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Social and Structural Factors Associated with Consistent Condom Use Among Female Entertainment Workers Trading Sex in the Philippines

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Abstract

This paper examined socio-structural factors of consistent condom use among female entertainment workers at high risk for acquiring HIV in Metro Manila, Quezon City, Philippines. Entertainers, aged 18 and over, from 25 establishments (spa/saunas, night clubs, karaoke bars), who traded sex during the previous 6 months, underwent cross-sectional surveys. The 143 entertainers (42% not always using condoms, 58% always using condoms) had median age (23), duration in sex work (7 months), education (9 years), and 29% were married/had live-in boyfriends. In a logistic multiple regression model, social-structural vs. individual factors were associated with inconsistent condom use: being forced/deceived into sex work, less manager contact, less STI/HIV prevention knowledge acquired from medical personnel/professionals, not following a co-workers' condom use advice, and an interaction between establishment type and alcohol use with establishment guests. Interventions should consider the effects of physical (force/deception into work), social (peer, manager influence), and policy (STI/HIV prevention knowledge acquired from medical personnel/professionals) environments on consistent condom use.

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Keywords

Condom use; Philippines; Female sex workers; HIV/AIDS; Socio-structural; Trafficking

Introduction

The Philippines is the 12th most populous country in the world with a low HIV prevalence (less than 0.1% infected of the adult population of 91 million). Over half of HIV cases since 1984 were transmitted through heterosexual sex. However, the epidemic has steadily expanded in recent years. An Integrated HIV Behavioral and Serological Surveillance (IHBSS) report revealed a 12-fold increase of HIV infection among freelance female sex workers (FSW) (44–540) and three-fold increase among registered FSWs (68–230) from 2007 through 2009 [1]. Filipina women with low economic and social status are especially vulnerable to HIV infection and other health disparities. Many engage in sex work to make a living and support families [2, 3]. Prostitution in the Philippines, although illegal, is estimated as the fourth largest source of gross national product (GNP) for the country [4]. FSWs work under various conditions, voluntarily or not. Those working in venues often call themselves ‘entertainers’. Rural girls are frequently tricked or sold into commercial sex work, and may have no alternative means of supporting themselves and their parents and siblings. Many local government units have issued ordinances against hiring minors [5], but in the Philippines, approximately 300,000–400,000 women and 60,000–100,000 children were still trafficked annually for the purposes of sexual exploitation or forced labor, internally and across international borders [6]. As in other settings, debt bondage is a common way to keep them in the profession [7]. The extent to which women who have entered sex work through force or deception are more or less likely to engage in condom use has not been well studied.

Rhodes and his colleagues [8, 9] developed a conceptual framework to address how harms in the physical, social, economic, and policy risk environments interact to influence the risk of HIV infection among substance users. Each physical, social, economic, and policy risk environment has a micro-and a macro-level. For example, Rhodes and colleagues classified drug trafficking as a macro-physical risk, but drug using location as a micro-physical factor because such routes and locations are related to the substance user’s physical environment at macro- and micro-levels. Peer group norms are a micro-social risk environment factor due to the social influence of peers on substance use and HIV risk behaviors, while larger gender inequalities and stigmatization are classified as macro-social risks. Economic risk factors include cost of living and health treatments at the micro level and lack of health service revenue at the macro level as these financial factors may increase risk for those who cannot afford services at a cost. Policy level influences involve availability of clean needles and syringes at the micro-level and public health policy governing harm reduction at the macro-level because these factors in the political environment may influence risk behaviors. For example, lack of availability of clean needles/syringes and harm reduction policies may increase HIV risk among injecting drug users.

Similarly, this framework is useful for examining social and structural factors that may operate in sex work environments and may inform the development of appropriate multilevel interventions. For example, macro-physical (i.e. force/deception into sex work) and micro-physical (i.e. venue type and histories of physical/sexual/emotional abuse) are included in this study. Micro-level social risk factors involve lack of peer and manager support at the establishment, interactions with sexual partners, and overall social support. Economic factors are income, cost of condoms sold at the establishment, where the entertainer gets condoms, and frequency carrying a condom. Micro-policy factors assessed in this study include condom availability and condom rule at the establishment and frequency of receiving an HIV and STI test.

Increasing evidence points to structural factors as correlates of risk behavior among sex workers in resource constrained countries [10–16]. Entertainers receiving structural peer and establishment manager interventions reported more positive condom attitudes, more establishment policies favoring condom use, and fewer STIs than the peer-only intervention group and control group in the southern Philippines [14]. However, prevention and intervention efforts have traditionally focused on individual-level risk factors. Few researchers have examined the role of workplace policies [17] and other organizational forms (e.g. non-government organizations (NGO) and support groups) in supporting protective HIV behavior [18, 19]. By ignoring structural risk factors, an individual approach is not comprehensive and has a low likelihood of producing real, lasting behavior change.

Despite government efforts to curb HIV in the Philippines, a 2007 IHBSS in 10 sentinel sites revealed that only 48% of FSWs used condoms at their last sexual encounter [20]. In the 2009 IHBSS in 23 cities, the prevalence of condom use among registered FSWs ranged from 7 to 89% [21]. The variation in condom use among FSWs at different sites in the Philippines needs further exploration and suggests a need for continuing, geographically expanding, or enhancing existing interventions (i.e. HIV prevention education, condom negotiation skill building, and peer support implemented since the 1990’s in the Philippines by the NGO, Program for Appropriate Technology in Health (PATH)’s AIDS Surveillance and Education Project (ASEP)).

Barriers to HIV prevention efforts in the Philippines include an ongoing battle over condom distribution since Roman Catholicism is the predominant religion [22]. Recently, laws were created in one city in the Philippines that required individuals to have a doctor’s prescription to purchase condoms [23]. Despite these barriers, provisions have been made by the Quezon City Health Department that attempt to involve venue managers. The Quezon City Health Department enacted an ordinance initiated by ASEP: (1) condom availability and 100% use in registered establishments, (2) mandatory AIDS and STD prevention education, (3) improved SHC examination for entertainers, (4) health policy for workers in the establishments, (5) non-hiring of minors. Entertainers are required to register with the health department and receive weekly or biweekly clinical exams at the government-run social hygiene clinics (SHC) where they often receive free condoms. While some managers are proactive in enforcing the condom use policy, such as issuing fines and sending their workers to the clinic, not all establishments adopt these policies.

Police lack of awareness about these health department policies and subsequent arrests of women who possess condoms have also posed barriers [24]. Another compelling explanation for the lack of support for a condom policy in the establishments is the alleged corruption among local politicians and police who may themselves use sex workers or take bribes from bar owners to keep certain establishments open even when the establishment does not comply with legislation that protects sex workers [25]. Further research is necessary that examines these variations in the physical and policy risk environments among sex work establishments and their influence on condom use.

We sought to extend current knowledge on factors associated with condom use among entertainers by determining the extent to which social and structural factors were associated with consistent condom use among female entertainment and spa/sauna workers at high risk of acquiring HIV in Quezon City, Philippines. Quezon City is the largest city in the Greater Metro Manila Area (GMMA), an area with 2.68 million people and nearly half of all reported HIV cases in the Philippines [26]. We hypothesized that social and structural factors at the micro-physical, economic, and policy levels, more than individual factors, influence consistent condom use. Specifically, we hypothesized that manager and peer support at the micro-social level and venue policies at the micro-policy level promotes more consistent condom use. We also hypothesized that exposure to trafficking at the macro-physical level and less frequent STI examinations at the micro-policy level decreases consistent condom use.

Methods

Study Population

We used stratified random sampling procedures to select the entertainment establishments. First, we identified the establishments in the community from lists obtained from the two largest SHC in Quezon City. Next, we stratified the establishments according to three types (bar/night club/disco, karaoke bar, and spa/sauna), and proportionally sampled according to size (based on number of workers, including those complying and non-complying with clinic visits) to obtain a closely matched sample between clinics. This provided an accurate denominator of the number of women working at the establishment compared to the number of women attending the clinic. After stratifying by size and type, establishments of each type were randomly selected per clinic site.

Originally, 498 employees from 54 randomly sampled establishments were surveyed, representing 70% of establishments from two of the three largest Quezon City clinics (having 46 and 32 total establishments on each list, respectively). The lists obtained from the clinics included establishments with business permits and for the most part, with employees who obtained health certificates and at least some who complied with weekly SHC check-ups. The rationale for selecting establishments from clinic lists was to potentially obtain STI and appointment keeping data on workers who attended the clinic. An estimated 400 establishments operate in Quezon City, with approximately 75% having business permits from the health department and 40% complying with clinic visits. Some establishments have business permits, but their workers do not always have health certificates, or workers might

obtain health certificates, but then never attend or visit the SHC afterwards. If a worker has an STI, sometimes they attend a private clinic rather than the SHC.

Trained NGO workers interviewed all workers in each establishment to reduce selection bias. The sample included entertainers who attended and did not regularly attend clinic appointments. All entertainers who reported trading sex in the previous 6 months and who answered questions regarding condom use with establishment guests were included in this analysis (N = 143). Although 173 of 498 entertainers traded sex in the previous 6 months, 30 were not included because they did not completely answer questions on condom use with establishment guests [27].

After including only those who traded sex in the past 6 months and who answered all condom use questions, entertainers came from 10 spa/saunas, nine night clubs/bars, and four karaoke bars. The average number of workers who traded sex in the past 6 months was five (range: 1–17) per night club, eight (range: 1–29) for spa/saunas, and four (range: 2–8) for karaoke bars. The establishments included in this analysis represented 29% of the establishments registered in the two major Quezon City clinics (N = 93 workers from 17 establishments from the largest clinic list and N = 48 workers from six establishments from the second clinic list), and the establishment types were proportionate to the general population of establishments registered in Quezon City.

Data Collection

The University of the Philippines Manila trained the experienced NGO workers on recruitment, informed consent, and interviewing protocols (e.g. how to probe participants, when necessary, to solicit complete answers). Institutional Review Boards at the University of the Philippines, Manila and the University of California, Los Angeles, approved the study protocol. Surveys were translated and back-translated into Filipino (Tagalog). Interviewers surveyed entertainers face-to-face at the establishment or SHC using structured questionnaires from April 2009–January 2010. Interviews lasted approximately 60 min in Filipino (Tagalog). Participants received the equivalent of 150–250 Pesos (approx. $3–5 USD) in non-cash incentives (e.g. stuffed animals, food, and resource materials).

Individuals were interviewed in separate spaces/rooms. The establishment managers requested their workers interview before their work started, but some interviews took place during work time (i.e. in the bars). In those instances, the manager provided a room (i.e. VIP rooms) for interviews to take place. In the SHC, interviews were held in a counseling room while the workers waited for their exam results.

Measures

Participants underwent an interviewer-administered survey eliciting data on sociodemographics, sexual risk behaviors, substance use behaviors, and experiences reflecting exposures in their physical, social, economic, and policy environment in their lifetime and over the last 6 months. The outcome variable, consistent condom use, was measured by whether entertainers always used condoms with establishment guests or not,

for those trading sex in the past 6 months. We also collected information on their consistent condom use behavior with regular partners (husbands, boyfriends, lovers).

Individual Risk Factors—Questions included age, education, number of children, marital status, income, length of employment, and knowledge of STIs and HIV. Number of STIs in the past 6 months was self-reported. Questions on history of sexual behavior included length of time worked in the sex trade and number of sexual contacts in a typical week. Questions on history of substance use included frequency of using alcohol and illegal drugs, and types of substances used. A 24-item center for epidemiologic studies depression scale (C-ESD) depression scale [28] was used with a cutoff of 23 argued in previous substance use research with high risk populations to indicate higher depressive symptoms [29]; Cronbach's alpha was .79.

Physical Risk Environment—Following Rhodes' risk environment framework [8, 9], we considered influences in the physical, social, economic and policy environments, at the micro- and macro-level. Variables in the micro-physical environment included establishment type (night club/bar, spa/sauna, or karaoke bar), and exposure to trauma (physical, sexual, emotional). At the macro-physical level, participants answered whether they were ever forced or tricked into their job as an entertainer.

Social Risk Environment—Factors at the micro-social environment included peer and manager support using dichotomous measures that were used in a previous Philippines intervention studies of sex workers [30]. Peer support measures included whether the entertainer was a member of an organization of workers, and whether peers discussed STIs, if a co-worker tried to convince the entertainer to use condoms, if the entertainer followed their co-worker's advice to use condoms, and frequency of contact with co-workers. Manager support measures were: manager supported condom use, group of workers met together with manager on a regular basis, and frequency of contact with manager/owner.

We measured social support using items adapted from the Norbeck social support questionnaire (1995) [31, 32]. Using a 5-point scale (0 = not at all to 4 = a great deal), participants assessed how much emotional, tangible, and functional support they received from peers at work, manager or owner at work, regular partner or husband, other family or friend outside of work, an agency or clinic provider, a community leader or church member, and other person outside of work, including how much each supported their safer sex practices. Cronbach's alpha for all items in the scale was .97.

The micro-social environment also included drug using behaviors occurring in the context of others. Specifically, they were asked on a 5-point scale (1-never to 5-always) how often they were drunk while having sex, how often they drank beer or alcohol with guests, how often guests were under the influence of drugs while having sex, and if the entertainer ever had sex with an injecting drug user.

Economic Risk Environment—Economic factors at the micro level included the entertainer's average weekly income, what price their workplace sold condoms, and where

they obtained condoms. Participants also answered how often they carried a condom with them, and were asked to show the brand of the condom if they had one with them.

Policy Risk Environment—In the policy risk environment, micro-level factors included whether the venue had a condom rule, if condoms were available at the venue, how often the entertainer took HIV and STI tests and were taught by medical personnel/professionals about STI/HIV prevention.

Analyses

Statistical analyses were conducted, comparing entertainers who engaged in consistent versus inconsistent condom use, using *t* tests for continuous variables and Pearson's Chi-square for binary outcomes. Univariate and multivariate logistic regressions were performed to identify factors associated with consistent condom use, considering aforementioned factors at the micro and macro-level of the risk environment. Models were developed using a manual procedure where all variables that attained a significance level <10% in univariate models were considered in logistic multiple regression analyses in order of most to least significance. Individual factors significant at the bivariate level <10% were retained in the final model to illustrate comparisons with social and structural significant factors. Plausible interactions were explored.

Results

Of 173 FSWs who traded sex in the past 6 months, 143 FSWs (42% not always using condoms, 58% always using condoms) were included in the analysis because they had complete data on the outcome variable (consistent condom use with establishment guests) and traded sex in the past 6 months.

Table 1 describes the sociodemographic, biologic, and behavioral characteristics of the 143 FSWs. They worked in 10 spa/saunas, eight night clubs/bars, five karaoke bars, had a median age of 22 (inter-quartile range (IQR): 20–25), 10 years of education (IQR: 9–10), average of 0.55 children, and 29% were married or had a live-in boyfriend. They worked as an entertainer for a median of12 months (IQR: 8–24), had a median income of 5,000 Pesos/week (USD $115), averaged six sexual contacts per week, and 12% had STIs during the past 6 months. Overall, 78% of the women had high levels of depressive symptoms. The FSWs used shabu (20%), marijuana (11%), and 12% drank alcohol daily. In the physical risk environment, they had histories of physical abuse (29%), sexual abuse (37%), and 12% were ever forced/coerced into a job as an entertainer. In the social risk environment, their overall median social support score was 88 (compared to an average score of 360 in a general population of US women), 46% said their manager supported their use of condoms, 55% said a co-worker discussed STI/HIV prevention with them, 64% said a coworker ever tried to convince them to use condoms, 63% used condoms due to co-worker advice, 10% belonged to a peer organization, 29% met with their manager on a regular basis as a group. In the economic risk environment, average condom price at their establishment was 35 Pesos (median price 20 Pesos or 0.46 USD). Policy risk environment factors included condom availability (56%) and a condom rule (48%) at their establishment, and only occasional HIV testing (2; IQR: 1–2), and STI testing (2; IQR: 1–5).

The 30 excluded FSWs (from seven night clubs/bars, four spa/saunas, three karaoke bars) who traded sex in the past 6 months but did not complete all condom use questions had a similar profile. They had a median age of 22 ((IQR): 20–25), 10 years of education (IQR: 9–11), average of 0.61 children, and 24% were married or had a live-in boyfriend. They worked as an entertainer for a median of 13 months (IQR: 7–33), had a median income of 5,000 Pesos/week (IQR: 3,000–8,000), and 77% of the women had high levels of depressive symptoms. The difference was not statistically significant with regard to substance use in this group (17% used shabu, 20% used marijuana, and 20% drank alcohol daily) or self-reported STIs during the past 6 months, although their number of sexual contacts per week were lower (4 vs. 6, $P = 0.05$) and they had less frequent STI and HIV exams ($P = 0.01$). Their histories of physical abuse (19%), sexual abuse (41%), and being forced/coerced into a job as an entertainer (19%) and their social support score (72; IQR: 56–107) did not significantly differ. They also did not statistically differ significantly on manager support of their condom use (33%), if a co-worker discussed STI/HIV prevention with them (43%), whether a co-worker ever tried to convince them to use condoms (67%), if they used condoms due to a co-worker advice (60%), belonged to a peer organization (3%), or met with their manager as a group on a regular basis (26%). They had a higher average condom price at their establishment (63 vs. 35 Pesos, $P = 0.01$), but they did not differ significantly on having condom availability (50%) or a condom rule (57%) at their establishment.

Comparisons Between FSWs Who Consistently Vs. Inconsistently Used Condoms

Individual Characteristics—For the 143 women included in the analyses, comparisons between those who used condoms consistently and those who did not suggested they were similar with respect to age, education, number of children, self-reported STIs, and depressive symptoms. Months worked as an entertainer and number of sexual contacts in a week also did not differ. However, those married or with live-in boyfriends were less likely to report using condoms consistently with establishment guests (22% vs. 40%; $t(141) = 2.40$, $P = 0.01$). FSWs using condoms consistently also drank alcohol less (2 vs. 4; $t(141) = 4.32$, $P = 0.001$) than those who did not use condoms consistently.

Physical Risk Environment—In Table 2, factors in the micro- and macro-physical risk environment that were significantly different for those who used condoms consistently and those who did not included physical abuse (18% vs. 43%; $t(141) = 3.41$, $P = 0.01$) and ever being forced/deceived into a job as an entertainer (6% vs. 20%; $t(141) = 2.59$, $P = 0.01$). However, the difference was insignificant for sexual abuse. Establishment type was also significant ($\chi^2(2) = 25.03$, $P = 0.01$); FSWs in spa/saunas had more consistent condom use than those night clubs (70% vs. 27%), and FSWs in night clubs had more consistent condom use than those in karaoke bars (27% vs. 4%).

Social Environment—In the micro-social environment, differences between those who used condoms consistently and those who did not were: following a co-worker's advice to use condoms (71% vs. 52%; $t(139) = -2.40$, $P = 0.02$), peers as a major knowledge source of HIV/STI prevention (12% vs. 32%; $\chi^2(1) = 8.29$, $P = 0.01$), peer/co-worker encouragement to get STI treated if symptoms don't go away (60% vs. 33%; $t(141) = 3.66$, $P = 0.01$), if groups of workers met together with manager on a regular basis (23% vs. 38%;

$t(139) = 2.02$, $P = 0.05$), being drunk while having sex ($t(141) = 2.10$, $P = 0.04$) and drinking with establishment guests ($t(141) = 4.43$, $P = 0.01$) or if they ever had sex with an injecting drug user ($t(139) = 2.52$, $P = 0.01$). Although 58% said guests were high on drugs during sex, no significant differences existed between those who used condoms consistently and those who did not. No significant differences existed for other types of peer support (belonging to an organization of workers, co-worker discussion of HIV/STIs, co-workers trying to convince them to use condoms), peer (co-worker) contact, manager support of condom use, frequency of manager contact, manager as major knowledge source of HIV/STI prevention, or general social support.

Economic Environment—In the micro-economic environment, consistent condom users were more likely to always carry a condom (62% vs. 31%; $t(114) = -2.76$, $P = 0.01$), but if they primarily purchased condoms from a drugstore, they were less likely to consistently use condoms (30% vs. 57%; $t(141) = 3.28$, $P = 0.01$). No differences existed in their average weekly income.

Policy Environment—Significant micro-policy factors associated with those who used condoms consistently were having a condom rule at the establishment (55% vs. 38%; $t(141) = -2.03$, $P = 0.04$) and working at venues that provided condoms for purchase (65% vs. 43%; $t(141) = -2.63$, $P = 0.01$). Frequency of HIV tests was not significantly different between groups, but more frequent STI tests ($t(141) = -3.49$, $P = 0.01$) were associated with more consistent condom use. Those who used condoms consistently identified medical personnel/professionals (76% vs. 48%; $\chi^2(1) = 11.54$, $P = 0.01$) and class/seminars (59% vs. 23%; $\chi^2(1) = 18.01$, $P = 0.01$) as major knowledge sources of HIV/STI prevention more than those who did not use condoms consistently.

In a final logistic multiple regression model (Table 3), Model 1 shows social and structural factors independently associated with inconsistent condom use. In the macro-physical level, being forced/deceived into sex work was associated with inconsistent condom use at the $P < 0.05$ level. Similarly, in the micro-social risk environment, those with less frequent contact with their managers and not following their co-workers' advice to use condoms used condoms less consistently. At the micro-policy level, not identifying medical personnel/professionals as a major source of HIV/STI knowledge was associated with less consistent condom use. On an individual level, FSWs who were married or living with a boyfriend and those who drank alcohol more reported less consistent condom use with establishment guests. However, other individual level factors (e.g. shabu use and knowledge of STIs and HIV), although significant at the bivariate $P < 0.10$ and $P < 0.05$ levels, were not significant in Model 1.

We examined a possible interaction between STI exam frequency and carrying condoms, since many women received free condoms at the SHC clinic during their visits. However, the interaction was not significant. We also explored a possible interaction between establishment type and frequency of drinking alcohol with their establishment guests on the odds of consistent condom use, since entertainment workers would be expected to serve alcohol to guests more commonly in night clubs/bars than in spa/saunas. The interaction was

significant, suggesting that venue type moderated the effect of drinking with establishment guests on consistent condom use (Model 2).

Discussion

This study of condom use among female entertainers working in Quezon City, Metro Manila, Philippines, uncovered two salient findings. First, factors operating in the macro-physical environment (i.e. forced/coerced entry into sex work) and micro-social environment (i.e. peer support and manager contact) predominated over individual-level risk behaviors associated with consistent condom use. Second, certain factors associated with the micro-policy environment (i.e. medical personnel/professionals as a major source of HIV/STI knowledge) were more closely associated with consistent condom use than other policies, such as the presence of a 100% condom rule at entertainment venues. These findings have important implications for social and structural interventions that are needed to halt HIV transmission behaviors among FSWs. Future researchers may be interested in using Rhodes and his colleagues' framework in similar work, and in designing interventions.

Importantly, entertainers who reported being forced or deceived into sex work used condoms less consistently. Except for a few studies [33, 34], the relationship between trafficking and condom use has not been well documented. It is plausible that these women may feel disempowered and less able to negotiate safer sex because they have less control over their work environments [35, 36]. The UN definition of trafficking encompasses those who have been forced and coerced into sex, but also includes minors under 18 years old engaged in the sex trade [37]. Further investigation of age at entry into sex work with the latter subgroup may show a higher prevalence of sex trafficking, but girls under age 18 were excluded from this study due to ethical concerns. The link between trafficking experiences and condom use needs further exploration.

This study found that peer support of condom use (more than peers imparting knowledge about STI/HIV) and increased manager contact (more than meeting with managers as a group of workers) were both independently associated with consistent condom use. These results coincide with findings from other studies that have documented the social and structural influences on consistent condom use among FSWs [15, 38–40], particularly in the southern Philippines [41] and local reports over the past two decades [3, 5, 24, 42]. Studies among FSWs in China and India underscore the importance of a supportive social environment, including peer and venue influences such as condom availability and managerial support [39, 40]. Our findings suggest that venue-level interventions that specifically address condom use versus only imparting knowledge about HIV/STIs may cultivate peer and manager support for condom use that may lower HIV/STI risks in sex work establishments in the Philippines.

Medical personnel/professionals as a major knowledge source of HIV/STI prevention, more than establishment policies or class/seminars, was associated with consistent condom use, which is similar to an earlier finding that regular STI exams were associated with reduced HIV transmission in the southern Philippines [43]. One explanation for this finding is that SHC clinics usually provide free condoms to those attending the clinic. However, another

explanation is the opportunity for entertainers to receive counseling about condoms at the clinic. However, the clinical exams of the entertainment workers are often handled by paramedical staff (e.g. nurse, midwives, and technicians) in the absence of the physician. Often only one nurse and one medical technician exist on staff, with the medical technician providing the results to the physician. The clinics are always teeming with entertainers due to the frequent visitations of entertainers to the SHC. Therefore, the interaction in these health service points is not always between the physician and the entertainment workers, but rather the non-physicians in the clinic. During PATH's ten-year USAID funded ASEP program (1993–2003), the SHCs provided STI testing and treatment for registered sex workers, and expanded their services with help from ASEP and their partnerships with NGOs to include educational services, community outreach, and services for difficult-to-reach groups such as freelance sex workers. Also, the Quezon City Health Department adopted a five point ordinance due to ASEP's efforts, but has faced difficulty monitoring the establishments (i.e. enforcing a 100% condom use policy) and allocating funds for HIV prevention education [24]. DKT International, a non-profit organization that promotes family planning and HIV/AIDS prevention through social marketing, has also sold condoms at low cost to various communities in the Philippines [44]. In either case, the results suggest the potential role of clinic staff and other personnel/professionals to promote condom use and HIV prevention messages for entertainers.

On an individual level, FSWs who were married or living with a boyfriend reported inconsistent condom use with establishment guests. Previous studies show FSWs use condoms less consistently with regular partners than with paying clients [45–47]. However, few studies have investigated whether FSWs with a spouse or live-in boyfriend use condoms more consistently with paying clients than if they do not have a spouse or live-in boyfriend. Possibly, FSWs in the current study who used condoms more inconsistently with venue patrons when they had spouses or live-in boyfriends may inconsistently use condoms with any partner or some FSWs may consider certain venue guests as live-in boyfriends. Both of these distinctions warrant further investigation.

Also, FSWs who drank alcohol more frequently reported less consistent condom use with establishment guests than those who drank alcohol less frequently. The association between alcohol use and inconsistent condom use among FSWs has also been documented by other studies [48, 49]. Women who worked in night clubs and particularly in karaoke bars used condoms significantly less than those who worked in spas/saunas. Drinking alcohol with a guest also modified the effect of venue type on consistent condom use, a finding that corresponded to women drinking alcohol with their guests in night clubs and bars more than FSWs in spa/saunas. Since alcohol use places women at higher risk for not using condoms, we recommend wider use of non-alcoholic 'ladies drinks' purchased by the guests for the entertainers and broader recognition, diagnosis and treatment for alcoholism offered to women in the entertainment industry.

Condom availability at the venue was also significantly associated with consistent condom use but only in bivariate analyses, possibly due to the small sample size and due to other factors contributing to condom use at the macro-physical, micro-social, and micro-economic levels. Using path analysis, Larios et al. [50] found that having access to condoms was

associated with greater self-efficacy and safer sex practices among women who worked in bars in Tijuana, Mexico. Ko et al. [51] found that increasing condom accessibility was effective in reducing unprotected sex among bathhouse patrons in Taiwan. We therefore recommend policies for ensuring that sex work establishments have condoms available in the Philippines. Five northern cities in the Philippines have previously piloted 100% condom use policies [52], but such policies have not been uniformly adopted by sex work establishments. Establishment managers need clarification that they will not be prosecuted for promoting 100% condom use policies and efforts are needed to engage the Catholic Church in trying to prevent condoms from being more widely available.

Limitations of this study include the reduced number of cases due to missing data; other variables might have emerged significant with a larger sample size. However, the women who were included did not appear to significantly differ from those who were excluded. Measures were entirely based on self-report, posing another potential limitation. Entertainers may have felt uncomfortable discussing their managers' influence on condom use. Our measures of substance use were relatively non-specific and may have led to under-reporting as well. To increase privacy and standardization, audio computer-assisted self-interviewing (ACASI) could be used for future surveys [53, 54], and interviews conducted outside their workplace when feasible.

This study suggests that factors associated with consistent condom use behaviors in the macro-physical (i.e. being forced/deceived into work), micro-social (i.e. peer influence, daily manager contact) and micro-policy environment (i.e. medical personnel/professionals as a major knowledge source of HIV/STI prevention) predominate over individual-level risk behaviors. More published research is necessary on the effects of force/deception on consistent condom use among entertainers, comparing those who have been trafficked to those who were not. Interventions should target relationships among entertainers, co-workers, and managers as entry points for HIV/STI risk prevention, and should attempt to reduce barriers in the economic and policy risk environments, combined with other individual-oriented interventions that build safer sex negotiation skills among sex workers. For example, violence prevention and condom negotiation skill-building interventions increased condom use and decreased substance abuse and victimization in the intervention group among sex workers in Pretoria, South Africa [55]. Future research might investigate the nuances of condom negotiations among sex workers in these social and structural contexts.

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Table 1

Sociodemographic, biologic, and behavioral characteristics associated with consistent condom use with establishment guests among entertainers in Quezon City, The Philippines

Characteristics	Total (*N* = 143)	Does not always use condoms w/guests (*N* = 60)	Always uses condoms w/guests (*N* = 83)	Odds ratio (for consistent use) (95% CI)
Sociodemographics				
Age[a]	22 (20–25)	21 (20–24)	22 (20–25)	1.05 (0.96–1.15)
Education[a]	10 (9–10)	10 (8–10)	10 (9–10)	1.06 (0.88–1.26)
Children	0.55 (0–4)	0.54 (0–4)	0.55 (0–3)	1.02 (0.65–1.59)
Marital status				0.42 (0.20–0.87)[b]
Married or living with boyfriend	42 (29%)	24 (40%)	18 (22%)	
Living alone, separated, or widowed	101 (71%)	36 (60%)	65 (78%)	
Biologic factors				
Had STI in the past 6 months[d]	12 (8%)	5 (8%)	7 (8%)	1.12 (0.33–3.80)
Lifetime individual risk behaviors				
Months worked as an entertainer (IQR)	12 (8–24)	13 (12–26)	12 (6–24)	1.00 (0.98–1.02)
Individual current risk behaviors				
Sexual contacts in a typical week (IQR)	4 (2–8)	4 (2–6)	4 (2–6)	1.01 (0.95–1.07)
Types of substance use[e]				
Shabu (crystal methamphetamine)	28 (20%)	16 (27%)	12 (14%)	0.46 (0.20–1.07)[c]
Marijuana	16 (11%)	12 (20%)	4 (5%)	0.20 (0.06–0.66)[b]
Rugby (cheap solvent inhalant)	5 (4%)	3 (5%)	2 (2%)	0.45 (0.07–2.80)
Other (e.g. cocaine)	4 (3%)	4 (100%)	0	0.25 (0.03–2.0)
Frequency of alcohol use (IQR)	3 (1–4)	4 (2–4)	2 (1–3)	1.67 (1.29–2.15)[b]
CES-D depression score	31 (23–36)	31 (22–36)	31 (27–36)	1.37 (0.55–3.41)
12–22 score	24 (22%)	12 (26%)	12 (14%)	
23–58 score	83 (78%)	35 (74%)	48 (58%)	
Knowledge of STIs (IQR)	2 (2–4)	2 (2–3)	3 (2–4)	1.89 (1.36–2.62)[b]
Knowledge of HIV (IQR)	2 (2–4)	2 (2–3)	3 (2–4)	1.77 (1.29–2.44)[b]

Certain percentages may reflect denominators smaller than the *N* value given in the column head. These discrepancies are due to missing data *IQR* Inter-quartile range

[a] Median (years)

[b] Significant at the bivariate level $P < 0.05$

[c] Significant at the bivariate level $P < 0.10$

[d] Self-reported

[e] Shabu is the street term for crystal methamphetamine. Rugby is a cheap solvent inhalant

Table 2

Environmental factors associated with consistent condom use with establishment guests among entertainers in Quezon City

Characteristics	Total (*N* = 143)	Does not always use condoms w/guests (*N* = 60)	Always uses condoms w/guests (*N* = 83)	Odds Ratio (for consistent use) (95% CI)
Physical risk environment				
Micro-physical				
Venue type (25 establishments)				0.73 (0.51–1.06)
Night club/bar workers (reference group)	48 (34%)	26 (43%)	22 (27%)	
Spa/sauna workers	77 (54%)	19 (32%)	58 (70%)	3.61 (1.67–7.78)[b]
Karaoke bar workers	18 (13%)	15 (25%)	3 (4%)	0.24 (0.06–0.92)[b]
Ever physically abused	41 (29%)	26 (43%)	15 (18%)	0.29 (0.14–.62)[b]
Ever sexually abused	53 (37%)	26 (43%)	27 (33%)	0.63 (0.32–1.25)
Macro-physical				
Ever forced/deceived into job as an entertainer	17 (12%)	12 (20%)	5 (6%)	0.26 (0.07–0.71)[b]
Social risk environment				
Micro-social				
Peer supports for condom use				
Member of an organization of workers	14 (10%)	6 (10%)	8 (10%)	0.96 (0.31–2.93)
Co-worker discussed STIs	79 (55%)	29 (48%)	50 (60%)	1.62 (0.83–3.17)
Co-worker tried to convince them to use condoms	91 (64%)	33 (55%)	58 (70%)	1.90 (0.95–3.79)[c]
Worker followed co-worker's advice to use condoms	90 (63%)	31 (52%)	59 (71%)	2.30 (1.15–4.60)[b]
Major knowledge source of HIV/STI prevention: peers	29 (20%)	19 (32%)	10 (12%)	0.30 (0.13–0.70)[b]
Co-worker encouragement to get STIs treated	70 (49%)	20 (33%)	50 (60%)	3.03 (1.51–6.06)[b]
Manager supported condom use	66 (46%)	23 (38%)	43 (52%)	1.73 (0.88–3.40)
Frequency of contact with manager/owner (IQR)[a]	4 (3–5)	4 (3–5)	5 (1–5)	0.92 (0.77–1.10)
Group of workers met together with manager on a regular basis	42 (29%)	23 (38%)	19 (23%)	0.82 (0.72–0.94)[b]
Major knowledge source of HIV/STI prevention: manager	10 (7%)	7 (12%)	3 (4%)	0.28 (0.07–1.15)
Overall social support (IQR)[d]	88 (65–113)	77 (62–114)	97 (78–111)	1.01 (0.99–1.02)
Frequency intoxicated while having sex	2 (1–2)	2 (1–3)	1 (1–2)	0.77 (0.60–0.99)[b]
Frequency drinks with establishment guests	1 (1–4)	2 (1–4)	1 (1–2)	0.62 (0.49–0.78)[b]

Characteristics	Total (*N* = 143)	Does not always use condoms w/guests (*N* = 60)	Always uses condoms w/guests (*N* = 83)	Odds Ratio (for consistent use) (95% CI)
Guest is under influence of drugs while having sex	2 (1–3)	2 (1–3)	2 (1–3)	0.96 (0.77–1.19)
Economic risk environment				
Micro-economic				
Weekly income (Pesos) (IQR)[a]	5,000 (3,000–10,000)	6,000 (3,250–10,000)	5,000 (3,000–10,000)	1.00 (0.99–1.00)
Price of condom (IQR)[a]	20 (20–35)	20 (20–50)	20 (20–30)	1.0 (0.97–1.01)
Primary place to get condoms				
Drugstore	59 (41%)	34 (57%)	25 (30%)	0.33 (0.16–0.66)[b]
SHC clinic	49 (34%)	20 (33%)	29 (35%)	1.07 (0.53–2.17)
Establishment	63 (44%)	24 (40%)	39 (47%)	1.44 (0.75–2.77)
Establishment guest	28 (20%)	15 (25%)	13 (16%)	0.56 (0.24–1.28)
Friend/relatives	14 (10%)	7 (12%)	7 (8%)	0.70 (0.23–2.11)
Always carries a condom	56 (40%)	16 (31%)	40 (62%)	3.5 (1.61–7.59)[b]
Policy risk environment				
Micro-policy				
Venue has condom rule	69 (48%)	23 (38%)	46 (55%)	2.00 (1.02–3.94)[b]
Venue provides condoms for purchase (average: 33 pesos per condom)	80 (56%)	26 (43%)	54 (65%)	2.44 (1.23–4.81)[b]
Frequency of HIV test	2 (1–2)	1 (1–2)	2 (1–2)	1.14 (0.91–1.43)[b]
Frequency of STI test	2 (1–5)	2 (1–3)	5 (1–5)	1.41 (1.15–1.73)[b]
Major knowledge sources of HIV/STI prevention: Medical personnel/professionals	92 (64%)	29 (48%)	63 (76%)	3.37 (1.65–6.87)[b]
Class/seminars	63 (44%)	14 (23%)	49 (59%)	4.74 (2.26–9.94)[b]

Certain percentages may reflect denominators smaller than the *N* value given in the column head. These discrepancies are due to missing data. Only four were aware that they ever had sex with an injecting drug user; 100 denied having sex with injecting drug users

IQR Inter-quartile range

[a] Median

[b] Significant at the bivariate level, $P < 0.05$

[c] Significant at the bivariate level, $P < 0.10$

[d] Entertainers had lower emotional and tangible social support of the Norbeck scale compared to a general sample

Table 3

Factors independently associated with inconsistent condom use among entertainers in Quezon City, controlling for individuals nested within establishments (N = 143)

Variable	Model 1		Model 2	
	Adjusted OR	95% CI	Adjusted OR	95% CI
Individual risks				
Marital status	3.01	1.09–8.30[a]	2.68	1.03–6.96
Alcohol use	1.67	1.00–2.81[b]		
Alcohol use (with establishment guest)			1.04	0.63–1.70
STI knowledge	NS	NS	0.60	0.37–0.98
Micro-physical risks				
Establishment type (vs. night clubs/bars)				
Spa/saunas	1.40	0.36–5.42	1.17	0.29–4.65
Karaoke bars	10.95	1.97–60.96[a]	2.00	0.29–13.89
Macro-physical risks				
Ever forced/deceived into job as an entertainer	7.16	1.85–27.714[a]	4.78	1.19–19.241
Micro-social risks				
Contact with manager/owner (daily)	0.46	0.27–0.78[a]	0.95	0.72–1.24
Followed co-worker's advice to use condoms with establishment guests	0.13	0.04–0.44[a]	0.24	0.07–0.75
Micro-policy risks				
Major knowledge source of HIV/STI prevention— medical personnel/ professionals	0.29	0.11–0.77[a]	0.51	0.17–1.56
Alcohol use with guest 9 establishment type			1.21	1.00–1.46[a]

NS Non-significant

[a] Significant at the P <0.05 level

[b] Significant at the P <0.10 level