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# Working in the Dark: A Look at the Violence Risk of the Street Prostitution Service

Hung-Hao Chang  
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**ABSTRACT.** Literature has shown that social exclusion can lead to vulnerability in the ability of a person to secure a decent standard of living. Among other vulnerable groups, street sex workers are subject to high levels of social exclusion. This study surveyed 140 street sex workers in Taiwan and investigated the factors associated with the risk for violence and assault by other sex workers and clients. In particular, this study quantifies the effects of sociodemographics, working conditions, and client characteristics related to the risk for violence. Results showed that violence risks from both clients and other sex workers are positively correlated. Prices charged for prostitution services, years in business, workplace, and risky behavior of the sex workers were significant determinants of risks. Moreover, the sociodemographic characteristics of the clients are also important for assessing the sex workers' risk for violence. Findings from this study can provide useful information for social service policies to reduce physical risks against sex workers.

**KEYWORDS.** Social exclusion, physical violence, prostitution, sex workers, Taiwan

## INTRODUCTION

Social exclusion is defined as a series of mutually reinforcing processes, such as poverty, poor education, severe health problems, lack of social support, and other adverse life events (Bradshaw, Kemp, Baldwin, & Rowe, 2004). It has been well documented that social exclusion will result in vulnerability and exclusion from enjoying the rights of

employment, health care, and a decent standard of living (e.g., Popay, Povall, & Mathieson, 2012). Social exclusion affects groups of people such as migrants, disabled people, and those suffering from mental illness, often as a result of impoverishment, discrimination, and lack of adequate social services. Among others, street sex workers are subject to high levels of social exclusion (Sanders, 2007).

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### ***Physical Violence Against Street-Level Sex Workers***

Physical violence is an important risk for sex workers and it has been documented that physical, sexual, and verbal violence are common experiences for many sex workers (e.g., Elmore-Meegan, Conroy, & Agala, 2004; Gilchrist, Gruer, & Atkinson, 2005; Silbert & Pines, 1981). Some studies have also investigated issues related to physical violence against sex workers and have indicated that violence is a prominent feature in the lives of sex workers. For instance, Spice (2007) argued that physical violence is the single greatest threat facing sex workers. Harding (2005) examined the experiences of female sex workers in Nottingham, and they found that almost all of the female sex workers in their study had experienced some forms of violence, whether physical, emotional, or sexual.

More recent studies have also revealed high levels of violence. For instance, Bindel, Breslin, and Brown (2013) found that two thirds of the sex workers they interviewed experienced violence. Because of social stigmatization and the illegal nature of the sex trade, sex workers are socially marginalized and are usual targets for physical violence. Moreover, it has been documented that men's violence against women is a common occurrence in the sex industry, and violence against sex workers, including murder, is rarely reported to the police (Karandikar & Prospero, 2010). In particular, in countries such as Taiwan and India where sex work is illegal and stigmatized, sex workers are afraid of reporting crime to the police because of the fear of being arrested (Jana, Basu, Rotheram-Borus, & Newman, 2004). A study by Sanders-McDonagh and Neville (2012) also showed that many sex workers had experienced increasing levels of violence and complained of harassment by police. Reporting of violent crime is low among sex workers. As a result, physical violence against sex workers underlines the need to address safety for sex workers and calls for assistance of social services.

There are several reasons why studying physical violence against sex workers is important. First, the consequences of physical violence can often lead to severe problems related to physical and mental health (e.g., Rossler

et al., 2010). Ward and Day (2006) examined the lives of 130 sex workers during a 15-year period and discovered that 2 workers in their cohort had been murdered during the 15-year period. Furthermore, the recording of violence against sex workers can also be problematic because the relationships between the police and sex workers can lack trust and understanding on both sides. Additionally, although it is possible that victims of violence may visit health facilities to receive treatment for injuries, it is unlikely that these incidents will be recorded in such a way that would identify the patient as a sex worker. There is no procedure among hospital staff for identifying sex workers, and in most cases, sex workers would be reluctant to reveal their occupation to health staff for fear of stigmatization (UK Network of Sex Work Projects, 2009). Given these facts, social services provided to sex workers are important to maintain their well-being.

Although few studies have focused on the violence risks of prostitutes, some empirical evidence has been provided. For example, some studies have concentrated on the risk for physical violence from clients (e.g., Bletzer, 2003; Brooks-Gordon, 2006; Hart & Barnard, 2003), while other studies have emphasized violence on the part of police (Sanders, 2004, 2005) and communities (Mayhew et al., 2009). In fact, prostitution is a business that involves not only sex workers but also pimps and peers. The violence often stems from the conflicts of profit sharing with pimps and competition from peers. Williamson and Cluse-Tolar (2002) demonstrated that the greatest risks of street-level prostitution service come from pimps and other sex workers using threats and physical assaults. Although violence risks to prostitutes from both clients and pimps are issues of academic concern, identifying the factors contributing to the risk has received little attention. This study provides an examination of the factors that are associated with these risks.

### ***Research Objectives***

This article investigates the violence risks against sex workers in Taiwan. In contrast to

previous studies on a similar topic, special attention was paid to quantifying the effects of the determinants of violence risks faced by sex workers. To the best of our knowledge, this article is among the first to provide quantitative evidence on this topic. Using a unique survey of the sex workers in Taipei City, Taiwan, we examined the extent to which their sociodemographic characteristics, working conditions, and characteristics of their clients are associated with the violence risks of being attacked by their clients and other sex workers. Payment is always dependent on the type of services rendered; therefore, this article examined how price was linked to the sex workers' violence risk. A further analysis examined the effects of the components associated with prostitution service pricing on the risks for violence. Results showed that violence risks from both clients and other sex workers were positively correlated. Service price, years in business, workplace, and risky behavior of sex workers were significant determinants of these two types of risks. Moreover, the sociodemographic characteristics of the clients were also important for the sex workers' physical violence risks.

## METHODS

### Sample

Data were collected in a district popular for securing sex worker services in Taiwan. One of the most active sex trade districts was selected, and a survey was distributed to gather information about street sex workers' health and safety. This research project was conducted with the permission and cooperation of the local community clinic center and police department in the district. The survey consisted of five sections<sup>1</sup> and 43 questions in total, 17 of which were related to health and safety.

Following the suggestions by police in the district, sex workers were identified. Because sex workers often received low-cost medical treatments at a local community clinic, the social workers associated with the clinic constantly interacted with the sex workers and

assisted in sample recruitment. All face-to-face interviewers were accompanied by a social worker whom the sex workers trusted. Each interview lasted 30 min to 40 min. From April to September of 2010, 140 street sex workers completed interviews.<sup>2</sup> For the purpose of confidentiality, no identifiers were affixed to any survey records and all of the respondents agreed to answer questions.

Three different categories of information were collected in this survey. The first part of the survey focused on the sociodemographic characteristics of the sex workers, including age and education, and the second part of the survey documented working conditions of the sex workers such as the price/charge of her service and years engaged in the business, among others. The third part of the survey collected information on the clients. Each respondent was asked if she would accept drunken clients, if she would provide services to foreign clients, and the average age of her regular clients. In addition to these three different parts of the questions, two unique questions were also designed to understand the risks confronting sex workers. Each sex worker was asked: "*Have you ever been physically attacked by other prostitutes or pimps during the past 6 months?*" and "*Have you ever been physically attacked by your clients during the past 6 months?*" The first question measures the risk that is related to the workers' peer groups—other sex workers and the associated pimps—while the second question measures the risk that is related to the clients. In each question, the answer "yes" or "no" was recorded. Accordingly, this study specified dummy variables for each of the two questions: The value of 1 was assigned if the prostitute answered "yes" and the code value of 0 was assigned if she answered "no."

Several explanatory variables related to the sociodemographic characteristics of the prostitutes, their working conditions, and characteristics of the clients were defined. The sociodemographic characteristics of the prostitutes included age and education. In addition, a dummy variable was specified if the prostitute had any criminal record. The second category of the explanatory variables was related to the working conditions. Three dummy variables

for the years during which each sex worker was engaged in prostitution were defined. Because income is likely to be an important indicator of the risks faced by the sex workers, a continuous variable was defined to measure the average price of her service. Three variables were also defined to indicate if the sex worker usually worked in a self-rented place, in a randomly selected hotel room, or in other arrangements. Because physical violence is likely to be determined by the different working hours, three variables based on the time when the sex workers usually worked were defined: 8 a.m. to 5 p.m., 5 p.m. to 12 a.m., or 12 a.m. to 5 a.m. Because the prostitutes' violence risk is associated with their appearance, outfits, and working behaviors, three dummy variables were defined: if the prostitute usually dressed in a "sexy" outfit for work, if she always carried

cash during working hours, and if she usually stood on dark street corners. Finally, characteristics of the participants were defined by several variables. The first variable was a dummy variable to indicate if the sex worker accepted drunken customers. Three dummy variables were specified for the age of regular clients. A dummy variable was also defined as to whether a sex worker would accept foreign clients. All definitions of the selected variables and their sample statistics are reported in Table 1.

### Statistical Methods

A bivariate probit model was estimated to examine the factors associated with the two violence risks of prostitutes: being physically attacked by clients and being physically

TABLE 1. Sample Statistics

Variable	Definition	Mean	SD
<i>Accident risk</i>			
Violence risks from peers	If ever physically attacked by other prostitutes during the previous 6 months (= 1)	0.23	0.42
Violence risks from clients	If ever physically attacked by clients during the previous 6 months (= 1)	0.26	0.44
<i>Sociodemographic characteristics of the prostitute</i>			
Age	Age in years	42.69	9.25
Primal	If less than junior high school (= 1)	0.50	0.50
Junior	If finished junior high school (= 1)	0.26	0.44
Senior	If finished senior high school or higher (= 1)	0.24	0.43
Criminal record	If had criminal record (= 1)	0.07	0.26
<i>Working conditions</i>			
Year 1	If worked in this business < 1 year (= 1)	0.38	0.49
Year 2	If worked in this business 1–3 years (= 1)	0.39	0.49
Year 3	If worked in this business ≥ 3 years (= 1)	0.23	0.42
Price	Average price (US\$/hour)	119.05	43.88
Workplace 1	If transaction in self-rented place (= 1)	0.21	0.41
Workplace 2	If transaction in a randomly selected hotel (= 1)	0.49	0.50
Workplace 3	If transaction in other places (= 1)	0.30	0.46
Workhour 1	If usually work between 8 a.m. and ~ 5 p.m. (= 1)	0.64	0.48
Workhour 2	If usually work between 5 p.m. and ~ midnight (= 1)	0.24	0.43
Workhour 3	If usually work between midnight and ~ 5 a.m. (= 1)	0.12	0.33
Sexy dress	If dressing sexy for business (= 1)	0.28	0.45
Carry cash	If always carry cash (= 1)	0.20	0.40
Dark corner	If usually standing at the dark corner (= 1)	0.17	0.38
<i>Clients' characteristics</i>			
Drunken_client	If accepted drunken clients (= 1)	0.06	0.23
Age50_client	If the average age of the clients is 50 years or younger (= 1)	0.59	0.49
Age5160_client	If the average age of the clients is 51–60 years (= 1)	0.30	0.46
Age61_client	If the average age of the clients is older than 60 years (= 1)	0.11	0.31
Foreign_client	If willing to take foreign clients (= 1)	0.07	0.26

attacked by other sex workers. If we let the binary indicators  $y_1$  and  $y_2$  represent the observed outcome of being attacked by clients or other prostitutes, respectively, and the latent variables  $y_1^*$  and  $y_2^*$  are their counterparts, the econometric model of the bivariate binary choice model can be specified as follows (Greene, 2010):

$$\begin{aligned} y_1^* &= x'\beta_1 + e_1, \\ y_2^* &= x'\beta_2 + e_2, \\ y_1 &= 1 \text{ if } y_1^* > 0; y_1 = 0 \text{ if } y_1^* \leq 0; \quad y_2 \\ &= 1 \text{ if } y_2^* > 0; y_2 = 0 \text{ if } y_2^* \leq 0; \end{aligned} \quad (1)$$

Where  $x$  is the vector of common factors that determine the sex worker's propensity to be attacked by clients or other sex workers. The vectors  $\beta_1$  and  $\beta_2$  are parameters of interest.  $(e_1, e_2)$  are random errors that follow a bivariate normal distribution with zero mean and unity variance, and the correlation coefficient ( $\rho$ ) captures the joint nature of these two accident risks. The consistent estimates of the parameters  $(\beta_1, \beta_2, \rho)$  can be obtained using the maximum likelihood estimation method. To quantify the effects of the determinants associated with the risk to the sex workers, we calculated the marginal effects for each explanatory variable. Marginal effect evaluates an additional change in the determinant on the likelihood of being attacked by other prostitutes or clients (see Greene, 2010, for a detailed description of the model).

## EMPIRICAL RESULTS

### *Who Are the Street Sex Workers of the Studied Sample?*

Table 1 summarizes the sample statistics of the selected variables. As presented in Table 1, 23% of the sex workers reported that they had been physically attacked by other sex workers and 26% of them had been physically attacked by clients. To capture the correlation of these two outcomes, we first calculated the Pearson correlation coefficient; the result was .38 ( $p < .001$ ). This result

provided a snapshot of the correlation between these two types of violence risks.

The average age of the prostitutes was 42.69 years and ranged from 23 years to 60 years (the sample distribution was presented in the right panel of Figure 1). The finding of older sex workers, rather than younger sex workers, is consistent with the fact that because the studied area has a long history of the sex trade in the service district, the average age of the street sex workers is believed to be older. Regarding education, almost half of the respondents had not finished junior high school. This result echoes the findings from previous literature on the return of human capital, in that prostitution is a low-skill business and requires low professional skills. In addition, about 7% of the respondents reported having criminal records.

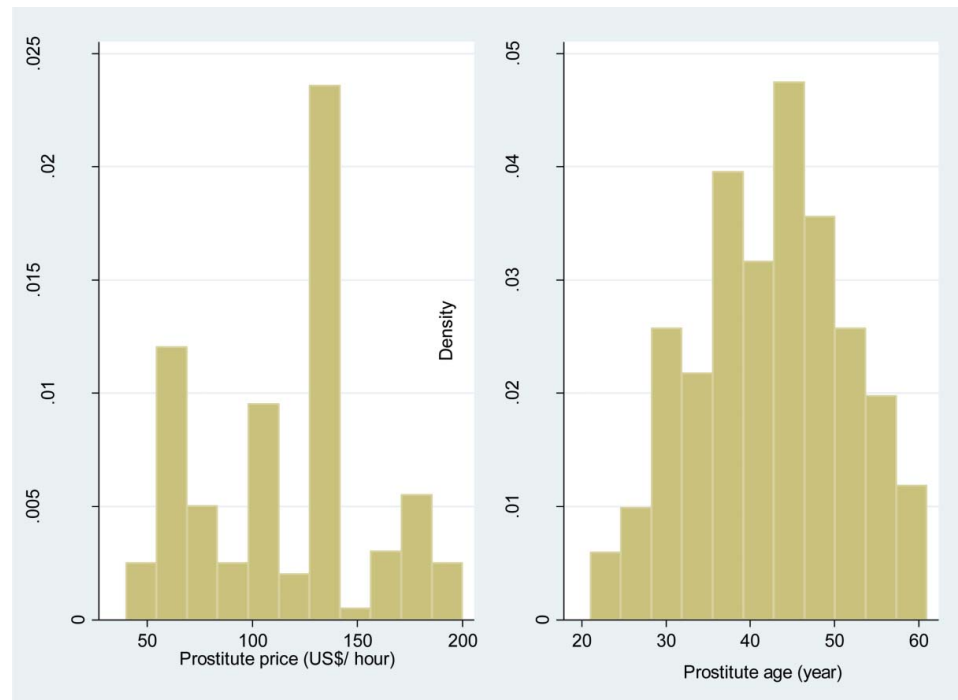
Information related to working conditions was also interesting. Results showed that 38% of the respondents worked in this business less than 1 year, and the average price of the service was US\$119 per hour and was not equally distributed (see the left panel of Figure 1). In addition, 21% and 49% of the respondents reported that they provided service in self-rented places and in randomly selected hotel rooms, respectively. Moreover, 64% of the respondents worked during the daytime, and only 12% worked from 12 a.m. to 5 a.m. Interestingly, 28% of the respondents reported that they usually wear sexy outfits to attract clients, and 20% reported that they usually carry cash with them during working hours. In addition, 17% of the respondents usually stand on a dark street corner waiting for clients.

With respect to the clients, most of the sex workers did not accept drunken or foreign customers. Interestingly, 30% and 11% of them reported that the average age of their regular clients was 51 to 60 years old and older than 60 years, respectively.<sup>3</sup>

### *Are These Two Violence Risks Correlated?*

In the empirical analysis, two different versions of the bivariate probit models were

FIGURE 1. Sample Distribution of Prostitute Price and Prostitute Age



estimated. The first model was a restricted model that only includes prostitute prices, age, and education levels. The estimation results are presented in Table 2. Based on the hedonic price theory, prostitute price can be seen as a combined outcome reflecting the effects of several characteristics, including working conditions and client characteristics. To provide a better picture of prostitute violence risks, we also estimated a full model that contains all of the variables of the sociodemographic characteristics of the prostitutes, working conditions, and client information, as defined in Table 1. The estimation results are presented in Table 3.

We begin our discussion of the empirical results by looking at the correlation coefficients between the violence risk of being attacked by other prostitutes or clients. Results pointed to a significant and positive correlation between these two risks: The estimated correlation coefficient  $\rho$ s were .720 and .688 in the restricted model (Table 2) and full model (Table 3), respectively. This positive correlation confirms

our hypothesis that the risks for being attacked by other prostitutes and by clients are correlated. Therefore, it is necessary to estimate the two different types of risks simultaneously because failure to do so would cause statistical inefficiency.

### ***Does Prostitution Services Pricing Affect the Violence Risks of Sex Workers?***

What is the role of prostitution service pricing on the likelihood of being attacked by other sex workers or clients? The answer to this question can be found in Table 2. Results indicated that an increase of US\$10 increased the probability of being attacked by other prostitutes and clients by 0.2% and 1.0%, respectively. This positive effect may not be unexpected because it may reflect the fact that sex workers charging higher prices were more likely to be targeted by clients and other prostitutes. The finding of a positive association between price and violence risk is consistent with the findings of

TABLE 2. Estimation of the Restricted Model

Variable	Violence Risks from Peers			Violence Risks from Clients		
	Coefficient	SE	Marginal Effect	Coefficient	SE	Marginal Effect
Price	.001 ***	.000	.0002	.003 ***	.001	.001
Age	-.001	.015	.000	-.022	.014	-.007
Junior	-.007 ***	.003	.002	-.386 *	.201	-.114
Senior	-.198 *	.113	-.057	-.394 *	.216	-.116
Constant	-.745	.833	—	.750	.820	—
$\rho$	.720 ***	.177				
LR test <sup>#</sup>	16.51 ( $p < .001$ )					
Log-likelihood	-143.261					

<sup>#</sup>H<sup>0</sup>: the parameter  $\rho$  is equal to 0.

\*\*\* and \* indicate significance at the 1% and 10% levels, respectively.

studies on workers in other industries. For instance, labor economics literature has demonstrated a trade-off between wage and job risks (Rosen, 1986). In this study, we found similar evidence on prostitution service pricing and the increased risk for violence.

### *Mechanisms That Link Prostitute Price and Violence Risks*

Although the finding of a positive effect of prostitution service pricing on violence risks is interesting, it may not reveal the complete story

TABLE 3. Estimation of the Full Model

Variable	Violence Risks from Peers			Violence Risks from Clients		
	Coefficient	SE	Marginal Effect	Coefficient	SE	Marginal Effect
<i>Sociodemographic characteristics of the prostitute</i>						
Age	-.015	.017	-.004	-.016	.015	-.005
Junior	-.080 *	.041	-.022	-.348	.307	-.100
Senior	-.167 *	.102	-.045	-.631	.356	-.168
Year 1	-.358 **	.147	-.096	-.786 **	.356	-.221
Year 2	-.289 **	.112	-.083	-.465	.309	-.136
Criminal	.043	.534	.012	.347	.483	.116
<i>Working conditions</i>						
Workplace 1	.503 ***	.138	.123	.135 **	.066	.040
Workplace 3	-.501 *	.298	-.139	-.262	.293	-.080
Time 2	-.236	.303	-.063	.083	.319	.026
Time 3	.165	.357	.048	.295	.311	.097
Sexy dress	-.197	.332	-.053	.269 **	.110	.085
Carry cash	.052 ***	.011	.014	.454 **	.225	.151
Dark corner	.931 ***	.385	.194	-.470	.346	-.126
<i>Clients' characteristics</i>						
Drunken_client	.828 **	.400	.289	.127 *	.069	.037
Age5160_client	-.050	.287	-.014	.076	.285	.024
Age61_client	.377	.501	.118	-.722 **	.316	-.172
Foreign_client	.736	.462	.252	-.260	.513	-.073
Constant	.376	.903	—	.765	.792	—
$\rho$	.688 ***	.100				
LR test <sup>#</sup>	19.751 ( $p < .001$ )					
Log-likelihood	-128.185					

<sup>#</sup>H<sup>0</sup> = the parameter  $\rho$  is equal to 0.

\*\*\*, \*\*, \* indicate the significance at the 1%, 5%, and 10% levels, respectively.



on the violence risks because price can be seen as a combined outcome determined by many different factors. In the full model (Table 3), we estimated the extent to which prostitute price may be determined by sociodemographic characteristics of the prostitutes, their working conditions, and the characteristics of their clients. Estimating the full model helps to clarify the potential mechanisms that link the positive association between prostitute price and violence risks.

As presented in Table 3, it is evident that the number of years spent engaged in street prostitution was significantly and positively associated with the risk for being attacked by other prostitutes and/or clients. Compared with prostitutes who have worked in the sex business for more than 3 years (the reference group), results showed that prostitutes who worked in this business for less than 1 year had a lower likelihood of having been attacked by other prostitutes and clients, by 9.6% and 22.1%, respectively. Although work experience can increase personal skill and decrease the likelihood of having occupational accidents for female workers in other industries, the same may not be said for sex workers. The positive effect of working experience on the likelihood of being attacked may reflect the higher possibility of conflicts with peers and customers; therefore, those who have worked longer in the sex business are more easily targeted compared with those prostitutes who are relatively new to this business.

The working environment also matters for the violence risks of prostitutes. As expected, the place in which the sex service was provided is also important. Compared with sex workers who ran their businesses in randomly selected hotel rooms, prostitutes who ran their business in their self-rented place had a higher risk for being attacked by clients and their peer group of prostitutes, by 4% and 12.3%, respectively. This result may reflect the possibility that prostitutes who work in a self-rented room for business are more independent, which means that they do not have much external protection from violence from a client. In addition, this result may also likely demonstrate that sex workers working in a self-rented room are more predictable to their customers and other sex workers. As a result, they are more likely to be attacked.

Interestingly, the results also indicated that street sex workers who usually wear sexy outfits to attract clients on the street have a higher probability of being attacked by clients, by 8.5%. This finding may point to the possibility that sexy outfits enhance the appearance of the sex workers, thus increasing their working opportunity. However, overly sexy outfits may raise clients' expectations on service, and if their expectations are not fully met, it may trigger physical assaults. It is also not a surprise to see that street sex workers who always carry cash during working hours have a higher likelihood of being attacked by their peers and clients, by 1.4% and 15.1%, respectively. Finally, it also makes sense that street sex workers who are used to standing on dark street corners to wait for clients had a 19.4% higher probability of being attacked by other sex workers.

The characteristics of the clients were also significantly associated with the violence risks faced by sex workers. It is not surprising to find a positive association between the likelihood of accepting drunken clients and the probability of being attacked by clients. Results indicated that sex workers who serve drunken clients have a higher chance of being attacked by their clients, by 3.7%. This positive association may simply show that drunken clients are in less control of their behaviors, and thus, they have a higher probability of attacking sex workers. The average age of the regular clients also matters. The result of the marginal effect shows that sex workers whose regular customers are older than 60 years are 17.2% less likely to be attacked by their customers. This finding may reveal the fact that older clients may have built long-term friendships with sex workers and thus have fewer trade conflicts with them.

### **DISCUSSION OF POLICY IMPLICATIONS**

Some implications of social service practices on prostitution can be inferred by the study findings. For instance, government policies designed for sex work usually tend to

focus on the law, the criminal justice system, and punitive measures to tackle and reduce sex work activities at the expense of health and safety (Cusick & Berney, 2005). This strategy has been criticized for its failure to adequately address sex workers' health issues, including the wider determinants of health, and to promote positive physical and mental health, which has the potential to reduce the numbers of people engaging in sex work through the improvement of health and life options (Jeal & Salisbury, 2013; Sanders, 2007). From the view of social service, our study identified the risk factors that are associated with physical violence against sex workers from both clients and other sex workers. Specifically, prostitute price, years in business, workplace characteristics, and risk behaviors of the prostitutes are significant determinants of these two types of violence risks against sex workers.

This information can be important for the social workers to help sex workers to reduce their risk for physical violence. First, our results indicated that sex workers who spent more years in street prostitution are at higher risk for physical violence. Therefore, a more effective prevention program to reduce physical violence against sex workers can be implemented by targeting the experienced street sex workers. Moreover, our results pointed out the importance of workplace environment on the risk for violence against street sex workers. To reduce the risk for physical violence against street sex workers, social service programs can be designed to encourage street sex workers not to work in self-rented rooms. Finally, our results indicated that characteristics of clients also matter for sex workers' violence risk. Social workers can share our findings and educate sex workers in not accepting drunken clients.

### **CONCLUDING REMARKS**

This article examines the factors related to the physical violence risks among street sex workers. Several interesting findings can be

summarized from this empirical analysis. First, previous studies have shown that prostitute service pricing is a significant determinant for the spread of HIV because sex workers may charge higher prices for unprotected sex services (Rao, Gupta, Lokshin, & Jana, 2003). Our findings also revealed that the prostitution service price is positively associated with the physical violence risks that the sex worker may face. As a result, sex workers who charge higher prices may face higher health and physical violence risks. With respect to the factors that are associated with the physical violence risks of the sex workers, age and education of the sex workers were not significant determinants. In contrast, years engaged in this particular business were important. It is evident that newer sex workers are less likely to suffer from both physical risks. Moreover, working conditions, sexy dress, and carrying cash all the time are important factors in regard to the physical violence risks of the sex workers. In addition to the sociodemographic characteristics of the sex workers, the characteristics of clients also matter. The behavior of serving drunken clients results in a higher probability of being attacked.

### **LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

Although some interesting findings were revealed in this study, some caveats remain. For instance, due to the difficulty in collecting a large-scale data set in the study of sex workers, our study relies on a unique survey in a specific district in Taiwan. Therefore, the authors cannot comment on the extent to which that the physical violence risks may differ in other geographical areas. Given the differences in economic and social conditions between rural and urban areas, if data permit, it would be interesting to investigate how the physical violence risks may differ for sex workers in rural and urban areas. If different risk factors are found for the physical violence risks of sex workers living in rural and urban areas, different policy implications can be drawn for social service practices.

In addition, as stated clearly in the article, the factors surrounding the risk for violence to

sex workers are complex. This study primarily focuses on street sex workers, and other channels of the prostitution service, such as soliciting via the Internet for business, have not been investigated. Future research efforts would benefit from addressing this issue. Moreover, it is likely that unhealthy lifestyle behaviors, such as drinking alcohol, smoking, and drug use, are associated with increased violence risks. A more comprehensive picture can be drawn if these types of behaviors are further considered. Because drug use is still illegal in many countries of the world, obtaining an objective measure of drug use is always a challenge for empirical studies. Therefore, this study cannot address this issue due to the limitation of the data. Regardless of these potential limitations, this study proposes an analytical framework to examine the physical violence risks against street sex workers. The analytical framework provided in this study can be easily applied to similar cases in other countries.

## NOTES

1. The five sections in this survey included Personal Characteristics, Working Conditions and Forms, Health Conditions and Prevention, Violence and Safety Experiences, and Policy Suggestions.

2. During the period in which the survey was conducted, the 140 respondents were about 60% of the street sex worker population in the district, as estimated by the police.

3. A continuous measure for the client's age was not used for two reasons. First, only a categorical measure of client age was documented in the survey. Moreover, two dummy variables were defined for clients aged 51 to 60 years and older than 60 years, respectively, because these two client age groups in particular may not look for sex services.

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