alvarez-Uria, Midde, & Naik, 2012; Cooperman, Shastri, Shastri, & Schoenbaum, 2014; Darak et al., 2014; Wirth, Tchetgen Tchetgen, Silverman, & Murray, 2013), few have focused on serodiscordant couples. Due to vast differences among cultures and social norms between the Indian states, results from the population of one state are not always generalizable to those in other states. Thus, the purpose of this analysis was to use a qualitative approach to explore the HIV risk factors for married women in serodiscordant relationships, where the husband is HIV positive and the wife is HIV negative, in Surat, Gujarat. Specifically, this analysis aimed to determine HIV risk factors using the Theory of Gender and Power, a theory commonly used to discuss HIV risk factors for women. However, the analysis found that many of the inductive themes did not align with the constructs of the theme. Rather, they provided counter-evidence against the constructs. Furthermore, the inductive analysis also deduced themes that did not fit under the construct of the TGP. Some of these counter-evident themes fit with the conceptual model of HIV-risk for serodiscordant couples that was created by Patel et.al (S. Patel et al., 2016). This section will discuss both the findings as they fit with the Theory of Gender and Power and the counterevidence to this theory, using the conceptual framework as appropriate.

Among HIV-negative married women in Gujarat, India who were in serodiscordant relationships, HIV risk was influenced by gender and power factors related to labor, relationship power, and social cathexis. Unlike what is normally supported by the Sexual Division of Labor structure, most participants saw a shift in traditional gender roles and these women did not feel as if they were financially dependent on their husbands. Due to their illnesses, husbands were unable to work as much as necessary, leading women to play a bigger role in earning for the family. For some women, this led to greater autonomy in their relationships and even served as a protective factor. When women did not want to have sex or were being harassed by their husbands for sex, they would use the fact that they were tired from work or stressed about work as an excuse not to have sex. The fact that this led to no sex aligns with pathway one in the model, especially when factoring in wife's level of assertiveness about being tired and not wanting to have sex and husband's respect for his wife and her wishes. For some, shifts in gender roles were not perceived positively and they would never have started working if their husband had not been so sick. Even though gender roles were shifting in the labor realm, they were not shifting in terms of who was responsible for the home. Women were still primarily responsible for household duties such as cooking, cleaning, and taking care of the children. Working mothers also have reported less time with their children, which could lead to feelings of loss or parental dissatisfaction (Raver, 2003).

As demonstrated above, the experiences of most participants did not align with the Sexual Division of Labor structure of the TGP. However, one participant

was having transactional sex because her husband was no longer working and she did not make enough in her job alone to support the family. In this outside relationship, she was unable to negotiate condom use because she was financially dependent on him. By not using condoms with this man, she was increasing her risk for HIV or other STIs since he was married and potentially having sex with other women. While she realized the risk she was taking, she also feared that too much pestering would lead to him leaving and her being unable to care for her family. While the experiences of the majority of participants do not align with the TGP labor structure, some elements of this structure did ring true for one participant.

Under the Sexual Division of Power structure, some faced verbal, physical, or psychological abuse by their husbands. Often, but not always, this abuse was linked to times when their husbands drank alcohol. Alcohol use also led to women's inability to negotiate sex with their husbands because husbands would physically force wives to have sex. This is consistent with other studies that have also found that alcohol use by men makes it hard for women to negotiate sex and can lead to sexual abuse (Chibber, Krupp, Padian, & Madhivanan, 2012; S. Patel et al., 2016). Women were also unable to negotiate sex even when there was no alcohol involved. In some cases, attempts to refuse sex led to physical violence perpetrated by the husband. This aligns with the conceptual model pathway four which showed that refusing sex led to physically coercive sex. Attempts to refuse sex also led to psychological abuse when a husband would threaten to go outside of the marriage for sex when the

participant refused. This is highlighted in the conceptual model, which shows that “no sex” leads to an unfulfilled desire that can result in extramarital sex. This sex can then increase the risk for transmission of other STIs in the marriage (S. Patel et al., 2016).

The experiences of this population also align strongly with the Sexual Division of Power in that men assert dominance in the relationship, often through violence, making it difficult for women to negotiate sex. However, it should be noted that one participant did retaliate violence against her husband after his HIV diagnosis, highlighting how having a husband with HIV can reshape how a woman views her own position, and power, in her marriage. A husband’s HIV status can alter power dynamics in the relationship, allowing women greater ability to negotiate sex and even address violence in the relationship.

According to the TGP, Division of Power makes it difficult to negotiate condom use. The experiences of this population were slightly different from what would be expected based on the theory. It was found that if women could negotiate sex, they were also able to negotiate condom use. However, those who were ultimately unable to negotiate condom use were first unable to negotiate whether or not sex even occurred. Thus, for women in this population, negotiating sex is a hurdle that needs to be overcome before even beginning condom negotiation.

With the last structure of TGP, Social Cathexis, it is posited that society and cultural norms influence a woman’s sexual behaviors. In this realm, HIV risk was affected by the desire to have more children and discussions with other

females about sex and marriage. Wanting to have a child was one of the reasons for not using condoms, even after knowing the husband's HIV status. Even when one person in the couple was worried about HIV transmission, if the other's desire for a child was great enough, they could convince their partner to have unprotected sex. This desire for children leading to risky sexual behaviors has been found among serodiscordant couples in other settings globally as well (Matthews et al., 2015; Ngure et al., 2012; Panozzo, Battegay, Friedl, Vernazza, & Swiss Cohort, 2003). Fear of what the family or community members would say if the couple did not have a child often influenced the decision to have a child, as is expected under this structure. However, it was also found that if one partner's fear of HIV transmission was great enough, they could convince their partner to not have a child. While this does not support the TGP structure, it is consistent with what was found in the conceptual model. That model found that fear of HIV acquisition by the wives and husbands wanting to protect their wives from the disease were two main influences that led to safe sex or no sex. It is also important to note that some couples that wanted to conceive also mentioned not getting counseling from their doctors about safe methods to do so. This is something that should be taken into consideration when creating future guidelines and interventions.

Another Social Cathexis-related theme found during the analysis was the participant's desire to protect herself and her children from the societal repercussions that could occur if people found out about the husband's HIV status. Women did not disclose their husband's status to others because they

were afraid of negative social repercussions, such as alienation from the community or resulting stigma against the family. This was especially true among couples that had children who still had to be married. In Gujarat, familial background is an important factor taken into consideration when finding a suitable partner for marriage. There was fear that if people found out about the husband's HIV status, no one would be interested in marrying their children. This fear of what negative social perceptions also prevented women from leaving their marriage. These feelings of HIV-related shame and stigma are not exclusive to these study participants and have been consistently found among many different cultural contexts (Ogden & Nyblade, 2005). However, it has been argued that shame following HIV status disclosure can be greater in Asian societies which are more collectivist and family-centered than individualistic societies (Chandra, Deepthivarma, & Manjula, 2003).

Keeping the HIV status a secret to protect the family could lead to many negative outcomes. First, the wife may be less likely to go to the testing and counseling center with her husband from fear of others figuring out that he has this disease. This means that she may miss out on valuable opportunities for getting information on the disease and risk-reduction (Patel et al., 2014). Additionally, the stress of keeping the secret could serve as an undue burden on someone who may already be feeling large amounts of stress from other changes as a result of the disease. Finally, the fact that women cannot leave when they want to means that they are staying in an unwanted relationship and continuing to expose themselves to HIV.

Under the Social Cathexis structure, it was also found that discussions with other females influenced sexual behaviors. These conversations either served as harmful and led to risky behaviors or as protective where other women gave advice on how to have sex safely. Related to the previous structure discussed, it is possible that women who were unable to disclose their husband's status were also unable to discuss sexual behaviors with other women. Thus, there were missed opportunities to get support from other females surrounding their sexual behaviors. Studies have found that social support, both in formal settings and informally, can improve health outcomes and may even mitigate sexual and HIV risk behavior (Choudhury, Toller Erausquin, Park, & Anglade, 2015).

The following themes affecting HIV-risk were also found during inductive analysis: ability to procure and use condoms, sleeping arrangements, and the use of non-penetrative sex methods. For all participants, it was the husband's responsibility to bring the condoms from the store and put it on. It is unsurprising that women are hesitant to buy condoms due to embarrassment and fear that they may be perceived as sexually promiscuous, which has been explored globally (Roth, Krishnan, & Bunch, 2001). The fear of what people in the store would think was also seen in this study. However, placing the responsibility solely on the husband to buy and wear the condom may give wives less sexual control in the relationship. For example, if either person in the couple wants to have sex but there are no condoms in the home and the husband keeps forgetting to bring some home, they may end up having unprotected sex. Or, one of the people may

go outside of the marriage for sex due to continuous unfulfilled sexual desire, as highlighted in the conceptual model (S. Patel et al., 2016). Overall, this barrier to condom procurement gives women less sexual autonomy. Furthermore, it is unclear from these results why exactly women leave the responsibility of putting on the condom with the husband. It may be that they are unsure of how to put on a condom or feel uncomfortable doing so. However, if women were more involved in putting on the condom, they could ensure that it is done properly and that the condom is not already damaged, further increasing their sexual autonomy and decreasing their risk.

Another factor that may have influenced HIV risk was the family's sleeping arrangement. Many of the participants in this study lived in a small home with their extended family permanently there, or with extended family that visited often. Thus, participants often did not sleep alone with their husbands and had either in-laws or children sleeping in the same room. This served as a protective factor from unwanted and unprotected sex because the husband was unable to fight with the participant from fear of waking others up. However, this also led to long intervals where the participants and their spouses did not have sex. As mentioned in the conceptual framework, not having sex led to unfulfilled desire and ultimately sex outside of the relationship. It may be possible that sleeping arrangements that impede couples from having sex regularly could lead to either partner going outside of the relationship to fulfill their sexual desires.

The final theme from the inductive analysis was the use of non-penetrative sex such as body rubbing, masturbation, and touching. Very few participants

discussed using these methods and those who did only used these methods to fulfill the husband, never the wife. These methods were used to fulfill the husband's desire when participants themselves did not want to have sex. Using non-penetrative sex methods is one way that serodiscordant couples can make sure the wishes of both people are fulfilled while also keeping HIV transmission risk low. One of the reasons for not using these methods was that participants did not know that non-penetrative sex was an option or how to do it (S. N. Patel et al., 2016).

Finally, many of the themes aligned with the conceptual model. With the Social Division of Labor, women were able to say no to sex by emphasizing how tired they were from work. Relatedly, pathway one in the conceptual model leads to no sex and is influenced by a wife's assertiveness of her wishes, and by the husband's respect for her wishes. Under the Social Division of Power, when husbands drank alcohol, they at times perpetrated violence on their wives and forced them to have sex, as seen in pathway four. Additionally, when being forced to have sex, many participants were unable to negotiate condom use; so coerced sex was also unprotected sex. Under the Social Cathexis structure, participants had unprotected sex when they wanted to have a child, which is consistent with pathway five in the conceptual model. Alternatively, husband's desire to protect his wife or wife's fear of HIV acquisition sometimes outweighed the desire to have a child and led to safe or no sex, as is consistent with pathways one and two in the model.

Future Directions

The results of this study have great implications for future research and intervention creation. First, these results could help create targeted interventions for serodiscordant couples in Gujarat and in India. Commonly, interventions that address HIV risk behaviors for serodiscordant married couples focus on increasing condom negotiation self-efficacy. However, for this population in Gujarat, the larger problem was being able to negotiate sexual acts. Thus, future interventions for couples in this state should consider focusing first on providing skills that address negotiating having sex and the type of sex, before condom negotiation. Relatedly, future interventions for this population should also focus on not just negotiating condom-use but also using condoms. Interventions targeting women's self-efficacy for buying and putting on condoms could help women gain further sexual autonomy that would allow them more power in their sexual relationships, thus lowering HIV risk. These interventions may include a group-based component, which has previously been found to be an effective intervention format for HIV prevention among couples in India (Jones et al., 2013; Nehra et al., 2013). A group-based intervention would also allow for greater social support and interactions, especially for wives who may not have existing support groups they can reach out to.

While it is important to consider theory-driven findings when creating an intervention, it is also important to consider situational relevance of findings. For example, when trying to address labor-related factors, those traditionally presented by the TGP may not be the most appropriate to consider for this

population. While the experience of the one participant whose HIV-risk was increased due to her financial dependence should not be discounted, the majority of participants started working and their financial independence served as a protective factor against risk. Thus, future interventions should address creating economic opportunities for women so that they can have this financial independence. Furthermore, studies have found that being a housewife was a significant predictor of being in a serodiscordant marriage (Mehra et al., 2015). Thus, creating economic opportunities could serve as a preventative strategy to decrease the likelihood of being even being in a serodiscordant relationship. However, it is important to remember that having a job and economic autonomy was not a positive experience for all participants. Working more outside of the home could mean less time with children, greater stress, and unexpected marital strains and may not be something that all women want. Therefore, while this sort of intervention could address HIV-risk for many women in serodiscordant couples in Gujarat, other interventions are also necessary for those women who would not want to work outside of the home.

These results also show that guidelines for physicians need to be changed to include certain topics such as safe conception methods for serodiscordant couples, and proper condom use. Conceiving a child is not something that is unfeasible for serodiscordant couples and it can be done safely. There are many safeguards that must be in place and procedures that should be followed when trying to conceive, as have been outlined by the National Institutes of Health (AIDSinfo, 2017). These guidelines should be evaluated and adapted for the

Gujarati context so that physicians in the state can offer clear and effective counseling to their patients to reduce the risk of HIV transmission. Additionally, physicians should offer counseling to both the husbands and wives on how to properly use a condom, what it means for a condom to be damaged, and the possibility of wearing more than one condom. Guidelines should also encourage physicians to discuss other safe-sex practices with couples, such as mutual masturbation. Based on these results, this is a currently an underutilized method of safely fulfilling sexual desire while limiting HIV risk.

This study also highlights the need for further research. Additional studies should focus on data collected from HIV-positive husbands and their perceived HIV-transmission risk factors. Furthermore, this study examined couples where the wife was HIV-negative and the husband was HIV-positive. There is a great need to also explore the opposite serodiscordance, where the husband is HIV-negative and the wife is HIV-negative. It may be that the risk factors highlighted in this study are very different from those that exist among couples with the opposite serodiscordance. Studies are also needed that examine HIV-risk among serodiscordant couples in other parts of North India. As stated earlier, the large variations in cultures between the Indian states make generalizability difficult and there are few studies among this population in North India. As such, further research is needed to determine what nuances in HIV-risk exist among different subpopulations in India.

Finally, research of HIV serodiscordance and HIV transmission among married couples found that patterns found in India were similar to those in other

countries such as Cambodia, Haiti, and the Dominican Republic (Chemaitelly & Abu-Raddad, 2016). While it is important to consider cultural context before completely generalizing finding, it seems that the results of this study could be a starting place when examining HIV-risk among couples in other countries. Thus these findings should be used to guide the creation of other research studies and interventions to address HIV transmission among serodiscordant couples in other countries.

Strengths & Limitations

A strength of this study was that it examined only the experiences of women. HIV risk among serodiscordant, married, Gujarati couples has been analyzed at the couple-level and via a case study. However, studies have not assessed HIV-negative wives in Gujarati serodiscordant couples, thus providing a unique perspective on HIV-risk. This study was also a qualitative study, which allowed researchers to gain rich data with insights into the complexities and subtleties surrounding the topic. Qualitative data collection also allowed for flexibility during the interview process. Interviewers were able to adapt questions as participants brought up new information. Additionally, face-to-face, in-person interviews allow both the interviewer and the participant to immediately ask clarifying questions. They also allow interviewers to view and note non-verbal cues, and adjust the interview if the participant seems uncomfortable or distressed.

Another strength is that the interviewers were all Gujarati, female, and easily able to speak the regional dialects to maximize patient trust and comfort.

Because of the sensitive nature of the topics discussed, the interview guide was created so that a large portion of the interview was spent building rapport. The interviews began with questions about participants' children, jobs, and hometowns and then slowly moved to more personal questions about HIV and sexual behaviors. This allowed participants to feel at ease with interviewers before talking about more sensitive topics and hopefully provided more accurate responses.

This study was also subject to some limitations. Since this was a qualitative study, the data is not generalizable. Since the data is based on unique, human experiences it cannot be used to make assumptions about a larger population. However, it can be used to guide the creation of more quantitative data collection tools to be used with this population, or ones similar. Further, the data quality could have been affected by the skills of the interviewers. Interviewers were given extensive training on proper methods of collecting qualitative data and the data was periodically checked throughout collection for leading questions or biased interview techniques. However, there is still the possibility that the data could be influenced by the personal biases and idiosyncrasies of the interviewers.

Another limitation is that only wives who knew of their husband's status and whose husband's were engaged with the testing and counseling center were recruited. These are women who may have already received information or counseling on preventing HIV acquisition. While this reduces transferability of findings, it was the only ethical way to do research on serodiscordant couples.

Recruiting serodiscordant couples that were not actively engaged with the testing and counseling center could have led to a breach of confidentiality by accidentally exposing a husband's positive status to his HIV-negative wife.

Additionally, due to the qualitative nature of the study and the sensitive nature of the topic, there may have been social desirability bias in participants' answers. In-person, qualitative data collection, especially when used for a sensitive topic such as sexual behavior, can also lead to participants feeling embarrassed and giving responses they thought were the "correct" answers. Interviewers were trained in techniques to create an understanding environment during the interview and minimize bias.

Conclusion

This analysis explored HIV risk factors among married, serodiscordant couples with HIV negative wives in Gujarat, India. Many risk factors were found but protective factors were also found. These findings have many implications for future interventions and research. The findings surrounding the fit of the Theory of Gender and Power also highlight the importance of contextualizing theories to the setting they will be used in. Ultimately these results fill a gap in the literature and provide a deeper understanding of the problem of HIV among married, serodiscordant couples in India.

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Appendix A

Interview Guide

A. Opening-Marital Relationship

1. Please describe how you came to meet your husband.
 - a. Tell me about the process of how you got married.

2. What is the best thing about your relationship with your husband?
 - a. Please give me an example about a time when ...
 - b. Is this story before HIV or after HIV?

3. What is the most disappointing thing about your marital relationship?
 - a. Please give me an example about a time when ...
 - b. Is this story before HIV or after HIV?

4. Tell me how you came to know about your husband's HIV status?

B. Sexual Communication

The next set of questions pertains to intimacy/sex with your husband. We are asking these questions so that we can develop programs for married couples like yourself, so your honest and open answers would be greatly appreciated.

5. Who usually initiates sex in your relationship?
 - a. Why?

6. How do you express to your husband that you are in the mood for sex?

7. How does your husband express that he is in the mood for sex?

8. What would happen if you were not happy with the sex life in your marriage?

9. What would happen if your husband was not happy with the sexual relationship?

10. Please tell me about a time when you wanted to have sex and your husband did not?
11. Please tell me about a time when your husband wanted to have sex and you did not?
- What are some reasons for not wanting sex?
 - What happens when there is alcohol use?
 - Violence?
 - What do you do to avoid sex?
 - Before or after HIV?

We understand that married couples may have sex. Many married couples find it challenging to use condoms every time they have sex, even when a wife has HIV.....

12. What has been your experience?
13. Who usually makes the decision about whether to use a condom or not?
Why?
14. If you wanted to use a condom how would you go about using it? How would your wife react to this?

C. Other Sexual Relationships

Now we are going to talk about your sexual relationships with anyone other than your husband. Again these questions are being asked to develop new programs to benefit married couples like yourself and programs would benefit from your honest responses.

15. Is there someone in your life, apart from your husband with whom you share your intimate moments? Please tell me about this.
- What are some reasons why you have sex outside of your marital relationship?
 - Do you know the HIV status of the partner(s) whom you have sex with?)

D. Closing/Wrap Up

We are almost done with the interview. We have just a few more questions

16. If you could tell married people like yourself how to prevent HIV transmission, what would you say?
17. Is there anything you would like to add that we have not yet discussed?

Appendix B

Coding Tree and Codebook

HIV Serodiscordant Couples Coding Tree

- 1.0 Personal Characteristics
 - 1.1 Age
 - 1.2 Kids
 - 1.3 Years married
 - 1.4 Type of marriage
 - 1.4.1 Arranged or love
 - 1.4.2 First or re-marriage
 - 1.5 Education
 - 1.6 Religion
- 2.0 Living Conditions
 - 2.1 Sleeping arrangement
 - 2.2 In-laws
 - 2.2 Other extended family
 - 2.3 Structural barriers to sex
- 3.0 HIV
 - 3.1 Who disclosed
 - 3.2 Time between HIV diagnosis and disclosure
 - 3.3 Feelings after disclosure
 - 3.4 Participant tested
 - 3.5 Participant going to medical facility
- 4.0 Division of Labor
 - 4.1 Participant working
 - 4.2 Spouse working
 - 4.3 Earning gap
 - 4.4 Shift in earning
- 5.0 Division of Power
 - 5.1 Alcohol/substance use
 - 5.2 Relationship abuse
 - 5.3 Condom negotiation self efficacy
 - 5.4 Knowledge of HIV
 - 5.5 Communication with partner
 - 5.5.1 Positive
 - 5.5.2 Sexual communication
 - 5.6 Decision making ability in relationship
 - 5.6.1 Decision to disclose
 - 5.7 Greater than 5-year age difference with husband
- 6.0 Social Cathexis
 - 6.1 Want to have children
 - 6.3 Social support

- 6.3.1 Participant's own family
- 6.3.2 In-laws
- 6.3.3 Friends/Community
- 6.4 Beliefs about condoms
- 6.5 Gender roles
 - 6.5.1 Traditional
 - 6.5.2 Non-traditional
- 6.6 Religion and HIV
- 7.0 Sexual behavior
 - 7.1 Condom use
 - 7.1.1 Before HIV
 - 7.1.2 After HIV
 - 7.2 Extramarital relations
 - 7.2.1. Before HIV
 - 7.2.2 After HIV
 - 7.3 Sexual submission
- 8.0 Advice to other serodiscordant couples

HIV Serodiscordant Couples Codebook

1.0 Personal Characteristics

1.1 Age - participant's age

1.2 Kids - description of how many kids the participant has and their ages

1.3 Years married - the number of years participant has been married

1.4 Type of marriage

1.4.1 Arranged or love - description of if it was a marriage arranged by family or a "love" marriage where participant picked her own spouse

1.4.2 First or re-marriage - description of whether it's the first marriage or a remarriage for participant and her spouse

1.5 Education - highest level of education completed by participant and her spouse

1.6 Religion - information about the religion that the participant and her family practice

2.0 Living Conditions

2.1 Sleeping arrangement - description of where everyone in the home sleeps (i.e. bed, floor), what room people sleep in (i.e. kitchen, bedroom), who sleeps in the same room (i.e. couple, children, in-laws)

2.2 In-laws - description related to if the participant's mother and/or father in-law are currently, or have previously, lived in the same house as the participant

2.2 Other extended family - description of any other extended family that currently, or has previously, lived in the same house as the participant

2.3 Structural barriers to sex – information surrounding how sleeping or living arrangements affect frequency or type of sexual behaviors performed.

3.0 HIV

3.1 Who disclosed - description of who disclosed the husband's HIV status to the participant

3.2 Time between HIV diagnosis and disclosure - the amount of time that passed between the initial positive HIV diagnosis and status disclosure to the participant

3.3 Feelings after disclosure - description of participant's feelings after she found out about her husband's positive HIV status

3.4 Participant tested - description of whether or not the participant got the HIV test after she found out about her husband's status and why or why not

3.5 Participant going to medical facility - information around if the participant is going to the hospital or the testing center with her husband when he goes for counseling or his medicine

4.0 Division of Labor

4.1 Participant working - whether or not the participant is working and how much money she is earning

4.2 Spouse working - information about whether or not the participant's spouse is working and how much he is making

4.3 Earning gap - information surrounding an earning gap between the partner and her spouse

4.4 Shift in earning - description of any changes in who makes more money

5.0 Division of Power

5.1 Alcohol/substance use - description alcohol or substance abuse issues that either partner has that led to violence or power differentials in the relationship

5.2 Relationship abuse - description of any type of abuse (verbal, physical, emotional, psychological, sexual) that perpetrated by either partner

5.3 Condom negotiation self efficacy - description of participant's confidence in her own ability to negotiate condom use with her partner

5.4 Knowledge of HIV - description of participant's knowledge of HIV as it relates to disease physiology, modes of transmission, prevention and treatment

5.5 Communication with partner

5.5.1 Positive - evidence of positive and open communication between partners

5.5.2 Sexual communication - description of communication that occurs related to sexual behaviors (may be double coded with 5.5.1 or 5.5.2)

5.6 Decision making ability in relationship - information about which partner in the couple has more decision making power in the relationship and information on the participant's own self-efficacy in making decisions in the relationship

5.6.1 Decision to disclose - information around who in the couple made the decision to disclose the husband's HIV status to others

5.7 Greater than 5-year age difference with husband - information on partners having an age gap of greater than five years

6.0 Social Cathexis

6.1 Want to have children - description of whether or not the participant wants to have any more children and discussions around pregnancy

6.3 Social support - description of the participant's social support as they relate to her husband's HIV and their sexual behaviors

6.3.1 Participant's family - information on if the participant has told her own family about her husband's HIV, and information on if she is able to talk about her sexual relationship with any of her own family members

6.3.2 In-laws - information on if the participant's in-laws know about her husband's HIV, and information on if she is able to talk about her sexual relationship with any of her in-laws

6.3.3 Friends/Community - information on if the participant has told her friends or community members about her husband's HIV, and information on if she is able to talk about her sexual relationship with any friends or community members

6.4 Beliefs about condoms - description of the participant's beliefs about using condoms, and their utility

6.5 Gender roles

6.5.1 Traditional - description of tasks that demonstrate traditional gender roles in the relationship or a shift towards more traditional roles; this would include text related to wives being homemakers and husbands being the sole income generators, wives having to take care of the children or other family members, and wives being weaker

6.5.2 Non-traditional - description of tasks that demonstrate non-traditional gender roles or a shift towards more non-traditional roles; this would include text related to women having greater earning capacity in the family, women working outside of the home, shared responsibility around household work and taking care of children and other family members

6.6 Religion and HIV - description of participant's beliefs about how religion plays a role in the husband's HIV and the spread of HIV in the family (may be double coded with 1.6)

7.0 Sexual behavior

7.1 Condom use

7.1.1 Before HIV - description of condom use before husband's HIV diagnosis

7.1.2 After HIV - description of condom use since husband's HIV diagnosis

7.2 Extramarital relations

7.2.1. Before HIV - description of any extramarital relations for either partner before husband's HIV diagnosis

7.2.2 After HIV - description of any extramarital relations for either partner after husband's HIV diagnosis

7.3 Sexual submission - information demonstrating sexual submissiveness of participant either before or after HIV

8.0 Advice to other serodiscordant couples - advice participant has for how other serodiscordant couples can prevent HIV spread