

# Knowledge, Perception of Risk for HIV, and Condom Use: A Comparison of Registered and Freelance Female Sex Workers in Cebu City, Philippines

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The HIV infection rate is lower in the Philippines than would be expected based on the numbers of people believed to engage in high-risk behaviors. A national behavioral surveillance system has been implemented to monitor selected behaviors among vulnerable populations. This paper reports on an interview survey of 360 registered and 360 freelance sex workers in Cebu City, the Philippines, from 1997 to 1999. All of the women had engaged in sexual activity in exchange for money during the week preceding the interview. The freelance workers reported more sexual partners than the registered sex workers ( $p < .00001$ ), assessed themselves as more at risk for HIV ( $p < .00001$ ), and were less likely to always use condoms during sex ( $p < .00001$ ). The groups were comparable on a measure of knowledge about HIV transmission. As these women continue to engage in risky behaviors, some form of intervention will be necessary to prevent the escalating HIV/AIDS rates seen in other Southeast Asian countries.

**KEY WORDS:** HIV; Philippines; sex workers; risk behaviors; condom use.

## INTRODUCTION

Although prostitution is illegal in the Philippines (Revised Penal Code Article 202), women who work in entertainment establishments such as bars, clubs, and massage parlors are required to undergo periodic gynecological examinations at government-sponsored Social Hygiene Clinics and to carry "health cards" with them while they are working. Beginning in 1999, men working in similar establishments who cater to the sex trade are also required to undergo similar periodic medical examinations. This system of Social Hygiene Clinics was first set up in collaboration with U.S. military bases in their efforts to protect servicemen from STDs, and it continues

in the Philippines today even after closure of these bases. In a 1997 report, it was estimated that 200,000–300,000 women and girls were working in the sex industry in the Philippines (The Coalition against Trafficking in Women—Asia Pacific report of February 1997). In that same report, a figure of 100,000 is given for the number of women "exported" to Japan to work as entertainers. Sex is a "growth industry" in the Philippines (CATW report).

Relative to other Southeast Asian countries (e.g., Thailand, India, Vietnam, and Cambodia), the HIV rate in the Philippines is low. The *reported* cumulative total of HIV positive individuals from January 1984 to September 1999, was 1,280, with 420 of these developing AIDS. (This is most certainly an underestimate of the number of HIV infected people in the Philippines, a fact well recognized by the Department of Health. For the period from 1984 to the end of 1997, UNAIDS estimated that 24,000 Filipinos were living with HIV/AIDS.) The principal mode of transmission reported is heterosexual contact, accounting for almost 58% of the total HIV positives and 55% of

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the AIDS cases. Two hundred twenty (17%) of those identified as HIV positive were reported to be due to homosexual contact, with 113 (27%) of these developing AIDS. Sixty-five (65) of the HIV-positive individuals reported bisexual contact, with 33 of these developing AIDS. Only 5 of the HIV positives and 2 of the AIDS cases were due to injecting drug use.

The national and local governments in the Philippines have invested effort in educating the general public and sex workers specifically, about the dangers of unprotected sexual activity with multiple partners. The assumption in most of this work is that if people are educated about the risks of unsafe sex, they will modify their behaviors accordingly to decrease their chances of acquiring a potentially lethal disease. Study after study, however, has found that knowledge and attitude do not necessarily predict behavior. In other words, whereas people may know how AIDS is acquired and how to prevent it, and may assess their risk for acquiring the disease as high, they do not necessarily adopt behaviors (e.g., practice safe sex) to reduce their risks (see, e.g., Geringer *et al.*, 1993).

Among the responses to the HIV/AIDS challenge by the Philippine Department of Health was the establishment of the HIV Behavioral Surveillance System to identify groups at risk for exposure to HIV and determine what behaviors and practices put them at risk. The surveillance was seen as important for enabling local government and health personnel to "design interventions that are appropriate to their respective situations and to the needs of their at-risk populations" (Manual of Operations for HIV Behavioral Surveillance, September 1997). The surveillance was conducted by the Field Epidemiology Training Program of the Department of Health in cooperation with local health clinics, government staff, and NGOs in 12 Philippines cities<sup>4</sup> between 1997 and 1999. Data were collected from four vulnerable groups: registered female sex workers (RFSW), freelance female sex workers (FFSW), men who have sex with men (MSM), and male injecting drug users (IDU). This paper presents the results of the 3-year study of female sex workers (RFSW and FFSW) in Cebu City, the capital of the province of Cebu.

Cebu City has a population of 635,000 (1995 census), a total land area of 279.4 km<sup>2</sup>, and an average population density of 2,164.5 persons/km<sup>2</sup> (Flieger, 1994). Its central location has made the city the hub

of trading and manufacturing in central and southern Philippines. It also has well-developed linkages (i.e., transportation, communications, and services), making it a magnet for inter- and intraregional migration. A total of 39 HIV positive individuals have been reported from 1989 to 1999 by the Cebu City Health Department; the Department recognizes that this is certainly an underestimate.

Registered female sex workers (RFSW) are those who are formally affiliated with or employed in establishments where sexual favors are usually solicited in exchange for money. The women may be clandestinely engaged in prostitution (as in brothels and massage parlors) or work as entertainers or dancers in one of the other settings. As "registered" commercial sex workers, these women carry health cards and receive periodic examinations from the City Health Department. Freelance female sex workers (FFSW) are sex workers who are not formally affiliated with any establishment. Although many of these women may be found frequenting nightspots, they are there as "customers." They do not carry health cards and are not subject to periodic examinations from the health department.

The larger surveillance study was designed to establish a baseline database of knowledge, attitudes, and practices related to sexual behaviors of groups who were perceived to be at risk for HIV and is, therefore, descriptive. The authors of this paper have further examined the data to compare registered and freelance commercial sex workers. A similar comparison of registered and freelance commercial sex workers in Iloilo City, Philippines, revealed that the two groups differed in marital status and condom use, but did not differ in age, education level, knowledge about HIV/AIDS, or assessment of risk (Liu and So, 1996).

For the Cebu City data, we were interested in the following questions: (1) Do the registered and freelance sex workers differ in age, education, marital status, number of sex partners, knowledge of HIV/AIDS, assessment of risk for acquiring HIV/AIDS, condom use, and self-reported signs and symptoms indicative of STDs? (2) Is there an association between knowledge about HIV/AIDS and risk assessment or condom use and do the two groups of women (registered and freelance) differ in these associations? (3) Is there a relationship between self-assessment of risk for HIV/AIDS and number of sex partners and how do the two groups compare? (4) How does condom use compare between the two groups of sex workers and is it associated with marital status, number of sex partners, knowledge about HIV transmission, and

<sup>4</sup>The cities of Quezon, Pasay, Angeles, Baguio, Iloilo, Cebu, Davao, Cagayan de Oro, General Santos, Zamboanga, Batangas, and Legazpi.

self-assessment of signs and symptoms indicative of STDs? Finally, in the third year of the project, the interviewers asked about the decision-makers involved in using condoms and the source of information on HIV/AIDS.

Although this paper reports exploratory analyses of data collected for another purpose, we hope that this more detailed analysis will provide further information to be used in making policy decisions about education and AIDS prevention. Suggestions for future research have also emerged from this exploration and are presented in the discussion.

## METHODS

The data collection methods were determined by the research design for the larger surveillance project. The sampling strategy focused on five geographic zones in Cebu: downtown zone, uptown zone, transition zone, port area, and suburban area. These areas were selected in order to maximize spread and optimize the probability of securing a wider range of cruising sites for the targeted populations (RFSW, FFSW, IDU, and MSM). The downtown zone is the inner city where the hub of commercial activity is greatest. It was known in advance that this site would have the greatest concentration of the target participants owing to its accessibility and large concentrations of potential clients for sex workers. In fact, most (79%) of the commercial sex workers interviewed for the surveillance came from this area. The establishments in the downtown zone cater largely to clients from the working class and from the medium to low-income groups. The uptown zone is located immediately outside the inner city and is characterized by the presence of more upscale and expensive establishments catering to a different set of clients than are generally found in the downtown area. The transition zone is next to the downtown zone and is primarily residential. Establishments in this area have a similar clientele to those in the downtown zone, but the establishments are more unobtrusive. Residents in this area tend to be of low to medium income and many are migrants from provinces and regions around Cebu. The port area is the zone immediately adjacent and proximate to the commercial shipping docks. Small establishments abound in this area catering primarily to transients, dockhands, and sailors. The zone also includes promenade areas, (e.g., Plaza Independencia—a place frequented mostly by the low-income group), a state technical school, and a very large mall. Finally, the suburban areas are located in the outer city and

are characterized by subdivisions and upscale housing developments. Income levels in these areas are generally medium to high. These areas contain schools, malls, and entertainment establishments that are low-key. Also, because of their clandestine nature, brothels are usually located in such places.

Given the geographic zoning as a framework, project leaders identified the specific sites in each zone where members of the selected participant categories were likely to be found. In other words, known establishments and cruising areas involved in commercial sex on an open or clandestine basis were purposively identified. For purposes of continuity and consistency, the surveillance sites selected were used for all 3 years of the study.

An obvious concern is the representativeness of the sample interviewed for each of the four categories. Unfortunately, we have no way of determining the total population of the target groups, given the clandestine and illegal nature of some of their activities. This is clearly a limitation of studies like this. To minimize bias, however, we selected a sampling strategy that considered both location and temporal controls by limiting the days of the week, and time of the day, when interviews were to be carried out. Days of the week selected for interviews depended on a number of factors. In Cebu City, Mondays and Tuesdays are “raiding days” for commercial sex workers, based on a tacit understanding between our target groups and the police. For this reason, commercial sex workers were less likely to be found on these days. Similarly, Fridays and Saturdays are the most active days for commercial sex workers and therefore not the best days to conduct interviews since the target population would be at their busiest. Sundays are a poor choice since many establishments are closed and certain participant-categories are harder to reach. This left us with the two “good” days per week during which interviews were conducted—Wednesdays and Thursdays. Thus, all interviews with RFSW and FFSW were conducted on these days. (Fieldwork for the other two groups, MSMs and IDUs, was not constrained by these considerations and was therefore not restricted by days of the week.) Fieldworkers remained at the selected establishment or cruising site for 1 hr, regardless of whether or not an interview was obtained. After that, they moved on to the next preselected site.

A further limitation to the goal of achieving a representative sample was that we had to get permission from the owners or managers of the establishments and locations that were previously identified. The

study had the endorsement of the Cebu City Health Officer from whom the establishments received their licenses, however, so most of the managers gave their consent. For the RFSW, letters of explanation of the study signed by the project leader, STD Detection Head, and the Cebu City Health Officer were sent to the managers of the establishments where the women who comprised the target population worked. The managers told the women about the study and that they were not required to participate. In fact, very few of the women refused to participate because similar interview surveys are routinely administered by the City Health Department.

The women interviewed were contacted in the areas in which they were working. As noted above, most (79%) worked in the inner city, or downtown area of Cebu City. The remaining participants came from one of the other four areas. There were 120 registered sex workers and 120 freelance sex workers interviewed each year, for a total of 720 women over the 3 years of the study. The sensitive nature of the study required that all interviews be anonymous, and there was no attempt to recruit women for follow-up interviews. Interviewees were not identified in any way so we cannot be absolutely certain that a woman was not interviewed again in succeeding years. Thus, this figure accurately represents 720 separate interviews but may not represent 720 different women. We feel confident, however, that if there are duplicate interviews, the number is small. Each fieldworker was assigned to a specific establishment for each year of the surveillance, so duplication in interviews within a single year is unlikely. In the case of FFSWs, it is possible that a participant could have been interviewed more than once in the same round, given that they are usually mobile and may frequent a number of identified cruising areas. To avoid this duplication interviewers were instructed to ask each woman if a member of the surveillance team had recently interviewed her. If her answer was "yes," she was not interviewed again.

The selection of respondents was purposive in the sense that the establishments and locations were previously identified and selected on the basis of the owners' or managers' approval for the team to conduct the study. It was opportunistic in that participants were interviewed on the basis of being present at a particular target site at the times selected for interviews. Additionally, participation in the study was entirely voluntary and the women were not paid for their participation. Finally, in order to participate in the study, the sex worker must have had sex with clients in exchange for money during the week

immediately preceding the interview. All participants were interviewed individually and privately at or near the place that they worked. They were informed that the goal of the interview was to determine knowledge, behaviors, and practices related to sexual activity of commercial sex workers. They were required to give their oral consent before the interview took place and informed that they could terminate the interview at any time. It is estimated that fewer than 10 women who were initially contacted declined to participate in the interview. The interview protocol and all aspects of the study were approved by a review board composed of consultants from the Field Epidemiology Training Program, Department of Health, Philippines; the United States Agency for International Development (USAID); and the World Health Organization (WHO).

Eleven local field interviewers were recruited for the study, working in teams of two or three. Only women field workers were selected to conduct the interviews with the female commercial sex workers. The interview instrument, originally written in English, was translated into Cebuano (the local dialect) and committed to memory. Responses to the questions were directly entered into the instrument as they were obtained. Completed interview schedules were reviewed by the field supervisors and the study leader prior to encoding and processing. Questionable interviews were rejected. Following review, transcripts were edited and coded by the interviewers and entered into the format appropriate for analysis by SPSS ver 6.125. To ensure effective monitoring of the fieldwork, the field specialists and the study leader made spot checks and the field interviewers were required to report daily prior to fieldwork to discuss problems encountered in the field and to clarify questionable or unclear entries.

As with the research design, the questionnaire was designed for the larger surveillance project and consisted of both open-ended and closed questions. Basic demographic information included age, education, marital status, and work location. The women were also asked about total number of sex partners and number of regular sex partners (defined as one with whom the respondent had sex for at least 6 months prior to the interview). Participants' knowledge about HIV/AIDS was assessed with a written survey instrument that required them to select the behaviors that protect against HIV from a list of health maintenance practices that included diet, monogamy, public toilets, condom use, sharing food, mosquitoes, and needle sharing. They were also asked about the

source of information about HIV/AIDS. Their perceived risk of contracting AIDS was evaluated from their answer to the question, “Do you think you have a chance of getting HIV/AIDS or do you think there is a possibility for you to be infected?” The following questions assessed their experience with signs and symptoms indicative of STDs: (1) In the past 6 months, did you experience any pain or burning sensation during urination? (2) In the past 6 months, did you experience any abnormal discharges from the vaginal area? and (3) In the past 6 months, did you have any sores or ulcers in the vaginal area? Finally, the women were required to select from the following phrases the option that best described their use of condoms during the week preceding the interview: always used condoms, sometimes used condoms, never used condoms.

**RESULTS**

Registered female sex workers (RFSW) were contacted at their places of employment. These establishments and the number of women contacted in each place are: brothels (known as *casas*; 59 or 16%); massage parlors (87 or 24%); “beer gardens” (44 or 12%); nightclubs and bikini bars (119 or 33%); and videoke/karaoke bars (51 or 14%). Freelance female sex workers (FFSW) are sex workers who are not formally affiliated with any establishment. Most of them are streetwalkers and pimps or sidewalk vendors handle their business deals. They were located for this study in four general settings: streets (175 or 49%); port area (37 or 10%); place of work or residence (112 or 31%); and “nightspots” (36 or 10%).

As can be seen from Table I, most of the women who participated in the survey were between the ages of 20 and 29. In general, the freelance sex workers were younger than those who worked in more formal establishments ( $p < .0001$ ), although the differences in age were minimal in the third year of the study. Most of the women in both groups were unmarried. Educational levels were significantly higher among the RFSW ( $p < .0001$ ). The higher frequencies of marriage and completion of high school among the RFSW are likely related to their older ages. In both groups, more reported living with a partner rather than being formally married (87 vs. 44 for the RFSW and 101 vs. 24 for the FFSW).

As noted, all who were interviewed for this study reported having had sex in exchange for money in the week prior to the interview. Participants were asked how many sex partners they had had during the previous week. As can be seen in Fig. 1, RFSW

**Table I.** Sociodemographic Characteristics of Registered and Freelance Sex Workers (RFSW and FFSW)

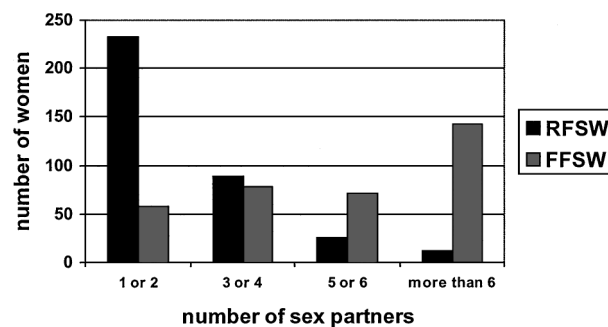
	RFSW (n = 360)	FFSW (n = 360)
Age group <sup>a</sup>		
Less than 19	47 (13%)	133 (37%)
20–29	240 (67%)	185 (51%)
30–39	58 (16%)	33 (9%)
Over 40	15 (4%)	9 (3%)
Marital status		
Single	194 (54%)	194 (54%)
Married	44 (12%)	24 (7%)
Living with	87 (24%)	101 (28%)
Separated/widowed	35 (10%)	41 (11%)
Highest educational achievement <sup>b</sup>		
Elementary or none	61 (17%)	163 (45%)
High school/vocational	247 (68%)	177 (49%)
College	52 (14%)	19 (5%)

<sup>a</sup> $\chi^2 = 49.8, p < .0001.$

<sup>b</sup> $\chi^2 = 74.2, p < .0001.$

reported far fewer sex partners than did FFSW ( $p < .0001$ ). The range for RFSW was 1–10 plus one outlier who reported 30 in 1998, whereas the range for FFSW was 1–30 with two outliers at 50 and 62; more than half of the FFSW reported having more than 7 sex partners and 21% reported more than 10. The mean number of reported sex partners for the RFSW was 2, median 2. The mean number for FFSW was 8, median 6. For the RFSW, 39% reported only one sex partner during the previous week, whereas only 7% of the FFSW reported only one sex partner.

Participants were also asked about regular sex partners. A regular partner implies regular sexual intercourse but does not necessarily involve marriage or even living in the same dwelling. Most of the women in both groups reported having one or two regular sex partners. The maximum number of regular sex partners reported by the RFSW was 4 (only three of the RFSW reported having more than two regular sex



**Fig. 1.** Total number of sex partners for the registered (RFSW) and freelance (FFSW) female sex workers ( $p < .0001$ ).

**Table II.** Knowledge of Ways of Avoiding Exposure to HIV/AIDS: Percentage of Women Who Agreed With the Statement

Practice	RFSW ( <i>n</i> = 360)	FFSW ( <i>n</i> = 360)
Have a good diet	124 (34%)	100 (28%)
<i>Stay with one faithful partner</i>	224 (62%)	205 (57%)
Avoid public toilets	89 (25%)	99 (27%)
<i>Use condoms during sexual intercourse</i>	259 (72%)	282 (78%)
Avoid sharing food with a person who has AIDS	83 (23%)	129 (36%)
Avoid being bitten by mosquitoes, etc.	105 (29%)	99 (27%)
<i>Use clean needles when injecting</i>	237 (66%)	230 (64%)
Mean score <sup>a</sup>	4.8	4.9
Know three ways of preventing HIV transmission	207 (57%)	204 (57%)

<sup>a</sup>Mean score reflects the average number of correct answers: True for the three statements in italics, not true for the other four.

partners). Fifty of the FFSW reported having three or more regular sex partners; four of them reported having more than 7 regular sex partners, with one reporting 19 regular partners during the week preceding the interview. Thus, for the FFSW especially, most of the sex partners of these women are considered nonregular, meaning that they are having sexual contact with a higher number of different individuals.

Participant's knowledge about HIV/AIDS was assessed with a written survey instrument (Table II). The message about monogamy, condom use, and clean needles seems to be getting to most of these sex workers, as more than half agree with the statements that reflect that knowledge. Unfortunately, there are several misconceptions about AIDS/HIV transmission revealed in Table II. Further analysis focuses on how many of the study participants know the three correct ways of protecting themselves from HIV transmission. The two groups are almost identical in this measure of knowledge.

Participants were also asked how they received information about HIV/AIDS. The source most frequently cited by RFSW was the city health office (reported by 92%), reflecting their pattern of visiting the city health office to receive their "health cards." In contrast, fewer of the FFSW report the city health office as a source of information, although it was reported by the largest number (60%). Other sources of information reported were television (74 and 56% for the RFSW and FFSW, respectively), workplace (38 and 11%), radio (29 and 16%),

newspapers (27 and 15%), and pamphlets (9 and 19%). Less frequently mentioned sources included church, schools, and community meetings. Although NGOs were not frequently cited as sources of information about HIV/AIDS, they are the usual providers of information in many of the other settings cited, most especially the workplace.

Participants were asked if they perceived that they had a chance of getting HIV/AIDS. Table III presents their responses to this question. When the groups are compared, eliminating the "don't know" category, the differences are highly significant. The FFSW are much more likely to assess their risk for HIV as high in comparison with the RFSW ( $\chi^2 = 41.07$ ,  $p < .0001$ ). This perception may reflect their

**Table III.** Assessment of Risk for Getting HIV/AIDS and Patterns of Condom Use

	RFSW ( <i>n</i> = 360)	FFSW ( <i>n</i> = 360)
At risk for getting HIV/AIDS <sup>a</sup>		
Yes	137 (38%)	217 (60%)
No	190 (53%)	104 (29%)
Don't know <sup>b</sup>	33 (9%)	39 (11%)
Consistent condom use during week before interview, all partners <sup>c</sup>		
Always used condom	167 (46%)	135 (37%)
Sometimes used condom	108 (30%)	193 (54%)
Never used condom	85 (24%)	32 (9%)
Consistency of condom use during week before interview, regular partners <sup>d</sup>		
Used	118 (40%)	83 (29%)
Did not use	175 (60%)	202 (71%)
Consistency of condom use during week before interview, nonregular partners <sup>e</sup>		
Used	211 (91%)	273 (83%)
Did not use	21 (8%)	57 (17%)
Marital status and condom use <sup>f</sup>		
Married or living with, always used condoms	34 (26%)	25 (20%)
Married or living with, sometimes used condoms	49 (37%)	92 (74%)
Married or living with, never used condoms	48 (37%)	7 (6%)
Single, always used condoms	133 (58%)	110 (47%)
Single, sometimes used condoms	59 (26%)	101 (43%)
Single, never used condoms	37 (16%)	25 (11%)

<sup>a</sup> $\chi^2 = 41.1$ ,  $p < .0001$ .

<sup>b</sup>This was not an option in 1997.

<sup>c</sup> $\chi^2 = 51.4$ ,  $p < .0001$ .

<sup>d</sup> $\chi^2 = 7.8$ ,  $p < .01$ .

<sup>e</sup> $\chi^2 = 7.4$ ,  $p < .01$ .

<sup>f</sup> $\chi^2 = 57.9$ ,  $p < .0001$ .

higher number of sex partners. In fact, for the FFSW, there was a significant association between assessment of risk and number of sex partners: three fourths of those who had five or more sex partners in the week preceding the interview perceived they had a chance of getting AIDS ( $\chi^2 = 16.01, p < .001$ , for risk assessment by number of sex partners). This relationship between risk assessment and number of sex partners was not observed for the RFSW.

Women were asked about the consistency of condom use in the previous week, based on the following categories: *always* use condoms, *sometimes* use condoms, and *never* use condoms (Table III). Overall, among the RFSW were women who were more likely to always use condoms than among the FFSW, but there were also women who were more likely to never use condoms ( $\chi^2 = 51.4, p < .0001$ ). Both RFSW and FFSW were much more likely to have used condoms during sex with their nonregular partners than with their regular partners (Table III). Is there a relationship between marital status and condom use (Table III)? Among the FFSW, women who were single were significantly more likely to use condoms than those who were married or living with a partner ( $\chi^2 = 32.35, p < .0001$ ). Among the RFSW, the same relationship holds ( $\chi^2 = 37.11, p < .0001$ ). Potentially alarming is the high number of married RFSW who report never using the condom (37%).

The relationship between self-assessment of risk and condom use was explored for the two groups of women. For the RFSW, those who perceived themselves not at risk for HIV were more likely to never use condoms, but they were also more likely to always use condoms in comparison with those who perceived themselves to be at risk ( $\chi^2 = 15.93, p < .001$ ). For the FFSW, there was not a significant association between perceived risk and condom use.

As can be seen in Table IV, among the FFSW, those with higher numbers of sex partners report a greater likelihood of always using the condom ( $\chi^2 =$

44.96,  $p < .0001$ ). A similar relationship between number of sex partners and condom use is seen among the RFSW ( $\chi^2 = 55.15, p < .0001$ ). Only three of the RFSW with three or more sex partners reported never using the condom during the week preceding the interview.

How does knowledge about ways to protect from HIV transmission affect condom use? For the entire sample of 720 women, there was no relationship between condom use and knowledge about ways of protecting from HIV transmission, nor was there a relationship between the two factors when the two groups of women were analyzed separately.

As noted, most studies of knowledge, attitudes, and practices regarding condom use report that knowledge and risk perception do not necessarily predict condom use. Several studies have reported that this is often because the woman herself does not make the decision about condom use, rather the partner makes the decision. During the third year of the study (1999), the 56 women who reported that they used a condom in sex with the regular partner were asked who made that decision. Among the 38 RFSW in this category, 20 (53%) reported that the decision was theirs, 6 reported that the partner made the decision, and 12 (32%) reported that the decision was mutual. For the 18 FFSW who used a condom in sex with the regular partner, half reported that the decision was theirs, half that it was a mutual decision. Those who did not use condoms during sex with the regular partner were asked who made that decision. For the RFSW the decision was made by the partner in almost half the cases, and by mutual agreement in almost half. Only three women reported that the decision to not use a condom was theirs. For the 85 FFSW who reported not using a condom during sex with the regular partner, 44 (58%) reported that the decision to not use a condom was the partner's, whereas 31 (41%) reported that it was a mutual decision. Only one of the FFSW said that the decision to not use a condom was hers. Although the RFSWs seemed to be slightly more involved in the decision-making process than the FFSWs, the differences are not significantly different. Those who chose *not* to use condoms with regular partners ( $n = 135$ ) were also asked why they had made that decision. The following reasons were given, ranked from *most* to *least frequently mentioned*: less sensation (mentioned by 97 women), hassle/arousal is interrupted (40), didn't think it was necessary (20), used other contraceptives (14), expensive (10), didn't think of it at all (7), painful (6), ashamed to purchase one (2), and not always available (1). Less sensation

**Table IV.** Condom Use by Number of Sex Partners

Number of sex partners	Always	Sometimes	Never
<b>FFSW<sup>a</sup></b>			
1-2	21	19	18
3-4	32	41	5
5 or more	82	133	9
<b>RFSW<sup>b</sup></b>			
1-2	88	63	82
3 or more	79	45	3

<sup>a</sup> $\chi^2 = 44.96, p < .0001$ .

<sup>b</sup> $\chi^2 = 55.15, p < .0001$ .

**Table V.** Condom Use by STD Signs and Symptoms

Signs of STDs	RFSW always	FFSW always	RFSW sometimes	FFSW sometimes	RFSW never	FFSW never
Absence	103 (43%)	146 (48%)	116 (48%)	83 (27%)	23 (9%)	78 (25%)
Presence	32 (27%)	21 (40%)	77 (65%)	25 (47%)	9 (8%)	7 (13%)

was also given as the primary reason for not using condoms with nonregular partners.

As part of the baseline data collection strategy, the women were asked about signs or symptoms indicative of STDs (pain/burning during urination, abnormal discharges from vagina, and sores/ulcers in the vaginal area) during the 6 months preceding the interview. Although less than half of the total number of women in this study reported signs indicative of STDs, this number is still cause for concern, as the risk of transmission of HIV is greater for those who have STDs. For the RFSW, 54 (15%) reported signs and symptoms indicative of STDs compared with 120 (33%) of the FFSW ( $\chi^2 = 33, p < .0001$ ). This higher incidence of reported STDs in the freelance women is not surprising, given the higher number of sex partners they also reported. For the entire sample of sex workers, there was a significant association between reported signs and symptoms indicative of STDs and number of partners ( $\chi^2 = 57.64, p < .0001$ ). Of those with five or more sex partners, 38% reported having signs or symptoms indicative of STDs; only 11% of those with 1–2 partners reported symptoms indicative of STDs.

Condom use and reported signs and symptoms indicative of STDs were associated in this study (Table V). Among the FFSW, the never-users were distributed evenly between those who did and did not report signs and symptoms indicative of STDs, but a greater percentage of the always-users reported absence of signs and symptoms indicative of STDs ( $\chi^2 = 9.80, p < .01$ ). For the RFSW, there were almost twice as many never-users who reported no signs and symptoms indicative of STDs as never-users who reported signs and symptoms ( $\chi^2 = 9.57, p < .01$ ).

As noted above, one of the primary characteristics that distinguishes registered and freelance sex workers is that the former are required to receive periodic exams for STDs and to carry a “health card” that certifies that they are free of STDs. When the women go for their exams, they are often provided with information on how to protect themselves against STDs, including HIV. Furthermore, as noted by Morisky *et al.* (1998), the establishment owners themselves may also provide information about protection to the women

who work for them. Interestingly, for the RFSW, the place of work is significantly associated with condom use in the present study, with those working in casas and massage parlors being much more likely to always use condoms and less likely to never use condoms than the women working in bars and nightclubs ( $\chi^2 = 38.42, p < .0001$ ). Although it was beyond the scope of this study, it would be interesting to see if the casas and massage parlors were more likely to provide information on STDs and condom use than did the bars and nightclubs.

Of interest in the original surveillance were trends from year to year in knowledge about HIV/AIDS and condom use. In Table VI we have summarized this information for the years 1997–99 and have included the results for the other two groups surveyed, the MSM and the IDU for comparison. As can be seen, the pattern of condom use from year to year is inconsistent. In 1997, 60% of the RFSW claim to have always used a condom during sex in the previous week; that number fell to 35% in 1998, and rose again to 44% in 1999. The FFSW show a similar

**Table VI.** Trends in Knowledge About HIV/AIDS and Condom Use in Four Cebu City Populations Engaged in High-Risk Behaviors, 1997–99

	1997 (%)	1998 (%)	1999 (%)	Total (%)
Know 3 correct ways to prevent HIV/AIDS				
RFSW	57	48	68	57
FFSW	71	41	58	57
MSM	73	67	78	73
IDU	53	62	78	64
Consistent condom use				
RFSW	60	35	44	46
FFSW	58	30	24	37
MSM	27	3	3	11
IDU	4	5	7	5
Condom use with regular partner				
RFSW	53	27	39	40
FFSW	42	26	19	29
MSM	35	10	9	21
IDU	5	2	15	7
Condom use with nonregular partner				
RFSW	89	85	99	91
FFSW	81	87	80	83
MSM	45	23	18	29
IDU	34	30	56	40



trend from relatively high use in 1997 to relatively low use in 1999. These patterns are similar for condom use with regular partners, as well. Condom use with non-regular partners had reached 99% among RFSW and 80% among FFSW in 1999. In general, the MSM and IDU populations were far less likely to use condoms than either of the groups of female commercial sex workers, despite their generally greater likelihood of knowing three correct ways of preventing HIV/AIDS.

## DISCUSSION

The results of this exploratory analysis of knowledge, behaviors, and practices related to HIV/AIDS in two samples of female commercial sex workers in Cebu City, the Philippines, show both similarities and differences when compared with similar surveys from other regions in the Philippines and other countries in Asia. For example, in Bali, Indonesia, 614 women from four groups of commercial sex workers were interviewed about their knowledge of AIDS, risk behaviors, and condom use (Ford *et al.*, 1998). The interviews took place in 1992–93. These women had many misconceptions about AIDS and almost half in the largest group ( $n = 407$ ) had never heard of AIDS. The total condom use rate with clients in the week prior to the interview was 38%. The women in our Cebu sample were more knowledgeable about HIV/AIDS and were more likely to use condoms, although the earlier time period for the Bali survey may account for lower levels of knowledge about HIV/AIDS in that sample.

In a study of 250 commercial sex workers in Ho Chi Minh City, Vietnam, self-reported condom use was reportedly high with clients (97.4% claiming to use condoms sometimes or usually) and somewhat lower with regular partners (38.3%; Giang *et al.*, 2000). Most of these women were working in the informal sector and did not have regular health examinations, but a system of peer education designed to promote condom use appeared to be having an effect on sexual behavior, according to the authors of that study.

Sentinel surveillance in Cambodia found a HIV sero-prevalence rate of 35% among commercial sex workers in 1996 (Morio *et al.*, 1999). An interview study of 200 direct commercial sex workers (brothel-based) and 220 indirect commercial sex workers (women working in beer promotion and massage parlors) found significant differences in practices related to condom use in the two groups. Almost two thirds

of the brothel-based women said they used condoms every time they had sex, compared with only 8% of the nonbrothel-based women. Many of the women stated that they would refuse to have sex with a client unless condoms were used. Almost all of the women claimed that they knew how to prevent STDs including AIDS, although the women were not given specific tests of that knowledge as was done in the Cebu study.

In a Philippine study of commercial sex workers by Morisky *et al.* (1998), 42% of the 813 respondents reported that they always used a condom when they had vaginal sex. Only 8% reported that they never used the condom. As noted above, these researchers found that the practices of establishments with which sex workers are associated had more influence on condom use than knowledge about and attitudes toward condoms expressed by individual sex workers. It should be noted, however, that most of the establishments with which those interviewed were associated did not have clear policies and practices for condom use. Although the present study did not investigate establishment practices, it is reasonable to assume that one source of the differences between establishment-based and freelance sex workers may be rooted in establishment rules and standards. Among the Iloilo City commercial sex workers interviewed by Liu and So (1996), only 15% of the registered sex workers admitted to never or rarely using condoms compared with 38% of the freelance workers. These results suggest that registration as a sex worker is associated with more accurate knowledge about the risks of the profession and ways in which to reduce those risks. Liu and So suggest that working in licensed establishments and regularly visiting the health clinics may give registered sex workers the confidence to insist on condom use with their clients.

Although it was not cited as a reason for not using condoms by participants in this study, one of the greatest obstacles to general population condom use in the Philippines is the objection of the Catholic Church in this nation where more than 85% of the population self-identify as Catholic. In fact, the Church has accused the Philippine government of exaggerating the AIDS epidemic to promote the use of condoms for birth control (*Los Angeles Times* 2/1/99; UNAIDS Epidemiological Fact Sheet, Philippines, 1997). In their pastoral letter on AIDS issued in 1993, the Catholic Bishops Conference of the Philippines urged Filipinos to reject the “condom-distribution approach to the problem” of AIDS (Francia, 1999). The bishops argued that condoms condoned permissive sexual behavior and their use for health reasons would lead

to their use for contraception. This letter was written in response to the condom advocacy programs of former Minister of Health, Juan Flavio (Francia, 1999).

Regardless of the reasons, in general, condom use in the Philippines is low. A 1993 survey of "randomly selected males" in three cities (Cebu, Manila, and Davao) found that 63% of the respondents had never used condoms and only 3% had used them for STD/AIDS protection (Tan, 1994). This is of particular concern, given the fact that extramarital sex is not uncommon in the Philippines. A survey conducted in 1990 among the "general population" of the Philippines noted that up to 12% of males aged 20–24 reported paying for sex (Tan, 1994). In another survey conducted in three Philippines cities (Manila, Cebu, and Davao) in 1993, 5% of the randomly selected male respondents reported two or more sex partners in the 4 weeks preceding the study. A 1997 study of extramarital sex in the Philippines found that "unprotected sex is common, as is sex with prostitutes" (Ahlburg *et al.*, 1997).

Nichter (1996) interviewed clients of commercial sex workers in Mindoro and found that even when they reported using a condom during sex, they did not necessarily use one every time they had intercourse in a given night. The 1993 National Demographic Survey found that less than 1% of the female respondents were currently using condoms (Tan, 1994). Table VII reports condom use among vulnerable groups surveyed in 1993 and 1994 (Tan, 1994). To facilitate comparison, we have added the data from the current study of female commercial sex workers to the table. As can be seen, the registered sex workers in Cebu were less likely to consistently use condoms than the registered sex workers surveyed in 1993 and 1994. The freelance sex workers, however, were more likely to have used condoms always or at all than their counterparts in the earlier survey. It will

be recalled that condom use actually decreased in frequency over the course of the 3-year survey reported here.

One of the major concerns that emerged from this study is the nature of the "knowledge" that these women have about HIV/AIDS. The "Health Belief Model" predicts that if a person knows how AIDS is acquired and assesses that he or she is at risk, he or she will adopt behaviors known to reduce the chances of acquiring HIV. The present study, however, supports previous research conducted all over the world that reveals a lack of association between knowledge about HIV transmission and practice of behaviors known to reduce it. Although more than half of the entire sample of 720 women were able to correctly identify three ways of preventing HIV transmission, it is not clear that they fully understood how HIV is transmitted and how condoms, clean needles, and monogamy are protective. Education campaigns on radio and television have been common in the Philippines for several years, and so it is likely that most people have heard at least one message about AIDS protection measures. It is less likely, however, that everyone who knows how to prevent HIV transmission also knows the mechanisms by which the virus is introduced into the body (Wu *et al.*, 1999). Thus, people may be able to answer correctly questions about HIV/AIDS, without fully comprehending the dangers to themselves.

In fact, the misconceptions about HIV/AIDS are informative. Liu and So (1996) note that 25% of the commercial sex workers they interviewed in Iloilo City, Philippines, believed that it is possible to contract AIDS from using a public restroom. Tan (1994) reports that the most common misconception about HIV/AIDS in Philippine studies he has reviewed is that donating blood puts one at risk for AIDS. In a 1993 comparative survey among dental, medical technology, and midwifery students and a 1991 survey of students at the University of Philippines, 68–93% of the respondents agreed with the statement that one can "get the virus by donating blood" (Tan, 1994). This suggests that those surveyed recognize that AIDS can be acquired through blood transfusions, but fail to understand that it is receiving blood rather than donating blood that puts one at risk. Abellanosa and Nichter (1996) report that more than one third of the 200 commercial sex workers they interviewed used antibiotics as prophylaxis for STDs and HIV. The unregistered sex workers in their study were five times more likely to use antibiotic prophylaxis and seven times less likely to use condoms.

**Table VII.** Condom Use for Selected Populations in the Philippines, 1993–99

Condom use	Number	Always	Sometimes	Never
Registered female sex workers	303	69%	25%	6%
Freelance female sex workers	109	29%	38%	33%
Male sex workers	106	1%	7%	92%
Men who have sex with men	192	2%	11%	87%
IDUs who have sex	135	6%	11%	83%
RFSW (Cebu)	360	46%	30%	24%
FFSW (Cebu)	360	37%	54%	9%

A related model postulated to account for health behavior is the “fear reduction model” (Sutton and Hallet, 1988, cited in Vincke *et al.*, 1993). According to this model, people will take steps to reduce their anxieties when presented with a health threat. As noted, however, the AIDS rate in the Philippines is relatively low and it is possible that very few of the women interviewed in this study actually knew anyone with AIDS or who had died from the disease. Thus, the threat may not have been real to them. Ratliff (1999) notes that in his ethnographic study of commercial sex workers in Manila and Angeles City, he spent hours talking with the women about their lives, work, families, dreams, romances, hopes, and fears, and yet no one ever mentioned AIDS. This suggests that the topic is not very salient to the women he interviewed, and it may be even less salient to the women in this study who live and work outside of Metro Manila.

The results of this initial analysis of survey data suggest several avenues for future research with commercial sex workers in the Philippines. First, there are a number of important details about sexual behavior that are not known. For example, do these women practice oral sex and, if so, does that account for the somewhat low number of women in both groups who say they “always use condoms?” It would be helpful to have more information on who makes the decisions about condom use and how much support for using condoms the establishments provide. As Sobo (1995) and others have pointed out, assessing reasons for not practicing safe sex requires much more depth of inquiry than surveys of knowledge, risk perception, and practices like that reported here. Issues such as cognitive versus embodied knowledge, decision-making processes, power imbalances between sex worker and clients/partners, and personal experiences with HIV/AIDS are all important contributors to decision-making about sexual practices and behaviors. Policy evaluators would have to consider these factors before recommending education programs or other avenues for reducing HIV/AIDS incidence among commercial sex workers in the Philippines.

In conclusion, although the current rate of HIV transmission in the Philippines appears to be low, the high numbers of women working in the sex industry and the high numbers of men availing themselves of that industry mean that the rate may not remain low. The results of this study suggest that women who work in regular establishments and register with the health department are more likely to protect themselves by using condoms more often and having fewer sex partners. One policy implication resulting from

this finding is that efforts might be aimed toward encouraging all commercial sex workers to become registered and to base their activities in establishments that may provide information and support for safer sex practices. Further information on how and why these women make the decision to use or not use condoms in sex would provide a basis on which to recommend other policies regarding safe sex practices. Fortunately, the surveillance continues for another 3 years, so we may have the answers to some of these questions in the future.

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