GENDER INEQUALITY AND TRADITIONAL SOCIAL NORMS AS PREDICTORS OF RISKY SEX AMONG MEN IN THE NORTH INDIAN STATES OF UTTAR PRADESH AND UTTARAKHAND: QUANTITATIVE AND QUALITATIVE ANALYSES

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ABSTRACT

RAJEEV COLACO: Gender inequality and traditional social norms as predictors of risky sex among men in the north Indian states of Uttar Pradesh and Uttarakhand: quantitative and qualitative analyses
(Under the direction of Dr. Anita Farel)

Quantitative data from the National Family Health Survey (NFHS-3) and qualitative data from an NIH-funded study in the north Indian states of Uttar Pradesh and Uttarakhand were used to examine the relationship between men's risky sex (non-marital and unprotected sex) and their gender equality attitudes and expressed social norms. Gender equality dimensions in the quantitative analysis were developed based on men's attitudes towards wife-beating, feelings regarding wives ability to refuse sex, history of family violence, and views on whether women had the right to make household decisions and have financial autonomy. Logistic regression models were fit to explore the influence of gender equality dimensions on reported non-marital sex and condom use. Qualitative analysis explored how men's gender attitudes and expressed social norms were related to their risky sex. Quantitative analysis indicated that men who were more likely to report non-marital sex were those who had a history of family violence [OR=1.83; 95% CI=(1.05-3.17) for married men; OR=1.93; 95% CI=(1.44-2.59) for unmarried men], felt that wife-beating was acceptable [OR=1.93; 95% CI=(1.10-3.38) for married men], and felt that women should not have the right to refuse sex [OR=2.17; 95% CI=(1.05-4.48)

for married men]. Men who were more likely to report using condoms during non-marital sex were those who felt that wife-beating was never acceptable, compared to men who felt that wife-beating was acceptable [OR=2.13; 95% CI=(1.35-3.36)]. Qualitative analysis revealed that men felt that women are sexually insatiable, should have no say over their own sexual needs, and be dependent on men to be sexually gratified. Men also indicated that certain restrictive social norms drove them to more, rather than less, non-marital sex. Men who reported no or inconsistent condom use felt that condoms prevented them from having “real” sex, that women did not have the right to request men to use condoms or to purchase condoms, and that men had the right to force women to have unprotected sex. Interventions that seek to curb the spread of STIs and HIV in India through reducing men’s risky sex should promote a redefinition of men’s traditional masculinity norms to incorporate acceptance of gender equality and prevention of violence against women.

DEDICATION

To my grandmother, Antonieta Virginia Andrade e Caeiro, who never had the privilege of a school education, but who taught me lessons no university ever could: to treat women and men equally; to be thirsty for knowledge; to be compassionate to all; to forgive unconditionally; and to love and treasure life

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CHAPTER 1

INTRODUCTION

Background

HIV estimates in India

The Joint United Nations Programme on HIV and AIDS (UNAIDS), the World Health Organization (WHO) and the Indian National AIDS Control Organisation (NACO) estimate that in 2006, adult HIV prevalence in India was approximately 0.36% of the total population, amounting to approximately 2.5 million people.[1] While the percentage of the adult population affected by HIV/AIDS may not be as high as in many other regions of the world, India's HIV epidemic is substantial in absolute numbers. It is the third largest population of HIV-positive individuals in the world, after South Africa and Nigeria, and remains the largest in Asia.[1] HIV prevalence among high-risk groups remains high, ranging from 10-50% among injecting drug users, men who have sex with men and female sex workers.[1] These rates are of urgent concern given that high HIV rates among high-risk groups are a precursor to increased incidence among the general population, due to intersections of individuals engaging in high-risk behaviors and sex with their partners. More men in India are HIV positive than women: nationally, the HIV prevalence rate is 0.29% for adult females, and 0.43% for males. HIV prevalence is highest in the sexually active 15-49 age group (88.7% of all infections), and thus threatens individuals in the prime

of their working lives.[1]

HIV/STI in Uttar Pradesh and Uttarakhand, trends and knowledge

For the last two decades, HIV prevalence has been estimated to be higher in southern Indian states as compared to northern states. However, by 2006, 26 new districts with high HIV prevalence were identified in India's northern states, including in Uttar Pradesh (UP) and Uttarakhand.[2] In 2006, the population estimate for UP alone was 183.8 million, accounting for 17% of India's total population.[3] Were UP to be an independent country, it would be the fifth most populous in the world.[4] Even though the 2006 estimates for HIV prevalence in UP were low, at 0.11% of the total population[5], this amounted to over 200,000 estimated HIV positive individuals in the state. Findings from NFHS-3 suggest that only 16% of women and 29% of men in UP have 'comprehensive knowledge' of HIV/AIDS, as measured by the Demographic and Health Survey (DHS).[6]

The increased transmissibility of HIV in the presence of STIs has been well documented by numerous studies, and high prevalence of STIs is recognized as a precursor to increased HIV incidence.[7, 8] While no comprehensive studies have been conducted to estimate population-level STI prevalence in the state, up to 14.6% of all sexually active women and 4.1% of all men aged 15-49 years reported having at least one STI symptom in the 12 months prior to the National Family Health Survey (NFHS-3) conducted in 2005-06.[6] Studies from India have reported increasing incidence of STIs, especially syphilis, gonorrhea and Type 2 herpes.[9, 10] While STI prevalence is high and possibly rising in UP and the rest of India, knowledge and

awareness is low: the National Behavioral Surveillance Survey conducted in Indian states in 2001 reported that only 22.2% of men and 17.4% of women in UP reported ever hearing of STIs other than HIV. Just 13.5% of men and 7.8% of women were aware of the linkage between STIs and HIV/AIDS.[11] Expectedly, individuals seeking treatment among those identified with STI symptoms was low: 8.6% of men and 13.6% of women in UP reported seeking treatment during their last symptomatic episode.[12] Given the potential high prevalence of STIs in UP, the specter of a spike in HIV is likely.

India is vulnerable to the AIDS epidemic due to a host of additional factors that include pervasive poverty, low levels of education and high gender stratification.[13] The spread of HIV and its consequences are likely to be particularly devastating in UP. Besides being India's largest state, UP (along with some other neighboring states) lags far behind the national average in most major economic, literacy and educational indicators, and women there have less autonomy and worse health outcomes than in most other states.[14]

In 2000, as part of a redistribution of state boundaries in India, twelve of UP's northern districts were merged into a new state, Uttarakhand. This state reorganization was purportedly for better administration and fairer redistribution of natural resources among different regions.[15] Both states share the same culture, traditions and languages, albeit with distinct internal variations.[15] The 2006 population estimate for Uttarakhand was 9.2 million[3] and the estimated adult HIV prevalence was 0.08%[5], amounting to over 7,300 HIV-infected people.

Heterosexual transmission and sexual attitudes

Eighty-four percent of AIDS cases in India are attributed to heterosexual HIV transmission.[16] Heterosexual risk in India arises from both lack of condom use and multiple sexual partners.[17] Although the probability of HIV transmission via heterosexual vaginal intercourse is low, at around 1 or less per 1,000 sex exposures, the risk of HIV transmission increases exponentially if one partner is exposed to repeated and frequent unprotected sexual acts with an HIV-infected individual during an extended period of time.[18]

Research on sexual attitudes and practices amongst the diverse ethnic, cultural, religious, and socioeconomic groups in India is limited.[19] While abstinence and monogamy have been acceptable options in HIV prevention strategies in India, open discussions about sex and sexual matters remain taboo.[20] The acceptability of sex education is publicly debated and the promotion of condom use has been opposed on the grounds that it will encourage young people to have premarital sex.[21] While discussions related to sex remain taboo, several studies over the past decade have documented the continuing high prevalence of STIs and HIV in India, and increased incidence of HIV among mainly married, monogamous women whose only risk factor was sexual contact with a husband.[22-24]

Earlier studies from India showed that considerable non-marital sexual activity among men took place among populations such as truck drivers and sex workers.[25, 26] In addition, recent research over the past decade indicates that a significant proportion of men in the general population in India reports non-marital sexual experiences. Studies in various Indian settings have shown that between 15% and

19% of married men and up to 45% of unmarried men have multiple partners.[27, 28] Studies have also reported that nearly two-thirds of male clients of sex workers are either married or living with their spouse/partner, thus exposing their regular partners to the threat of STIs and HIV.[29]

HIV risk factors among men and women and implications

The dearth of national or state-wide men's sexual behavior surveys in India has meant that no studies have been conducted to determine predictors of risky sexual behaviors among Indian men at the population level. All studies looking at men's risky sexual behaviors have been carried out among men in high-risk settings such as among men frequenting sex workers, wine bars, STI/HIV clinics and voluntary counseling and testing (VCT) centers. The 2005/06 NFHS-3 survey, which provides the dataset for this study, was the first nationally representative Indian survey to elicit information about men's risky sexual behaviors, such as their relationships with their sexual partners and use of condoms during intercourse.

On the other hand, national-level women's surveys have been conducted in the past, and a number of population-based as well as high-risk-setting studies have explored the factors associated with women's increased risk of acquiring HIV/STIs.[13, 30] These studies have shown that the risk of having an STI increases for women who are married; have fewer children in the house; are older; are migrants; are living with verbally, physically or sexually abusive husbands; report being concerned about husbands' alcohol consumption and extramarital relationships; and report that their freedom to socialize and participate in activities outside the home was being

curtailed by their spouses .[30]

While some interventions for women in developing settings have resulted in their ability to better negotiate condom use with male partners, [31, 32] the reality is that given the strong patriarchal social infrastructure, interventions for women are unlikely to be highly successful without the approval of their husbands and/or male guardians.[33-35] A number of studies highlight this situation, emphasizing that it is men who play a pivotal role in slowing HIV/AIDS spread in India because it is their risky behaviors that place themselves and their partners at high risk for contracting STIs/HIV. Reducing high-risk behaviors in men, therefore, is the best strategy for attenuating HIV spread in India.[33, 34]

While there is a need to step up men's behavioral interventions in India, for such interventions to be most successful at the population level, it is imperative to understand the predictors of non-marital and unprotected non-marital sexual behaviors among Indian men, and the unique socio-cultural context within which these behaviors occur.

Influence of social context, autonomy and gender implications

In order to understand men's and women's risk of STI/HIV infection, it is necessary to analyze the patriarchal nature of the family structure in Indian society, which instills socially and culturally-driven sexual beliefs and behaviors in both men and women. Even though Indian societal norms do not encourage non-marital sexual activity, expectations vary by gender. Unmarried girls are expected to resist premarital sexual activity in order to maintain their "purity", and to engage in sexual

activities with their husbands solely for procreation and motherhood. Women are often prohibited from “excessive” social interactions with men, let alone be permitted to maintain a social relationship with males. On the other hand, men are permitted (if not openly encouraged) to engage in non-marital sex for the sake of gaining “experience” and learning to be sexual decision makers, and have much greater freedom of movement outside the household.[36-38] This means that young unmarried men are more likely to have non-marital sex with partners such as sex workers rather than with their female peers.[37] Early marriage for girls, resulting in early onset of coital activity and repeated sexual intercourse with potentially infected partners increase young women’s chances of contracting STIs/HIV, even when they do not express their sexuality outside traditionally defined boundaries.[39]

Married women are also at risk because their husbands who might have engaged in pre-marital high risk sex are also more likely to continue having high-risk sex after marriage.[27] Yet, studies have found that the majority of Indian women do not consider themselves to be in a vulnerable or at-risk group. Women seem to discount, deny, or be unaware of the possibility that their male partners’ non-marital sexual activity could be placing them at risk.[40, 41] Raised in a traditional socio-cultural environment with culturally ingrained gender roles and expectations, where girls are taught to aspire to get married and the husband-wife bond is considered one of the most sacred ones in society, these women rarely question their spouse or the relationship.[42] Because society puts so much more emphasis on male children’s wellbeing from birth, women in India have significantly lower literacy rates and educational attainment as compared to men, and have far less financial

independence. Further, studies have found that many Indian women are dependent on their husbands for all health-related and fertility decisions.[13, 43] Yet, two studies conducted in UP found that very few married men had adequate knowledge about women's fertility, maternal health and STIs, while at the same time impeding their wives' autonomy to make their own health decisions.[44, 45]

While studies have not examined links between men's non-marital sexual behaviors and their views on women's autonomy, studies have reported than the reasons men gave for justifying non-marital sex included their need for sexual excitement, sexual curiosity, novelty or variety, and sexual enjoyment.[46] It has been pointed out that such justifications are exacerbated by men's sense of hyper-masculinity or "real" manhood that argues for their perceived natural ability and right to have continued access to multiple sexual partners, their perceived natural need for frequent sexual satisfaction, and married men's perceived superiority over their spouses within the marriage, which supposedly grants them the right to have non-marital sex.[46, 47] A study from rural UP reported that men who perceived having more power within the marriage felt they were justified in forcing their spouses to have sex and in retaining control over reproductive decisions.[48] Other studies from UP have found that nearly two-thirds of all men believed their wives should be subservient to them.[44, 45]

Domestic violence as a risk factor

Community gender norms in India tacitly sanction domestic violence; given the choice between the immediate threat of violence and the relatively hypothetical

specter of HIV, women often resign themselves to husbands' sexual demands and indiscretions that may increase their risk of HIV acquisition.[49] Studies have found that wife-abuse appears to be common in northern India, and especially in Uttar Pradesh and Bihar, and that abusive men are more likely to engage in non-marital sex and have STI symptoms, thus suggesting that these men may be acquiring STIs from their extramarital relationships and placing their wives at risk for STI acquisition, sometimes via sexual abuse.[49, 50] Gender-based violence also seems to be both a cause and a consequence of non-marital sex. Studies in international settings have found that a significantly higher number of abusive husbands had non-marital sexual affairs and such affairs significantly predicted their wives being physically and/or sexually abused within the marriage.[51] Fear of domestic violence among women is a major barrier to control over their own sexuality and their husbands' sexual activity outside of marriage.[36, 52] As a result, wives are exposed to unprotected sex,[47, 53] have poor marital communication about sexual risk and sexuality, have limited capacity for refusal to husbands' demands for sex, and are limited in their use of condoms as protection against disease transmission.[36, 54, 55]

Condom use in the Indian context

Regular and consistent condom use by serodiscordant heterosexual partners can reduce the transmission of HIV infections by up to 80%.[56] Though India was a pioneer in the social marketing of condoms as a family planning method, condoms have been used at low rates for both family planning and STI prevention, and accurate knowledge of HIV/STIs is low among the both men and women. Until the

advent of the HIV/AIDS epidemic, the use of condoms for prevention of STIs had not been a theme in condom promotion strategies in India.[21, 37] Condom use during non-marital sex also remains low: findings from NFHS-3 show that only about a third of Indian men reported using condoms at the last reported incident of sex with sex workers, and consistent condom use during risky sex is likely even lower.[6] A number of factors present significant challenges to programs promoting condom use in India as an STI/HIV prevention strategy: low condom knowledge, barriers to accessibility and affordability, perceived embarrassment related to purchase, misinformation about correct use, social norms expecting married women to trust their spouse's sexual fidelity, and fear of violence against women if condom use is requested or even suggested.[34, 36, 37, 40, 57-59] Studies have reported that the one of the reasons Indian men give for justifying not using condoms includes the "right" to not use them, resulting from perceived superiority over women.[46, 47] In addition, in many places in India, semen is commonly referred to as *dhatu* (literally "metal"), and is considered the most potent representation of a man's virility. Because condoms block the flow of semen from men to women, the use of condoms is perceived as an impediment to the expression of a man's masculinity.[36]

Theoretical Context and Dissertation Aims

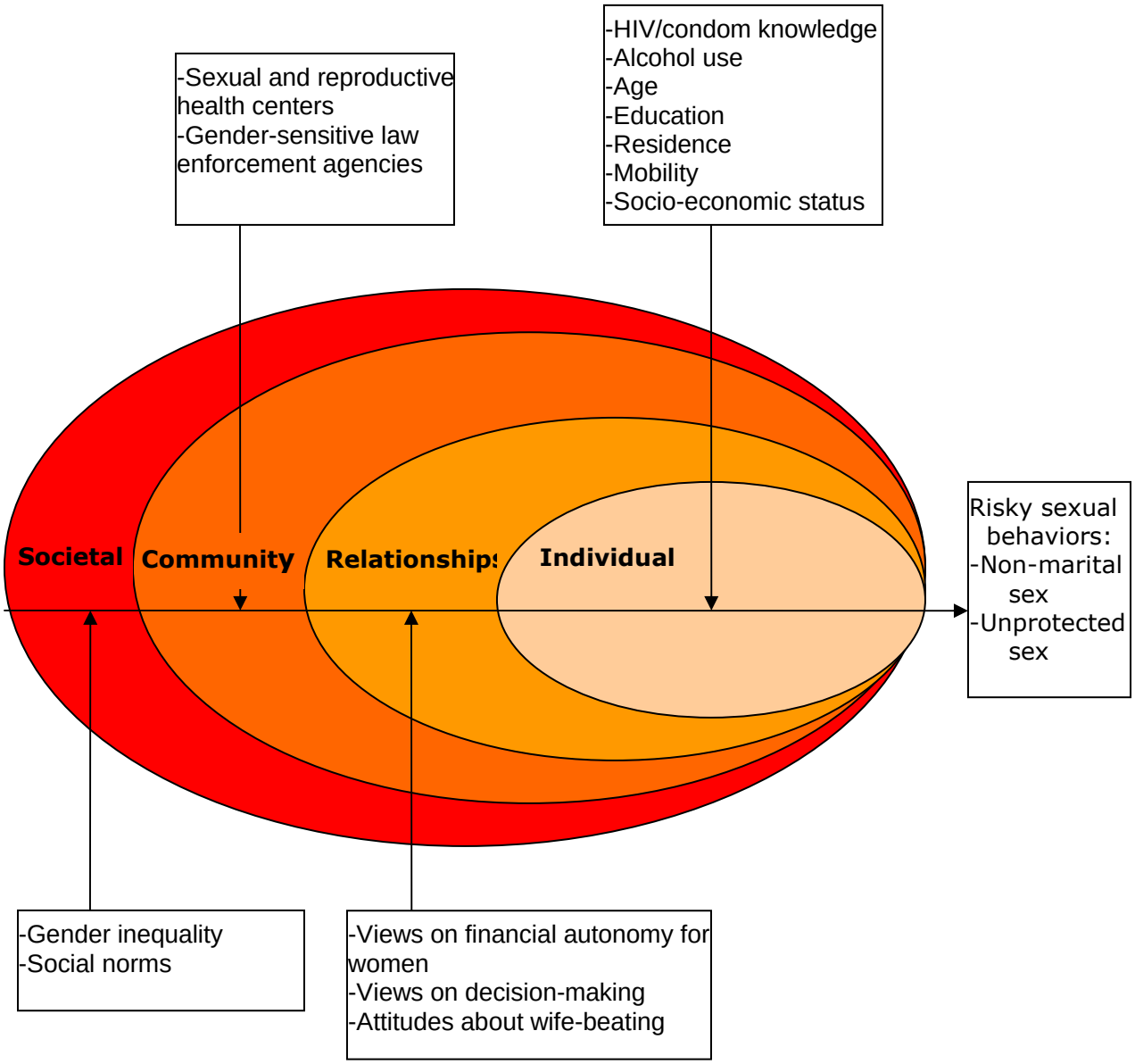
The social-ecological framework (SEF) was used to examine the influence of various independent variables on non-marital and unprotected sex among men. The SEF views risky sexual behaviors (such as non-marital and unprotected sex) as the outcome of reciprocal interactions among various factors at four main levels of the SEF: the individual, the relationship, the community, and the societal.[60, 61] This framework indicates that factors at all four levels explain why some men are at higher sexual behavioral risk, while others are more protected from it. The SEF proposes that reciprocal influences on risk-taking behaviors occur within two main system levels: the microsystem and the macrosystem.[61] The microsystem includes the individual engaged in risky sex, and the reciprocal relationships and interactions he has with partners, family and peers. The macrosystem includes reciprocal interactions between community and societal characteristics that in turn influence individual risky behaviors. A hallmark of this contextual theory is the concept of reciprocity. Men's risky sexual behaviors affect the systems around them; in turn, the systems also affect the predictors of men's risky sex.[61] For example, social and cultural norms (at the societal level) that endorse male non-marital sex as being acceptable can influence men's non-marital sexual behaviors. At the community level, factors such as relatively easy access to sex workers and condoms can influence whether men (at the individual level) are at higher or lower sexual behavioral risk.

Potential determinants at various SEF levels include the following:

1. At the **individual level**, personal beliefs, perceptions and biological factors influence how individuals behave and increase their likelihood of engaging in risky sex. Among these factors are men's age, alcohol/substance abuse, and knowledge about spread of STIs/HIV and the role of condoms.
2. Inter-personal **relationships**, especially with spouses/partners and peers may influence men's risky sexual behaviors. Men who deny partners autonomy, financial equality, decision-making and equal rights are more likely to engage in risky sexual behaviors.
3. **Community** contexts in which social relationships occur can influence risk-taking. Risk factors here include type of residence, presence of condom distribution centers in the community, socio-economic status, and mobility/migration associated primarily with travel for employment.
4. **Societal** factors influence whether men's risky sex is encouraged or inhibited by existing societal norms. These factors include social, cultural and patriarchal norms regarding male dominance, and cultural norms that endorse male risky sex as being acceptable.

Please refer to Fig. 3 for the conceptual model examining factors likely to predict non-marital and unprotected sex among men.

Fig. 1: Conceptual Model: The social-ecological framework[62]



Specific Aims and Hypotheses

Aims 1 and 2

This mixed-methods study aimed to illuminate how men's gender inequality attitudes and traditional social norms may be related to their risky sexual behaviors (Aim 1: non-marital sex and Aim2: unprotected non-marital sex), using quantitative and qualitative analyses from the northern Indian states of Uttar Pradesh (UP) and Uttarakhand (refer to figs. 1 and 2 below for state maps). Quantitative analysis were used to identify the gender inequality-related predictors of men's risky sexual behaviors, while qualitative analysis explored how gender inequality attitudes and traditional norms influenced men's risky sex. Understanding the roles that gender inequality and traditional social norms play in fueling the spread of STIs and HIV in India is key to developing policy and interventions that will meaningfully involve men in prevention efforts. It was hypothesized that men who ascribed to restrictive gender and social norms were more likely to engage in non-marital and unprotected non-marital sex than men who believed in gender equality and progressive social norms. These two states were studied because they have lower levels of gender equality and female autonomy compared to other regions in India and because part of the data used in this study came from a larger qualitative study that was conducted in these two states. Quantitative data for this study came from UP and Uttarakhand states from the National Family Health Survey (NFHS-3), the first nationally representative men's survey to collect this information in India. This study received ethics approval from the Institutional Review Boards of University of North Carolina at Chapel Hill, USA and Banaras Hindu University, India.

Fig. 2: Map of India highlighting northern states of UP and Uttarakhand

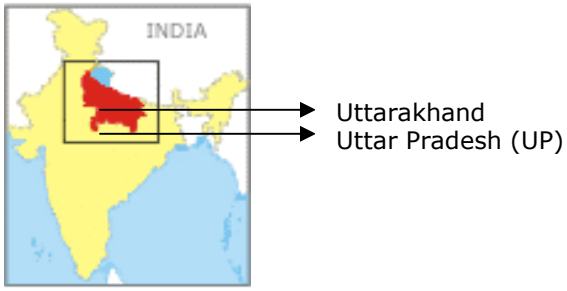


Fig. 3: Map of UP and Uttarakhand showing five qualitative study city-sites

CHAPTER 2

GENDER INEQUALITY AND TRADITIONAL SOCIAL NORMS AS PREDICTORS OF MEN'S NON-MARITAL SEX IN NORTHERN INDIA: A MIXED-METHODS STUDY

Abstract

Quantitative data in this mixed-methods study from the north Indian states of Uttar Pradesh and Uttarakhand were used from the National Family Health Survey (NFHS-3), to examine the relationship between gender equality attitudes and non-marital sex among married (n=7,406) and unmarried (n=4,834) men. Gender equality predictors were developed based on men's attitudes toward wife-beating, family violence history, and views on whether women had the right to refuse sex, make household decisions and have financial autonomy. Qualitative data among thirty-one men were analyzed to explore how men's gender attitudes and expressed social norms were related to their non-marital sex. Quantitative methods included descriptive analyses and logistic regression modeling for married and unmarried men, to explore the effect of gender equality predictors on non-marital sex. Qualitative analyses included inductive coding of interviews to generate codes associated with themes describing non-marital sex. Themes were collapsed across interviews to observe theme density and to explore how men's gender-related attitudes and expressed social norms were related to their non-marital sex. Quantitative results indicated that men who were more likely to report non-marital

sex were those who: felt wife-beating was acceptable [OR=1.93;95% CI=(1.10-3.38) for married men], had a history of family violence [OR=1.83;95% CI=(1.05-3.17) for married men; OR=1.93;95% CI=(1.44-2.59) for unmarried men], and believed women should not have the right to refuse sex [OR=2.17;95% CI=(1.05-4.48) for married men]. Qualitative analyses revealed that men felt they had the right to force women to have sex, that women had no say in the refusal of sex, and that sex with multiple "good" women was safe. Certain restrictive social norms drove men to more, rather than less, non-marital sex. Given study findings, HIV and STI prevention programs should promote gender equality acceptance and a redefinition of traditional masculinity norms among men to reduce men's risky non-marital sex in India.

Keywords

HIV; STI; India; men; non-marital sex; gender equality

INTRODUCTION

India's adult HIV prevalence is estimated at 0.36% of the total population, amounting to approximately 2.5 million people. This is the third largest HIV-positive population in the world, and the largest in Asia.[1] Further, studies indicate that HIV prevalence rates among at-risk populations such as injecting drug users, men who have sex with men and female sex workers range between 10-46%, and high HIV prevalence among these groups can be a precursor to increased incidence among the general population.[63] The increased transmissibility of HIV in

the presence of STIs has been documented by numerous studies.[7] Up to 14.6% of all sexually active Indian women and 4.1% of men report having at least one STI symptom,[64] and incidence of STIs, especially syphilis, gonorrhea and Type 2 herpes might be increasing.[9, 10]

While higher HIV prevalence appeared to be confined in the 1980's and 1990's to southern India, 26 new districts in northern India were identified in 2006 with an HIV prevalence higher than that estimated in 2001. These districts were primarily in the states of Uttar Pradesh (UP) and Uttarakhand (which was part of UP until 2000).[2] This is India's most populous region, with 17% of the nation's population. It lags far behind the national average in major economic and literacy indicators. Lesser female autonomy in this region, when compared to other Indian states, contributes to lower HIV knowledge among women[13] and poorer female health outcomes.[65]

The patriarchal nature of family structure in India (and more so in this region of India) instills differing norms for sexual behaviors among men and women. Unmarried girls are expected to resist premarital sex and maintain their "purity", but it is tacitly acknowledged that men can engage in non-marital sex for the sake of gaining "experience" and learning to be sexual decision makers.[37, 38] The reasons that men give for justifying non-marital sex include their perceived right to have access to multiple sexual partners, and perceived superiority over spouses within marriage.[46, 47] Given restrictive social norms (especially for women), cohabitation with a non-spouse is virtually non-existent, and men who engage in non-marital sex to do so with sex workers and casual partners such as acquaintances or friends

rather than with committed partners.[37] In the Indian context, therefore, almost all non-marital sex is considered high-risk, and the Demographic Health Surveys and the National Family Health Survey (NFHS-3, which provides data for this study) explicitly define non-marital sex in India as “higher-risk sex”.[64]

Earlier men’s studies from India have shown that non-marital sex is common in at-risk populations such as truck drivers.[66] Yet, recent studies estimate that up to 15-19% of married men and 15-47% of unmarried men in the general population may be engaged in non-marital sex.[27, 53] Data from India on condom use during non-marital sex are not comprehensive; studies indicate that less than a third of men in India report using condoms at their last reported instance of non-marital sex, and consistent use of condoms over an extended period of time is expected to be even lower.[64] Studies since the mid-nineties have suggested that HIV incidence might be increasing among married, monogamous Indian women in the general population, whose only known risk factor was sexual contact with their husbands.[23, 67] The risk of having HIV/AIDS and STIs increases for Indian women who live with abusive husbands, have low autonomy, and report being concerned about husbands’ extramarital relationships.[30, 68] A number of studies emphasize that reducing men’s risky sexual behaviors, such as non-martial sex, is key to slowing HIV incidence in India.[23, 30] Studies, however, have hitherto not explored the link between men’s attitudes about gender equality and their own non-marital sex.

The aim of this study was to examine whether men’s gender equality attitudes and expressed social norms in the Indian states of UP and Uttarakhand influenced whether and how they engaged in non-marital sex. It was hypothesized that men

who ascribed to restrictive gender and social norms were more likely to engage in non-marital sex than men who believed in gender equality and progressive social norms. The reason why these two states were focused on was because they have lower levels of gender equality as compared to other regions in India, and because qualitative data for this study came from a larger qualitative study that was conducted in these two states. Quantitative data for this study came from the National Family Health Survey (NFHS-3), the first nationally representative men's survey n India. This study received research and ethics approval from the Institutional Review Boards (IRB) of the University of North Carolina at Chapel Hill, USA and Banaras Hindu University, India.

METHODS

Quantitative Methods: The NFHS-3, conducted from November 2005 to August 2006, interviewed a total of 74,369 men (87.1% response rate) 15-54 years old in 109,041 Indian households. Male subjects were interviewed within households by male interviewers.[64] For the current analyses, data were restricted to men living in the low gender-equity states of UP (*n*=11,458) and Uttarakhand (*n*=983), and stratified analyses were conducted for married (*n*=7,406) and unmarried (*n*=4,834) men.

The outcome measure for the quantitative part of the study was men's reported non-marital sex with a female partner in the 12 months prior to the survey. Specifically, according to the NFHS-3, a non-marital sexual partner included any one of the following: a friend not living with the respondent (non-cohabiting partner), a

casual acquaintance, a sex worker, or a relative other than a spouse.

The key explanatory variables in the quantitative analyses were married and unmarried men's reports of gender equality, assessed in terms of the following five dimensions:

1. A series of seven questions in the survey asked men if they believed that a husband was justified in beating his wife under specific conditions: (1) the husband suspected her of being unfaithful, (2) she showed disrespect for in-laws, (3) she went out without telling her husband, (4) she neglected the children, (5) she argued with him, (6) she refused to have sex with him, and (7) she burnt the food. Men who answered "yes" to any one of these were classified as believing that wife-beating was acceptable.

2. Men were asked a series of three questions about whether a woman had the right to refuse sex with her husband under the following circumstances: (1) the husband had an STD, (2) the husband had relations with other women, and (3) the wife was tired or not in the mood to have sex. Men answering "no" to any of these questions were classified as believing that women did not have the right to refuse sex with her husband.

3. Men were asked four questions about who they thought should make the following decisions: (1) make household purchases for daily needs, (2) purchase major household items, (3) make a decision on how many children to have, and (4) have the final say on visits to family or relatives. For each question, men who felt that decisions should be made by women alone or jointly with their husbands were given a score of 1, while men who felt that husbands alone should make decisions

were assigned a score of zero. Men who scored at or below the median (2 or less) were considered to believe that women should have low decision-making power. Men who scored more than 2 were considered as believing that women should have high decision-making power.

4. Men were asked who should have a final say on how a wife's earnings should be spent. Men who felt that women alone or jointly with their husbands should have this say were considered to believe that women should have high financial autonomy. Men who felt that husbands alone should have the final say were considered to believe that women should have low financial autonomy.

5. Men's family violence history was measured by a single question asking if their fathers ever beat their mothers. Men who responded in the affirmative were considered to have a history of violence in their families.

Factors reported in the literature to influence non-marital sex among men were also included in the analyses: alcohol use (whether men never consumed alcohol or consumed it at least once a week, more than once a week, or almost daily); mobility (whether men spent more than a month away from home in the year prior to the survey); and HIV knowledge. Men were asked in the survey if they had heard of HIV. Those who answered in the affirmative were asked whether the risk of getting AIDS can be reduced by 1) not having sex at all, 2) always using condoms during sex, 3) having only one sex partner; and whether 4) a healthy person can have AIDS, 5) one can get AIDS from mosquito bites, and 6) one can get AIDS from sharing food with an infected person. A "yes" to questions 1-4 and "no" to questions 5 and 6 were given a score of one. Men scoring above 3 (the median) were

classified as having high HIV knowledge; those who scored 3 or less were classified as having low or no HIV knowledge.

Socio-demographic measures controlled for included men's age; urban versus rural residence; education; standard of living index; religion; caste; and employment status.

Descriptive analyses were conducted to explore the relationship between non-marital sex and each of the gender equality and socio-demographic variables. Parallel models were then built separately for married and unmarried men using logistic regression. Baseline models including all socio-demographic factors - considered to be important study controls – were fit to investigate the factors that predict reported non-marital sex. Other predictors of interest and gender equality predictors were then added to the models to assess whether the addition of each of these variables helped to predict the outcome. The state level individual sampling weight and clustering variable (primary sampling unit)[64] were used in all analyses, which were conducted using Intercooled Stata version 9.

Qualitative Methods: Semi-structured interviews were conducted among men in the northern Indian states of UP and Uttarakhand, from August 2002 until May 2003, as part of a larger study conducted to explore the risk of HIV spread in these states. Men were interviewed in the four largest cities (Agra, Jhansi, Lucknow and Varanasi) in each of the main geographical regions of UP, and in Dehradun, the largest city in Uttarakhand. Interviews were conducted by three field workers (two male and one female) who were native to this region. Before beginning the study, all interviewers received training on appropriate interviewing strategies and information

regarding study design and goals. Interviewers initially conducted pilot interviews, which were assessed for quality, and then proceeded to conduct study interviews.

Study participants were recruited in two ways: 1) Physicians (known to the interviewers) in STI clinics identified subjects and notified interviewers of the same; 2) Key informants in the communities where interviews took place contacted men they knew who may have had non-marital sex. After receiving informed consent from study subjects, they were given a screening interview to assess that they fit the study's inclusion criterion: that they had non-marital sex within the past 12 months. Subjects were assured of anonymity and were offered no incentives to participate in the study.

The screening interview was followed by a semi-structured interview that explored men's life history and current situations with regard to their non-marital sexual behaviors. Each interview was conducted over a one to two-hour period, and all interviews were conducted in Hindi, the native language in these two states. Interviews were tape-recorded and transcribed verbatim, following which they were translated into English.

Thirty-one interviews were analyzed from respondents in the age group of 18-50 years. Interviews were read using an inductive coding approach to generate codes associated with themes of interest regarding men's non-marital sexual practices. These themes were then collapsed across interviews to observe theme density and to explore how men's gender and expressed traditional social norm themes were related with men's non-marital sex. The qualitative software program Atlas.ti was used for both coding and analyzing the various emerging themes.

RESULTS

Quantitative Results: Of the 12,441 men surveyed in UP and Uttarakhand states, the following men were excluded from this analysis: 28 men who did not respond to the question asking whether or not they had sex, and 173 married men who reported not having sex in the year prior to the survey. The final sample size of 12,240 men included 7,406 married and 4,834 unmarried men.

Of the 7,406 married men in the survey who reported being sexually active in the past 12 months, 99 men (1.3%) reported having had non-marital sex. Of the 4,834 unmarried men in the survey, only 37 men (0.007%) reported having sex with cohabitating partners while 482 men (11%) reported having sex with non-cohabitating friends, casual acquaintances, sex workers or relatives.

Sample characteristics for currently married and unmarried men are shown in Table 2.1. Most unmarried men (85%) were in the younger 15-25 year old group, whereas over 50% of married men were between the older ages of 26-39 years. More unmarried men (36%) than married men (28%) lived in urban areas, possibly a reflection of the former group's higher work-related migration to cities. While an overwhelming majority of married men (96%) were employed, less than two-thirds of unmarried men reported being employed, possibly because they were enrolled in school.

Married and unmarried men's reported measures of gender equality are shown in Table 2.2. While 40% of married men indicated that wife beating was justified, almost 50% of unmarried men felt the same way. A little under 90% of all men believed that a woman had the right to refuse having sex with her husband. A

fifth of married men reported that their fathers physically abused their mothers and a quarter of unmarried men reported the same. Over two-thirds of all men indicated that women should have a high level of decision-making power in the household, and 93% of all men believed that a woman should have the right to spend her earnings how she wishes.

The results of the final logistic regression model are shown in Table 2.3. Younger men, both married and unmarried, were more likely to report non-marital sex compared to men in the oldest age group (40-54 years). Being employed was significantly associated with having had non-marital sex among unmarried men only [OR=1.79; 95% CI=(1.34-2.38)]. None of the other socio-demographic variables demonstrated statistically significant associations with men's reported non-marital sex. After controlling for socio-demographic factors, at least three of the five gender equality predictors under consideration demonstrated a statistically significant relationship with men's reported non-marital sex. Married men who believed that wife-beating was acceptable were more likely to report non-marital sex [OR=1.93; 95% CI=(1.10-3.38)], compared to married men who thought that beating wives was never acceptable. Family violence history was a predictor of men's non-marital sex, both among married men [OR=1.83; 95% CI=(1.05-3.17)] as well as among unmarried men [OR=1.93; 95% CI=(1.44-2.59)]. Married men who believed that women did not have the right to refuse having sex with their husbands had a higher estimated odds of reporting non-marital sex [OR=2.17; 95% CI=(1.05-4.48)] compared to married men who believed that women had this right. Two of the gender equality dimensions, decision-making power and men's views on financial

autonomy for women, did not retain significance in the final model. Among the other predictors of interest expected to influence the outcome, alcohol use and mobility were significantly and positively associated with married as well as unmarried men's non-marital sex. Unmarried men who had high HIV knowledge were significantly more likely to report non-marital sex [OR=1.86; 95% CI=(1.32-2.63)], compared to those who had low or no HIV knowledge.

Qualitative Results: Interviewed men ranged in age from 18 to 50 years. Seventeen of the thirty-one interviewed respondents were married. Twenty men had at least a high-school education; of the remaining, three men had no formal education at all. Men reported a range of professions, from being students (eight men) to being self-employed or working for employers. Ten men reported earning less than Rupees 5,000 (about US$100) per month (lower SES) and eight men earned more than Rupees 15,000 (about $300) per month (higher SES); the thirteen other men were in the medium SES range.

Interviewed men generally referred to sexual intercourse as "making relationship" or "doing it" even though they might be familiar with the term "sex", possibly a reflection of sex not being a commonly discussed topic in society. Four main domains related to men's non-marital sex emerged in the qualitative analysis: context of non-marital sex, sexual rights and negotiation, sexual partner selection, and social norms associated with non-marital sex.

Context of non-marital sex

Men reported having non-marital sex with a wide range of partners that included neighbors, relatives (other than spouses or cohabiting partners), friends,

classmates, co-workers, casual partners and sex workers. Of all partners, sex with neighbors was the most commonly cited by men. A number of these neighboring women were married. These sexual encounters were always discreet and ranged from just one-time encounters to those that occurred over a period of weeks, months or years. While men indicated that such sexual encounters were socially unacceptable, they mentioned that the reason they sought sex with neighbors, classmates or co-workers was the feasibility of having such encounters without raising suspicion of other people in society. Men indicated that going into a neighbor's house on the pretext of work or a social visit made it relatively easy for such encounters to take place.

> "*If some marriage or play has been taking place in the village and when no one was around than I have been making relation to her (neighbor) or even in day time when I have been going with bulls to the field and her husband was at work."* 22 year old man, Lucknow

> *"There was a lady known to me, she was living in my neighborhood. When nobody was in her home I used to go there to do it (have sex). Nobody was suspecting and no one saw us doing these things."* 34 year old man, Dehradun

Sexual rights and negotiation

Men felt that they themselves should have control over sexual initiation and progression, and felt that women should accede to their sexual demands. A number of men mentioned that they had the right to force their female partners to have sex. Men felt that women had no say regarding their own sexual desires and needs, and no say in the refusal of sex.

> *"When I want to do (have sex) with women who seem to be like whore or similar than I am forcing them to do things."* 20 year old man, Lucknow

"Once man is sexually aroused then in that case it is her (girl's) compulsion to get to agree to things." 24 year old man, Dehradun

Sexual partner selection

Men's selection of sexual partners was influenced by their risk perceptions, which were tied with their gender attitudes and how they viewed women. Women were perceived as being sexually insatiable and as being the cause of sexual desire and lust among men. In fact, this was cited by many men as the justification of men's non-marital sex.

"Girls have more sex in them than boys and they instigate men to do things. Girls are sexy and shameless." 23 year old man, Agra

"It is woman who attracts man and then what can he do, he is bound to go after her." 42 year old man, Varanasi

Reflecting conservative social norms, men viewed women as being of "loose" morals even if they just talked to male strangers in public. Gestures such as these in public were viewed as an invitation by women to initiate sexual contact, and as a sign that they were sexually promiscuous.

"When I was in Delhi and Masoori I have seen girls spending morning with some boys, afternoon with someone else and in evening with someone else. I have reached conclusion that 90% of women in general are whores." 22 year old man, Dehradun

"I met this girl at internet café and I saw that she was inclined in having sex with me as she was talking to me. After talking few times I did it (with her) … I have feeling about girls that they are just sexual objects." 22 year old man, Jhansi

Conversely, women who were not socially visible were considered to be "good" women. Almost all interviewed men who engaged in sex with women known to them (such as neighbors or relatives) did not consider such sex as being risky

because these women were “good” and “safe”. At the same time, none of the men knew whether these women were engaging in sex with other men.

> *“Till now the girls with whom I have sex I knew them in some or other way and I know that they are clean. I didn’t have sex with anyone else.”* 24 year old man, Lucknow

On the other hand, some men who paid sex workers for sexual services said they were aware that they were engaging in risky sex, but did so regardless because they felt less inhibited with sex workers in their desires for sexual experimentation. They felt that sex workers were “loose” women, hence they could “do anything” with them.

> *“I like doing sex with my girlfriend but I go to these other women (sex workers) when I want to change my mood. There is more excitement in it with them because they do whatever I want.”* 18 year old man, Varanasi

A number of men who denied having sex with sex workers or having transactional sex went on to explain after probing that they solicited women in red light areas and “gave” them money or gifts. These men felt they were not having sex with sex workers since they did not explicitly pay for sexual services.

> *“I know this girl because I help her family financially from time to time. I bring her to my room and after that I take liberty to touch and I make sexual relation. I sometimes buy suit for her.”* 24 year old man, Jhansi

> *“I had sex with woman is that area of slum (red light area). She was living in poverty. So I gave her thousand rupees to help her and I had sex with her..”* 34 year old man, Dehradun

Social norms associated with non-marital sex

Men spoke about how traditional social norms affected their sexual relationships. A number of men mentioned that they ended already-initiated committed sexual relationships with partners they were in love with, due to family

and social pressure. Men indicated they were compelled to break off relationships primarily when they and their partners were from different castes, religions or linguistic backgrounds. Some men indicated that it was pointless being in committed relationships since they would have no say in decisions regarding their life partners. Men felt they would continue having sexual encounters with multiple partners until their families arranged their marriages.

> *"I was in love with this girl in my village. We first became friends, then after holding hands we started having sex. She was loving me also and said that she wants to marry me. I too was agreeing but our families did not agree, they said it was shame in society. So I stopped. Now I am making relationships with two-three other girls."* 24 year old man, Jhansi

> *"I am having sex with her (neighbor) but it is headache because my family will not agree for marriage and I don't want to create any problem. I don't want permanent relationship with anyone until I get married."* 25 year old man, Lucknow

DISCUSSION

Mixed-methods findings from this study suggest that men's gender equality attitudes and expressed social norms influence their non-marital sex. Specifically, the quantitative findings demonstrate that nearly half of all men surveyed in the NFHS-3 did not believe in gender equality, and these men were also more likely to engage in non-marital sex. This finding may provide an explanation for reports of increased STI and HIV incidence among married monogamous Indian women who indicate they are being denied autonomy by their male partners.[30, 68]

All married men engaging in non-marital sex and over 99.9% of unmarried sexually active men in the NFHS-3 reported having sex with casual partners or sex workers, rather than with committed partners. Similarly findings were observed in the

qualitative section of this study. These findings are consistent with those from other Indian studies that demonstrate that given restrictive socio-cultural norms on women, almost all non-marital sexual activity among Indian men is with multiple partners that include sex workers and casual partners rather than committed partners.[37] Given that non-marital sex in itself is recognized as a risky sexual practice in India, we did not include men's reported condom use during non-martial sex in this analysis. Further, the NFHS-3 does not provide information on the consistent use of condoms during non-marital sex.[64]

For unmarried men in the quantitative analysis, no significant association was found between non-marital sex and views on wife-beating and women's right to refuse sex. This may be because these men had no current marital context within which to answer these survey questions. However, married men who felt that wife-beating was acceptable and that women had no right to refuse sex were significantly more likely to report non-marital sex, compared to men who felt that beating wives was never acceptable and that women had the right to refuse sex. Qualitative findings revealed that men felt that they had the right to force women to have sex, that women should be subservient to men in the initiation and expression of sexual desires and needs and that women had no say in the refusal of sex. These findings have important implications for STI and HIV transmission and prevention. Forced sex associated with violence can cause abrasions in the vaginal mucous membrane, thereby increasing the transmissibility of HIV and other STIs, if one of the partners is infected.[7] Monogamous Indian women who report abuse by their husbands have higher HIV and STI prevalence rates compared to women who are not abused.[30, 68]

This study provides a potential explanation for this finding, by showing that married men who approve of wife-abuse are more likely to engage in non-marital sex. Further information is needed to elicit whether men who approve of wife-abuse are in fact more likely to abuse their wives. If this were to be the case, they would be putting themselves and their wives at increased risk for acquiring HIV and other STIs.

Previous Indian studies have shown that men who either witnessed abuse at home or were victims of abuse in childhood are more likely to perpetrate violence against their partners.[69] Given the links between intimate partner violence and increased HIV transmission, and the findings from this study that men with a history of family violence are more likely to engage in non-marital sex, this population of men is at increased risk for acquiring HIV through risky sex and subsequently infecting their partners.

The qualitative interviews revealed interesting aspects about the occurrence of non-marital sex in the context of traditional and patriarchal norms prevalent in this part of India. Interviewed men indicated that they engaged in non-marital sex despite being aware that such sexual activity was frowned upon in society. In order to circumvent restrictions on the inter-mingling between the sexes, men visited their sexual partners (such as neighbors or relatives) discreetly, and learned schedules within their partners' households to ensure that sexual rendezvous could take place when women were alone in their houses. Reflecting restrictions on women's social freedoms, none of the men mentioned that their female partners visited them; rather, men always visited women's houses.

Qualitative findings further revealed that traditional social norms played a role in how men engaged in non-marital sex. While it is widely believed that restrictive social norms discourage non-marital sexual interactions between men and women, it appeared that at least some of these norms in this qualitative sample of men might in fact have a role in furthering non-marital sex. Interviewed men indicated that they broke off committed sexual relationships with women that they loved and wanted to marry, due to family and societal pressure. Men indicated they were forced to break off relationships with women most often when they belonged to different castes, religions or linguistic backgrounds. Men who were compelled to break up with women they loved indicated that since their marriages would anyways be arranged by family, they would continue "enjoying" with multiple sexual partners until they were married. This finding provides further insight into qualitative findings among sexually active unmarried Indian women who report being often talked into sex by men who initially promise to marry them but then break off the relationship citing social and family pressure.[70]

Previous studies have emphasized that even when men's HIV knowledge is high, they still engage in risky sex,[71] and similar findings were observed for married men surveyed in the NFHS-3. The finding that unmarried men in the NFHS-3 with high HIV knowledge were more likely to report non-marital sex than men with no or low HIV knowledge could be because these men might be more receptive to acquiring HIV-related information. This finding was backed by results from the qualitative analysis. While most men in the qualitative sample had knowledge about the spread and prevention of STIs and HIV, they still engaged in sex with sex

workers and casual partners. Importantly, men's sexual partner selection and risk perceptions were influenced by their gender norms and how they viewed women. Men felt that when they knew that their partners were not sex workers (for example when partners were neighbors, relatives or friends), they considered these women to be "good" and hence "safe" or free from STIs and HIV. Men indicated that "good" women were those that were not socially visible and were not seen with men other than their husbands in public. Men felt that having sex with multiple "good" women was not risky, while at the same time being unaware whether these women were having sex with other men.

While other predictors such as younger age, alcohol use and mobility were not the focus of this study, they were found to be strongly associated with men's non-marital sex in the quantitative findings. These findings concur with those from numerous studies in India and world wide that highlight that interventions for these groups of men remain crucial for curtailing HIV and STI spread.[72, 73]

Only a small proportion (1.3%) of surveyed married men in the NFHS-3 reported having non-marital sex. Among unmarried men, a higher proportion (11%) reported the same. These proportions are far lower than those from other studies in northern India that reported 15-19% prevalence of non-marital sex among married men, and 15-47% among unmarried men.[27, 53] In the qualitative interviews, a number of men denied having sex with sex workers because they did not pay them explicitly for sexual services, while at the same time indicating that they "gave" them money or gifts in return for sexual services. Other men initially denied having sex with sex workers because of the stigma attached to the sex trade, and admitted to doing so

only after probing. Some men had to be asked a number of probing questions to encourage them to describe their non-marital sexual practices, given strong cultural taboos regarding such topics. Reporting bias regarding sexual practices in India has been shown to be lower in culturally specific anonymous interviews than in face-to-face household surveys such as the NFHS-3.[74] In order to more accurately capture information regarding men's non-marital sex, future surveys in India might need to include additional probes and take more steps to assure respondents of confidentiality.

Findings from this mixed-methods study have important implications for reducing men's risky sex as part of HIV and STI prevention programs in India. Studies in India have found that sustained men's behavior change communication strategies that reinforced messages of monogamous commitment and gender equality significantly reduced men's sex-worker visits and incidents of sexual harassment against female partners.[34, 75] Women's HIV voluntary counseling and testing that was expanded to include counseling and gender equality awareness for couples and husbands led to an increase in awareness of women's rights, and decrease in men's non-marital sex and rates of intimate partner violence.[47, 75] Besides targeting men in only high-risk settings, there is a need to change men's traditional gender and masculinity norms at the population level through structural-level programs such as community peer education, incorporation of gender equality in school curricula, and initiation of media campaigns to promote awareness about women's rights and protection laws.[75-77] Given findings of the study reported here, policies that promote gender equality acceptance among men and a redefinition of

traditional masculinity norms are likely to lead to a reduction in their risky sex, thereby curbing the spread of HIV and STIs in India.

Table 2.1: Characteristics of married and unmarried men living in Uttar Pradesh and Uttarakhand

	Married men (n=7,406)	**Unmarried men** (n=4,834)
Socio-demographic variables	weighted %	weighted %
Age		
15-25 years	17	85
26-39 years	51	10
40-54 years (Ref.)	32	5
Residence		
Urban	28	36
Rural (Ref.)	72	64
Highest level of education		
Primary	15	12
Secondary	46	64
Secondary plus	13	11
None (Ref.)	26	13
Standard of living index		
High	39	46
Medium	38	35
Low (Ref.)	23	19
Religion		
Muslim	15	16
Other	1	1
Hindu (Ref.)	84	83
Caste		
Privileged (upper) caste	27	30
Other backward caste	47	46
Scheduled caste/tribe (Ref.)	26	24
Employment status		
Employed	96	62
Unemployed (Ref.)	4	38
Other predictors		
HIV knowledge level		
High	62	69
No or low (Ref.)	38	31
Alcohol consumption		
Almost daily	2	1
At least once a week	4	2
Less than once a week	28	12
Never consumed (Ref.)	66	85
Mobility		
Yes	13	16
No (Ref.)	87	84

Table 2.2: Self-reported measures of gender equality (by weighted percentage) of married and unmarried men living in Uttar Pradesh and Uttarakhand

	Married men (n=7,406)	**Unmarried men** (n=4,834)
Attitude to wife-beating		
Acceptable	40	46
Never acceptable (Ref.)	60	54
Woman has right to refuse sex with husband		
No	11	13
Yes (Ref.)	89	87
Family violence history		
Yes	20	24
No (Ref.)	80	76
Woman should have high decision-making power		
Yes	68	69
No (Ref.)	32	31
Woman should have financial autonomy		
Yes	93	93
No (Ref.)	7	7

Table 2.3: Odds ratios[a] and 95% confidence intervals from final logistic regression model[b] investigating likelihood of reporting non-marital sex, among married and unmarried men living in Uttar Pradesh and Uttarakhand

	Married men (n=7,406)	**Unmarried men** (n=4,834)
Gender equality dimensions		
Attitude to wife-beating		
Acceptable	1.93* (1.10-3.38)	0.95 (0.70-1.28)
Never acceptable (Ref.)	1.0	1.0
Woman has right to refuse sex with husband		
No	2.17* (1.05-4.48)	1.02 (0.66-1.58)
Yes (Ref.)	1.0	1.0
Family violence history		
Yes	1.83* (1.05-3.17)	1.93** (1.44-2.59)
No (Ref.)	1.0	1.0
Woman should have high decision-making power		
Yes	1.64 (0.86-3.12)	0.86 (0.64-1.16)
No (Ref.)	1.0	1.0
Woman should have financial autonomy		
Yes	0.81 (0.33-1.98)	0.87 (0.57-1.33)
No (Ref.)	1.0	1.0
Other predictors		
HIV knowledge		
High	1.17 (0.63-2.18)	1.86** (1.32-2.63)
No or low (Ref.)	1.0	1.0
Alcohol use		
Almost daily	11.59** (3.70-36.28)	8.70* (2.14-35.41)
At least once a week	7.47** (3.06-18.24)	4.90** (2.61-9.18)
Less than once a week	2.50* (1.37- 4.57)	3.51** (2.62-4.71)
Never (Ref.)	1.0	1.0
Mobility		
Yes	2.35* (1.26-4.36)	1.37* (1.01-1.88)
No (Ref.)	1.0	1.0
Socio-demographic variables		
Age		
15-25 years	5.96* (2.04-17.41)	1.92* (1.02-3.72)
26-39 years	3.26* (1.26-8.41)	2.58* (1.22-5.44)
40-54 years (Ref.)	1.0	1.0
Employment		
Yes	0.44 (0.19-1.06)	1.79** (1.34-2.38)
No (Ref.)	1.0	1.0

[a] Reported at p<0·05 and p<0·01
[b] Controlling for other socio-demographic factors not significant in final model: residence, education, standard of living, religion, and caste
*p<0·05, **p<0·01

CHAPTER 3

THE INFLUENCE OF MEN'S GENDER ATTITUDES AND HIV KNOWLEDGE ON CONDOM USE DURING RISKY SEX: A MIXED-METHODS ANALYSIS FROM TWO NORTH INDIAN STATES

Abstract

Quantitative data from the National Family Health Survey (NFHS-3) and qualitative data from a study in the north Indian states of Uttar Pradesh and Uttarakhand were used to examine the relationship between men's condom use during risky sex (sex with sex workers and casual partners) and their gender attitudes and HIV knowledge. Key gender attitude factors in the quantitative analysis were men's attitude toward wife-beating, and views on whether women should have decision-making power and financial autonomy. Logistic regression models were fit to explore the influence of gender attitude and HIV knowledge variables on reported condom use. Men who were more likely to report using condoms during risky sex were those who felt that wife-beating was never acceptable compared to men who felt that wife-beating was acceptable [OR=2.13; 95% CI=(1.35-3.36)], and men who had high HIV knowledge compared to those who had no or low HIV knowledge [OR=2.54; 95% CI=(1.06-6.12)]. Qualitative analysis explored how men's gender attitudes and HIV knowledge influenced their condom use. Men who reported no or inconsistent condom use felt that men had the right to force women to have

unprotected sex, that women did not have the right to request men to use condoms, that condoms were not needed when having sex with “safe” partners, and that condoms prevented men from having “real” sex. Interventions should promote a redefinition of existing gender and masculinity norms among men to promote men’s condom use during risky sex and more effectively curb the spread of STIs and HIV/AIDS in India.

Keywords

HIV/STI; men; condom use; risky sex; gender

INTRODUCTION

Estimated adult HIV prevalence in the northern Indian states of Uttar Pradesh (UP) and Uttarakhand is 0.11%, below the national average of 0.36%.[1] In absolute numbers, this amounts to over 200,000 HIV positive persons living in these two states. Further, recent trends indicate increasing HIV incidence in this region, which is home to 184 million people, or 17% of India’s population.[2] Already, 26 new high-HIV-prevalence districts have been identified in this region.[2] Further, HIV prevalence rates range between 10 and 46% among high-risk populations such as female sex workers, injecting drug users and men who have sex with men, and high HIV prevalence among these groups can lead to increased incidence in the general population.[63] In addition, up to 14.6% of all sexually active women and 4.1% of men in this region report having at least one STI symptom,[64] and transmissibility of HIV is

known to increase in the presence of STIs.[7] UP and Uttarakhand (which both constituted a single state until 2000) lag behind the national average in socio-economic and literacy indicators, and lower female autonomy in this region contributes to lower HIV knowledge[13] and worse health outcomes among women than in most other states.[65]

Recent studies from northern India estimate that between 15 and 47% of men in the general population may be engaging in risky sex (sex with sex workers and casual partners such as friends, acquaintances and relatives other than spouses or cohabitating partners).[27,53] It has been pointed out that regular and consistent condom use by serodiscordant heterosexual partners can reduce HIV transmission by up to 80%.[56] India was a pioneer in the social marketing of condoms as a family planning method, and the use of condoms as an STI and HIV/AIDS prevention strategy was promoted only after the advent of the AIDS epidemic.[21] Even so, only about 3% of Indian couples use condoms as a pregnancy prevention method.[78] Surveys indicate that less than a third of Indian men use condoms during their last reported instance of risky sex, and consistent condom use during risky sex is likely even lower.[64] Research findings indicate that reducing men's risky sex and increasing condom use are key to slowing STI and HIV incidence in India.[23, 30]

It has been pointed out that having HIV and condom knowledge alone does not fully explain men's decisions to use condoms during risky sex.[71] A number of studies in India have found that higher HIV knowledge is positively associated with men's condom use.[79] Yet, even in settings where HIV knowledge is high, men still engage in unprotected risky sex and use condoms inconsistently.[71] To date, no

study using data representative at the population level in India has explored whether men's gender attitudes might have an influence on their decision to use condoms during risky sex. As a result of patriarchal societal norms, Indian women face restrictions in choosing their sexual partners and in condom negotiation, while men can more easily engage in risky sex in order to gain "experience" and to learn to be sexual decision makers.[19, 38] Studies have reported that the one of the reasons Indian men give for justifying risky sex includes the "right" to do so, resulting from perceived superiority over women.[46, 47] In many places in India, semen is commonly referred to as *dhatu* (literally "metal"), and is considered the most potent representation of a man's virility. Because condoms block the flow of semen from men to women, the use of condoms is perceived as an impediment to the expression of a man's power and strength.[36] Prevailing gender inequality and traditional social norms mean that most Indian women rarely negotiate condom use or question partners' decisions to have unprotected sex, and report being fearful of being abused if they request or even suggest that their partners use condoms.[36, 58] Studies have shown that the risk of having STIs, including HIV, increases for Indian women living with abusive husbands and reporting that their freedom and autonomy are curtailed by their male partners.[30, 68]

A mixed-methods approach that included quantitative and qualitative analyses was used in this study. For the quantitative analysis, it was hypothesized that men who were more likely to have unprotected risky sex were those who believed that women should have less autonomy/rights than men and who had no or low HIV knowledge, compared to men who accepted gender equality norms and had

high HIV knowledge. Through qualitative analysis, we explored how men's gender attitudes and HIV knowledge were related to their decisions regarding condom use during risky sex.

Data for this study came from the Indian states of Uttar Pradesh (UP) and Uttarakhand. These two states were focused on was because they have lower levels of gender equality compared to other regions in India, and because data used in this study came from a larger qualitative study conducted in these two states. Qualitative data included interviews with men who reported engaging in risky sex. Quantitative data were obtained from the 2005-06 National Family Health Survey (NFHS-3), India's first nationally representative men's survey. Research and ethics approval for this study was obtained from the Institutional Review Boards of Banaras Hindu University, India and University of North Carolina at Chapel Hill, USA.

METHODS

Quantitative methods: The NFHS-3 was carried out in India in two phases, from November 2005 to August 2006. As part of the nationally representative survey, a total of 74,369 men (87.1% response rate) in the age group of 15-54 years were interviewed by male interviewers in 109,041 households across the country. The current analysis uses men's data from the low gender-equity states of UP (*n*=11,458) and Uttarakhand (*n*=983). Of these 12,441 men, data were restricted to 581 men who reported having had risky sex (sex with sex workers and casual partners) in the 12 months prior to the survey.

The outcome measure for this analysis was men's reported condom use

during the last reported incident of risky sex (sex with a sex worker or casual partner) within the 12 months prior to the survey. Men who did not use a condom during such sex were considered to have had unprotected risky sex. Casual partners included any of the following: friends not living with respondents (non-cohabiting partners), acquaintances, or relatives other than spouses or cohabiting partners.

Key explanatory variables were men's reported gender attitudes, assessed in terms of the following three dimensions and answered by all surveyed men:

Men were asked if they believed that a husband was justified in beating his wife under the following conditions: (1) the husband suspected her of being unfaithful, (2) she showed disrespect for in-laws, (3) she went out without telling her husband, (4) she neglected the children, (5) she argued with him, (6) she refused to have sex with him, and (7) she burnt the food. Men who answered "yes" to any one of these questions were classified as believing that wife-beating was acceptable.

Men were asked a series of four questions about who they thought should decide the following: (1) make household purchases for daily needs, (2) purchase major household items, (3) make a decision on how many children to have, and (4) have the final say on visits to family or relatives. For each question, men who felt that decisions should be made by women alone or jointly with their husbands were given a score of 1, while men who felt that husbands alone should make decisions were assigned a score of zero. Men who scored at or below the median (2 or less) were considered to believe that women should have low decision-making power. Men who scored more than 2 were considered to believe that women should have high decision-making power.

Men's views on women's financial autonomy were based on a single question asking them who should have a final say on how a wife's earnings should be spent. Men who reported that husbands alone should be able to decide how to spend their wives' earnings were scored zero (as believing that women should not have financial autonomy), while those who said earnings should be spent jointly or that wives should spend their earnings how they wished were scored one (as believing that women should have financial autonomy).

To assess HIV knowledge, men were asked if they had ever heard about HIV. Men who indicated they had heard about HIV were asked the following six questions: can the risk of getting AIDS be reduced by 1) not having sex at all, 2) always using condoms during sex, 3) having only one sex partner; and whether 4) a healthy person can have AIDS, 5) one can get AIDS from mosquito bites, and 6) one can get AIDS from sharing food with an infected person. A "yes" to questions 1-4 and "no" to questions 5 and 6 were given a score of one. Men who answered "no" to ever having heard about HIV or to questions 1-4, "yes" to questions 5 and 6, and "don't know" to any question were given a score of zero. Men scoring 4 or higher were classified as having high HIV knowledge; those who scored 3 (the median) or less were classified as having no or low HIV knowledge.

Other factors reported in the literature to influence condom use during risky sex were also included in the analysis. These factors included alcohol use (whether men never consumed alcohol or consumed it at least once a week, more than once a week, or almost daily) and mobility (whether men spent more than a month away from home in the year prior to the survey). Socio-demographic measures used as

control variables included men's age; urban versus rural residence; education; standard of living index; and religion. The standard of living index, represented by low, medium and high categories, was calculated by the NFHS-3 based upon ownership of household possessions, consumer durables, land and livestock.[64]

Descriptive analyses were conducted to explore the relationship between reported condom use during risky sex and each of the gender attitude and other variables of interest. Logistic regression models that included all socio-demographic factors (deemed as important study controls) were fitted to investigate the factors that predict reported condom use during risky sex. Other variables of interest, including gender attitude variables, were then added to the models to observe whether and how their addition helped predict the outcome. Taking into consideration the complex survey design of the NFHS-3, the state level individual sampling weight and clustering variable (primary sampling unit)[64] were used in all analyses. Data were analyzed using Intercooled Stata version 9.

Qualitative Methods: As part of a larger qualitative study to explore the risk of spread of HIV/AIDS in the northern Indian states of UP and Uttarakhand, semi-structured interviews were conducted among men over a ten-month period, from August 2002 until May 2003. Men were interviewed in the four largest cities (Agra, Jhansi, Lucknow and Varanasi) in each of the four main geographical regions of UP, and in Dehradun, the largest city in Uttarakhand. Interviews were conducted by three field workers (two male and one female) who were native to this region and who had prior experience conducting qualitative interviews regarding sexual behaviors. After receiving training on appropriate interviewing strategies, all three interviewers

conducted pilot interviews, which were then assessed for quality. Interviewers then proceeded to conduct study interviews.

Study participants were recruited to the study in two ways: 1) Willing men in STI clinics were identified by physicians known to the interviewers; 2) Key informants in the communities where interviews took place contacted men they knew who may have had risky sex during the12 months prior to the study.

Study subjects were assured of anonymity and after receiving informed consent, they were given a screening interview to assess that they fit inclusion criterion: that they had risky sex (sex with sex workers or casual partners) within the past 12 months. Subjects were not offered any incentives to participate in the study.

The screening interview was followed by a semi-structured interview that explored men's views, perceptions and knowledge with regard to their condom use during risky sex. Interviews were conducted in Hindi, the native language in these two states. Each interview (lasting one to two hours) was tape-recorded and transcribed verbatim, and then translated into English.

For qualitative analysis, thirty-one interviews from respondents in the age group of 18-50 years were read using an inductive coding approach. Codes that were generated were associated with themes of interest regarding men's condom use during risky sex. Themes included condom negotiation norms, condom use based on gender attitudes, inhibition of "real" sex with condoms, and condom use exclusively for pregnancy prevention. Themes were collapsed across interviews to observe theme density and to explore how men's gender attitude themes and HIV knowledge themes were related with men's condom use during risky sex. The

qualitative software program Atlas.ti was used for both coding and analyzing the various emerging themes.

RESULTS

Quantitative Results: Of the 12,441 men in the sample, 581 men (6.5%) reported having had risky sex (sex with sex workers or casual partners such as friends, acquaintances or relatives) in the 12 months prior to the survey. Of these 581 men, 192 men (28.4%) reported using a condom at the last instance of risky sex.

Among the 192 men who reported using condoms during risky sex, 72 men (41.8%) indicated they used condoms exclusively to prevent their partners from getting pregnant, 32 men (15.7%) used condoms exclusively to prevent STI transmission, 44 men (19.8%) used condoms to prevent both STIs and pregnancy, and the remaining 44 men (22.7%) gave no reason for using condoms.

Socio-demographic, HIV knowledge and gender attitude variables of men engaging in risky sex, and of men in the entire sample, are presented in Table 3.1. Most men (74%) reporting risky sex were in the younger age group of 15-25 years. Among men reporting risky sex, 69% had an education equal to or higher than the secondary level, and 78% had a medium or high standard of living. While 84% of men reporting risky sex were unmarried, only 37% of men in the entire sample were unmarried. Twenty-six percent of men having risky sex reported being more mobile, in contrast to 14% of men in the entire sample who reported the same. While 73% of men in the entire sample were found to have high HIV knowledge, more men (82%) in the risky sex sample had high HIV knowledge. Among men reporting risky sex,

53% felt that wife-beating was acceptable, in comparison with 42% of men in the entire sample who felt this way. Roughly one-third of men felt that women should not have decision-making power and one in ten men felt that women should not have a say over how their own earnings should be spent.

The results of the final logistic regression model examining the association between men's condom use and their gender attitude and HIV knowledge variables are shown in Table 3.2. After controlling for socio-demographic and other variables of interest, men's attitude toward wife-beating demonstrated a statistically significant relationship with reported condom use during risky sex. Specifically, men who believed that wife-beating was never acceptable were more likely to report having used condoms during risky sex [OR=2.32; 95% CI=(1.46-3.68)], compared to men who believed that wife-beating was acceptable. Men's views on whether women should have decision-making power and financial autonomy did not reach statistical significance in the final model. Men who had high HIV knowledge level compared to no or low HIV knowledge were significantly more likely to report using condoms during risky sex [OR=2.54; 95% CI=(1.06-6.12)].

Among other variables of interest included in the final model, men who reported being less mobile had a higher estimated odds of reporting condom use during risky sex [OR=1.86; 95% CI=(1.07-3.26)], compared to men who had higher mobility. The only socio-demographic variable that retained significance in the final model was men's education. Men who reported having up to a high-school education were significantly more likely to report using condoms, compared to men who had no education at all [OR=2.31; 95% CI=(1.02-5.24)].

Qualitative Results: Interviewed men were in the age group of 18 to 50 years old. Of the 31 men in this analysis, 20 men had at least a high-school education and 3 men had no formal education. Eight of the interviewed men were students, 3 men said they were unemployed and the remaining men were employed in a range of professions that included vendors, office workers and daily laborers. Ten men reported being in the lower SES range (earned less than Rupees 5,000 or about US$100 per month), 13 men were in the medium SES range and 8 men were in the higher SES group (earned more than Rupees 15,000 or about US$300 per month). Seventeen of the thirty-one interviewed men were married.

All interviewed men had heard of condoms, and only six men reported consistently using them during risky sex. Some men referred to condoms as "balloons", while some others referred to them as "Nirodh", which is the brand name of condoms the government distributes free of charge through health centers throughout India. Four main domains emerged from the qualitative analyses: Condom negotiation norms, condom use based on gender attitudes, inhibition of "real" sex with condoms, and condom use exclusively for pregnancy prevention.

Condom negotiation norms

Men generally felt that women did not have the right to ask men to use condoms, or refuse to have sex if men did not use condoms. Men perceived that being asked by women to use condoms was an insult. Men felt that they alone should be the ones to make decisions regarding condom use.

> *"She (partner) cannot say to me to use condom or not, it depends on me whether I want to do with condom or without condom."* 23 year old man, Agra

A number of men expressed the view that they had a right to force women to have unprotected sex, and felt that forcing women to have sex without a condom was a justified response to suggestions of condom use.

> *"Never any woman can ask me to use condom. During periods they used to ask I was not listening to them."* 22 year old man, Lucknow

> *"In our culture women have to accept it (unprotected sex) whether they like it or not. If they insist men can fight with them or hit them in frustration, so they are scared."* 34 year old man, Varanasi

Most men were of the view that women should not be permitted to buy condoms on their own because this would give the impression that they were "loose" and "unfaithful" women.

> *"If woman buys condom it is as bad as exposing herself on the road. It is absurd thing. Man should buy it."* 42 year old man, Varanasi

Condom use based on gender attitudes

While most men had HIV knowledge and were aware that condoms could help prevent HIV transmission, they also reported no or inconsistent condom use. A number of men reported not using condoms during risky sex when they regarded their sexual partners as being "safe". Men's views on whether or not it was safe to have sex with women were guided by their gender attitudes; men regarded women (such as neighbors, friends or relatives) who were not socially "forward" and seen interacting with unrelated men in public as being women with "good" morals, and therefore safe. At the same time, men were unaware whether these "safe" women they were having unprotected sex with had sexual relationships with other men.

> *"When I do things with a prostitute then I use condoms….but with the schoolgirls and girls from the village I was not using (condoms)."* 24 year old man, Jhansi

"I have not been using it (condom) with her because according to me she didn't have relation with anyone else, only with me. I use condom only with loose girls but if I don't have doubt on her than in that case I don't use." 25 year old man, Dehradun

Inhibition of "real" sex with condoms

A number of men who were aware of the role that condoms played in HIV prevention mentioned that they still did not use condoms during risky sex. Men expressed the view that condoms prevented them from having "real" sex, which they perceived as sex wherein they were able to ejaculate without the presence of a barrier.

"I did not use condoms even with them (sex workers). I only know that the whole stuff (semen) will fall in that bloody balloon (condom) and not in her if I use it. For real sex it must fall inside her." 24 year old man, Lucknow

"I feel sex is not complete if I release it (semen) in condom. She must take it in her for sex to be complete." 37 year old man, Varanasi

Condom use exclusively for pregnancy prevention

Many men had knowledge about HIV and the role of condoms in preventing their transmission, yet used condoms exclusively to prevent pregnancy rather than to prevent HIV and other STIs. Men felt that a pregnancy with someone they were not married to would be shameful, and would be viewed negatively in society.

"I used condom with her (neighbor) because I did not want that she becomes pregnant with my child. I am already married and I have children, it will be shame if she (neighbor) becomes pregnant for me." 34 year old man, Dehradun

DISCUSSION

Findings from this study demonstrate that among this sample of men in

the north Indian states of UP and Uttarakhand, gender attitudes and HIV knowledge were associated with men's condom use during risky sex. The quantitative section of this study is the first Indian study to our knowledge that uses population-level data to examine whether men's gender attitudes and HIV knowledge are associated with their condom use during risky sex. The qualitative study in the same two states provides a further insight into how men's gender attitudes and HIV knowledge are tied to their condom use.

In the quantitative analyses, men who felt that wife-beating was acceptable were less likely to use condoms during risky sex, compared with men who felt that wife-beating was never acceptable. Qualitative analysis revealed that men felt they had a right to force their female partners to have unprotected sex, and that women had no say in the refusal of sex or in condom negotiation. Since forced sex causes abrasions in the vaginal mucous membrane, it can increase HIV and STI transmissibility if one of the partners is infected.[7] Over a half of men surveyed in the NFHS-3 and engaging in risky sex believed that wife-beating was acceptable. In addition, these men were significantly less likely to report using condoms during risky sex, thereby putting themselves, their casual partners and their cohabiting partners (such as wives) at increased risk for HIV/STI contraction. This finding provides further evidence to reports from other studies that abused Indian women are more likely to have HIV and STIs compared to non-abused women.[30, 68]

Both quantitative and qualitative analyses showed that many men used condoms exclusively as a contraception method rather than an STI or HIV prevention method. In the qualitative interviews, men indicated that if partners such

as neighbors, relatives or friends became pregnant, the sexual relationship would be exposed, leading to shame in society. Contracting STIs and HIV, on the other hand, were perceived as a more desirable alternative since this could be hidden from other people. This has important STI and HIV prevention implications, and further research is needed to explore whether men who use condoms only for pregnancy prevention would still use condoms during risky sex if their female partners were sterilized (the most common female contraception method in India) or used oral contraception. One reason why condom use during risky sex is associated by many Indian men with contraception rather than with HIV and STI prevention could be because condoms were promoted in India as an HIV prevention tool only following the advent of the AIDS epidemic. There is currently a growing emphasis in India on the role of condoms in STI and HIV prevention, and these results indicated that such promotion and awareness should be sustained.

Quantitative analysis showed that men with high HIV knowledge are more likely to use condoms during risky sex, compared to men with low or no HIV knowledge. This finding reinforces similar reports from prior Indian studies that found that higher HIV knowledge was associated with increased condom use during risky sex.[71, 80] Qualitative analysis gave further insight into how men's HIV knowledge was tied with their condom use during risky sex. While most men had HIV knowledge, they still used condoms inconsistently. Reasons for inconsistent condom use included perceptions that condoms were an impediment to "real" sex, and that condoms were not needed when having sex with "safe" partners.

The qualitative interviews revealed that some men did not use condoms

because of a perception that condoms inhibited them from having “real” sex, which in their understanding was sex wherein ejaculation should take place inside the vagina, without the presence of a barrier. This finding supports evidence from other studies suggesting that one of the reasons why many men in India do not use condoms even during risky sex is a perception that condoms impede the expression of a man’s power and strength by blocking the flow of semen from men to women.[36]

Men’s attitudes on how they thought respectable or “good” women should behave in society influenced their risk perceptions. Men perceived that they did not need to use condoms when they had sex with known women whom they considered to be “safe”, since these women were thought to be “homely” and free of HIV and STIs. Given that men were not aware whether their “safe” partners were engaging in sex with other men, they were potentially placing themselves as well as their partners at risk of contracting HIV and STIs through unprotected sex.

Prior Indian studies have found that lower educational level, lower standard of living and increased alcohol use were associated with lower condom use during risky sex.[71, 80] In this study, having up to a secondary school education was positively associated with condom use during risky sex. No association was found in the final regression model between men’s condom use and their reported alcohol use and standard of living, after controlling for other independent variables. One reason why no significant association was found between reported alcohol intake and condom use during risky sex might be that men were asked in the NFHS-3 to report only frequency of alcohol use but not quantity of alcohol consumed. Given that men who were more mobile were highly likely to report not using condoms

during risky sex, interventions for these groups of men remain important to curtail STI and HIV spread in India, as highlighted by other studies.[73]

Findings from this study have important implications for STI and HIV prevention programs in India. Studies examining men's HIV prevention interventions in India have found that sustained behavior change communication (BCC) strategies that reinforced messages of gender equality and condom use with sexual partners significantly increased their condom use during risky sex.[34, 47] HIV-prevention interventions tailored specifically for men are likely to be far more successful if they incorporate messages that change men's existing gender and masculinity norms.[49] Given mixed-methods findings of this study showing a link between men's gender attitudes and unprotected risky sex, policy measures that encourage gender equality acceptance (including reducing violence against women) among men may be a crucial component in curbing the spread of STIs and HIV in India. Respect for women's rights and well-being that arise out of redefining men's traditional gender norms and attitudes might make men more likely to use condoms as well as be more amenable when women request them to use condoms. As a consequence, men would protect not just their partners, but also themselves from the risk of acquiring STIs and HIV.

Table 3.1: Socio-demographic characteristics and predictors of interest (by weighted percentage) of a) men having risky sex[a] and b) all men, in Uttar Pradesh and Uttarakhand

	Men in sample reporting risky sex (n=581)	All men in sample (n=12,441)
Socio-demographic variables		
Age		
15-25 years	74	42
26-54 years (Ref.)	26	58
Residence		
Urban	29	31
Rural (Ref.)	71	69
Highest level of education		
Primary	14	14
Secondary	60	53
Secondary plus	9	12
None (Ref.)	17	21
Standard of living index		
High	38	42
Medium	40	37
Low (Ref.)	22	21
Religion		
Muslim	13	15
Hindu (Ref.)	87	85
Marital status		
Married	16	63
Unmarried (Ref.)	84	37
Other predictors		
HIV knowledge level		
High	73	64
No or low (Ref.)	27	36
Alcohol consumption		
Almost daily	3	1
At least once a week	6	3
Less than once a week	32	22
Never consumed (Ref.)	59	74
Mobility		
No	74	86
Yes (Ref.)	26	14
Gender equality predictors		
Attitude to wife-beating		
Never acceptable	47	58
Acceptable (Ref.)	53	42
Woman should have high decision-making power		
Yes	66	69
No (Ref.)	34	31
Woman should have financial autonomy		
Yes	91	93
No (Ref.)	9	7

[a] Last sexual intercourse within past 12 months with at least one of the following partners: friends not living with the respondent (non-cohabiting partners), casual acquaintances, sex workers, or relatives other than spouses or cohabiting partners

Table 3.2: Odds ratios and 95% confidence intervals from final logistic regression model[a] investigating the likelihood of condom use during risky sex[b], among men living in Uttar Pradesh and Uttarakhand

	OR and 95% CI: Condom use among men having risky sex (n=581)
Gender equality dimensions	
Attitude to wife-beating	
Never acceptable	2.32** (1.46-3.68)
Acceptable (Ref.)	1.0
Woman should have high decision-making power	
Yes	1.19 (0.69-2.04)
No (Ref.)	1.0
Woman should have financial autonomy	
Yes	0.81 (0.36-1.85)
No (Ref.)	1.0
Other predictors	
HIV knowledge	
High	2.54* (1.06-6.12)
No or low (Ref.)	1.0
Alcohol consumption	0.84 (0.19-3.79)
Almost daily	1.72 (0.61-4.87)
At least once a week	1.21 (0.72-2.03)
Less than once a week	1.0
Never consumed (Ref.)	
Mobility	
No	1.86* (1.07-3.26)
Yes (Ref.)	1.0
Socio-demographic variables	
Age	
15-25 years	0.97 (0.49-1.92)
26-54 years (Ref.)	1.0
Residence	
Urban	1.03 (0.59-1.78)
Rural (Ref.)	1.0
Highest level of education	
Primary	1.77 (0.67-4.70)
Secondary	2.31* (1.02-5.24)
Secondary plus	1.96 (0.66-5.81)
None (Ref.)	1.0
Standard of living index	
High	1.73 (0.77-3.89)
Medium	1.01 (0.49-2.04)
Low (Ref.)	1.0
Religion	
Muslim	2.09 (0.88-4.99)
Hindu (Ref.)	1.0
Marital status	
Married	1.06 (0.50-2.24)
Unmarried (Ref.)	1.0

[a] Controlling for socio-demographic factors which were not significant in final model: age, residence, standard of living, religion and marital status

[b] Last sexual intercourse within past 12 months with at least one of the following partners: friends, casual acquaintances, sex workers, or relatives other than spouses or cohabiting partners

**p<0·01, *p<0·05

CHAPTER 4

STUDY STRENGTHS AND LIMITATIONS

Strengths:

1. The quantitative data come from the first Indian survey representative at the national level, that gathered information on sexual behaviors and gender attitudes among men in India.
2. The qualitative study was unique because very few Indian studies have explored whether and how men's gender attitudes and social norms influence their risky sexual behaviors.
3. Findings from this study have the potential to meaningfully inform men's STI and HIV prevention interventions in India and other countries in South Asia.

Limitations:

As with most secondary data analysis, this study had limitations that arise from conducting analyses on existing quantitative and qualitative data. Some specific examples of limitations are:

1. Access to condoms: NFHS-3 does not elicit information from men about whether they have easy access to condoms. Previous studies in India have shown that increased condom accessibility among men enrolled in HIV

interventions leads to increased condom use during risky sex.[34] NFHS-3 provides information on how much money men spent to purchase condoms, but this cannot be used as a proxy to determine condom accessibility.

2. Frequency of alcohol consumption: While men were asked in the NFHS-3 survey how often they consumed alcohol in general, they were not asked whether they consumed alcohol the last time they had sexual intercourse. Studies in Indian settings have shown that men are more likely to engage in high-risk sex after consuming small to moderate amounts of alcohol.[81] Further, quantity of alcohol consumed in each instance of consumption is not assessed.
3. Mobility: NFHS-3 has two mobility variables in the men's dataset. The first variable specifies how many times men spent away from home in the past 12 months. However, no information is available on how much time men spent away from home. The second variable specifies whether men who spent time away from home in the past 12 months stayed away for more than one month. Both these variables fail to capture important information regarding the time span that men stayed away from home. For example, it is possible that men who spent even a few days away from home (but less than one month) within the past 12 months could have engaged in risky sex.
4. Condom use: Men were asked in the NFHS-3 whether they used condoms in the last instance of risky sex, but no information was elicited on consistent condom use. While 28% of men engaging in risky sex reported using condoms, consistent use of condoms is likely even less.

5. The findings from the qualitative interviews provide insight into how men's views on gender and social norms influence their risky sexual practices, and supplement findings from the quantitative findings. As with all qualitative analyses, this study does not suggest that the results obtained from this qualitative sample of men can be generalized to all men in UP and Uttarakhand engaging in risky sex.

CHAPTER 5

CONCLUSION

Analyses of quantitative and qualitative data suggest that men's traditional gender equality attitudes and social norms play a role in their risky sexual practices. Quantitative data for this study came from the first Indian men's survey (NFHS-3) that was representative at both the national and state level. Specifically, the quantitative findings demonstrate that among men in northern India, gender equality measures were independently associated with men's non-marital and unprotected non-marital sex. This is important given that 40-50% of men surveyed in the NFHS-3 did not ascribe to at least some gender equality beliefs, and these men were also more likely to engage in non-marital and unprotected non-marital sex. This finding may provide one explanation for reports of increased STI and HIV incidence among married monogamous Indian women,[23] especially among those who indicated that they were being denied autonomy by their male partners.[30, 68]

Men surveyed in the NFHS-3 and who felt that wife-beating was acceptable were significantly more likely to report both non-marital sex as well as unprotected non-marital sex, compared to men who felt that wife-beating was never acceptable. Qualitative analysis revealed that men felt they had a right to force their female partners to have sex, including unprotected sex, and that women had no say in

refusal of sex or in condom negotiation. These findings have important implications for STI and HIV transmission and prevention. A number of studies have demonstrated that forced sex, associated with domestic violence, can cause abrasions in the vaginal mucous membrane, thereby increasing the transmissibility of HIV and other STIs if one of the partners is infected.[7] Monogamous Indian women who report abuse by their husbands have higher HIV and STI prevalence rates compared to women who are not abused.[30, 68] Our study reported here possibly provides an answer as to why this is so, by showing that men who approved of wife-abuse were more likely to engage in non-marital sex. Further information (not collected in the NFHS-3) is needed to elicit whether men who approved of wife-abuse were in fact more likely to abuse their wives. If this were the case, they would be putting themselves and their wives at increased risk for acquiring HIV and other STIs.

Quantitative analysis suggested that family violence history was a predictor of men's engagement in non-marital sex. Previous Indian studies have shown that men who either witnessed abuse at home or were victims of abuse in childhood were more likely to perpetrate violence against their partners.[69] Given the links between domestic violence and increased HIV transmission, and the findings from this study that men with a history of family violence are more likely to engage in non-marital sex, this population of men is at increased risk for acquiring HIV through risky sex and subsequently infecting their partners.

It is interesting to note that only a small proportion (1.3%) of surveyed married men in the NFHS-3 reported having had non-marital sex. Among unmarried men, a

higher proportion (11%) reported the same. These proportions are far lower than those from other studies in northern India that reported 15-19% prevalence of non-marital sex among married men, and 15-47% among unmarried men.[27, 53] In the qualitative interviews used in this study, a number of men who were engaged in sex with sex workers denied having risky sex. Some men said they were not having sex with sex workers because they did not pay them explicitly for sexual services, while simultaneously indicating that they "gave" women in red light areas money or gifts in return for sexual services. Other men initially denied having sex with sex workers because of the stigma attached to the sex trade, and admitted to doing so only after in-depth probing. The qualitative interviews also revealed that men were very reluctant to talk about their non-marital sex, given strong cultural taboos regarding such sexual practices. This could be the reason behind low reporting of non-marital sex among respondents in the NFHS-3. Studies among Indian men and women have shown that such reporting bias is lower in culturally specific interactive interviews than in face-to-face surveys such as the NFHS-3.[74] It is important to keep in mind that surveys in India, that do not include in-depth probes, might be unable to capture accurate information regarding men's non-marital sex, thereby resulting in its under-reporting.

Over 99% of unmarried sexually active men in the NFHS-3 reported having sex with high-risk or casual partners rather than with steady partners. Similarly, in the qualitative section of this study, none of the unmarried men reported having cohabiting partners and all of them were engaged in sex with high-risk or casual partners. These findings are consistent with those from other Indian studies that

demonstrate that given restrictive socio-cultural norms, almost all sexual activity among Indian men is with high-risk, rather than with cohabiting partners.[37]

The qualitative interviews revealed interesting characteristics of non-marital sex in the context of traditional and patriarchal norms prevalent in this part of India. Interviewed men indicated that they engaged in non-marital sex despite being aware that such sexual activity was frowned upon in society. In order to circumvent restrictions on inter-mingling between the sexes, men paid their sexual partners (such as neighbors or relatives) discreet visits on the pretext of social engagements, and learned schedules within their partners' households to ensure that sexual rendezvous could take place when women were alone in their houses. Reflecting restrictions on women's social freedoms, none of the men mentioned that their female partners visited them; rather, men always visited women's houses.

Qualitative findings further revealed that traditional social norms play a role in how men engage in non-marital sex. While it is widely believed that restrictive social norms discourage non-marital sexual interactions between men and women, it appears that these norms, in this qualitative sample of men, might in fact reinforce non-marital sex. Interviewed men indicated that family and societal pressure were among the reasons they did not remain in committed monogamous relationships. This exposes a contradiction in traditional social norms: on one hand, men are expected to be faithful to traditions that require them to wed virgin brides in marriages arranged by family and society. On the other hand, patriarchal norms mean that men have more sexual freedom and rights than women. As a result, men engage in short-term discreet sexual relationships with a number of partners, even

when they might have a personal desire to remain in long-term committed relationships with any of their sexual partners. This provides further insight into sexually active unmarried Indian women who report being often talked into sex by men who promised to marry them, only subsequently to break off the relationship citing social and family pressure.[70]

Reasons men gave for having non-marital sex were influenced by their gender attitudes and traditional masculinity beliefs that gave them perceived power over women. Men were of the view that they had the right to force women to have sex whenever men so desired. Men felt that women were sexually insatiable, and constantly needed to be sexually gratified by men. These were cited as the main justifications for men's non-marital sex. Further, men felt that women should be subservient to men in the initiation and expression of sexual desires and needs. Women were perceived as needing and wanting sex, but men felt that they alone should be the decision-makers when it came to when and how to have sex.

Previous studies have emphasized that even when men's HIV knowledge is high, they still engage in non-marital and unprotected sex,[71] and similar findings were observed for men surveyed in the NFHS-3. This finding was backed by results from the qualitative analysis. While most men in the qualitative sample had knowledge about the spread and prevention of STIs and HIV, they still engaged in sex (including unprotected sex) with sex workers and casual partners. Importantly, men felt that when they knew that their partners were not sex workers (for example when partners were neighbors, relatives or friends), they considered these women to be "safe" or free from STIs and HIV. The reason men gave for such a perception

was related to their concepts of gender and women's role in society. Men indicated that "good" women were those that did not interact with men and were not seen with men other than their husbands in public. These women were considered "not the loose kind", and hence men felt that even having unprotected sex with multiple "good" women was not risky. At the same time, however, none of the men knew whether their partners were having sexual liaisons with other men.

Both quantitative and qualitative analyses showed that many men used condoms exclusively as a contraceptive method rather than an STI or HIV prevention method. Only 28% of men reported using condoms at the last instance of risky sex in the NFHS-3, and the proportion of men that consistently used condoms during such sex was likely even less. Among men who reported using condoms during risky sex, over 40% of men reported using condoms exclusively to avoid a pregnancy. This has important STI and HIV prevention implications and further research is needed to explore whether men who use condoms only for pregnancy prevention would still use condoms during non-marital sex if their female partners were sterilized (the most common female contraception method in India) or used oral contraception. One reason why condoms are associated by many Indian men with contraception rather than with HIV and STI prevention could be because condoms were promoted in India as an STI prevention tool only following the advent of the AIDS epidemic. There is currently a growing emphasis in India on the role of condoms in STI and HIV prevention, and such promotion and awareness must be sustained.

The qualitative interviews revealed that some men did not use condoms

because of a perception that condoms inhibited them from having “real” sex, sex wherein ejaculation should take place inside the vagina without the presence of a barrier. This finding supports evidence from other studies suggesting that one of the reasons why men in India do not use condoms even during risky sex is a perception that condoms impede the expression of a man’s masculinity by blocking the flow of semen (a symbol of potency and power) from men to women.[36]

Prior Indian studies have found that lower educational level, lower standard of living and increased alcohol use were associated with lower condom use during non-marital sex.[71, 80] In this study, having at least secondary school education was positively associated with condom use during non-marital sex. Predictors such as younger age, alcohol use and mobility were found to be strongly associated with men’s non-marital sex in the quantitative findings. These findings corroborate those from numerous studies in India and worldwide that emphasize that interventions for these groups of men remain crucial for curtailing HIV and STI spread.[72, 73]

Findings from this mixed-methods study have important implications for HIV and STI prevention programs in India. Studies examining men’s HIV and STI prevention interventions in India have found that sustained behavior change communication (BCC) strategies that reinforced messages of monogamous commitment, promoted condom use and provided government-sponsored free condoms significantly reduced men’s sex-worker visits and increased condom use during risky sex.[34, 75] Given findings of this study showing a link between men’s traditional gender and social norms and their non-marital and unprotected non-marital sex, policy measures that promote a redefinition of men’s traditional gender and masculinity norms might

play a crucial role in curbing the spread of STIs and HIV in India. Studies recommend that existing interventions directed toward women should include partner notification and counseling services for both couples and husbands, and that structural-level programs such as community peer education, incorporating gender equality into school curricula, promoting awareness about women's protection laws and initiating media information campaigns can increase men's understanding of women's rights and equality.[75-77] [75-77] Interventions in India focusing on changing men's traditional gender and masculinity norms have resulted in an increased awareness of women's rights, decreased risky sex and decreased rates of intimate partner violence.[47, 75] Given findings of the study reported here, policies that promote gender equality awareness as part of a redefinition of traditional masculinity norms are likely to lead to a reduction in men's risky sexual practices, thereby curbing the spread of HIV and STIs in India.

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