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Consistent condom use by married and cohabiting female sex workers in India: Investigating relational norms with commercial versus intimate partners

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Abstract

This study examines determinants of consistent condom use (CCU) among married and cohabiting female sex workers (FSW) in India. Although CCU with clients is normative in the study area, most FSW do not consistently use condoms with intimate partners. Multiple logistic regression models indicated that condom use with intimate partners was associated with relationship status, cohabitation, HIV knowledge, STI symptoms, and being offered more money for sex without a condom by clients. Additionally, more days of sex work in the last week, serving as a peer educator, and participating in community mobilization activities were associated with higher odds of CCU across all partner types. Although improving economic security may increase CCU with clients, mobilization to reduce stigma and promote disclosure of sex work to non-cohabiting partners may be necessary to increase CCU overall.

Abstract

Este estudio examina los determinantes del uso constante del condón (CCU) entre las trabajadoras sexuales (FSW) casadas y en cohabitación en la India. Aunque la CCU con los clientes es

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normativa en el área de estudio, la mayoría de las FSW no usan condones con sus parejas íntimas. Múltiples modelos de regresión logística indicaron que el uso del condón con parejas íntimas se asoció con el estado de la relación, la cohabitación, el conocimiento del VIH, los síntomas de infecciones transmitidas sexualmente (ITS), y que los clientes les ofrecieron más dinero para tener relaciones sexuales sin un condón. Además, más días de trabajo sexual en la última semana, sirviendo como educador inter pares, y participando en actividades de movilización comunitaria se asociaron con mayores probabilidades de CCU en todos los tipos de socios. Aunque la mejoría de la seguridad económica puede aumentar la CCU con los clientes, puede ser necesaria la movilización para reducir el estigma y promover la divulgación del trabajo sexual a parejas que no viven en concubinato para aumentar la CCU en general.

Keywords

sex work; condom use; commercial partners; intimate partners; community mobilization; structural interventions

Introduction

India has the third largest HIV/AIDS epidemic in the world despite a low overall prevalence of 0.3% (1). Due to targeted interventions led by the National AIDS Control Organization and foundation-funded initiatives (e.g., Project Avahan), India has experienced sharp declines in HIV incidence (23%) and AIDS-related deaths (54%) over the last decade (2). One of the major achievements of India's HIV/AIDS response has been the promotion of consistent condom use (CCU) between female sex workers (FSW) and clients. As a result, FSW in India now have HIV prevalence below 3% (2, 3).

In 2015, approximately 90% of FSW in India reported using a condom with their last client (4). However, CCU remains very low (26%) between FSW and their intimate partners who do not pay for sex – such as husbands, lovers, boyfriends, and cohabiting partners (5–9). Condom use behaviors between FSW and intimate partners are not well understood compared to patterns between FSW and clients (9). More than 85% of new HIV infections in India are the result of heterosexual sex, and male intimate partners of FSW are a bridge population that has been largely overlooked (4, 10).

The current study addresses this gap by examining condom use behaviors among FSW who reported having sex with both clients and intimate partners within the previous week. This study aims to address the following research questions:

1. Do the determinants of condom use between FSW and clients also predict condom use between FSW and intimate partners?
2. What factors are associated with CCU across all partner types?

Background on study setting

This analysis utilizes data from a random household survey of brothel-based FSW who were married or living with an intimate partner in two neighborhoods served by the Durbar intervention (The Sonagachi Project) in Kolkata, West Bengal. Durbar is the longest running

empowerment-based HIV prevention program for sex workers in India, serving more than 65,000 sex workers annually (8, 11, 12).

In 2016, Durbar initiated the first pre-exposure prophylaxis (PrEP) demonstration project with FSW in India. Despite growing awareness of PrEP for HIV prevention, at this time, PrEP is only consistently available to 600 FSW in Kolkata, a city home to more than 11,000 sex workers according to Durbar epidemiologic catchment surveys (13). It is likely that additional hard-to-reach FSW, such as “flying” or mobile street-based sex workers are undercounted in Durbar data. As a result, CCU remains a central goal of Durbar’s programming because condoms protect FSW from other sexually transmitted infections (STIs) and are commonly used as a form of contraception. In a previous analysis with the study population in Kolkata (13), we found that nearly half of FSW reported symptoms of an STI that required treatment within the previous 12 months. Additionally, 92% used condoms as a form of contraception, whereas only 16% used oral contraceptive pills. Less than 2% used any other form of hormonal or long-acting reversible contraceptives (13).

In addition to STI and pregnancy prevention benefits, condoms are also the most accessible and affordable option for safer sex among FSW in India (14). Shortages in antiretroviral medications over the last five years have created severe disparities in access to treatment for people living with HIV/AIDS in India (15). Within this context, it is unlikely that PrEP will be widely available and free for FSW for many years to come. As a result, understanding variation in condom use behaviors by FSW across partner types remains a vital area of research interest.

Existing literature has shown the potential transmission of HIV/STIs bi-directionally between FSW and intimate partners due to the perception that condoms prevent emotional and sexual intimacy (16–18). This belief can impede condom use negotiation and safer sex practices, even among FSW with high knowledge and condom use self-efficacy (16–18). In addition to risk of HIV/STI transmission from FSW to partner, many intimate partners of FSW also have other concurrent sexual partners, which increases risk of transmission to FSW.

The majority of FSW served by the Durbar intervention in Kolkata see both occasional and regular clients on a weekly basis. More than half are also married or living with a “temporary husband” referred to as a *babu* (8, 13). The terms *husband* and *babu* are sometimes used interchangeably in the study population. Some FSW have both a husband and a *babu* concurrently, and many *babus* have other wives or intimate partners. *Babus* typically meet FSW as clients, transition into regular clients, and eventually become cohabiting partners who no longer pay for sex (19). Less commonly, local men sometimes force FSW to accept them as a *babu*.

FSW distinguish between “*babus* who take” referred to as *lenewala babus* and “*babus* who give” referred to as *denewala babus* (20). Like good husbands, *denewala babus* provide FSW with social, emotional, and physical stability, whereas *lenewala babus* are abusive or economically draining. Although *babus* generally do not work outside of the home or contribute income to the household, *denewala babus* perform a range of roles for FSW.

These roles can include performing services traditionally viewed as “masculine” – such as providing security, helping solicit and screen clients, or enforcing payment – as well as “feminine” duties traditionally expected of wives – such as cooking, cleaning, and providing emotional support to FSW partners when they are dealing with difficult clients (20). Some *denewala babus* eventually become second husbands for FSW.

Condom use norms in commercial versus intimate relationships

Interventions and community engagement activities conducted by Durbar that have attempted to reach out to intimate partners of FSW have had limited success thus far and continue to be an ongoing challenge. To predict what factors are associated with CCU among FSW across partner types, it is useful to outline theoretical assumptions guiding condom use behaviors and examine when norms diverge for commercial versus intimate relationships. Table 1 highlights variation in condom use norms for FSW based on underlying expectations regarding risk perceptions and beliefs related to trust and emotional attachment with each type of partner: occasional clients, regular clients, babus, and husbands (21, 22).

Within the study setting, the normative expectation for FSW when engaging in commercial sex with clients is to use a condom in every sexual encounter (13). Several factors reinforce this norm. First, in commercial interactions, HIV/STI risk exposure is assumed to be high because FSW have multiple concurrent partners and the risk behaviors of clients outside of the brothels are unknown (23). FSW prioritize condom use with clients because other sexual risk reduction strategies – such as abstinence, fidelity, or reducing the number of partners – are not compatible with their work and economic needs. In addition, newer biomedical prevention strategies, such as PrEP, are not widely available and have not yet been shown to have the same community level impact as CCU (24). Second, it is assumed that FSW in the study setting have access to condoms, are knowledgeable about how to use them, and are empowered to demand that condoms are used with clients (11) as a result of Durbar’s condom distribution, community mobilization and education programs, and social reinforcement for condom use norms by peers, madams, and brothel owners (19). Third, trust and familiarity between FSW and clients can alter perceptions of risk, such that an FSW might be more inclined to engage in condomless sex with a regular client than an occasional client (i.e., the intimacy gradient) (25). Finally, financial need can impact decision-making regarding condom use with clients, such that an FSW might be willing to engage in condomless sex in exchange for additional compensation (26), which can undermine CCU particularly for economically insecure FSW (13). Based on these assumptions, we hypothesize that economic factors – income, number of clients, and number of days of sex work in the last week – will be the primary determinants of CCU with clients (Hypothesis 1).

In contrast to commercial interactions, it is not normative for FSW to use condoms with husbands/babus except under specific circumstances (27, 28). These circumstances include when the FSW is using condoms as a form of contraception or if either partner is living with HIV or experiencing STI symptoms. In the absence of these circumstances, there are several assumptions that intersect to reinforce the norm of condomless sex in intimate relationships.

First, sexual fidelity is expected in heterosexual marriages in India, so HIV/STI risk exposure is perceived to be low or non-existent. As such, condoms are viewed as unnecessary (29). However, the fidelity assumption does not apply when a husband/babu is aware of his partner's occupational status as a sex worker. All babus and most second husbands in the study setting know that their FSW partners are sex workers, but some first husbands do not know. Many FSW in Kolkata migrate from rural areas to work and live in the city and do not disclose their sex work involvement to non-cohabiting husbands back home due to stigma or fear (12). As a result, married FSW often do not demand that condoms are used with husbands in order to avoid relationship conflict or intimate partner violence. Second, condoms are viewed as a "psychological barrier" to intimacy (25), so FSW and husbands/babus often engage in fluid bonding (i.e., CCU with all clients but not with intimate partners) as an alternative to using condoms. In addition to reducing risk, fluid bonding symbolically demonstrates a belief in mutual commitment and ownership, which delineates a boundary between intimate and commercial partners (28, 30, 31). Insistence on condom use can raise suspicions regarding infidelity if sex work is not disclosed, or it can create perceived emotional distance between intimate partners (32, 33). Desire for emotional intimacy is often more pronounced within relationships in which the partners do not live together or see each other regularly (34). Based on these assumptions, we hypothesize that cohabitation will be the primary determinant of condom use between FSW and husbands/babus (Hypothesis 2a), and that FSW in first marriages will be less likely to use condoms with their husbands than FSW who are remarried or living with a babu (Hypothesis 2b).

Finally, it is important to consider how condom use decision-making processes in the context of sex work are *relational* based on behaviors with multiple partners. We conceptualize relational condom use behaviors as either *complementary*, in which risk reduction behaviors with one type of partner reinforce risk reduction behaviors with another type of partner, increasing CCU overall through habit formation (35) – or *compensatory*, in which a risk reduction behavior with one partner is balanced against increased risk-taking with another partner, decreasing CCU overall to maximize rewards or minimize losses, either tangible (e.g., money), or intangible (e.g., social support or security) (36). We propose one complementary and one compensatory hypothesis. First, we hypothesize that using condoms consistently with clients will increase condom use with husbands/babus and CCU overall across partner types (Hypothesis 3). Second, we hypothesize that offers of more money for condomless sex by clients will decrease condom use with clients but increase condom use with husbands/babus, maximizing earning potential while protecting the intimate partner from HIV/STI risk exposure (Hypothesis 4).

Methods

Data and sample

The institutional review boards of Durbar and the University of California, Los Angeles approved the study protocol. All participants provided informed consent. A cross-sectional demographic survey was administered in 2007 to 2008 through face-to-face interviews with randomly selected FSW (n=200) in brothel households in two large red light areas in Kolkata (Sonagachi and Bowbazar). Both neighborhoods have been served by Durbar since

1992. For a comprehensive description of Durbar and its key components, see Fehrenbacher et al. (13) and Basu et al. (8).

The enumeration, recruitment, and interviewing were conducted by the Durbar monitoring and evaluation team comprised of bachelor's and master's degree level staff accompanied by FSW peer educators. FSW households were enumerated in a multi-stage process beginning with identifying and enumerating brothel buildings, enumerating rooms occupied by FSW within brothels, and then enumerating individual FSW within rooms if more than one person occupied the room. Participants were then randomly selected from the enumeration list. Fourteen participants voluntarily withdrew from the study before completing the survey due to time limitations. Three participants were withdrawn by interviewers due to interruptions by madams or male partners. Two were withdrawn by the study team due to inconsistent responses. Nineteen additional FSW were randomly selected to replace the withdrawals to meet the target sample size (n=200). Among FSW in the sample who were married or in a relationship with a babu (n=105), participants who had sex with at least one occasional client, at least one regular client, and their husband/babu in the previous week were included in the analytic sample (n=95). An occasional client was defined as, "someone you have only had sex with once or someone you have seen only a few times and do not consider a regular client." A regular client was defined as, "someone who pays to have sex with you on a regular basis."

Measures

The survey questionnaire was based on an instrument developed for the evaluation of Project Avahan (37). The objectives of the study were to measure demographic background and socio-economic characteristics of FSW; knowledge, attitudes, and perceptions related to HIV/STI transmission and sexual risk reduction behaviors; empowerment attitudes and behaviors; and exposure to and participation in Durbar intervention activities. The questionnaire was originally written in English through a collaboration between U.S.-based and Kolkata-based co-principal investigators, then translated into Bengali and back-translated into English. The survey was administered in Bengali, the native language of both the FSW participants and interviewers.

Dependent variables.—The five dependent variables in this analysis were dichotomous outcomes for condom use with last occasional client (outcome 1), condom use with last regular client (outcome 2), consistent condom use (CCU) with clients (outcome 3), condom use with husband/babu (outcome 4), and CCU across all partner types (outcome 5). These variables were drawn from the question, "In the previous week, the last time you had sex with [an occasional client, a regular client, or your husband/babu], did you use a condom?" (1=Yes, 0=No). CCU with clients was defined as using a condom with both the last occasional client and the last regular client (1=Yes, 0=No). CCU across all partner types was defined as using a condom with both types of clients and with husband/babu (1=Yes, 0=No) at last sexual encounter.

Independent variables.—The primary independent variables to test *economic characteristics* for Hypothesis 1 were: weekly income, total number of occasional clients in

the last week, total number of regular clients in the last week, and total days of sex work in the last week, all continuous variables. Weekly income was measured in Indian rupees (INR) and log-transformed to approximate a normal distribution. The primary independent variables to test *relationship intimacy characteristics* for Hypotheses 2a and 2b were: cohabitation status and relationship status. Cohabitation status was a dichotomous variable (1=Living with a partner, 0=Living alone). Relationship status was a categorical variable dummy coded for: in a relationship with a babu/temporary husband, married for the first time, or remarried (reference category). The primary independent variables to test *complementary condom use behaviors* for Hypothesis 3 were: used a condom with last occasional client (1=Yes, 0=No), used a condom with last regular client (1=Yes, 0=No), CCU with both client types (1=Yes, 0=No), and used a condom with husband/babu (1=Yes, 0=No), all within the last week. The primary independent variables used to test *compensatory condom use behaviors* for Hypothesis 4 were: ever offered more money for sex without a condom by a client (1=Yes, 0=No), and ever accepted more money for sex without a condom (1=Yes, 0=No), both within the last five years. Since only 13% reported ever accepting more money for sex without a condom, this variable was dropped from the multiple logistic regression analysis and included only in the study characteristics.

Control variables.—Covariates to test for confounding or alternative explanations were grouped into the domains of demographic, economic, intervention, empowerment, and sexual risk characteristics. *Demographic characteristics* included: current age in years, age of entry into sex work, years in sex work, years of schooling completed, total number of dependents, frequency of visits with non-cohabiting partners, location of work, and reasons for entering sex work. All demographic variables were continuous except frequency of visits (1=At least weekly, 2=At least monthly, 3=Once every six months or less), location of work (1=Sonagachi, 0=Bowbazar), and reasons for entering sex work. Reasons were operationalized using a set of seven non-mutually exclusive questions regarding pathways into sex work including: needed money, to gain independence, to get out of family violence, to get out of hard work, advised by someone, was a traditional sex worker, or was lured, cheated, or forced (i.e., trafficked).

Control variables for *economic characteristics* included: currently in debt (1=Yes, 0=No), currently financially independent (1=Yes, 0=No), currently has secure housing (1=Yes, 0=No), currently has a bank account (1=Yes, 0=No), currently has a Durbar USHA multipurpose cooperative banking passbook (1=Yes, 0=No), has saved money in the last year (1=Yes, 0=No), has borrowed money from someone in the last year (1=Yes, 0=No), and client composition. Client composition was constructed as an interaction term for the product of the number of occasional clients in the last week by the number of regular clients in the last week.

Control variables for *intervention participation* were: an ordinal variable for level of participation in Durbar activities (0=Not a member, 1=Member but do not participate, 2=Member and participate infrequently, 3=Member and participate regularly), served as a peer educator – a paid part-time position as educational staff of Durbar (1=Yes, 0=No), participation in door-to-door community mobilization activities as an unpaid member of Durbar to network and increase membership (1=Yes, 0=No), participation in workshops or

instruct other sex workers about HIV/AIDS (1=Yes, 0=No), participation in conferences (1=Yes, 0=No), and participation in political rallies (1=Yes, 0=No), all measured for the last six months. *Intervention exposure* variables included: number of visits from Durbar in the last 30 days and having received pamphlets about HIV/AIDS from Durbar (1=Yes, 0=No), both within the last six months.

Control variables for *empowerment characteristics* were: five multi-item scales constructed from a confirmatory factor analysis of 26 empowerment attitude questions rated on a five-point Likert scale (0=Strongly disagree to 4=Strongly agree). The five scales constructed from these empowerment items were: perceived collective identity with other sex workers (9 items, e.g. "Sex workers have the same problems as me"), perceived autonomy in decision-making with clients (3 items, e.g. "I decide how much to charge a client for sex"), perceived legitimacy of sex work as work (4 items, e.g., "There should be no laws against sex work"), perceived political self-efficacy (4 items, e.g., "I am well qualified to participate in political activity and decision making"), and perceived institutional fairness toward sex workers (3 items, e.g., "Sex workers are treated fairly by shopkeepers"). Additionally, a single-item dichotomous variable denoting whether or not the respondent "always feels proud of being a sex worker" (1=Yes, 0=No) was included.

Control variables for *sexual risk knowledge, attitudes, and perceptions (KAP)*, included: perceived oneself to be at risk for HIV (1=Yes, 0=No), condom knowledge (1= High, 0=Low, dichotomized from a multi-item scale), HIV knowledge (1= High, 0=Low, dichotomized from a multi-item scale), awareness of HIV status (1=Tested for HIV within last six months and knew the results, 0=Not tested or did not find out results), and knew someone personally living with HIV/AIDS (1=Yes, 0=No). Control variables for *sexual risk behaviors* included: self-reported condom use with all clients in the last 30 days (1=Yes, 0=No), convinced a client to use a condom when he did not want to in the last 30 days (1=Yes, 0=No), refused a client for any reason in the last 30 days (1=Yes, 0=No), experienced STI symptoms in the last six months (1=Yes, 0=No), received treatment for STIs, if needed (1=Yes, 0=No), and experienced violence within the last six months (1=Yes, 0=No).

Statistical analysis

All analyses were performed in Stata 13.1. Univariate descriptive statistics and bivariate associations with each dependent variable were computed for each covariate. Skewed variables were either log-transformed or the range was top-coded to account for outliers that were altering the distribution. Multiple logistic regressions were used to identify significant correlates of condom use with last occasional client (outcome 1), last regular client (outcome 2), CCU with clients (outcome 3), husband/babu (outcome 4), and CCU across all partner types (outcome 5). Models for each outcome were built by selecting all covariates associated with each outcome variable in the bivariate regressions below the 10% significance level (p-value = 0.10 or less) due to the relatively small sample size. First, the primary independent variables for each hypothesis were tested. Next, control variables were grouped by each domain (demographic, economic, intervention, empowerment, and sexual risk characteristics) and added successively to the multiple logistic regression models as a group.

Covariates that were not associated with each outcome variable were dropped from the models. Finally, interaction terms were added and goodness-of-fit statistics recomputed. The parsimonious models are displayed in the tables.

Significant associations in the final multiple logistic regression models were determined by a significance level of 5% (p-value < 0.05). Covariates that were marginally above the significance level (p-value = 0.05–0.10) were also denoted in the tables. The fit of each of the final models was confirmed using the Hosmer-Lemeshow goodness-of-fit test, the Bayesian Information Criterion (BIC), and the Akaike Information Criterion (AIC). The predictive accuracy of each model was assessed using the pseudo-R² value and the area under the Receiver Operating Characteristic (ROC) curve.

Results

Characteristics of sample

Table 2 displays summary statistics of the sample. The characteristics of the current analytic sample of FSW who had a husband/babu (n=95) mirrored the characteristics of the full sample (n=200) on most study variables (as discussed in Fehrenbacher et al., 2016). Compared to the full sample, the current analytic sample was more educated (50% with any formal education vs. 39%), more likely to have another person contributing to their household income (47 vs. 36%), to have a bank account (66 vs. 57%), to report being in debt (41 vs. 35%), to perceive themselves to be at risk for HIV (72 vs. 65%), to have taken an HIV test in the last six months (58 vs. 49%) and to know the results of their most recent HIV test (57 vs. 48%). Differences on other study variables were negligible.

Demographic characteristics.—Respondents ranged in age from 18 to 55 years old, with a mean age of 30 years old. The average time in sex work was 9 years, and average age of entry into sex work was 21 years old. Approximately four out of five respondents entered sex work as adults (18 years of age or older). Sixty percent worked in the larger Sonagachi red light area. More than 75% reported entering sex work due to financial need, 20% were trafficked into sex work, 13% entered to gain independence, 11% entered to evade family violence, and 8% were advised by a friend or relative. Reasons for entering sex work were not mutually exclusive. Approximately half of the respondents in the sample were married for the first time, 23% were remarried, and 30% had a babu/temporary husband. The majority of respondents (79%) were living with their husband/babu. Among those not living with a partner, 85% visited their non-cohabiting partner at least once per month. Almost all respondents (89%) had at least one dependent child or other relative that they were financially supporting, with three dependents on average.

Economic characteristics.—Respondents worked, on average, four days in the last week in sex work, seeing approximately nine clients in that week. On average, respondents had twice as many occasional clients as regular clients, although client composition and range of total clients varied widely. Average weekly income from sex work was approximately 1,600 INR (range: 50–10,000 INR). Just over half of respondents were solely dependent on their own income (financially independent) and 71% had secure housing. Two-thirds had a bank account and half were members of Durbar's USHA multipurpose banking

cooperative. In the last 12 months, 67% saved money and 43% borrowed money from someone else. Forty-one percent of respondents reported being currently in debt.

Intervention characteristics.—Two-thirds of the sample identified as members of Durbar, but only 16% participated in Durbar activities regularly. Respondents were visited by Durbar an average of four times in the last month, and 30% received a pamphlet about HIV/AIDS from a Durbar representative in the last six months. Twenty-seven percent of respondents served as a Durbar peer educator in the last six months. The most common forms of engagement in Durbar activities over the last six months were participation in political or street rallies (68%), conferences (28%), and door-to-door mobilization campaigns (21%).

Empowerment characteristics.—Respondents reported a moderate level of collective identity with other sex workers and a high level of autonomy with clients, on average. Respondents felt that local institutions, except police, were fair to sex workers. Respondents endorsed sex work as legitimate work and reported a moderately high level of political self-efficacy to affect change to benefit sex workers. Forty percent reported always feeling proud of being a sex worker.

Sexual risk characteristics.—Respondents reported high levels of knowledge regarding condoms and HIV/AIDS. Approximately three out of four respondents perceived themselves to be at risk for HIV. Four in ten reported experiencing at least one STI symptom in the last six months, and of those who needed STI treatment, all were able to receive it. Experiences of physical violence in the last six months were reported by 19% of respondents. The vast majority of respondents (85%) reported convincing at least one client to use a condom when he did not want to within the last 30 days, and 61% refused a client within the last 30 days for any reason. Although 67% reported that they were offered more money for sex without a condom by a client within the last five years, only 13% reported ever accepting more money for condomless sex.

Condom use behaviors by partner type.—Almost all participants (90%) reported always using condoms with all clients in the last 30 days. However, only 74% reported using a condom with their last occasional client, 71% with their last regular client, and 60% with both their last occasional client and last regular client (CCU with clients). Less than half (42%) of respondents used a condom during the last sexual encounter with their husband/babu. Thirty-one percent reported CCU with clients, but not with their husband/babu, and 30% used a condom with all partner types in the last week (CCU across all partner types).

Multiple logistic regressions

Table 3 displays the results of multiple logistic regression models for condom use with last occasional and regular clients and CCU with both client types within the last week.

Condom use with last occasional client—(outcome 1) was associated with using a condom with husband/babu at last sex (OR=7.491, 95% CI: 1.338–41.935, p=0.022), number of days of sex work in the last week (OR=1.792, 95% CI: 1.063–3.020, p=0.022),

and the interaction of number of occasional clients by number of regular clients in the last week (OR=0.956, 95% CI: 0.919–0.995, $p=0.027$). Using a condom with last regular client (OR= 5.826, 95% CI: 0.955–35.525, $p=0.056$) was marginally not significant. Condom use with last occasional client was not significantly associated with other demographic characteristics, economic characteristics, empowerment attitudes, Durbar intervention exposure or participation, nor sexual risk knowledge, attitudes, perceptions, and behaviors.

Condom use with last regular client—(outcome 2) was strongly associated with using a condom with last occasional client (OR= 10.740, 95% CI: 1.532–75.289, $p=0.017$) and number of regular clients in the last week (OR= 2.226, 95% CI: 1.117–4.437, $p=0.023$). Condom use with last regular client was not significantly associated with the interaction for client composition, nor other demographic characteristics, economic characteristics, empowerment attitudes, Durbar intervention exposure or participation, or sexual risk knowledge, attitudes, perceptions, and behaviors.

Consistent condom use (CCU) with both last occasional client and last regular client—(outcome 3) was associated with using a condom with husband/babu (OR=5.749, 95% CI: 1.437–23.005, $p=0.013$), number of days of sex work in the last week (OR=2.038, 95% CI: 1.371–3.029, $p<0.001$), participating in door-to-door Durbar mobilization activities (OR=5.845, 95% CI: 1.293–26.414, $p=0.022$), and perceiving oneself to be at risk for HIV (OR=5.022, 95% CI: 1.363–18.506, $p=0.015$). Serving as a Durbar peer educator in the last six months was marginally not significantly associated with CCU with clients (OR=3.451, 95% CI: 0.863–13.787, $p=0.080$).

Consistent with Hypothesis 1, economic factors were significantly associated with condom use with both client types individually and CCU with clients overall. For each additional day of sex work, the odds of using a condom with last occasional client and CCU overall roughly doubled (1.8 and 2.0 times, respectively). Similarly, for each additional regular client in the last week, the odds of using a condom with last regular client doubled (2.2 times). The significant interaction effect of client composition on condom use with last occasional client indicated that having more clients overall increased odds of condom use, and the effect was stronger for those with a higher proportion of occasional clients than regular clients.

Table 4 displays the results of the multiple logistic regression models for *condom use with husband/babu at last sex* (outcome 4) and *CCU across all partner types* (outcome 5). Odds of *condom use with husband/babu at last sex* were significantly higher for those living with their intimate partner (OR=13.778, 95% CI: 2.301–82.495, $p=0.004$), those who were offered more money for sex without a condom by a client within the last five years (OR=10.093, 95% CI: 2.656–38.365, $p=0.001$), those who had experienced STI symptoms in the last six months (OR=5.006, 95% CI: 1.362–18.405, $p=0.015$) and those with high HIV knowledge (OR=1.972, 95% CI: 1.107–3.514, $p=0.021$). Odds of condom use with husband/babu at last sex were significantly lower for those who were married for the first time (OR=0.224, 95% CI: 0.055–0.915, $p=0.037$) or living with a babu (0.113, 95% CI: 0.022–0.582, $p=0.009$) compared to those who were remarried (reference category). CCU with clients was marginally above the significance level (OR=3.193, 95% CI: 0.981–10.393, $p=0.054$).

Odds of *CCU across all partner types* were significantly higher for those living with their intimate partner (OR=8.478, 95% CI: 1.248–57.605, $p=0.029$), those who were offered more money for sex without a condom by a client in the last five years (OR=12.340, 95% CI: 2.498–61.552, $p=0.002$), those who had experienced STI symptoms in the last six months (OR=4.567, 95% CI: 1.048–19.903, $p=0.043$), those who worked more days in sex work in the last week (OR=1.626, 95% CI: 1.095–2.414, $p=0.016$), those who participated in Durbar door-to-door mobilization activities (OR=4.499, 95% CI: 1.037–19.522, $p=0.045$), and those who had served as a Durbar peer educator (OR=5.856, 95% CI: 1.365–25.117, $p=0.017$). Odds of CCU across all partner types were lower for those who were married for the first time (OR=0.166, 95% CI: 0.033–0.831, $p=0.029$) compared to those who were remarried. There was no significant difference in odds of CCU across partner types for those who had a babu compared to those who were remarried. High HIV knowledge (OR=1.849, 95% CI: 0.917–3.730, $p=0.086$) was marginally above the significance level.

Consistent with Hypothesis 2a, cohabitation increased the odds of using a condom with husband/babu by 13.8 times and odds of CCU overall across partner types by 8.5 times. Consistent with Hypothesis 2b, FSW who were married for the first time had 78% lower odds of condom use with husband/babu and 84% lower odds of CCU overall compared to FSW who were remarried. FSW with babus had 89% lower odds of condom use with husband/babu compared to FSW who were remarried, but there was no significant difference between these groups for CCU overall across all partner types.

Consistent with Hypothesis 3, odds of using a condom with last occasional client were 7.5 times higher for those who used a condom with their husband/babu and odds of using a condom with last regular client were 10.7 times higher for those who used a condom with last occasional client. Although marginally not significant, odds of using a condom with husband/babu were 3.2 times higher for those who used a condom with both last occasional client and last regular client (CCU with clients).

Finally, partially consistent with Hypothesis 4, being offered more money for sex without a condom by a client increased odds of condom use with husband/babus and CCU overall by 10.1 and 12.3, respectively. Offers of more money for condomless sex did not significantly alter odds of condom use with either client type individually nor CCU with both client types overall.

Discussion

The findings suggest that different processes are at play when FSW decide to use condoms with clients versus with husbands/babus because most norms influencing condom use during commercial sex are in opposition to norms for intimate relationships (6, 9). Economic concerns are a central component of all sexual interactions between FSW and clients, whereas intimacy and trust are of primary importance with husbands/babus (6, 9). Furthermore, several factors that enable and reinforce condom use are explicitly known in commercial settings (e.g., non-monogamy and involvement in sex work) but must be disclosed in intimate relationships.

In summary, the results provide support for four of five hypotheses. First, economic factors – number of clients and number of days of sex work – increased condom use with clients but not with husbands/babus (Hypothesis 1). Although income was not significantly associated with condom use with clients, number of days of sex work, number of clients, and client composition were proxies for perceived economic security as well as for perceived level of risk exposure (13). FSW who worked more often and had a steady flow of clients, particularly occasional clients, were more likely to use condoms than those who worked less often, likely because they did not have to take additional risks to meet their financial needs (13). Furthermore, when their client base was primarily made up of occasional clients, FSW were more prone to use protection because trust had not been established and risks with these clients were unknown (21, 22). These results bolster the findings of our previous analysis on CCU with clients among the full sample of single and coupled FSW (13).

Second, relationship intimacy factors – cohabitation and relationship status – were significantly associated with condom use with husbands/babus, but not with clients (Hypotheses 2a and 2b). As expected, living with a partner had a large effect on odds of using a condom with a husband/babu, likely because cohabitation is a proxy for disclosure of sex work to intimate partners (28). Because the majority of FSW in the sample lived in brothel neighborhoods, it would have been difficult for a cohabiting husband/babu to be unaware of their partner's involvement in sex work. Correspondingly, remarried FSW had higher odds of using a condom with their husband/babu compared to those married for the first time or living with a babu, and higher odds of CCU across all partner types than FSW married for the first time. Re-examining cross-tabulations for cohabitation by relationship status, we found that only 72% of FSW in first marriages cohabitated compared to 82% of those remarried and 89% of those in relationships with babus. Because FSW in first marriages were more likely to be migrants who lived separately from their husbands (38, 39), it is logical to assume that they were less likely to disclose their sex work involvement. Additionally, those who were remarried or living with babus were more likely to have partners that they met in a brothel neighborhood while they were working. Most FSW in Kolkata entered sex work already married (39, 40), so it would be difficult for an FSW to establish a relationship with a new partner without the partner knowing her occupation. One may assume that second marriages for FSW involved more openness and acceptance regarding sex work, particularly if they met in a brothel neighborhood.

One potential explanation why remarried FSW had higher odds of condom use than FSW with babus is that second marriages likely shared characteristics of both babu relationships – such as openness about non-monogamy – as well as expectations of traditional marriages – such as a higher level of intimacy and trust. As a result, remarried partners might have been more concerned about each other's wellbeing and desired to protect themselves and their partners from risks. Furthermore, men who married FSW might have had a higher level of acceptance of sex work as legitimate work and understood the importance of and need for CCU.

Third, using a condom with one partner type increased the odds of using a condom with other partner types (Hypothesis 3). These results provide support for the hypothesis that FSW engage in complementary behaviors, such that risk reduction behaviors with

commercial partners improve risk reduction behaviors with intimate partners and vice versa. Habit formation strengthens the norm of CCU, which is reinforced by peer educators, madams, and brothel owners.

Finally, being offered more money for sex without a condom had no significant effect on condom use with clients, but it increased odds of condom use with husbands/babus and CCU overall (Hypothesis 4). The results suggest that FSW engaged in both complementary and compensatory condom use behaviors to protect themselves and their partners. Receiving offers from clients for more money in exchange for condomless sex could have had the expected effect of reducing CCU overall or the opposite because offers serve as an opportunity to demonstrate empowerment and autonomy by insisting on condom use (11, 41). It is possible that some FSW who received such offers refused services to these clients or convinced them to use a condom when they did not want to.

There were limitations to this study that impair our ability to draw causal inferences from the findings. First, the survey data was cross-sectional, so the temporal ordering of variables was not known. Second, the size of the analytic sample for FSW who had sex with all partner types in the last week was relatively small and some variables of interest did not have sufficient variation, limiting power to detect significant associations. For example, only 12 respondents reported that they had ever accepted more money for sex without a condom. It is unknown whether this was the true number of FSW who accepted or if other respondents did not answer truthfully due to social desirability bias. Third, offers of more money for condomless sex might not have had the expected effect of reducing CCU with clients because the time period for the offer variable (last five years) was not ideally matched to the time period for the outcome variable measuring condom use within the last week. Fourth, the survey questionnaire only examined perceived risk for HIV, but it did not include a variable to assess perceived risk for STIs overall. Future studies should include this question because it could be used to guide STI prevention programs and community mobilization initiatives. Fifth, data used in this analysis were collected 10 years ago, but the relationship formation patterns and behaviors between FSW, clients, and intimate partners have remained largely consistent over the last decade, with condom use still being the primary mode of both HIV/STI and pregnancy prevention. There has been no significant change in intimate partner relationship dynamics for FSW in the period since the study was conducted. Finally, the terms *babu* and *husband* are sometimes used interchangeably, so inferences regarding the association between relationship status and condom use should be interpreted with caution.

Despite these limitations, the study also had many strengths. First, a range of condom use behaviors across partner types were assessed with a focus on intimate partnerships in which condom use was most inconsistent. Second, the form of the outcome variables was more valid and reliable than variables drawn from questions regarding frequency of condom use measured on Likert scales or measures assessing global behaviors without disaggregating by partner types. Scale and global measures can overestimate condom use as a result of social desirability and recall bias. The discreteness and recent timeframe of the chosen outcome variables – within the last week – provided a more specific and accurate assessment of condom use across partner types while limited reporting bias. Nonetheless, these measures

might have missed variability in condom use across multiple sexual encounters. Third, the analysis reinforced and expanded the findings from our previous analysis on CCU with clients (13) by providing new insights on how behaviors with clients influence behaviors with intimate partners in line with our proposed theoretical construct of *relational* condom use norms. Finally, the analysis identified characteristics that could be used to target condom use interventions and newer biomedical HIV prevention options (e.g., PrEP). Future PrEP acceptability, uptake, and adherence studies should target FSW who have strong disincentives to use condoms consistently, such as married FSW who live away from their husbands, FSW who have not disclosed their occupation to intimate partners, and FSW in relationships with abusive husbands or *lenewala babus* (“babus who take”).

Durbar is leading the first PrEP demonstration project with FSW in India. The findings of the current study provide insights regarding how to identify ideal candidates for PrEP among those who do not consistently use condoms with all partners. Although Durbar’s community mobilization efforts have been successful at fostering empowerment and collective identity among FSW (11, 12), disclosure of sex work is still not viable for some woman in the profession. PrEP is a safe and discrete harm reduction option that can limit the potential for relationship conflict, suspicion, or intimate partner violence, if CCU is not likely or possible.

Conclusion

It is well established that condom use among FSW declines along an intimacy gradient (13). As relationships grow in emotional intimacy and attachment, condom use rates plummet. Expectations for intimacy without boundaries can be even stronger when partners do not live together or see each other regularly (42). As a result, HIV/STI intervention strategies should be tailored based on how many and what partner types FSW have if the goal is to improve CCU overall and not only with clients in commercial interactions. Whereas improving economic security is crucial for CCU with clients, educational and empowerment-based interventions to improve negotiation skills, reduce stigma, and promote disclosure of sex work to husbands might be necessary to increase condom use with intimate partners and CCU with all partners overall. HIV prevention options beyond condoms, such as PrEP, should be targeted to FSW who do not live with their intimate partners and those who have not disclosed their occupation to all partners.

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References

1. National AIDS Control Organization (NACO). HIV Facts & Figures: Government of India: Ministry of Health & Family Welfare; 2016 [Available from: <http://naco.gov.in/hiv-facts-figures>.
2. National AIDS Control Organization (NACO). Annual Report 2015–2016: Government of India: Ministry of Health & Family Welfare; 2016 [Available from: http://naco.gov.in/sites/default/files/Annual%20Report%202015-16_NACO.pdf.
3. Wilson D HIV Programs for Sex Workers: Lessons and Challenges for Developing and Delivering Programs. *Plos Med.* 2015;12(6).
4. UNAIDS. The Gap Report. 2016.
5. Beattie TS, Isac S, Bhattacharjee P, Javalkar P, Davey C, Raghavendra T, et al. Reducing violence and increasing condom use in the intimate partnerships of female sex workers: study protocol for Samvedana Plus, a cluster randomised controlled trial in Karnataka state, south India. *Bmc Public Health.* 2016;16.
6. Bhattacharjee P, Raghavendra T, Doddamane M, Nair S, Isac S, editors. “All in the name of love”: Understanding the relationship between female sex workers and their intimate partners. *Sexual Violence Research Initiative (SVRI)*; 2015.
7. Dandona R, Dandona L, Gutierrez JP, Kumar AG, McPherson S, Samuels F, et al. High risk of HIV in non-brothel based female sex workers in India. *Bmc Public Health.* 2005;5.
8. Basu I, Jana S, Rotheram-Borus MJ, Swendeman D, Lee SJ, Newman P, et al. HIV prevention among sex workers in India. *J aids-J Acq Imm Def.* 2004;36(3):845–52.
9. Isac S, Parkash R, Halli SS, Ramesh BM, Rajaram SP, Washington R, et al. Understanding low levels of condom use between female sex workers and their regular partners: Timing of sexual initiation in relationships as a differentiating factor in Karnataka, South India. *Journal of HIV/AIDS & Social Services.* 2017;16(2):113–26.
10. Newmann S, Sarin P, Kumarasamy N, Amalraj E, Rogers M, Madhivanan P, et al. Marriage, monogamy and HIV: a profile of HIV-infected women in south India. *Int J Std Aids.* 2000;11(4): 250–3. [PubMed: 10772089]
11. Swendeman D, Basu I, Das S, Jana S, Rotheram-Borus MJ. Empowering sex workers in India to reduce vulnerability to HIV and sexually transmitted diseases. *Soc Sci Med.* 2009;69(8):1157–66. [PubMed: 19716639]
12. Swendeman D, Fehrenbacher AE, Ali S, George S, Mindry D, Collins M, et al. “Whatever I Have, I Have Made by Coming into this Profession”: The Intersection of Resources, Agency, and Achievements in Pathways to Sex Work in Kolkata, India. *Arch Sex Behav.* 2015;44(4):1011–23. [PubMed: 25583373]
13. Fehrenbacher AE, Chowdhury D, Ghose T, Swendeman D. Consistent Condom Use by Female Sex Workers in Kolkata, India: Testing Theories of Economic Insecurity, Behavior Change, Life Course Vulnerability and Empowerment. *Aids and Behavior.* 2016;20(10):2332–45. [PubMed: 27170035]
14. National Association of People with HIV in Australia (NAPWHA). India’s ART Shortage 2014 [Available from: <http://napwha.org.au/health-treatment/hiv-treatment/india’s-art-shortage>.
15. Kalra S Poor Patients in India Facing HIV/AIDS Drug Shortages: Reuters; 2014 [Available from: <https://in.reuters.com/article/india-pharmaceuticals-aids/poor-patients-in-india-facing-hiv-aids-drug-shortages-idINKBN0GZOL120140904>.
16. Mahapatra B, Lowndes CM, Mohanty SK, Gurav K, Ramesh BM, Moses S, et al. Factors Associated with Risky Sexual Practices among Female Sex Workers in Karnataka, India. *Plos One.* 2013;8(4).
17. Wang C, Hawes SE, Gaye A, Sow PS, Ndoye I, Manhart LE, et al. HIV prevalence, previous HIV testing, and condom use with clients and regular partners among Senegalese commercial sex workers. *Sex Transm Infect.* 2007;83(7):534–40. [PubMed: 17942575]
18. Elmes J, Nhongo K, Ward H, Hallett T, Nyamukapa C, White PJ, et al. The Price of Sex: Condom Use and the Determinants of the Price of Sex Among Female Sex Workers in Eastern Zimbabwe. *Journal of Infectious Diseases.* 2014;210:S569–S78. [PubMed: 25381377]

19. Ghose T, Swendeman D, George S, Chowdhury D. Mobilizing collective identity to reduce HIV risk among sex workers in Sonagachi, India: The boundaries, consciousness, negotiation framework. *Social Science & Medicine*. 2008;67(2):311–20. [PubMed: 18455855]
20. Ravishankar S The many men of Sonagachi—India’s largest red light district: QUARTZ India; 2015 [Available from: <https://qz.com/449899/the-many-men-of-sonagachi-indias-largest-red-light-district/>].
21. Tan SY, Melendez-Torres GJ. A systematic review and metasynthesis of barriers and facilitators to negotiating consistent condom use among sex workers in Asia. *Cult Health Sex*. 2016;18(3):249–64. [PubMed: 26325239]
22. Murray L, Moreno L, Rosario S, Ellen J, Sweat M, Kerrigan D. The role of relationship intimacy in consistent condom use among female sex workers and their regular paying partners in the dominican republic. *Aids and Behavior*. 2007;11(3):463–70. [PubMed: 17096198]
23. Stoner BP, Whittington WLH, Aral SO, Hughes JP, Handsfield HH, Holmes KK. Avoiding risky sex partners: perception of partners’ risks v. partners’ self reported risks. *Sex Transm Infect*. 2003;79(3):197–201. [PubMed: 12794201]
24. Mukandavire Z, Mitchell KM, Vickerman P. Comparing the impact of increasing condom use or HIV pre -exposure prophylaxis (PrEP) use among female sex workers. *Epidemics-Neth*. 2016;14:62–70.
25. Kerrigan D, Ellen JA, Moreno L, Rosario S, Katz J, Celentano DD, et al. Environmental-structural factors significantly associated with consistent condom use among female sex workers in the Dominican Republic. *Aids*. 2003;17(3):415–23. [PubMed: 12556696]
26. Gertler P, Shah M, Bertozzi SM. Risky Business: The Market for Unprotected Commerical Sex. *Journal of Political Economy*. 2005;113(31).
27. Ranjan A, Bhatnagar T, Babu GR, Detels R. Sexual behavior, HIV prevalence and awareness among wives of migrant workers: results from cross-sectional survey in rural North India. *Indian J Community Med*. 2017;42(1):24–9. [PubMed: 28331250]
28. Deering KN, Bhattacharjee P, Bradley J, Moses SS, Shannon K, Shaw SY, et al. Condom use within non-commercial partnerships of female sex workers in southern India. *Bmc Public Health*. 2011;11. [PubMed: 21208451]
29. Ghosh P, Arah A, Talukdar A, Sur D, Babu GR, Sengupta P, et al. Factors associated with HIV infection among Indian women. *Int J Std Aids*. 2011;22(3):140–5. [PubMed: 21464450]
30. Saggurti N, Raj A, Mahapatra B, Cheng DM, Coleman S, Bridden C, et al. Prevalence and Correlates of Non-Disclosure of HIV Serostatus to Sex partners among HIV-Infected Female Sex Workers and HIV-infected Male Clients of Female Sex Workers in India. *Aids and Behavior*. 2013;17(1):399–406. [PubMed: 22810892]
31. Gaffey MF, Venkatesh S, Dhingra N, Khera A, Kumar R, Arora P, et al. Male Use of Female Sex Work in India: A Nationally Representative Behavioural Survey. *Plos One*. 2011;6(7).
32. Batra R, Reio TG. Gender Inequality Issues in India. *Adv Dev Hum Resour*. 2016;18(1):88–101.
33. Sen A When misogyny becomes a health problem. The many faces of gender inequality. *New Republic*. 2001;225(12):35–40.
34. Verma RK, Saggurti N, Singh AK, Swain SN. Alcohol and Sexual Risk Behavior among Migrant Female Sex Workers and Male Workers in Districts with High In-Migration from Four High HIV Prevalence States in India. *Aids and Behavior*. 2010;14:31–9. [PubMed: 19997971]
35. Jain AK, Saggurti N, Mahapatra B, Sebastian MP, Modugu HR, Halli SS, et al. Relationship between reported prior condom use and current self-perceived risk of acquiring HIV among mobile female sex workers in southern India. *Bmc Public Health*. 2011;11.
36. Ulibarri MD, Strathdee SA, Lozada R, Staines-Orozco HS, Abramovitz D, Semple S, et al. Condom use among female sex workers and their non-commercial partners: effects of a sexual risk intervention in two Mexican cities. *Int J Std Aids*. 2012;23(4):229–34. [PubMed: 22581944]
37. Piot P Setting new standards for targeted HIV prevention: the Avahan initiative in India. *Sex Transm Infect*. 86 Suppl 1 England 2010 p. i1–2. [PubMed: 20167723]
38. Kempadoo K, Saghera J, Pattanaik B. *Trafficking and prostitution reconsidered: New perspectives on migration, sex work, and human rights.*: Routledge 2015.

39. Evans C, Lambert H. Health-seeking strategies and sexual health among female sex workers in urban India: Implications for research and service provision. *Social Science & Medicine*. 1997;44(12):1791–803. [PubMed: 9194241]
40. Sarkar K, Bal B, Mukherjee R, Niyogi SK, Saha MK, Bhattacharya SK. Epidemiology of HIV infection among brothel-based sex workers in Kolkata, India. *J Health Popul Nutr*. 2005;23(3): 231–5. [PubMed: 16262019]
41. Bharat S, Mahapatra B, Roy S, Saggurti N. Are Female Sex Workers Able to Negotiate Condom Use with Male Clients? The Case of Mobile FSWs in Four High HIV Prevalence States of India. *Plos One*. 2013;8(6).
42. Parikh SA. The political economy of marriage and HIV: The ABC approach, “safe” infidelity, and managing moral risk in Uganda. *Am J Public Health*. 2007;97(7):1198–208. [PubMed: 17538057]

Theoretical Norms and Assumptions Guiding Condom Use Behaviors of FSW by Partner Type in Kolkata, India

Table 1.

Domains	Occasional clients	Regular clients	Babus	Husbands
Is the sexual relationship commercial?	Yes	Yes	In transition	No
Is condom use normative?	Yes	Yes	Unclear, negotiated	No
How frequently should condoms be used?	Always	Most of the time	Rarely	Never
How high is perceived risk for HIV/STI transmission?	High	Moderate	Low	None
Are partners expected to be monogamous?	No	No	No	Yes
Is sex work always disclosed?	Yes	Yes	Yes	No
How high is expected level of trust and intimacy?	Low	Moderate	High	High
Do partners live together?	No	No	Yes	Yes, unless migrants
Which partner decides whether condoms are used?	FSW	FSW or both	FSW or both	Neither, condoms not used
Is money always explicitly considered in condom use decisions?	Yes	Yes	No	No

Table 2.

Demographic, Economic, Intervention, Empowerment, and Sexual Risk Characteristics of Brothel-Based Female Sex Workers (FSW) with Husbands/Babus in Kolkata, India (n=95)

Variable	%	Mean	SD
<u>Demographic Characteristics</u>			
Age (18–55 years)		29.5	6.5
Age of entry into sex work (12–40 years)		20.9	5.0
Less than 18 years old at entry	22.1		
Time in sex work (0–39 years)		8.7	8.2
Years of schooling (0–12 years)		2.9	3.5
No formal education	50.0		
Class 1–6	27.2		
Class 7–12	22.8		
Relationship status			
Married (first time)	46.8		
Remarried	23.4		
Babu (live-in partner/temporary husband)	29.8		
Number of dependents (0–11 dependents)		3.3	2.3
No dependents	10.5		
Lives with partner (cohabitation)	78.9		
Frequency of visits with partner (among those not living with partner)			
At least weekly	50.0		
At least monthly	35.0		
Once every six months or less	15.0		
Location of work			
Sonagachi	60.0		
Bowbazar	40.0		
Reasons for entering sex work (not mutually exclusive)			
In need of money	75.8		
Lured, cheated, or forced into sex work	20.0		
To get independence	12.6		
To get out of family violence	10.5		
Advised by friend or relative	8.4		
Was a traditional sex worker	3.2		
To get out of hard work	4.2		
<u>Economic Characteristics</u>			
Number of days of sex work last week (0–7 days)		4.3	2.2
Number of clients last week (0–41 clients)		9.2	7.6
Regular clients last week (0–14 clients)		2.9	3.2
Occasional clients last week (0–29 clients)		6.4	6.4
Average weekly income from sex work (50–10,000 INR)		1605.9	1762.6
50–1,000 INR	57.0		

Variable	%	Mean	SD
1,001–10,000 INR	43.0		
Financially independent	52.6		
Has secure housing	70.5		
Has bank account	66.3		
Has an USHA banking cooperative passbook	55.8		
Saved money last year	67.4		
Borrowed money last year	43.2		
Currently in debt	41.1		
<u>Intervention Participation & Exposure Characteristics</u>			
Level of participation in Durbar (0–3, low to high)		1.3	1.1
Not a member	31.6		
Member but do not participate	22.1		
Member and participate infrequently	30.5		
Member and participate regularly	15.8		
Number of times visited by Durbar last month (0–5 visits)		3.6	1.4
Received pamphlets about HIV/AIDS from Durbar last six months	29.5		
Served as a peer educator at Durbar last six months	27.4		
Participated in Durbar activities last six months:			
Workshops to instruct other sex workers	6.3		
Door-to-door educational mobilization campaigns	21.1		
Conferences	28.4		
Rallies	68.4		
<u>Empowerment Characteristics</u>			
Perceived collective identity (0–36, low to high)		22.3	5.6
Perceived institutional fairness (0–12, unfair to fair)		8.3	2.8
Perceived autonomy with clients (0–12, low to high)		9.8	3.1
Perceived political self-efficacy (0–16, low to high)		9.1	1.9
Perceived legitimacy of sex work as work (0–16, low to high)		9.4	2.0
Frequency of pride in being a sex worker (0–4, never to always)		2.8	1.4
"Always" proud of being a sex worker	40.0		
<u>Sexual Risk Knowledge, Attitudes, Perceptions, & Behaviors</u>			
Condom knowledge scale (0–3, low to high)		2.5	1.0
HIV knowledge scale (1–6, low to high)		4.5	1.3
Current perceived HIV risk	71.6		
Taken an HIV test last six months	57.9		
Knows results of last HIV test	56.8		
Always used a condom with all clients last month	90.5		
Convinced a client to use condom last month	85.3		
Refused a client for any reason last month	61.1		
Client offered more money for sex without condom last 5 years	67.4		
Accepted more money for sex without condom last 5 years	12.6		

Variable	%	Mean	SD
Experienced STI symptoms last six months	42.1		
Received STI treatment for STI symptoms last six months	41.1		
Experienced physical violence last six months	18.9		
<u>Condom Use Behaviors By Partner Type, Last Time Had Sex</u>			
Last occasional client	73.7		
Last regular client	70.5		
Husband/babu	42.1		
Both last occasional client and last regular client (CCU with clients)	60.0		
Both last occasional client and last regular client, but not husband/babu	30.5		
All partner types (CCU across all partners)	29.5		

CCU=Consistent condom use

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Table 3. Odds Ratios and 95% Confidence Intervals from Multiple Logistic Regression Models of Condom Use with Last Occasional Client, Last Regular Client, and CCU with Both Client Types Among FSW with Husbands/Babus in Kolkata, India (N=94)

Variable	(1) Occasional Client		(2) Regular Client		(3) Both Clients (CCU)	
	OR	95% CI	OR	95% CI	OR	95% CI
Used a condom with last client (of alternate type), last week	5.826 [†]	(0.955, 35.525)	10.740*	(1.532, 75.289)	N/A	N/A
Used a condom with husband/babu, last sex	7.491*	(1.338, 41.935)	1.143	(0.288, 4.543)	5.749*	(1.437, 23.005)
Number of days of sex work, last week	1.792*	(1.063, 3.020)	1.234	(0.815, 1.869)	2.038***	(1.371, 3.029)
Number of occasional clients, last week	1.894**	(1.183, 1.050)	0.948	(0.788, 1.140)	1.044	(0.899, 1.212)
Number of regular clients, last week	0.754 [†]	(0.541, 1.050)	2.226*	(1.117, 4.437)	0.956	(0.761, 1.199)
Number of occasional clients*Number of regular clients, last week	0.956*	(0.919, 0.995)	1.004	(0.928, 1.086)	1.003	(0.984, 1.022)
Participated in door-to-door mobilization, last six months					5.845*	(1.293, 26.414)
Current perceived HIV risk					5.022*	(1.363, 18.506)
Served as a peer educator, last six months					3.451 [†]	(0.863, 13.787)
Constant	0.030***	(0.004, 0.229)	0.050**	(0.007, 0.376)	0.006***	(0.000, 0.069)
Pseudo-R ²	0.574		0.402		0.377	

Significance level:

[†] =p<0.10,

* =p<0.05,

** =p<0.01,

*** =p<0.001

CCU: Consistent Condom Use

CI: Confidence Interval

N/A: Not applicable

Table 4. Odds Ratios and 95% Confidence Intervals from Multiple Logistic Regression Models of Condom Use with Husband/Babu and CCU with All Partner Types Among FSW with Husbands/Babus in Kolkata, India (N=94)

Variable	(4) Husband/Babu		(5) All Partners (CCU)	
	OR	95% CI	OR	95% CI
Used a condom with both client types (CCU with clients), last week	3.193 [†]	(0.981, 10.393)	N/A	N/A
Relationship status				
Remarried (reference category)	-	-	-	-
Married (first time)	0.224 [*]	(0.055, 0.915)	0.166 [*]	(0.033, 0.831)
Babu/temporary husband	0.113 ^{**}	(0.022, 0.582)	0.259	(0.041, 1.630)
Lives with partner	13.778 ^{**}	(2.301, 82.495)	8.478 [*]	(1.248, 57.605)
Offered more money for sex without condoms by client, last five years	10.093 ^{***}	(2.656, 38.365)	12.340 ^{**}	(2.498, 61.552)
Experienced STI symptoms, last six months	5.006 [*]	(1.362, 18.405)	4.567 [*]	(1.048, 19.903)
HIV knowledge scale	1.972 [*]	(1.107, 3.514)	1.849 [†]	(0.917, 3.730)
Number of days of sex work, last week			1.626 [*]	(1.095, 2.414)
Participated in door-to-door mobilization, last six months			4.499 [*]	(1.037, 19.522)
Served as a peer educator, last six months			5.856 [*]	(1.365, 25.117)
Constant	0.001 ^{**}	(0.000, 0.690)	0.000 ^{***}	(1.420, 0.011)
Pseudo-R ²	0.281		0.339	

Significance level:

[†]=p<0.10,

^{*}=p<0.05,

^{**}=p<0.01,

^{***}=p<0.001

CCU: Consistent Condom Use

CI: Confidence Interval

N/A: Not applicable