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Correlates of Suicidal Ideation and Attempt Among Female Sex Workers in China

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Abstract

The purpose of this study was to explore the factors associated with suicidal ideation and attempt among female sex workers (FSWs) in China. A cross-sectional survey was administered among 454 FSWs in a rural county of Guangxi, China. About 14% of FSWs had thought of suicide and 8% had attempted suicide in the past 6 months. Multiple logistic regression analyses indicated that those FSWs who were dissatisfied with life, abused alcohol, were deceived or forced into commercial sex, and had stable sexual partners were more likely to report suicidal ideation. Female sex workers who had multiple stable partners, experienced sexual coercion, and worried about an inability to make enough money were more likely to report a suicide attempt. These FSWs who entered commercial sex because of financial needs or who were influenced by the peers were less likely to report a suicide attempt. Our data suggested that the rates of suicidal ideation and attempts were high among FSWs in China, and there were multiple factors associated with their suicidality. Future health education and promotion efforts among FSWs need to take into consideration substance abuse, interpartner conflict, and psychological stress.

INTRODUCTION

During the past decade, suicide in China has been recognized as a great public health concern, not only because of the high suicide rate but also because of its unique epidemiologic characteristics (Ji, Kleinman, & Becker, 2001). A recent national estimation reported an annual suicide rate of 23 per 100,000, two times higher than the average global rate (10.7 per 100,000 Phillips, Li, & Zhang, 2002). China accounts for 21% of the world's population, but it accounts for 44% of all suicides and 56% of all female suicides in the world (Phillips, Liu, & Zhang, 1999). Suicide accounts for 3.6% of all deaths in China and is the fifth leading cause of death in the general population. In contrast with Western nations, suicide rates in China are higher in rural than in urban areas and are higher among females than among males in young age

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groups, especially among young females aged 15–34 years, whose rate of suicide is as high as 30.5 per 100,000 (Phillips, Li, & Zhang, 2002).

Given the critical role of suicidal ideation and attempt in leading to completed suicide (Reynolds, 1991), researchers have called for a greater effort to further understand the risk factors associated with suicidal ideation and attempt (Borges, Walters, & Kessler, 2000). Literature from Western societies suggests multiple risk factors for suicidal ideation and suicidal attempt, including biological, cognitive, psychological, social, and family factors. Psychopathology (e.g., depression and substance abuse) has been recognized to be the strongest predictor of suicidal behaviors (Brockington, 2001; Chaudron & Caine, 2004). These findings may not be generalizable to China, however, because of marked differences in social economic conditions and cultural traditions. For instance, in Western countries, more than 90% of suicides are associated with mental disorders, while only fewer than half of the suicides in China are associated with mental disorders (Ji et al., 2001; Phillips et al., 2002). Suicide in China traditionally has been understood not as the sequence of mental illness but as a response to social stress (Phillips et al., 1999). Suicide can be seen as one of the traditional forms of protest and escape from social distress or social pressure for Chinese women (Desjarlais, Eisenberg, Good, & Kleinman, 1999; Pearson & Liu, 2002). Higher suicide rate among females might reflect women's lower social, economic, and educational positions in China (Zhao, Qu, Peng, & Peng, 1994). Despite a growing interest to identify risk factors of suicidality among the general population of China, there is a lack of studies on vulnerable subgroups such as the FSWs.

The past decades also witnessed a rapid resurgence of commercial sex in China, driven and reinforced by growing economic disparities, greater freedom of population movement, increased disposable income, and changing sexuality (Gil, Wang, Anderson, Lin, & Wu, 1996; Hershatter, 1996). Depending on different definitions and methods used, the estimated number of FSWs in China varies from 4 million to as many as 10 million (Huang, Henderson, Pan, & Cohen, 2004; Pan, Parish, Wang, & Lao, 2004; Schafer, 2003). Previous studies suggested that most FSWs admitted entering commercial sex voluntarily, with economic motivations. Many women were attracted to the quick financial returns and chose sex work as a mean to support families. Some women were performing "survival sex" as a result of poverty and limited employment opportunities. A small portion of women (particularly young or underage girls) were deceived or forced into the sex trade against their will; and some entered the profession after marriage or relationship failure (Huang et al., 2004; Yang, Li, et al., 2005). Most FSWs work at entertainment establishments (e.g., karaoke, nightclubs, dancing halls, discos, bars) or personal service sectors (e.g., hair-washing rooms, hair salons, massage parlors, saunas, restaurants, hotels; Huang et al., 2004). Female sex workers in China face strong discrimination and stigmatization from society. According to current Chinese laws, commercial sex is illegal and often is considered as one of the "social evils" in Chinese society (Gil et al., 1996). Law enforcement agencies organize periodic clampdowns on the industry; FSWs and their clients are subject to fines and incarceration if arrested (World Health Organization [WHO], 2001).

Global literature suggests that, compared with the general population, FSWs generally have relatively higher rates of psychopathology and other health-related risks, including higher rates of depressive symptoms, drug use, and psychological distress (Alegría et al., 1994; El-Bassel et al., 1997; El-Bassel, Witte, Wada, Gilbert, & Wallace, 2001; Jones et al., 1998; Surratt, Kurtz, Weaver, & Inciardi, 2005). Only limited data are available regarding self-destructive behaviors such as suicide among the FSW population. For example, in a study conducted in Scotland, 53% of FSWs had thought of suicide (Gilchrist, Gruer, & Atkinson). A study conducted in the United States found that suicide accounts for 4.5% of deaths among a cohort of FSWs (Brody,

Potterat, Muth, & Woodhouse, 2005). Few studies examine the risk factors of suicidal ideation and suicidal attempts among the FSW population worldwide.

Likewise, there is a dearth of studies that examine the psychosocial well-being among FSWs in China, as most of the existing studies mainly have focused on the prevalence of the human immunodeficiency virus (HIV) and sexually transmitted diseases (STDs) and the related risks among this population. A study conducted among female migrant workers who exchanged sex for money found that more than half of the participants had an elevated level of depressive symptoms (Yang, Li, et al., 2005). Despite wide recognition of their stigmatized status, there is a scarcity of studies on suicidality among this vulnerable and marginalized population. Therefore, this study was designed to examine rates of suicidal ideation and suicide attempt among a group of FSWs in a rural county of China, and to examine the associations of FSWs' suicidal ideation and attempts with (1) social and demographic characteristics, (2) sexual history and current sexual practice, and (3) substance abuse, dissatisfaction, and worries.

METHODS

Study Site

The data in the current study were drawn from the baseline assessment of a longitudinal HIV/STD prevention project, which was conducted in 2004 in "H County," a rural county of Guangxi Zhuang Autonomous Region ("Guangxi"; Li et al., 2006). Guangxi, one of China's five autonomous and multiethnic regions, is located in southwest China, bordering Viet Nam. The prosperous economy and increased tourism in Guangxi have created a demand and market for commercial sex. According to statistics from the Guangxi public security agency, there are at least 500,000 FSWs in Guangxi. H County, about 90 kilometers northeast of Nanning, the capital city of Guangxi, is the most populous county in the Nanning suburban area. There are an estimated 200 entertainment establishments, in the county with more than 2,000 women providing commercial sex service.

Participants and Survey Procedure

Participants in this study were recruited from restaurants, barbershops, and hair-washing rooms in H County. The research team and local health workers identified entertainment establishments in H County through ethnographic targeted sampling strategies (Carlson, Wang, Siegal, Falck, & Guo, 1994). The owners/managers of these establishments were contacted for their permission to conduct research in their premises. Trained outreach health workers from the county Center for Disease Control and local hospitals approached women in the establishments to ask for their participation. Among 582 women contacted, 454 (78%) women agreed to participate in this study, provided written informed consent, and completed a self-administered questionnaire.

The survey procedure has been described in detail elsewhere (Li et al., 2006). Briefly, the survey was conducted in separate rooms or private spaces in the establishments where participants were recruited. No one was allowed to stay with the participant during the survey except the interviewer who provided the participant with necessary assistance. For participants with limited literacy (approximately 10%), the interviewer, read each question and response options from her copy of the questionnaire, while the participant marked the response on her own copy (so that the interviewers would not see the answers from participants). The questionnaire took about one hour to complete. The study protocol was approved by the Institutional Review Boards at Wayne State University in the United States and Beijing Normal University and Guangxi Center for Disease Control and Prevention in China.

Measures

Suicidal Ideation and Attempt—The questionnaire contained two questions concerning suicidality in the past 6 months: “Have you thought of committing suicide?” (yes/no) and “Have you attempted to commit suicide?” (yes/no). Those women who answered “yes” to the first question were considered to have suicidal ideation. Those women who answered “yes” to the second question were considered to have suicidal attempt.

Demographic Characteristics—Women’s demographic information collected in this study included their age, ethnicity (Han, Zhuang, Jingpo, Tong, and others), years of formal schooling, hometown type, migratory status, marital status, prior occupation (before becoming a FSW), living arrangement in H County, and current monthly income. For the purpose of data analysis in this study, ethnicities were categorized into Han, Zhuang, and others. Hometown type was grouped into rural and urban (including county seat and medium/large city). Migratory status was grouped into local residents (those women who had their permanent residence in H County) and migrants (those came to H County from other areas). Living arrangement was grouped into alone, with boyfriend or husband, with other family members, and with other FSWs.

Sexual History and Practices—Women were asked their sexual history and their current sexual behaviors. Questions regarding their sexual history included age of onset of sexual activities, their first sexual partner (client, husband, boyfriend/fiancé, and other), length of being a FSW, and reasons for becoming a FSW (e.g., financial needs, relationship failure, influenced by peers, deceived or forced, and other reasons). Questions regarding their current sexual practices included current workplace (restaurant vs. hair salon), average number of clients per week, maximum number of clients per day, and number of stable partners (i.e., nonpaying partners such as boyfriend, husband, long-term client). For the purpose of data analysis in this study, responses to the question on the number of stable partners were categorized into no stable partner, one stable partner, and more than one stable partner. Women also were asked if they had experienced sexual coercion (i.e., raped or forced to have sex) in the past 6 months (yes/no), if they ever had an STD infection (yes/no). In addition, their perceived risks of STD or HIV infection were assessed by asking, “How likely do you think you will be infected with STD (HIV)?” The 4-point scale ranged from “very likely” to “very unlikely.” Those who answered “likely” or “very likely” to these questions were considered perceiving themselves at risk of STD or HIV infection.

Substance Abuse, Dissatisfaction, and Psychological Worries—Questions regarding women’s substance abuse included daily smoking, “Have you smoked daily in the past 6 months” (yes/no), and alcohol intoxication, “Have you gotten drunk at least once a month in the past 6 months?” (yes/no). Life and work satisfaction were assessed on a 5-point scale: very dissatisfied, dissatisfied, neither satisfied nor dissatisfied, satisfied, and very satisfied. Those who answered “very dissatisfied” were considered as being dissatisfied with their life or work. Women also were asked the things they most worried about, including being known by family members for being a sex worker, being abused by clients, being unable to make enough money, getting pregnant, being raped or robbed, getting, STD, getting an HIV/AIDS, and getting arrested by police.

Analysis

Association of suicidal ideation/attempt with the demographic characteristics, sexual history and practice, and other individual characteristics were tested using chi-square (for categorical variables) or ANOVA (for continuous variables) analysis. Stepwise logistic regression analysis was employed to assess the multivariate association between suicidal ideation/attempt and other variables. All the variables that were significant ($p < .05$) in the binary analyses were

selected into the multivariate logistic regression models. Specifically, the independent variables included in the regression model for suicidal ideation were workplace, reasons for becoming a FSW, number of stable partners (none, one, or more than one), experience of sexual coercion in the past 6 months, daily smoking, alcohol intoxication, dissatisfaction with life, and worry of being known by family members as a FSW. The independent variables included in the regression model for suicidal attempt were years of schooling, workplace, living with husband/boyfriend, reasons for becoming a FSW, number of stable partners, experience of sexual coercion in the past 6 months, daily smoking, alcohol intoxication, dissatisfaction with life, worries (known by family members as a FSW, not able to make enough money). Odds ratios (OR) and 95% confidence intervals (95% CI) were calculated as the primary measures of association between outcome variable (suicide ideation or suicidal attempt) and the other factors. A stepwise option with backward elimination was used in the logistic regression analyses. All statistical analyses were performed using the Stata 8.0 statistical software package.

RESULTS

Demographic Characteristics and Associations with Suicidal Ideation and Attempt

The sample had a mean age of 23.5 ($SD = 5.1$) years, and 5.7 ($SD = 3.3$) years of formal schooling. Nearly 60% of the women received no more than 6 years of formal education. More than half of the women were of Han ethnicity (the ethnic majority in China, accounting for 92% of the total population nationwide); Zhuang ethnicity constituted about one-third of the sample. The majority of the women (89%) migrated from outside the H County. Most (80%) of them grew up in rural areas. Approximately onethird of them were married, 36% were single without a boyfriend, and 24% were single with a boyfriend. Prior to becoming a sex worker, approximately 41% of the women were peasants, 41% were migrant workers, and 18% were students or had no jobs. While working in H County, most of them (64%) lived with other FSWs, 25% of them live alone, and the rest live with a husband, boyfriend (7%), or other family members (5%). Their average monthly income was about 575 yuan ($SD = 523$, 8 yuan = approximately \$1 U.S.).

Among 454 FSWs in this study, 14.2% of the participants reported suicidal ideation and 8.4% reported a suicide attempt in the past 6 months. Demographic characteristics were compared between women who had suicidal ideation/attempt and women who did not (Table 1). There was no significant association of suicidal ideation with any of the demographic characteristics. There was no significant association of suicidal attempt with most of the demographic characteristics except the education level and living with husband or boyfriend in H County. Compared with women who did not attempt suicide, those who had attempted suicide had fewer years of schooling (5.6 yrs vs. 6.7 yrs, $p < 0.05$), and were more likely to be living with their husband or boyfriend (18.4% vs. 6.2%, $p < 0.01$).

Sexual History and Practices and Their Associations With Suicidal Ideation and Attempt

As shown in Table 2, a number of measures of sexual history and practices were significantly associated with FSWs' suicidal ideation and attempt. For example, women who had attempted suicide had a younger age of onset of sexual activities than those who did not. Women working in hair salons (barbershops or hair-washing rooms) were more likely to have had suicidal ideation and attempt than their counterparts working in restaurants. Women who experienced suicidal ideation and attempt were more likely to report relationship failure or being deceived or forced as reasons of becoming a FSW. They also were more likely to report having one or multiple stable sex partners, experiencing sexual coercion in the past 6 months, or having a history of STD infection. In contrast, those who did not experience suicidal ideation or attempt

were more likely to report that they did not have a stable partner, or that they had become a sex worker because of financial needs or influence from peers.

Substance Abuse, Dissatisfaction, Worries, and Their Associations With Suicidal Ideation and Attempt

As shown in Table 3, 15% of the participants smoked daily, and one third of them became intoxicated with alcohol at least once a month in the past 6 months. About 20% of the women were very dissatisfied with their work, and 18% were very dissatisfied with their life. Except for dissatisfaction with work, all of these behavioral characteristics were significantly associated with suicidal ideation and attempt. Specifically, those who experienced suicidal ideation or attempt were more likely to report substance abuse or dissatisfaction with life; these women also were more likely to report their worries about being known by family as a sex worker, or not being able to make enough money.

Multivariate Analysis

Variables that demonstrated statistical significance ($p < 0.05$) in bivariate analyses were entered into the stepwise logistic regression model for suicidal ideation or suicidal attempt. As depicted in Table 4, four factors were significantly associated with suicidal ideation: being deceived or forced into commercial sex (OR = 3.95, 95% CI = 1.45–10.74), alcohol intoxication (OR = 2.02, 95% CI = 1.14–3.58), dissatisfaction with life (OR = 2.16, 95% CI = 1.16–4.05), and having stable sexual partners (OR = 2.45, 95% CI = 1.16–5.17 for having one stable partner and OR = 4.34, 95% CI = 1.84–10.24 for having multiple stable partners). Four factors are significantly associated with suicide attempt: becoming a FSW because of financial needs (OR = 0.24, 95% CI = 0.09–0.58), influence from peers as a reason for becoming a FSW (OR = 0.10, 95% CI = 0.01–0.81), experience of sexual coercion in the past 6 months (OR = 2.92, 95% CI = 1.31–6.50), and having multiple stable sexual partners (OR = 3.21, 95% CI = 4.89–15.11).

DISCUSSION

To our knowledge, this report represents one of the first studies on suicidality among FSWs in China. We found high 6-month rates of suicide ideation (14.2%) and suicidal attempts (8.4%) in our sample. The rates among our participants were higher than among the general population but were comparable with those reported in other high-risk populations in China (e.g., adolescent girls). For example, a WHO-sponsored study among the general population in a small town of China found a rate of 18.5% for lifetime suicidal ideation, and a rate of 2.4% for lifetime suicidal attempt (Bertolote et al., 2005). Liu and colleagues (2005) found a suicidal ideation rate of 22% of suicide attempt rate of 7% among a sample of high school adolescent girls in rural China. Prevalence of suicidality generally considered is to reflect quality of life (Tousignant & Mishara, 1981). High rates of suicidal ideation and attempt among FSWs have significant public health implications and deserve public health attention.

Our data indicated that a number of psychosocial factors were associated with higher risks of suicidal ideation or attempt among FSWs in China. These factors included dissatisfaction with life, alcohol intoxication, experience of sexual coercion, being forced or deceived into the sex trade, worry about not making enough money, and stable sexual partnership.

Previous studies have reported high rates of substance abuse including alcohol intoxication among FSWs (Chiao, Morisky, Rasenberg, Ksobiech, & Malow, 2006; Inciardi, Surratt, & Kurtz, 2006). It also is evident that alcohol abuse is strongly associated with mental disorders and suicidal behaviors (Gomberg, 1989; Kolves, Varnik, Tooding, & Wasserman, 2006; Preuss et al., 2003; Wilcox, Conner, & Caine, 2004). In this study, one third of the participants reported

alcohol intoxication (got drunk at least once a month in the past 6 months), and these women were twice as likely to report suicidal ideation as their counterparts who did not abuse alcohol. Because our participants were recruited from entertainment establishments, alcohol use might be related to their working environment. More studies are needed on occupational hazards and mental health effects of commercial sex.

Sexual coercion (rape) is another risk factor for suicidal behaviors. Data indicate that women who experienced sexual coercion in the past 6 months were 2.92 times more likely to report suicidal attempts than those who did not have such an experience. Previous studies suggest that sexual violence is a strong predictor of mental disorders such as post-traumatic stress disorder and suicidal behaviors (Pico-Alfonso et al., 2006;Stepakoff, 1998). Female sex workers are particularly susceptible to sexual coercion (Farley & Barkan, 1998;Miller & Shwartz, 1995;Surratt et al., 2005). Previous studies suggested that those who raped sex workers might assume them to be sexually available on demand (Perkins, Prestage, Sharp, & Lovejoy, 1994). The illegal and stigmatized nature of commercial sex might further expose women to sexual violence. In addition, FSWs are difficult to approach with prevention efforts owing to the clandestine nature of their work and their fear of discrimination, arrest, and detention. Even though it has been suggested that FSWs working at establishments are safer than those working on the streets (Pyett & Warr, 1997), this study found that 14.5% of FSWs had experienced sexual coercion, which might have had a detrimental effect on their psychological well-being. Effective programs and resources to prevent sexual coercion against FSWs are urgently needed.

Some risk factors of suicidality reported in this study were especially relevant to the FSW population. For example, the reasons for becoming a FSW were associated with their suicidal behavior. Women who were deceived or forced into the occupation were almost four times more likely to report suicidal ideation. On the other hand, if they were driven into commercial sex by their financial needs or peer influence, their suicidal risk was much lower than their counterparts (OR = 0.24, OR = 0.10, respectively). This may be because these women might either have been aware of what they would encounter in the commercial sex services, or they may have been psychologically prepared for the situations they would have to go through in the business. Corroborating this postulation, we also found that women who worried about their inability to make enough money were at increased risk of a suicide attempt (OR = 2.38).

About two thirds of the FSWs in this study had stable sexual partners. Previous studies in this population have reported that many FSWs have stable partners (Yang, Li, et al., 2005). There are limited data, however, regarding how these partners affect FSWs' well-being. Data in this study indicated a strong association between stable partnership and FSWs' suicide ideation and attempt. Specifically, a FSW who had one stable partner was 2.45 times more likely to report suicidal ideation. A FSW who had more than one partner was 4.34 times more likely to report suicidal ideation and 4.89 times more likely to report a suicide attempt. One possible explanation of this finding was that the presence of stable sexual partners in a FSW's life might have caused a greater degree of interpartner conflict, which in turn caused an elevated level of suicidal intention or behavior. Conversely, another possible explanation is that the women who experienced suicidal ideation and attempt might be more likely to seek emotional support by engaging in a stable or nonpaying sexual relationship. Previous studies on suicidality in China characterized causes of suicidal behaviors among Chinese women to be a high level of impulsivity and experiences of negative and stressful life events, and often were triggered by an interpersonal crisis (Pearson & Liu, 2002;Yang, Phillips et al., 2005;Zhang, Conwell, Zhou, & Jiang, 2004). A study among a sample of rural women who attempted suicide found that family or relationship conflicts accounted for the majority of the causes of suicide attempts (Pearson, Phillips, He, & Ji, 2002). While the findings from these previous studies supported

the first speculation, further study is needed to explore the role of stable partnership in FSWs' suicidal behaviors.

Several potential limitations should be considered in the interpretation of the findings. First, the data in the current study were cross-sectional in nature, which precluded causal interpretation of the findings. Second, information on some important aspects of FSW's life, such as depression, anxiety, stress, and coping, was not available in the current study because of time constraints of the survey. Third, our participants were recruited from entertainment establishments in a rural county in a multiethnic region. Given the heterogeneity of FSW populations in China, generalization of findings from this study to other FSWs in China is limited.

Despite these limitations, the current study makes an important step toward increasing our understanding of suicidal ideation and attempt among FSWs in China. The results of this study provide evidence that prevalence and correlates of suicidal ideation and attempt among FSWs in China are serious issues that warrant public health concerns. Future health education and promotion efforts among FSWs in China should take into consideration their psychological stress and mental health. Specifically, based on our findings, we suggest future intervention efforts include components, such as culturally appropriate counseling services, to help FSWs reduce alcohol abuse, prevent sexual coercion, and reduce conflicts between FSWs and their stable sexual partners. Further efforts are needed to provide emotional and social support, to reduce stressful experiences in their daily life, and empower these women, ultimately, to prevent suicide among this socially marginalized population.

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Demographic Characteristics of Chinese Female Sex Workers (FSWs) and Their Associations With Suicidal Ideation and Suicide Attempt ($N = 454$)

TABLE 1

	Total %	Suicidal ideation		Suicidal attempt	
		Yes %	No %	Yes %	No %
N(%)	454 (100)				
Age (yr, mean $\pm$ SD)	23.50 $\pm$ 5.09	65(14.32)	389(85.68)	38(8.37)	416(91.63)
School (yr mean $\pm$ SD)	5.69 $\pm$ 3.30	23.43 $\pm$ 4.54	23.51 $\pm$ 5.18	23.29 $\pm$ 4.63	23.52 $\pm$ 5.14
Ethnicity		6.18 $\pm$ 3.39	5.60 $\pm$ 3.29	6.79 $\pm$ 3.35	5.59 $\pm$ 3.29 *
Han	54.48	55.56	54.31	50.00	54.90
Zhuang	31.84	34.92	31.33	44.74	30.64
Other	13.68	9.52	14.36	5.26	14.46
Migratory status					
Local (H Co.)	10.79	9.23	11.05	13.16	10.58
Migrants	89.21	90.77	88.95	88.84	89.42
Hometown type					
Rural	79.59	70.97	81.00	67.57	80.69
Nonrural	20.41	29.03	19.00	32.43	19.31
Marital status					
Single w/o boyfriend	35.62	36.18	32.31	36.47	26.32
Single w. boyfriend	24.34	24.29	24.62	23.43	34.21
Married	35.18	35.14	35.38	35.51	31.58
Divorced	4.87	4.39	7.69	4.59	7.89
Prior occupation					
Peasants	41.24	30.77	43.01	28.95	42.37
Migrant worker	40.58	44.62	39.90	55.26	39.23
No job/student	18.18	24.62	17.10	15.79	18.40
Living arrangement					
Alone	25.33	23.08	25.71	23.68	25.48
With husband or bf.	7.27	12.31	6.43	18.42	6.25 **
With other family mem.	4.85	1.54	5.40	2.63	5.05
With other FSWs	63.80	73.08	63.92	55.26	64.58
Monthly income (100 yuan, mean $\pm$ SD)	5.75 $\pm$ 5.23	5.66 $\pm$ 4.98	6.35 $\pm$ 6.56	6.15 $\pm$ 5.93	5.72 $\pm$ 5.17

* $p < 0.05$,

** $p < 0.01$.

TABLE 2
Chinese FSWs' Sexual History and Current Sexual Practices and Their Associations with Suicidal Ideation and Suicidal Attempt (*N* = 454)

	Total%	Suicidal ideation		Suicidal attempt	
		Yes%	No%	Yes%	No%
Age of onset of sexual activities(yr, mean $\pm$ SD)	18.62 $\pm$ 2.11	18.52 $\pm$ 2.15	18.64 $\pm$ 2.11	18.68 $\pm$ 2.11	17.97 $\pm$ 2.03 *
First sexual partner					
Clients	15.71	12.31	16.28	10.53	16.18
Boyfriend/fiancé	45.35	49.23	44.70	55.26	44.44
Husband	31.86	29.23	32.30	26.32	32.37
Friend/other	7.08	9.23	6.72	7.89	7.00
Months of being a FSW (mean $\pm$ SD)	12.18 $\pm$ 12.16	14.50 $\pm$ 14.53	11.79 $\pm$ 11.70	16.37 $\pm$ 15.84	11.80 $\pm$ 11.72
Workplace					
Restaurant	83.70	75.38	85.09	71.05	84.86
Hair salon	15.2	24.62	14.91	28.95	15.14 *
Reasons for becoming a FSW					
Financial needs	86.78	75.38	88.69 ***	68.42	88.46 *****
Relationship failure	10.35	20.00	8.74 **	28.95	8.65 *****
Influenced by peers	14.76	12.31	15.17	2.63	15.87 *
Deceived or forced	5.29	10.77	4.37 *	10.53	4.81
Other	2.86	3.08	2.83	7.89	2.40
Average # of clients/wk, (mean $\pm$ SD)	2.00 $\pm$ 1.75	2.22 $\pm$ 1.95	1.96 $\pm$ 1.71	2.17 $\pm$ 1.91	1.98 $\pm$ 1.73
Maximum # of clients/day(mean $\pm$ SD)	1.25 $\pm$ 0.60	1.34 $\pm$ 0.84	1.23 $\pm$ 0.56	1.46 $\pm$ 1.02	1.23 $\pm$ 0.55
Stable partnership					
No stable partner	31.74	17.19	34.11 ***	13.51	33.33 *****
1 stable partner	52.55	54.69	52.20	48.65	52.90
>1 stable partners	15.74	28.13	13.70	37.84	13.77
Experience of sexual coercion in past 6 mon	15.42	27.69	13.37 *****	36.84	13.46 *****
History of STD infection	19.38	27.69	17.99	23.68	18.99
Perceived STD risk	17.88	21.54	17.27	21.05	17.59
Perceived HIV risk	9.27	10.77	9.02	7.89	9.40

* $p < 0.05$;

** $p < 0.01$,

*** $p < 0.005$,

**** $p < 0.001$.

TABLE 3
Substance Abuse, Dissatisfaction, Worries, and Their Associations With Suicidal Ideation and Suicidal Attempt Among Chinese FSWs (N = 454)

	Total%	Suicidal Ideation		Suicidal Attempt	
		Yes%	No%	Yes%	No%
Daily smoking in past 6 m	15.42	26.15	13.62 [*]	36.84	13.46 ^{****}
Alcohol intoxication in past 6 m	32.82	47.69	30.33 ^{**}	55.26	30.77 ^{***}
Dissatisfaction with work	19.82	27.69	18.51	28.95	18.99
Dissatisfaction with life	18.50	32.31	16.20 ^{***}	34.21	17.07 ^{**}
Issues worried most					
Be known by family as FSW	55.85	67.69	53.87 [*]	73.68	54.22 [*]
Abused by clients	26.71	27.69	26.55	34.21	26.02 [*]
Cannot make enough money	19.65	26.15	18.56	34.21	18.31
Get pregnant	43.71	40.00	44.33	43.86	42.11
Be raped and robbed	14.13	13.85	14.18	23.68	13.25
Get STD	74.61	72.31	75.00	73.68	74.70
Get HIV/AIDS	57.84	60.00	57.47	63.16	57.35
Be arrested by police	36.64	41.54	35.82	47.37	35.66

*
 $p < 0.05$;

**
 $p < 0.01$,

 $p < 0.005$,

 $p < 0.001$.

TABLE 4

Stepwise Logistic Regression Analysis of Correlates of Suicidal Ideation and Suicidal Attempt Among Chinese FSWs^{1, 2} (*N* = 454)

Independent variables	Dependent variables	
	Suicidal ideation OR (95% CI)	Suicidal attempt OR (95% CI)
Reasons for being a FSW		
Financial needs	—	0.24 (0.09, 0.58) **
Relationship failure	—	—
Influence from peers	—	0.10 (0.013, 0.81) *
Deceived or forced	3.95 (1.45, 10.74) **	
Stable partnership		
No stable partner	Reference	Reference
1 stable partner	2.45 (1.16, 5.17) *	—
> 1 stable partners	4.34 (1.84, 10.24) ***	4.89 (1.59, 15.11) **
Experience of sexual coercion in past 6 m	—	2.92 (1.31, 6.50) **
Alcohol intoxication in past 6 m	2.02 (1.14, 3.58) *	—
Dissatisfied with life	2.16 (1.16, 4.05) *	—
Issues worried most		
Be known by family as FSW	—	—
Cannot make enough money	—	2.38 (1.06, 5.38) *

* $p < 0.05$,

** $p < 0.01$.

Note: Only OR and 95% CI of variables retained in the final regression models were presented in the table