

Social and Behavioral Factors Associated with Condom Use among Female Commercial Sex Workers (CSWs) in Tarlac, the Philippines

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Abstract

This study examines social and behavioral factors associated with condom use among female commercial sex workers (CSWs) in Tarlac, the Philippines. One hundred and twenty-one CSWs who visited a social hygiene clinic for regular check-ups were asked to fill out a self-administered questionnaire with thirty-one items. More than 80% of the respondents had experience of using condoms with clients. However, only 48% of them used consistently. Six factors, level of education, knowledge of condom application, knowledge of condom effectiveness for preventing AIDS, knowledge of AIDS, use of other contraceptives, and sex premise managers' advice about using condoms, were significantly associated with their condom use by bivariate analyses. Following a logistic regression analysis, three variables, education, knowledge of condom effectiveness, and sex premise managers' advice, were revealed to be independently associated with consistent condom use. We recommend that managers of sex premises take an active role in advocating condom use, and that the effectiveness of condoms as an AIDS preventative be emphasized in future educational and interventional programs.

Key words: AIDS prevention, Commercial sex workers, Condom use, The Philippines, Questionnaire study

Introduction

Consistent use of condoms has been shown to be an effective strategy for reducing the risk of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV) infection. Acquired Immunodeficiency Syndrome (AIDS) prevention programs in many parts of the world have addressed the promotion of condom use¹⁻⁵. Several studies have investigated the social and behavioral determinants of condom use by commercial sex workers (CSWs). For example, higher rates of condom use have been reported in CSWs who charge higher prices in Bali, Indonesia. These CSWs also had a higher level of knowledge about AIDS and STDs, and had fewer partners⁶. A study in the Gambia showed that the frequency of condom use in prostitutes decreased as the number of contacts with clients increased. However, there were no significant associations between condom use and the age, level of

education, number of children, or use of other contraceptives, etc. in this group of CSWs⁷.

In the Philippines, the AIDS-STD Prevention and Control Program of the Department of Health includes the promotion of condom use to people in high risk groups. Both registered and freelance female sex workers have been identified as target groups for the National HIV Sentinel Surveillance System^{8, 9}. Previous studies have examined knowledge, attitudes, behaviors and practice among CSWs¹⁰, or the sexual behaviors of female prostitutes after diagnosis of HIV infection in Manila¹¹. However, little has been written about the social and behavioral factors associated with condom use by CSWs.

The objectives of this study are: (1) to obtain information on the frequency of condom use among registered female CSWs during sexual intercourse with clients; and (2) to investigate factors associated with their use of condoms. The implications for future appropriate interventions to increase condom use among CSWs are discussed.

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Methods

Study area

The province of Tarlac (population ca. 860,000¹²⁾, one of the provinces in Central Luzon Region, was chosen as the study area. It has a total area of 3,053 square kilometers, 1.0% of the total land area of the country. This area was selected because of its accessibility from Manila, and its well-organized provincial administrative system. CSWs in the Philippines are subjected to routine check-ups fortnightly for STDs at the social hygiene clinics (SHCs) that are operated under the direction of the Department of Health. Activities of the SHCs include surveillance, diagnosis of STDs/HIV, treatment of STDs such as gonorrhea, syphilis, and health education. If a CSW's checkup yields negative results, the SHC issues her a permit ("pink card") to engage in the licensed commercial sex industry. The number of CSWs in Tarlac varies throughout the year, as many are itinerant workers.

Data collection

The present study was conducted from the second to fifth week of October, 1995. Prior to the administration of the questionnaire in English with corresponding Tagalog translation, in-depth interviews with ten CSWs were conducted in July and the results were used in developing the survey. The respondents were expected to answer thirty-one questions. Of the 126 CSWs eligible to participate in the present study, 96.0% (N=121) completed the questionnaire. Of these, 90.1% (N=110) reported that they knew what a condom was. This group of CSWs with knowledge of condoms comprised the sample for the statistical analyses.

In order to determine the factors that influence condom use, the following subjects were included in the questionnaire:

1. Socio-demographic characteristics: Age, level of education, religion, marital status, and number of children.
2. Knowledge of and attitudes to condoms: Ten items in the questionnaire assessed the CSWs' knowledge and perception of condoms. These questions included items that asked about condom application and their effectiveness for preventing pregnancy, STDs, and AIDS. The questions about attitudes to condoms called for categorical responses. (Agree-Disagree).
3. AIDS knowledge and perceived susceptibility: To measure the level of AIDS knowledge, a series of ten statements were derived from the AIDS knowledge questionnaire developed by DiClemente et al¹³⁾. All the correct responses to the ten statements were counted, and high and low knowledge categories were determined based on a median split of the distribution of the scores. Perceived susceptibility was assessed using a single question: "Do you think you are highly at risk of getting AIDS?"
4. Other factors: Number of clients, history of STDs, use of other contraceptives, and sex-premise manager's advice. These four factors were assessed by the CSWs' response to questions as

follows: "How many clients do you have sexual intercourse with per week?", "Have you ever had an STDs?", "Are you using any other contraceptive methods besides condoms?", and "Does your manager advise you to use condoms during sex with clients?"

5. Frequency of condom use: A five-point Likert scale of "always, often, sometimes, seldom and never" was used. In this study, the CSWs who reported using condoms "always" and "often" were categorized as "consistent condom users", while the remainder were categorized as "infrequent users". This factor was used as the dependent variable.

Statistical analyses

The associations between the above factors and consistent condom use were assessed using contingency table analysis. Multivariate analysis was adopted to estimate independent contribution to consistent condom use. Factors identified as significantly associated with condom use in bivariate analyses were entered into the logistic regression model.

Results

1. Socio-demographic characteristics (Table 1)

The ages of CSWs ranged from 17 to 39 years, with an average of 23.9 (SD±2.4). The majority had high school education and more than 90% of the respondents were Roman Catholic. Although single women outnumbered married women, nearly 70% of the CSWs reported that they had one or more living children.

2. Condom knowledge and perception (Table 2)

More than 90% of the respondents reported that they knew about condom application. Their sources of information were health workers (44.6%), friends (21.6%), magazines or books (17.1%), and school (6.8%). More than 80% understood the effectiveness of condoms for preventing pregnancy, STDs, and AIDS. About half of the CSWs agreed that using condoms reduced sexual satisfaction.

3. AIDS knowledge and perceived susceptibility (Table 3)

Only 17.3% of the CSWs responded to all 10 items about AIDS knowledge correctly. The average score on these 10 questions was 7.1 (SD±2.4). Regarding perceived susceptibility, 48.8% (N=59) considered themselves to be highly at risk of contracting AIDS.

4. Number of clients, history of STDs, use of other contraceptives, and sex-premise manager's advice

Seventy-nine point one percent of CSWs reported having commercial sex three times or less per week. Among 26 CSWs (23.6%) who reported a history of contracting STDs, seven reported that they had contracted gonorrhea. Fifty-three CSWs (48.2%) stated that they used other contraceptives besides condoms, among which contraceptive pill was the most widely

Table 1 Socio-demographic characteristics.

Age (%)	N (%)	Education level (%)		Religion (%)		Marital status (%)		Number of children (%)	
15-19	33 (30.0)	None	2 (1.8)	Roman Catholic	100 (90.9)	Single	58 (52.7)	0	34 (30.9)
20-24	26 (23.6)	Elementary	25 (22.7)	Iglesia ni Cristo	5 (4.5)	Currently married	10 (9.1)	1	42 (38.2)
25-29	33 (30.0)	High school	77 (70.0)	7th day Adventist	2 (1.8)	Separated	35 (31.8)	2	18 (16.4)
≥ 30	18 (16.4)	College	6 (5.5)	Others	3 (2.7)	Widowed	6 (5.5)	3	12 (10.9)
						N.A.	1 (0.9)	≥4	4 (3.6)

N.A.: no answer.

Table 2 Responses to questions on knowledge and perception on condom.

Questions	Yes (%)	No (%)
<i>Knowledge</i>		
Do you know how to put on condoms?	101 (91.8)	9 (8.2)
Do you think condoms are effective for preventing pregnancy?	92 (83.6)	18 (16.4)
Do you think condoms are effective for preventing STDs?	94 (85.5)	16 (14.5)
Do you think condoms are effective for preventing AIDS?	92 (83.6)	18 (16.4)
<i>Perception</i>		
Do you agree or disagree with the following questions?	Agree*	Disagree**
Condoms often break/leak.	60 (54.5)	50 (45.5)
Condoms are slippery.	88 (80.0)	22 (20.0)
Condoms are dirty.	30 (27.3)	80 (72.7)
It is messy to use condoms.	31 (28.2)	79 (71.8)
It is painful to use condoms.	40 (36.4)	70 (63.6)
Using condoms reduces sexual satisfaction.	57 (51.8)	53 (48.2)

* "Agree" includes "Absolutely agree" and "Moderately agree".

** "Disagree" includes "Absolutely disagree" and "Moderately disagree".

Table 3 Responses to questions on AIDS knowledge.

Questions	Correct response (%)
Most people who get AIDS usually die from the disease.	100 (90.9)
Having sex with someone who has AIDS is one way of getting it.	96 (87.3)
What you eat can give you AIDS.*	86 (78.2)
AIDS is caused by a virus.	81 (73.6)
If you touch someone with AIDS you can get AIDS.*	80 (72.7)
AIDS can be cured.*	80 (72.7)
Using a condom during sex can lower the risk of getting AIDS.	72 (65.5)
Stress causes AIDS.*	69 (62.7)
AIDS can be spread by using someone's personal belongings like a comb or hairbrush.*	65 (59.1)
Just being around someone with AIDS can give you the disease.*	53 (48.2)

* Correct answer to these questions is "No".

Table 4 Frequency of condom use.

Question	Always	Often	Sometimes	Seldom	Never (%)
How often do you use condoms during sex with your clients?	42 (38.2)	14 (12.7)	24 (21.8)	9 (8.2)	21 (19.1)

used method (90.5%). Seventy-seven point three percent (N=85) answered that their sex premise managers advised them to use condoms during sexual intercourse with clients.

5. Frequency of condom use (Table 4)

Of the 110 CSWs who knew what a condom was, 50.9% (N=56) were considered to be consistent condom users. The rest of them were classified into the infrequent users. However, nearly 20 % reported that they never used condoms.

6. Bivariate analyses (Table 5)

Six factors were identified as significantly associated with consistent condom use: level of education, knowledge of condom application, knowledge of condom effectiveness for preventing AIDS, AIDS knowledge score, use of other contraceptives, and manager's advice.

7. Multivariate analysis (Table 6)

Factors significantly associated with consistent condom use in bivariate analyses were entered into the logistic regression model. Knowledge of condom application was excluded because of its skewed distribution. Significant factors were level of education, knowledge of condom effectiveness for preventing AIDS, and sex premise manager's advice. AIDS knowledge score and use of other contraceptives were narrowly eliminated, probably because of their association with level of education.

Discussion

This is the first study focusing on influential factors and frequency of condom use among CSWs in the Philippines. The results revealed that more than 80% of CSWs in Tarlac had experience of using condoms but their consistent use during sexual intercourse with clients was reported by only half of the subjects. Six factors were significantly associated with their condom use in bivariate analyses. Followed by multivariate analysis, three factors, level of education, knowledge of condom effectiveness, and manager's advice, were revealed to be independently associated with consistent condom use.

The importance of sex premise managers' involvement in AIDS/STD education programs has been pointed out recently by the Department of Health Research Institute health education report¹⁰. This report argued that maintaining smooth relationships and sustaining cooperation among all the parties concerned is a matter of extreme importance to the implementation of its recommendations. Campbell has suggested that enlisting the cooperation of pimps is important since they often had considerable influence over the behavior of prostitutes¹⁴. The results of the present study have provided the first statistical evidence that strongly supports these arguments. The actual involvement of managers should be seriously considered in the further development of educational programs.

Table 5 Association between consistent condom use and predictors.

Factors		Consistent condom use (N=56)	Infrequent condom use (N=54)	χ^2
Education	Low ⁽¹⁾	9	18	4.4*
	High	47	36	
Knowledge of condom application	No	0	9	10.2**
	Yes	56	45	
Knowledge of condom effectiveness	No	4	14	7.1**
	Yes	52	40	
AIDS knowledge score	Low ⁽²⁾	21	34	7.1**
	High	35	20	
Use of other contraceptives	No	21	32	5.2*
	Yes	35	22	
Manager's advice about using condoms	No	4	21	15.8**
	Yes	52	33	

(1) "Low" includes "none" and "elementary", and "High" includes "high school" and "college".

(2) "Low" includes the score of 7 and under in 10-item AIDS knowledge questions, and "High" includes 8 to 10.

*p<0.05, **p<0.01

In addition, knowledge of condom effectiveness for preventing AIDS and level of education were strongly associated with consistent condom use. This result suggests that the effectiveness of condoms should be stressed on in future educational programs to CSWs, rather than simply providing general information on condoms and AIDS. Their educational level should also be taken into account when deciding teaching methods in these programs. In the light of the increasing number of HIV positive cases in the Philippines (as of August 1995, 668 individuals were identified as HIV positive: 300 were females; 361 males; 7 unknown¹⁵⁾), several types of brochures and posters have been produced by government and non-government organizations. Radio and television have also been used as communication media to increase AIDS awareness. However, there is criticism suggests that the information is not detailed enough on the correct way to use condoms, or exactly what kind of sexual behaviors should be avoided. Moreover, the way in which condom use was explained tended to be too technical and to assume a high level of education background¹⁶⁾. Thus the development of educational programs that are appropriate to the target groups are badly needed.

Some cautions are required in interpreting the data in this study. Firstly, it is necessary to ensure whether or not the respondents' answers are consistent with their actual behavior, given the sensitive nature of the topic. The frequency of condom use may be overreported since the SHCs recommend condom use. On the other hand, history of STDs and number of clients may be underreported because it affects the value of commercial sex (e.g. fear of infection, clients' satisfaction, etc.). Nevertheless, the figure of consistent condom use in the present study (50.9%) is similar to another study conducted in Manila where 43% of the respondents

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Table 6 Result of logistic regression analysis.

Factors	Regression coefficient (B)	Standard error (SE)
Education	0.56*	0.27
Knowledge of condom effectiveness	0.68*	0.34
AIDS knowledge score	0.22	0.23
Use of other contraceptives	0.24	0.24
Manager's advice about using condoms	1.00**	0.32

Consistent condom use=1, Infrequent condom use=0.

*p<0.05, **p<0.01

reported frequent condom use¹⁷⁾. Moreover, information obtained from the in-depth interviews supports the conclusion of this study in general (data not shown).

Secondly, although this study has focused on the social and behavioral factors of CSWs, apart from the advice of sex premise managers, factors that could not be assessed in this survey may have significant influence on the frequency of condom use. Other information from clients and private partners of CSWs, for example, is also needed. In fact, several studies have revealed that the nature of the relationship between CSWs and their partners has influenced their use of condoms¹⁸⁻²⁰⁾.

Thirdly, since the target group of this study was registered sex workers, the results of this study are not applicable to freelance sex workers. The total population of freelance workers in Tarlac is not known and data collection through the SHCs is not possible for this population.

Lastly, the situation and characteristics of the study area should also be taken into account. When compared with Tarlac CSWs' population, CSWs in Manila and other big cities are more likely to be exposed to AIDS information and counseling programs conducted by government and non-government organizations than CSWs in the provinces. The results of this study will be more relevant to the provinces, of the Philippines, especially the Central Luzon Region.

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