



Published in final edited form as:

World Health Popul. 2007 January ; 9(1): 46–64.

Profile of female sex workers in a Chinese county: Does it differ by where they came from and where they work?

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Abstract

Since the 1980s, informal or clandestine sex work in the service or entertainment industry has spread from municipalities to small towns in most areas of China. Despite recognition of the important role of female sex workers in HIV and STD epidemics in China, limited data are available regarding their individual characteristics and social and environmental context of their work. Furthermore, most existing studies on commercial sex in China have been conducted in large cities or tourist attractions. Using data from 454 female sex workers in a rural Chinese county, the current study was designed to explore the individual profile of commercial sex workers and to examine whether the profile and sexual risk behavior differ by where the female sex workers came from and where they work. The sample in the current study was different from previous studies in a number of key individual characteristics. However, similar to previous studies, the sample in the current study were driven into commercial sex by poverty or limited employment opportunities, lived in a stressful life, were subject to sexual harassment and related violence, and engaged in a number of health-compromising behaviors including behaviors that put them at risk of HIV/STD infection and depression. The findings of the current study underscore the urgent needs for effective HIV/STD prevention intervention and mental health promotion program among female sex workers in China. The data in the current study suggest a strong association of individual profile with the economic conditions of work sites and residence status (in-province residency versus out-province residence) which suggests that such efforts must take the social and cultural contextual factors of their working environment (and sexual risks) into consideration.

Keywords

female sex workers; China; individual characteristics; sexual risk; HIV/AIDS; mental health

Introduction

The current official estimate of numbers of persons infected with HIV in China exceeds 650,000 (China Ministry of Health, 2006). While the number of infected individuals may be relatively small in a country with a population of 1.3 billion, the sharp increase in the prevalence of infection (e.g., over 30% annually) indicates a serious and rapidly deteriorating situation of HIV/AIDS epidemic in China. About two-thirds of infections were among individuals 20 to 39 years of age, with a male predominance. Although intravenous drug use and paid blood/plasma donation have been the major sources of infection, it is estimated that 31% of the seropositive cases in China were sexually transmitted (20% heterosexually and 11% homosexually) (Yang et al., 2005b). The resurgence of wide-scale commercial sex since the 1980's has now accelerated to a nationwide dilemma. Commercial sex has long been considered to be reservoir, if not "vector" for transmission of sexual diseases (Asthana & Oostvogels, 1995; Davis, 1993; Ford & Koetsawang, 1991; Karim, Karim, Soldan, & Zondi, 1995). Despite recognition of the important role of female sex workers in China's HIV and STD epidemics, limited data are available regarding their individual characteristics and social and environmental context of their work, which have been shown to be closely related to HIV/STD risk behaviors for women (Logan, Cole, & Leukefeld, 2002).

Prostitution in mainland China was declared to be eradicated in the early 1950s. Since the 1980s, it has emerged as a "flourishing industry", as a consequence of more political and economic freedom, increased disposable income, and liberalization of attitudes (Gil, Wang, Anderson, Lin, & Wu, 1996; Liao, Schensul, & Wolfers, 2003; Hershatter, 1996). While the actual number of female sex workers in China is unknown, the number of women engaging in commercial sex in mainland China has been estimated to be from 4 to 10 million (Yang et al., 2005b). Chinese women enter the sex trade through different paths or for different reasons. A small proportion of women (particularly young or underage girls) are deceived or forced into the trade against their will (Gil et al., 1996). A recent survey among a sample of 382 female sex workers in Shenzhen suggested that about 15% of these young women (average age of 24 years) enter the profession against their free will (Shenzhen Academy of Social Science, 2004). A large proportion is driven into the business as a result of poverty and limited employment opportunities. Some women (in both rural and urban areas) choose the sex trade as a means to support their families. Some unskilled, low-educated female rural-to-urban migrants come to urban centers looking for better lives but find limited opportunity for legitimate employment or employment that would provide them with living conditions above subsistence. Attracted by a relatively high income, some women enter the sex trade as a route to rapid financial gains.

There is great heterogeneity among female sex workers in China in terms of their working environment. Several researchers in China have classified female sex workers into a multi-layer spectrum (Huang, Henderson, Pan, & Cohen, 2004). "High-status" sex workers, who work in higher-class dance halls and clubs, or who cater as "call girls" to businessmen, are often able to charge high prices for their services, work in private settings, and afforded higher status than other workers. At the far end of the spectrum are "street-walkers", who are often considered to be at the very bottom of the hierarchy both by insiders and outsiders to the sex industry (Romero-Daza, Weeks, & Singer, 2003; Dalla, 2001; Rogers, Ying, Xin, Fung, & Kaufman, 2002). Some sex workers only work on a part-time or occasional basis to supplement their income from legitimate employment. For example, a recent study among female rural-to-urban migrant workers in Beijing and Naging China indicates that 6.3% of them had ever exchanged sex for money (Yang, et al., 2005a). In addition to the usual form of one-time sex trade, some women provide long term (several months, or even years) sex services to men, known as "Bao Er Nai" (meaning "hiring a second wife"). The payment to women is not on the basis of each sexual encounter; it is based on the demand of the relationship. For example,

the men may pay other expenses such as cost of the woman's board and lodging (Liao et al., 2003).

While some female sex workers in China are street-based or freelance, the majority of them encounter their clients in entertainment establishments (e.g., karaoke, night club, dancing hall, disco, bar) or personal service sectors (e.g., hair washing rooms, hair salons, massage parlor, sauna, restaurant, hotel). These establishment-based sex workers are called "Xiaojie" in Chinese (literally translating as "miss" in English) (Hong et al., 2006). While these establishments are all popular venues for women to provide sexual service to customers, they differ substantially in terms of the types of working and living conditions. Women in the entertainment establishments are normally not directly employed by the owners of the establishments, but are allowed to work there to attract customers who often come to the establishment to dance, sing, drink, and/or eat first. Usually, the women are selected by the customers as companions (e.g., for drinking or singing) and paid by the customers directly for sexual service afterward. The employers of the establishments typically provide living accommodation for these women on their premises, so that they can be available anytime. In hotels and restaurants, some women work as bar maids or waitresses, but also provide sex services for which the clients pay extra money directly to the women, while in other hotels and restaurants, some women only work as "entertainers".

Hair salons or hair-washing rooms have a reputation of providing sexual service in China. A recent ethnographic mapping and outreach project in Shenzhen City, China found that 80% of the hair salons in the city provided sexual services (Shenzhen Academy of Social Science, 2004). In a typical hair washing room and hair salon, an owner or manager (who is most likely an experienced sex worker) operates a shop with several young women. The shop usually opens from early morning until late night. Many young women are employed by hair salons or barbershops to provide unskilled services such as shampooing and head or body massaging (requiring no more than one-week on-the-job training). Many of these women negotiate sexual services with clients during such personal contacts. The establishments typically pay the women a minimum monthly base wage (e.g., 150 Yuan or equivalently US\$20). In addition to the base salary, the women receive a proportion (usually 10–20%) of the fees customers pay to the managers for the services (including sexual service) they provide. In addition, they may also receive tips from customers directly as part of their income.

Bathhouses are places where bath, massage and entertainment (e.g., chess, board games, etc.) are available in a single location, and are primarily oriented to the needs of middle- and high-income men. These establishments are usually open 24 hours a day and are especially busy at night from late evening to early morning. Women in bathhouses/massage parlors include massage technicians who provide head, foot or body massage service to customers, and receptionists, who are responsible for welcoming customers or providing customers with drinks, snacks or towels. Women working in beauty salons or bathhouses receive a base salary, supplemented by bonuses that are proportional to the number of customers they serve. They have contact with a wide range of persons during work (Zheng et al., 2001) and socializing with customers during work is expected.

Dance halls or nightclubs are places for entertainment or socialization (e.g., business discussions, enhancing relationships with clients, friends gathering, or seeking excitement). Women working in such establishments include waitresses and entertainers. Waitresses, who provide drinks and snacks, are employed by the owner and have regular work schedules and salaries. Most entertainers, however, are not employed by the owner but are allowed to work at the establishments because they attract clients and promote business through their escort services. Their income is dependent on payments or tips from the customers. In many of these entertainment establishments, female sex workers accompany clients for singing, drinking and

dancing and provide sexual service. These women's activities are often supervised and managed by "mommies" (pimps), who usually are former or experienced female sex workers (Hong et al., 2006).

The Chinese government policies towards commercial sex are based on the rehabilitation model that was instituted in the early 1950s with the goal of eliminating prostitution. However, actual government practices regarding commercial sex are more complex. On one hand, commercial sex is still illegal under current Chinese law and since the 1980s, the government has continued to pass laws to control commercial sex. Prostitution is one of the "seven evils" targeted by the government (Gil, 1991; Gil & Anderson, 1998). On the other hand, in practice, law enforcement is somewhat more tolerant of existing commercial sex enterprises. Some local governments have even promoted the entertainment establishments or personal service sectors that potentially provide commercial sex to attract foreign or out-of-town investors and businessmen. Within this context, commercial sex has spread widely throughout every city or township in the country; however, commercial sex is still subject to legal punishment. If arrested for sex trade, female sex workers and their clients are most likely to be fined (generally from 3,000 to 5,000 yuan), but repeat arrests (especially sex workers) may result in imprisonment at a reeducation center, where women or men are subject to education, treatment and forced labor for a period of six months to two years (Gil, Wang, & Anderson, 1994; Gil et al., 1996). Each year between 40,000 and 50,000 women are detained in these facilities (Qu et al., 2002). Sex work is a highly stigmatized occupation in China; female sex workers, who are not protected by the laws, are vulnerable to abuse, violence and infectious diseases including HIV and STD.

Since the 1980s, informal or clandestine sex work in the service or entertainment industry has spread from municipalities to small towns in remote areas (Hershatter, 1997; Pan, 1999). However, most studies on commercial sex in China have been conducted in large cities or in tourist attractions such as Guangzhou (provincial capital and largest city in South China) (van den Hoek, et al., 2001), Shenzhen (the first Special Economic Zone in China, bordering Hong Kong) (Lau, Tsui, Siah, & Zhang, 2002), Hainan (the largest Special Economic Zone in China, an island in the South of Guangdong and Guangxi Provinces) (Liao et al., 2003), Beijing (capital city of China) (Rogers et al., 2002), and Baise (a major trade center in Guangxi and neighboring provinces) (Qu et al., 2002).

Available data has revealed some characteristics of this population: most female sex workers are young, in their teens or 20s, with only a primary or junior high school education. Most of them were migrants from rural areas. They have high rates of STD (China CDC, 2004), are often engaged in risk behaviors including drug use and low rate of condom use. They have poor knowledge of HIV/STD prevention and low perception of HIV risk (Qu et al., 2002; Liao et al., 2003; Rogers, et al., 2002; Lau et al., 2002; Yang, et al., in press-a). Most of the female sex workers are highly mobile, moving from one establishment to another about every 3 to 4 months (Rogers et al., 2002), and frequently moving between cities (Pan, 1999).

Several studies addressing commercial sex conducted in China utilized data from incarcerated women (Gil et al., 1996; Gil & Anderson, 1998; Lau et al., 2002; Liu, Fu, Su, Kong, & Huang, 2001; Pei, Yang, Lai, & Wang, 2002). Among the millions of sex workers in China, only a small portion has been arrested and even fewer have been sent to reeducation centers. Therefore, findings based on data of women in reeducation centers may not be representative of the majority female sex workers. Some studies recruited participants from public STD clinics (Gil, 1996; Choi, Xiwen, Shuquan, Yiee, & Mandel, 2000; Wang 2001a, 2001b, Liu, Detels, Ma, Yin, & Li, 2003; Liu, Detels, Li, Ma, & Yin, 2002), which again might be a biased sample as most of the female sex workers rarely patronize public clinics or hospitals (Ref).

Recent research addressing women, sex and HIV suggested that most of the existing HIV/STD behavioral prevention intervention efforts do not sufficiently consider the range of important contextual and social factors that influence women's sexual behaviors (Logan et al., 2002). Studies on female sex workers in China in other parts of Southeast Asia indicate that the characteristics, HIV knowledge and awareness, and health behaviors of female sex workers vary by geographic location and work site (Ford, Wirawan, & Fajans, 1995; Wirawan, Fajans, & Ford, 1995). The existing literature also suggests an insufficient understanding of female sex workers in more remote Chinese counties and smaller metropolitan or rural areas (as opposed to big cities or tourist spots), especially regarding the women's individual and family characteristics, sexual experience and history of sex work, working and living environment, and health behaviors. While entertainment establishments where these women work vary substantially in terms of the context of working and living (Yang et al., 2005c), little is known about whether the profiles of female sex workers (e.g., demographic characteristics, sexual experience, and HIV-related risk behaviors) also differ by the type of working environment.

Therefore, the current study was designed to explore the profiles of Chinese women who provide sex service through entertainment establishments (e.g., restaurants, hotels, and hair-salons) in three geographic locations with different levels of economic development and different socio-cultural characteristics in a multi-ethnic county in China, with the goal of developing effective HIV/STD prevention programs in these settings. Specifically, this study was designed to (1) explore the profile of the study sample in terms of their individual characteristics, sexual experience, and history of sex work, working environment, and other health behaviors and mental health indicators; and (2) examine whether the profile and sexual risk behavior differ by where the female sex workers come from and where they work.

Methods

Study Site

The data in the current study were drawn from the baseline assessment of a longitudinal HIV/STD prevention project (Li et al., in press). The prevention project was conducted in H County, a suburban county on Nanning, the capital city of Guangxi Zhuang Autonomous Region ("Guangxi"). Guangxi, one of China's five autonomous and multi-ethnic regions, is located in the southern part of the country. It is bordered by Guangdong Province on the east, the Gulf of Tonkin on the south and Vietnam on the southwest. Because of its central location in southwest China, Guangxi has historically been a transport hub for trade, commerce, and tourism in southwest China and South East Asia. Guangxi has a population of 46.8 million, among which 72% are rural residents. The average annual per capita was 6,666 RMB (approximately US\$800) for urban dwellers and 2,321 RMB (approximately US\$280) for rural residents in 2001 (Guangxi Bureau of Statistics, 2004).

Guangxi has witnessed an alarming rise in HIV prevalence in the past decade. A total of 8,602 HIV infected cases has been officially reported as of the end of 2003, with an estimated number of infected cases as high as 80,000 (Guangxi CDC, 2004). Guangxi ranks third among Chinese provinces in terms of reported seropositive cases. Similar to the national epidemic, the majority of infected cases are from rural areas. The prosperous economy, international contact, and tourism in Guangxi have created a demand and market for commercial sex. According to the statistics from the public security agency, there are at least 50,000 female sex workers in Guangxi, although the actual number is believed to be substantially higher (Liu Wei et al., 2001). Female sex workers provide sexual service primarily through three venues in Guangxi: (1) hotels, restaurants, nightclubs, karaoke bars, dancing halls, and other entertainment establishments; (2) barbershop, hair-washing room, saunas, and massage parlors; and (3) roadside food stalls in rural-urban conjunctions (Liu et al., 2002).

H County, about 90 kilometers northeast from Nanning, is the most populous county in Nanning suburban area. H County has jurisdiction over 22 townships with a total population of 1.1 million (94.5% are rural residents). Similar to other areas of China, residents in H county are roughly divided into “urban” (county seat and towns) and “rural” (villagers or rural centers). The population in H county consists of 23 ethnic groups with the majority of residents being Han (60%) and Zhuang (37%). Zhuang is one of the 55 ethnic minorities in China. The Zhuang ethnic group, concentrating in the southwest China, shares a culture similar to Han, China’s ethnic majority (92% of the nation’s population). Zhuang people have their own dialects, but can also speak the country’s official language, Mandarin. Besides its proximity to Nanning, H County is the biggest production and distribution center for jasmine and jasmine tea in China. The officially reported number of drug users here is 1,976 in 2003. This number has been increasing at a rate of 15% per year. The actual number of drug users is estimated by the County health department to be about 8,000, among whom 70% share needles. The reported HIV prevalence among drug users was 20% in 2000, 25% in 2002. It was estimated that there are about 200 entertainment establishments with more than 2,000 women offering sexual service in the county. The majority of these women were working in restaurants, barbershops, and hair-washing rooms.

Sampling and participants

Participants in the current study were recruited from restaurants, barbershops, and hair-washing rooms from three geographic locations in H County: the county seat, a recently established development zone in rural-urban conjunction, and one rural township. The county seat has an area of 15 square kilometers with a population of 100,000. The development zone, about 10 kilometers from the county seat, is an area approximately 5 square kilometers in size. This zone was established in the late 1990s and has more than 100 small factories in the area. The development zone and surrounding areas have a population of 90,000. The rural township is 35 kilometers from the county seat and has a population of 35,000. The workplace (mainly restaurants, hair salons, hair-washing rooms, and massage parlors) was employed as the sampling unit. We employed ethnographic targeted sampling (Carlson, Wang, Siegal, Falck, & Guo, 1994) to identify and recruit participants. First, the research team and local health workers conducted an ethnographic-mapping of the establishments which provide sexual service. The ethnographic-mapping identified these establishments with information from local health care providers (e.g., STD clinicians, obstetricians or gynecologists), taxi drivers, public security agencies, and local business owners and residents. The mapping team collected data on the name and address of the establishment, estimated number of sex workers, operation history, and contact information of the owner/manager. A total of 85 establishments were identified in the three targeted areas (53 in county seat, 12 in the development zone, and 20 in the township) with an estimated number of greater than 800 female sex workers in these establishments.

Upon the completion of the ethnographic-mapping, the owners/managers of these establishments were contacted for permission to conduct study on their premises. Among the 85 establishments identified, 57 (67%) agreed to participate in the study. Following receipt of permission from the owner/manager, local outreach workers (mainly comprised of health workers from the county anti-epidemic station or local hospitals) approached the women in the establishments who were identified by the owner/manager as female sex workers. Once the sex worker status was confirmed by the women themselves, the outreach workers explained the purpose, procedure, potential benefits and potential risks of the study to and invited these women to participate. Those women who expressed interest in the study were provided with an informed consent form and were assured of confidentiality and privacy. A total of 581 women were approached in the 57 workplaces and 454 (78%) agreed to participate and provided appropriate informed consent.

Survey Procedure

Each woman who provided appropriate informed consent was assigned a unique personal code number and was given a self-administered questionnaire entitled “Health Survey for Women in the Service Sectors”. The questionnaire contains four main components: Demographic information, living and working conditions, health behaviors with sexual experience and history of sex work, and HIV/AIDS-related knowledge and attitudes. The questionnaire takes about 45–60 minutes to complete. The questionnaire was extensively pilot-tested in two waves among 22 women (7 in wave one and 15 in wave two) to ensure the appropriateness of the content and language for the study population. The participants completed the questionnaire in a separate room or a private space and recoded the unique personal code number to the questionnaire. No other person (e.g., co-worker, employer, or customer) was allowed to stay with the participant during the survey, except for a trained interviewer who could provide the participant with necessary assistance if needed. For participants with limited literacy (about 10%), the interviewer read each question and response options to the participants from the interviewer’s copy of the questionnaire, while the participants marked the response in their own copy (to ensure that the interviewer would not see their answers).

Most of the outreach workers and interviewers were health care workers from the county Anti-epidemic Station and local hospitals. They were carefully chosen and rigorously trained (and re-trained) on survey procedures and confidentiality issues and were asked to sign a pledge to protect the privacy and confidentiality of the participants. The study protocol was approved by the Institutional Review Boards at Wayne State University in the United States and Beijing Normal University and Guangxi Autonomous Region Centers for Disease Control and Prevention in China.

Measures

Individual and family characteristics—Participants were asked to provide information regarding their demographic characteristics which included age, year of formal schooling; ethnicity (Han, Zhuang, and other); place of home residence (Guangxi versus non-Guangxi), type of hometown (rural village, small town/county seat, small/medium city, major city); marital status (single without boyfriend, single with boyfriend, or ever married); whether the participant had a child; living arrangement in H county including living alone, with family member/relative (husband, child, boyfriend, parents, sibling, other relatives), or with other female sex workers; and workplaces including restaurant and other dining services (“Restaurant”) and barbershop, hair-washing room, message parlor, and sauna (“Hair-salon”).

Sexual experience and history of sex work—The information of the participant’s sexual experience collected included age of sexual onset, length of time being a sex worker, history of pregnancy and abortion, partner of first sexual intercourse (customer, boyfriend, husband, friends or other acquaintance, other), occupation prior to being a sex worker (student, peasant, migrant worker, unemployed, other); family members who knew that she was a sex worker, and the reasons for being a sex worker.

Working environment—The contextual factors of working environment were assessed using a number of questions: monthly income (in Chinese currency Yuan), time interval between change of workplaces (less than three months; every 3 to 6 months, every 6 to 12 month, more than 12 months, and never changed), money management (e.g., giving most to parents, managed by husband or boyfriend; saved by self; or spent most), number of sex workers in the current workplace; experience with law enforcement (e.g., was arrested, was fined, was sent to the Women Education Center), who were most of their clients (businessmen from other places, migrant workers, local peasants, local town residents).

Sexual behavior and HIV-related risk—The participants were asked about the average number of clients per week; maximum number of clients per day; number of their stable sexual partners (including long-term customers), being raped or forced to have sex in the last 6 months, having had a “sugar-daddy” (i.e., a rich man) in last 6 months; exchanging sex for drugs, sex under the influence of alcohol, and sex with client during menstruation. Participants were also asked about their sex acts with clients including group sex, oral sex, and anal sex (yes/no); and any use of protective measures with clients and stable partners in recent sexual encounters (e.g., last month). The participants were also asked about personal history of STDs infection.

Substance use/abuse and mental health indicators—Other health behaviors in the previous 6 months assessed included daily smoking (yes/no), alcohol intoxication (yes/no), illegal drug use (yes/no), and injection drug use (yes/no). Mental health indicators included life satisfaction, suicidal thoughts and actual suicide attempts in previous 6 months (yes/no), psychological worries, Attitudes toward sex work, and plans for the future. Life satisfaction was measured using two items (i.e., satisfaction with work and satisfaction with life) with a five point scale (1=very unsatisfied to 5=very satisfied). Participants were asked to check what they worried about most in their daily life from a list of 8 items: being known as a sex worker by family/relatives, being abused by customers, not making enough money, getting pregnant, being raped or robbed, getting STD, getting HIV/AIDS, and being arrested by police. Participants’ attitudes toward sex work were measured by five items: “The only difference in making money is an easy or hard way, but there is no right or wrong way”; “To me sex work is the same as any other job”, “If I had a choice, I would not be a sex worker”, “If I have been a sex worker once, it will be very difficult for me to do anything else”; “It does not make any difference if you do sex work just for one day or for your whole life”. Future plans included both short-term plan with her work (does it for a few more years, has no plan at current moment, wants to change to other job immediately), and long-term plan (to have own business; to get married and/or have child).

Statistical analysis

Chi-square (for categorical variables) and ANOVA (for continuous variables) were employed to assess the group differences in individual and family characteristics, sexual experience and history of sex work, working condition, substance use/abuse and mental health indicators. All statistical analyses were performed using SPSS V11.5 for Windows.

Results

Demographic characteristics

The final sample of 454 women was recruited from 34 restaurant-type establishments (n=380), 23 hair salons, hair-washing rooms or massage parlors (n=74) in three geographic locations (243 or 54% from the county seat, 131 or 29% from the development zone, and 80 or 18% from the township). The sample had a mean age of 23.50 years (SD=5.09) and an average of 5.69 years of formal schooling (SD=3.30) with about 70% being younger than 25 years of age (Table 1). More than one half the women had finished no more than 6 years of formal schooling and only 7% had more than 9 years of school. About one half of the sample was of Han ethnicity, and Zhuang ethnicity constituted about one-third of the sample. Other ethnicities (e.g., Jingbo, Dong) made up one-seventh of the sample. Among the participants, 299 (66%) were Guangxi natives among whom 49 (16%) were H county residents. Eighty percent of the participants grew up in rural villagers and additional 13% grew up in county seat. Sixty percent of the sample was never married, with one-fourth currently having a boyfriend/fiancée. A small proportion of them were divorced (n=20). When they were in H County, 77% of the participants were living with other female sex workers, 14% were living alone, and 12% were living with family members (child, husband, parents, and sibling), boyfriend, or relatives. Although nearly 40%

of the women had children including 92% (n=166) of the married and 2% of the single (n=6), only a small fraction of them (n=2) has their children with them in H County.

As shown in Table 1, the sample was significantly different by working location in a number of demographic characteristics. Compared to women working in the county seat or development zone, more women in the township were younger than 23 years of age (56%), with no more than 6 years of formal schooling (74%), ethnic minority (61%), Guangxi native (68%), and rural residents (95%). More women in township (93%) than their counterparts in county seat (72%) or development zone (77%) currently lived with other female sex workers ($p<.0001$).

Compared to Guangxi natives, non-Guangxi residents were older (26.95 versus 21.76, $p<.0001$), had more years of formal schooling (6.62 versus 5.23, $p<.0001$), had greater Han ethnicity (96% versus 34%, $p<.0001$), less likely to be rural residents (73% versus 83%, $p<.001$), more married (72% versus 24%, $p<.0001$), and had more children (72% versus 22%, $p<.0001$). The living arrangements in H County were similar between Guangxi residents and non-Guangxi residents with about three-fourth of them living with other female sex workers.

Sexual Experience and History of Sex Worker

Sex debut—The age of sexual debut for the entire sample was 18.62 years (Table 2). The age of sexual onset ranged from 13 to 27 years with the majority of them (85%) having had sex before 20 years of age. About 4% of them had sex between 13 to 15 years of age. While the age of sexual onset was similar across the work location, Guangxi residents were younger than non-Guangxi residents at the time of their first sexual intercourse (18.10 versus 19.64, $p<.0001$).

Length of sex work—Overall, the sample had a history of being a sex worker for just over one year (Table 2). Women in the township and Guangxi residents reported a shorter history of sex work than their counterparts in other locations ($p<.001$) or from other provinces ($p<.001$).

History of pregnancy and abortion—Sixty-three percent of the women had at least one pregnancy in the past, with 30% having one pregnancy, 19% having two, 8% having three, and 6% having more than three pregnancies. Among those who had at least pregnancy, about three-fourths had at least one abortion. While the history of pregnancy was similar across the work location, women in the county seat tended to have a higher rate of abortion (55%) than those in the development zone (48%) or township (36%). Compared to their Guangxi counterparts, Non-Guangxi residents had substantially higher rates of pregnancy (83% versus 53%, $p<.0001$) and abortion (62% versus 44%, $p<.0001$).

First sexual partners—Forty-five percent of the sample reported that they had their first sexual intercourse with their boyfriends, 32% with their husband, 16% with their clients, and 7% with friends or other people. While more women in the county seat had their first sexual intercourse with their boyfriends, more women in development zone and township had their first sex with their husbands. More Guangxi residents than their non-Guangxi counterparts had their first sexual intercourse with their clients (20% versus 7%), with their boyfriends (56% versus 25%), while non-Guangxi residents had first sex with their husband (64% versus 16%).

Prior occupation—About 40% of the women were peasants before they entered into commercial sex work and an equal number of them were migrant workers (41%). One-tenth had no job before and 5% were students in school. The distribution of prior occupations was significantly different across work location ($p<.0001$), with more women in township being

peasants (78%) and more women in county seat being migrant workers (51%). More Guangxi residents were migrant workers (46%) than non-Guangxi residents (29%), while more non-Guangxi residents than Guangxi natives were peasants (46% versus 39%) or jobless (15% versus 8%).

Secrecy of their work—The majority of the sample (89%) had kept the nature of their commercial sex work secret from their family members. Only 5% of them thought that their parents knew about it; 8% thought that their sibling knew about it, and less than 1% thought their boyfriends or fiancée knew about it. Among those who were married, only five (3%) thought their husbands knew about it. Such patterns were similar across the work location and province of residency except that the women who thought their husbands knew about their sex work were all Guangxi residents.

Reasons for engaging in commercial sex—Family financial hardship has been selected by most of the women as a major reason to engage in commercial sex (65%). This percentage was consistent between Guangxi and non-Guangxi residents (66% versus 65%). While it remained the most selected reason across all three work locations, more women in the township (74%) than in the county seat (67%) and development zone (57%) selected ($p < .05$) this reason. The other top reasons selected by the women included inability to find a better job (41%) and influence from their friends or fellow villagers (15%). More women in the development zone (52%) and township (50%) than in the county seat (32%) thought the inability to find a better job was one of the reasons for them to engage in commercial sex. Likewise, more women in the township (26%) than women in development zone (19%) or county seat (9%) said that they were influenced by their friends or fellow villagers.

Contextual factors of their working

Size of workplace—As shown in Table 3, there were about 16.39 ($SD=9.77$) female sex workers in each work place with an average of 15.43 female sex workers ($SD=7.96$) for work place in the county seat, 20.65 for those in the development zone, and 12.56 ($SD=4.99$) in the township ($p < .0001$). The mode of number of female sex workers seat was 2–5 for the county seat (26%), 21–50 for development zone (43%), and 11–15 for the township (38%, $p < .0001$). The number of female sex workers at the workplace did not differ between the Guangxi and non-Guangxi residents.

Income—Overall, the average monthly income was 576 Yuan (or equivalently about 70 US dollars), with 696 Yuan (or 85 US dollars) for women in the county seat, 419 (approximately 50 US dollars) in the development zone, and 468 (or 55 US dollars) in the township ($p < .0001$). About one-half of the women made no more than 400 Yuan (50 US dollars) monthly, while only 2% of the women made between 2,000 to 4,000 Yuan (250 to 500 US dollars).

Frequency of changing workplace—About 15% of the women typically stayed in any workplace for less than three months, 10% stayed from 3 to 6 months, 27% stayed from 6 to 12 months, and 48% stayed longer than one year. About one half of the women (52%) in the county seat or development zone stayed in one workplace longer than 12 months, while only 29% women in the township stayed in one place for more than 12 months ($p < .0001$). Compared to Guangxi residents, more non-Guangxi residents stayed in once workplace for more than 12 months (59% versus 43%, $p < .0001$).

Money Management—In terms of money management, about one-quarter of the women said they sent most of their income to their parents; 42% saved the money for themselves; 28% spent most of the money. Only about 5% said that they gave most of the money to their husband or boyfriend. More women in the county seat (29%) or the township (26%) than in the

development zone (16%) gave most of their money to their parents, while more women in the development zone (50%) saved money for themselves than women in the county seat (41%) or township (31%). The money management practice was significantly different between Guangxi and non-Guangxi residents, with more Guangxi residents giving money to their parents (33% versus 9%) and more non-Guangxi residents saving the money for themselves (62% versus 32%, $p<.0001$).

Experience with laws—There were only a small proportion of women who had experienced any problem with law or law enforcement agencies because of the involvement in commercial sex, which include 4% ($n=19$) had ever been arrested, 3% ($n=12$) ever was fined, and less than 1% ($n=3$) was ever sent to the women's education centers. While the numbers are not sufficient to examine the difference across work location and provinces of residency, it is interesting to note that all 3 women who had ever been sent to the women's education centers were working at the county seat and all were Guangxi natives.

Identity of clients—Local urban residents were identified by most of the women (61%) as their primary clients, followed by businessmen from other places (26%), local peasants (22%), and migrant workers in H County (15%). Local urban residents were the primary clients for both Guangxi and non-Guangxi women and for women in various work locations. However, more women in the county seat (36%) than women in the development zone (15%) or township (16%) provided service to outside businessmen ($p<.0001$). In contrast, more women in the township (34%) or development zone (28%) than women in the county seat (14%) provided services to local peasants ($p<.0001$). More Guangxi women than non-Guangxi women provided services to migrant workers (17% versus 9%) and local peasants (25% versus 17%, $p<.05$).

Sexual behaviors and HIV-related risk

Stable partnership—As shown in Table 4, on average, the sample had 1.29 stable sexual partners (husband, fiancé, boyfriend, lover or long-term client) and the number of stable sexual partners was similar across work locations. About 8% of the participants reported that they had a sexual relationship with a "sugar-daddy" (a rich man) in previous six months with more women reporting this in the county seat (11%) than women in development zone (3%) or township (5%) did ($p<.05$). The rates of having a "sugar daddy" were similar by province of residency (Guangxi versus non-Guangxi).

Number of clients—The women reported an average of 2 clients ($SD=1.75$) per week (ranged .25 to 14 clients), with 2.40 clients ($SD=2.18$) among women in county seat, 1.41 ($SD=.78$) in the development zone, and 1.65 ($SD=.73$) in the township. About one half of the women had one client per week and about one-fifth had 3 or more clients per week. The Guangxi natives reported more clients per week than non-Guangxi residents (2.13 versus 1.73, $p<.05$). The maximum number of clients per day averaged 1.25 ($SD=.60$) for the entire sample (ranged from 1 to 5). While the number was similar between Guangxi and non-Guangxi residents, women in the county seat reported a higher number of clients (1.34) than those in the development zone (1.08) or township (1.20).

Sexual coercion—About 15% of the sample reported being raped or forced to have sex during the previous 6 months, with more women in the county seat (20%) than those in development zone (13%) or township (5%) reporting such experiences ($p<.01$). The rates of being raped or forced to have sex were similar by province of residency (Guangxi versus non-Guangxi).

Sex acts—Only a small proportion of women had performed group sex with their clients (4%), with more women in the county seat (7%) than development zone (2%) or the township (0%) doing so. Similarly, only about 2% of the women had oral sex or anal sex with their clients. More Guangxi residents than non-Guangxi had group sex, oral sex, or anal sex, although none of the differences reached statistical significance.

Protective measures with clients—Male condom use and douching after intercourse have been the two protective measures that two-thirds of the women used with their clients during the recent month, followed by oral contraception pills (14%), intrauterine device (IUD) (13%), withdraw (12%), and rhythm method (11%). While the male condom usage and douching are the two most used preventive measures among women across work locations, more women in the county seat (78%) than women in development zone (45%) or the township (55%) reported any use of condoms ($p<.0001$). While more women in the county seat (14%) than those in the development zone (9%) or the township (4%) used rhythm method ($p<.05$), more women in the development zone (23%) than women in the county seat (8%) or the township (13%) used IUD ($p<.0001$). More women from Guangxi than those from other provinces used oral contraception pills (16% versus 9%, $p<.05$), condom (69% versus 56%, $p<.05$), douching (68% versus 58%, $p<.05$), or rhythm methods (14% versus 3%, $p<.0001$). In contrast, more non-Guangxi women than Guangxi women used IUD (29% versus 5%, $p<.0001$).

Protective measures with stable partners—Among those women who had stable partners ($n=309$), douching remained the most used preventive measure (62%) with their stable partners, followed by female condom (42%), oral contraception pills (17%), withdraw (16%), and rhythm method (16%). More women in the township (82%) than those in the county seat (56%) or development zone (65%) used douching with their stable partners ($p<.01$), while more women in the county seat (20%) than those in development zone (14%) or the township (4%) used rhythm method with their stable partners ($p<.05$). More Guangxi women with stable partners than their non-Guangxi counterparts used pills (20% versus 11%, $p<.05$) or rhythm methods (22% versus 7%, $p<.0001$).

Other sexual risks—Two women reported exchanging sex for drugs. Both women were working in the county seat and were Guangxi residents. About 29% of the women reported having had sex under the influence of alcohol. The percentage was similar across the work location, with more Guangxi residents doing so than non-Guangxi residents (32% versus 23%, $p<.05$). About 7% of the women reported having sex with clients during menstruation. The percentage was similar across work locations and between Guangxi and non-Guangxi residents. About one-fifth of the sample reported a history of STDs, which was higher among women in the county seat (23%) and the development zone (20%) than in township (7%).

Substance use/abuse and mental health indicators

Substance use/abuse—As shown in Table 5, 15% of the women had been a daily smoker during the previous month with the rate of daily smoking being similar across work locations. One-third of the women reported being intoxicated with alcohol at least once during the previous month. More women in the county seat (36%) and development zone (39%) than in the township (14%) had such an experience ($p<.0001$). Both daily smoking and alcohol intoxication were higher among Guangxi women than non-Guangxi women (18% versus 11%, $p<.05$ for daily smoking, 37% versus 24%, $p<.01$ for alcohol intoxication). There were 2% of the women used illicit drugs and 1% intravenous drugs during previous 6 months.

Life/work satisfaction—Only a small proportion of the women were satisfied with their work (4%) or their life (8%). The Guangxi women tended to be more satisfied with their life or work than non-Guangxi women, and the women in the township tended to be more satisfied

with their work or life than other women. However, none of the differences reached statistical significance.

Suicidal thoughts and suicidal attempts—About 14% of the women had thoughts about suicide during the previous 6 months and the rate was similar between Guangxi women and non-Guangxi women. About 8% of the sample had actually attempted suicide during the previous 6 months, with more Guangxi women (10%) than non-Guangxi women (6%) making such attempts. More women in the county seat tended to have suicidal thoughts and suicide attempts than other women, although the difference was only significant for suicide attempt ($p<.05$).

Psychological worries—The top five issues the women worried about the most during their daily life were STD infection (75%), HIV infection (58%), family's awareness of the nature of their work (56%), getting pregnant (44%), and being arrested by police (37%). In general, more women in the county seat worried about these issues than other women, particularly, issues about HIV infection ($p<.0001$), family's awareness of their work ($p<.05$), and being arrested by police ($p<.01$). In addition, more women in the county seat (18%) and the development zone (13%) than those in the township (4%) worried about being rapped and robbed ($p<.01$). There is no statistically significant difference between Guangxi women and non-Guangxi women on issues of worry, except that more Guangxi women (53%) than non-Guangxi women worried about getting pregnant ($p<.0001$).

Attitudes toward sex work—The majority of the women (81%) thought that they would not be sex workers if they had other choice. About one-fourth of the women viewed sex work as just another job. More than one-third of the women believed that once they had been a sex worker, it would be very difficult for them to do something else. About one-fifth of the women agreed that being a sex worker for one day is the same as being a sex worker all the time. Such views/attitudes were similar across work locations and between Guangxi and non-Guangxi residents except that more Guangxi women (41%) than non-Guangxi women (29%) believed that it would be very difficult for them to do something else in the future ($p<.01$).

Future personal plan—About 62% of the participants said they had no plans at all at the moment regarding their future. About 30% would like to find other type of jobs immediately, with about 8% of participants planning to continue in this line of work for a few more years. This pattern of response was consistent across the work locations and province of residency.

Regarding long term plans, nearly one half of the women would like to have their own business in the future. More women in the county seat (53%) and development zone (48%) than those in the township (25%) planned to do so ($p<.05$). Likewise, more non-Guangxi women (53%) than Guangxi women (43%) planned to own a business in the future ($p<.05$). Among those who were unmarried, about 80% would like to get married and have children. Among married women, one-third would like to have (more) children in the future. More unmarried women in township (93%) than women in county seat (76%) or development zone (81%) wanted to get married in the future ($p<.05$), while more married women in county seat (44%) than women in development zone (28%) or township (23%) to have children in the future ($p<.05$).

Discussion

This descriptive study provides data on individual profiles among women providing sexual service in a multi-ethnic area in China. The profiles were examined for differences across work locations and between Guangxi residents (in-province residents) and those who migrated to Guangxi from other provinces (out-province residents). The work location was employed in the current study as a representation of local economic conditions, as the township represents

a less economically developed rural setting and the county seat is the political, economic, and cultural center of the county. The data in the current study suggest a strong association between the individual profiles of female sex worker with the economic conditions of work sites and residence status (in-province residency versus out-province residency).

The majority of the women in the current study were young ($91\% \leq 30$ years), less educated (58% finished no more than 6 years of school), and unmarried (60%). About half of them were Zhuang or other ethnic minority groups and 80% grew up in rural villages. Sixty percent were never married with 40% of them having a boyfriend. Three quarters of them lived with other female sex workers while in H County. In average, they had an age of sexual onset between 18 to 19 years and 16% of them had their first sexual intercourse with a client. Compared to women in the rural township, women in the county seat had more years of formal schooling, more Han ethnicity, more non-rural residency, and higher monthly income.

The sample of female sex workers in the current study is different in a number of key demographic characteristics from female sex workers in studies conducted in other parts of China. First, the current sample was multi-ethnic with a mixture of Han majority (55%), Zhuang minority (32%), and other minority (14%). Most of the previous studies in other regions of China were conducted among women of predominately Han majority, ranging from 92.8% (Rogers et al., 2002) to 96.7% (Lau et al., 2002). Second, the women in the current study were less educated with more than 50% of women having finished no more than 6 years of formal schooling (or elementary school), compared to 13% in Beijing (Rogers et al., 2002) and 32% in Guangzhou (Lau, 2002). However, the ethnic distribution of the current study sample was comparable to other studies conducted in Guangxi (where the current study site is located). For example, a study among 487 female sex workers in Baise city of Guangxi found that 63% of the women were of Zhuang minority. The difference in ethnicity and education across different work locations in the current study also followed the same trend between studies in Guangxi and other economically advantaged provinces/regions, with more women of Han ethnicity and with relatively better education tending to work in locations with better economic conditions. These differences between the female sex workers in the current study and those in studies being conducted in major metropolitan areas (e.g., Beijing) or economically booming provinces or regions (e.g., Guangdong, Shenzhen, and Hainan), provide further support to the association of local economic conditions with demographic characteristics and their HIV-related risks among female sex workers.

The data in the current study suggest that the pattern of sexual service (e.g., the number of clients) among female sex workers also differed by the local economic conditions. The sample in the current study differed from female sex workers in other economically booming regions in numbers of clients. The women in the current study reported an average of 2 clients per week, which was much less than that reported in Guangzhou (median number of clients=7) (van den Hoek et al., 2001), Shenzhen (41% of female sex workers reported one client per day) (Lau 2002), or Beijing (average 1–2 clients per day) (Rogers et al., 2002). The number reported in the current study was comparable with that reported in the Baise study (average 10 clients per months) (Qu et al., 2002), a study in Jinan, Shangdong Province where 88.5% of the female sex workers reported having less than 5 clients per month, and a study in Hainan where 73% of the female sex workers reported having no more than a total of 20 clients during the previous 3 months (Pei 2002). Compared to female sex workers in other regions (Rogers et al., 2002; van den Hoek et al., 2002) and other bigger cities in Guangxi (Qu et al., 2002), the women in the current study also reported lower income (80% earned \leq US\$75 per month).

Most women in the current study were Guangxi natives (66%), which is consistent with other Guangxi-based studies in which Guangxi locals constituted 67% (Qu et al., 2002) of the study sample. In studies conducted in other regions of China, most female sex workers were young

migrants from other provinces. For example, the local women accounted for less than 10% in Shenzhen (Lau et al., 2002) or Beijing (Rogers et al., 2002) and 14% in Guangzhou (van den Hoek et al., 2001). The large numbers of local residents in Guangxi-based studies might suggest unique characteristics of female sex workers in small cities/towns or less-economically developed areas. The current study also found that compared to non-Guangxi residents, Guangxi residents were younger (21.76 versus 26.95, $p < .0001$), newer to the business (49% versus 33% engaging in commercial sex for less than 6 month, $p < .01$), and more frequent in changing workplace (18% versus 9% changed workplace at least quarterly). These differences between local women and migrant women might also suggest that some women engaged in commercial sex locally before moving on to other (more developed) parts of the country. The proportional change of various prior occupations across work locations also suggest that many rural women might start commercial sex in a small place (e.g., rural township) before migrating to bigger cities. For example, the proportion of women who were peasants significantly decreased from rural township, to semi-urban setting (development zone), and to county seat (78%, 39%, and 30%, respectively), while the proportion of women who were migrant workers increased from township, to development zone, and to county seat (15%, 38%, and 51%, respectively).

While demographic characteristics of the current sample were significantly different from studies in other regions of China, there were a number of similarities between findings in the current study and previous studies. First, most of the women were driven into the business by poverty or limited employment opportunities. The majority of the women perceived that they had no or little choice in their lives to do something else. Second, most of the women (89%) kept the nature of their work secret from their family members. Third, they considered sex work as a temporary way of money-making. While the majority of them did not perceive sex work as a “normal” job, few of them had a fatalistic review about their engagement in sex work and they did not perceive it would be difficult for them to separate from the business in the future. Fourth, most of these women engaged in health risk behaviors such as cigarette smoking, alcohol intoxication, and limited consistent use of condom. Finally, they were subject to sexual harassment and associated violence, since 15% of them reportedly were raped or forced to have sex during last 6 months.

Similar to previous studies (Huang et al., 2004), the sample in the current study also had a stressful life, as evidenced by low satisfaction with their work and lifestyle, and a high proportion of suicidal thoughts (14%) and suicide attempts (8%) during the last 6 months. Most of them worried about contracting STD/HIV, fears about their sex work being discovered by family members, and confrontation with law enforcement. While the majority did not have a plan for themselves for their present lives, most of them did hope to eventually return to their normal lives (e.g., get married and/or have children) in the future.

Researchers in both China and international communities have been concerned with the “bridging effect” of female sex workers in the rapid spread of HIV from a high risk population (e.g., intravenous drug users [IDU]) to the general population in China (Yang et al., 2005a). One aspect of the “bridging” is the mixture of commercial sex and illicit drug use among female sex workers. However, rates of illicit drug use, particularly the rate of IDU was low among this population. Although drug use was locally prevalent in Guangxi (Hammett et al., 2003), very few women reported exchanging sex for drugs. One of the reasons for this low rate of drug use among female sex workers may be because they were relatively new to sex work. In addition, a small number of women in the current study reported having anal sex. This finding is consistent with previous studies in which the rate of anal sex among Chinese female sex workers was about 1% (van den Hoek et al., 2001; Qu et al., 2002). The low rates of illicit drug use (including IDU) and other risk sexual behavior (e.g., anal sex) among female sex workers present a window of opportunity for early prevention efforts among this population.

Despite their young age, short personal history of sex work, and relatively low number of clients, the sample of female sex workers in the current study faces a significant risk of HIV/STD infection and transmission. The self-reported history of STD infection was similar to those in more economically advantaged regions such as Shenzhen (15%, Lau et al., 2002). The proportion of women who never used a condom with their clients during previous month was similar to those reported in other studies (Yang et al., 2005a). Similarly, condom use with stable partners was also low among this population. In addition, most of female sex workers in the current study had concurrent multiple sexual partners in a mixture of commercial and non-commercial partners.

The data in the current study indicate that a very small proportion of female sex workers had experience with law enforcement (e.g., being arrested, fined, or incarcerated). One reason for such a low incidence might be the relative short personal history of sex work among the study population. Another possibility is that the actual number of arrests and incarceration are indeed small, despite the governmental intention to eliminate commercial sex. Nevertheless, this low number underscores the importance of community-based research among this population.

There are potential limitations in the current study. First, the sample was recruited through convenience sampling rather than random sampling. Because commercial sex is technically illegal in China, a random sampling is not feasible. Therefore, caution is needed in generalizing the findings from this study to other female sex worker populations. However, the fact that our sample is comparable to other Guangxi-based studies in a number of key demographic characteristics (e.g., age, ethnicity, education, residence) provides evidence of the representative nature of our sample. Second, the current sample is multi-ethnic, while the proportion of ethnic minorities in the current sample mirrored the ethnic composition of the Guangxi population, the sample limited the ability of these findings to be generalized to other regions where other ethnic groups (e.g., Han) predominate in the population. Third, because the original study was not designed to examine the personal profile of female sex workers, some important information (e.g., family socioeconomic status) was not collected due to space limitations of the survey instrument.

The findings in the current study have some important public health implications. First, there is an urgent need for effective prevention intervention programs targeting this new, but rapidly growing female sex worker population, particularly in remote, rural areas. Given the relatively low education, low income, and young age among this population, empowerment and alternative employment/education opportunities should be part of the intervention efforts. Similarly, mental health promotion is needed among this population to increase their adaptive coping strategies with their stressful lives. Second, the associations between the local socioeconomic conditions and HIV risk behaviors among female sex workers suggest that HIV/STD intervention efforts among female sex workers must take the social and cultural contextual factors of their working environment (and sexual risks) into consideration. Intervention efforts may be more effective if efforts at multiple levels (e.g., individual, family, community, environmental, and structural) can be implemented synergistically across multiple contexts of risk factors (Pequegnat & Stover 2000).

Acknowledgements

This project is supported by a grant from the NIH Office of AIDS Research (R01MH064878-3S1). The authors want to thank other research team members from the China CDC Center for AIDS/STD Control (Hui Liu), China CDC Resources Center for STD Prevention and Treatment (Guojun Liang, Ping Yang, Xiaohong Su), Guangxi Zhuang Autonomous Region CDC (Wei Lu, Dongmei Huang, Weijian Lu, Qinghua Chen, Linzhen Guo), H County Anti-Epidemic Station (Canjian Lu, Feng Chen, Qinghua Lei, Zutiab Lu, Zilong Meng, Jiancheng Zhou, Yan Nong, Biwei Wei, Li Ma, Huang Ling), Beijing Normal University (Danhua Lin and Linyuan Zeng), Wayne State University Pediatric Prevention Research Center (Jiantong Fuo, Hongjie Liu, Xinguang Chen). The authors also want to thank Joanne Zwemer for assistance in preparing the manuscript.

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Table 1

Demographic Characteristics

	Overall	City	Zone	Town	Guangxi	Non-Guangxi
N (%)	454 (100%)	243 (54%)	131 (29%)	80 (18%)	299 (66%)	155 (34%)
mean age	23.50 ± 5.09	23.36 ± 4.69	24.08 ± 5.62	22.99 ± 5.34	21.76 ± 4.04	26.95 ± 5.23
Age group ≤22	234 (52%)	125 (51%)	64 (49%)	45 (56%)	192 (62%)	40 (27%)
Schooling				(<i>p</i> = .019)		(<i>p</i> = .003)
0-6 years	260 (58%)	127 (53%)	74 (58%)	59 (74%)	187 (63%)	71 (48%)
7-9 years	158 (35%)	96 (40%)	46 (36%)	16 (20%)	96 (32%)	61 (41%)
>10 years	32 (7%)	19 (8%)	8 (6%)	5 (6%)	15 (5%)	17 (11%)
mean schooling	5.69 ± 3.30	6.12 ± 3.33	5.81 ± 2.97	4.19 ± 3.34	5.23 ± 3.36	6.62 ± 3.00
Ethnicity				(<i>p</i> = .006)		(<i>p</i> = .000)
Han	243 (55%)	130 (54%)	82 (66%)	31 (39%)	99 (34%)	145 (96%)
Zhuang	142 (32%)	81 (34%)	32 (26%)	29 (37%)	138 (47%)	2 (1%)
Other	61 (14%)	31 (13%)	11 (9%)	19 (24%)	57 (19%)	4 (3%)
Residence						
Guangxi	299 (66%)	180 (74%)	65 (50%)	54 (68%)	299 (100%)	0
County	49 (11%)	28 (12%)	16 (12%)	5 (6%)	49 (16%)	0
Type of Hometown				(<i>p</i> = .007)		(<i>p</i> = .001)
Rural	351 (80%)	178 (74%)	97 (80%)	76 (95%)	243 (83%)	105 (73%)
County seat	59 (13%)	39 (16%)	16 (13%)	4 (5%)	40 (14%)	19 (13%)
Small/Medium city	19 (4%)	13 (5%)	6 (5%)	0	5 (2%)	13 (9%)
Major city	12 (3%)	10 (4%)	2 (2%)	0	5 (2%)	7 (5%)
Marital Status				(<i>p</i> = .001)		(<i>p</i> = .000)
Single without boyfriend	161 (36%)	85 (35%)	42 (32%)	34 (43%)	131 (44%)	28 (19%)
Single with boyfriend	110 (24%)	76 (31%)	23 (18%)	11 (14%)	95 (32%)	14 (9%)
Married	181 (40%)	81 (34%)	65 (50%)	35 (44%)	71 (24%)	109 (72%)
Have Children	173 (39%)	75 (31%)	66 (53%)	32 (40%)	64 (22%)	108 (72%)
Living Arrangements						
Alone	63 (14%)	36 (15%)	23 (18%)	5 (6%)	41 (14%)	22 (22%)
With other sex workers	350 (77%)	175 (72%)	101 (77%)	74 (93%)	229 (77%)	118 (78%)
With family member	53 (12%)	39 (16%)	12 (9%)	2 (3%)	37 (12%)	16 (11%)
husband	7 (4%)	5 (6%)	2 (3%)	0	6 (9%)	1 (1%)
Child	2 (<.5%)	0	2 (2%)	0	2 (1%)	0
boyfriend	27 (6%)	20 (8%)	6 (5%)	1 (1%)	17 (6%)	10 (7%)
parents	4 (1%)	2 (1%)	2 (2%)	0	3 (1%)	1 (1%)
Sibling	13 (3%)	8 (3%)	5 (4%)	0	11 (4%)	2 (1%)
relatives	7 (2%)	5 (2%)	1 (1%)	1 (1%)	4 (1%)	3 (2%)
Workplace				(<i>p</i> = .000)		
Restaurant	380 (84%)	169 (70%)	131 (100%)	80 (100%)	250 (84%)	126 (83%)
Hair Salon	74 (16%)	74 (31%)	0	0	49 (16%)	25 (17%)

* *p* < .05.

** *p* < .01.

*** *p* < .001.

**** *p* < .0001

Table 2
Sexual experience and history of sex work

	Overall	City	Zone	Town	Guangxi	Non-Guangxi
Age of sexual onset	18.62 ± 2.11	18.73 ± 2.20	18.47 ± 2.09	18.54 ± 1.87	18.10 ± 1.90	19.64 ± 2.14 *****
Time being a sex worker (months)	12.18 ± 12.16	12.39 ± 11.78	14.35 ± 14.30	8.06 ± 7.94 *****	10.88 ± 11.62	14.86 ± 12.92 *****
At least 1 pregnancy	286 (63%)	160 (60%)	83 (64%)	43 (54%)*	159 (53%)	125 (83%)
At least 1 abortion	218 (50%)	132 (55%)	57 (48%)	29 (36%)*	127 (44%)	89 (62%)
Partner of first sex (p=0.005)					(p=0.000)	
Clients	71 (16%)	37 (15%)	22 (17%)	12 (16%)	60 (20%)	11 (7%)
Boyfriend	205 (45%)	132 (54%)	45 (35%)	28 (35%)	165 (50%)	37 (25%)
Husband*	144 (32%)	59 (24%)	52 (40%)	33 (41%)	47 (16%)	96 (64%)
Friend	24 (5%)	13 (5%)	6 (5%)	5 (6%)	21 (7%)	3 (2%)
Other	8 (2%)	2 (1%)	4 (3%)	2 (3%)	4 (1%)	4 (3%)
Prior Occupation (p=0.000)					(p=0.001)	
Student	22 (5%)	8 (3%)	12 (9%)	2 (3%)	16 (5%)	6 (4%)
Peasants	186 (41%)	73 (30%)	51 (39%)	62 (78%)	115 (39%)	70 (46%)
Migrant Workers	183 (41%)	122 (51%)	49 (38%)	12 (15%)	136 (46%)	44 (29%)
No Job	46 (10%)	30 (12%)	13 (10%)	3 (4%)	23 (8%)	23 (15%)
Other	14 (3%)	8 (3%)	5 (4%)	1 (1%)	6 (2%)	8 (5%)
Family member who knows you are a sex worker						
Nobody	402 (89%)	214 (88%)	12 (92%)	67 (84%)	264 (88%)	135 (89%)
Parents	21 (5%)	8 (3%)	6 (5%)	7 (9%)	18 (6%)	3 (2%)
Sibling	35 (8%)	21 (9%)	6 (5%)	8 (10%)	20 (7%)	14 (9%)
Boyfriend or fiancée	5 (1%)	5 (2%)	0	0	5 (2%)	0 (0%)
Husband†	5 (3%)	2 (3%)	2 (3%)	1 (3%)	5 (7%)	0 (0%)*
Reasons for being a sex worker						
quick/easy money	24 (5%)	13 (5%)	7 (5%)	4 (5%)	22 (7%)	2 (1%)*
easy/pleasant job	27 (6%)	6 (3%)	14 (11%)	7 (9%)*	19 (6%)	8 (5%)
no better job	185 (41%)	77 (32%)	68 (52%)	40 (50%)*	117 (39%)	64 (42%)
Influenced by others	67 (15%)	21 (9%)	25 (19%)	21 (26%)*	44 (15%)	22 (15%)
marriage failure	37 (8%)	22 (9%)	13 (10%)	2 (3%)	21 (7%)	16 (11%)
revenge on men	10 (2%)	4 (2%)	5 (4%)	1 (1%)	7 (2%)	2 (1%)
deceived/forced	24 (5%)	17 (7%)	7 (5%)	0	18 (6%)	6 (4%)
family financial difficulty	295 (65%)	162 (67%)	74 (57%)	59 (74%)*	197 (66%)	97 (65%)
Other	13 (3%)	7 (3%)	3 (2%)	3 (4%)	11 (4%)	2 (1%)

Note: Percentages were based on the numbers of female sex workers who were married.

* p<0.05,

** p<0.01,

*** p<0.001,

**** p<0.0001

Table 3

Working environment

	Overall	City	Zone	Town	Guangxi	Non-Guangxi
# of sex workers in your place	16.39 ± 9.77	15.43 ± 10.99	20.65 ± 7.96	12.56 ± 4.99	16.09 ± 9.37	16.91 ± 0.42
Median monthly income (Yuan)	400	500	400	375	(<i>p</i> = .006)	
How often do you change workplace (<i>p</i> = .000)						
<3m	68 (15%)	40 (17%)	16 (12%)	12 (15%)	54 (18%)	14 (9%)
3-6m	46 (10%)	27 (11%)	12 (9%)	7 (9%)	33 (11%)	12 (8%)
6-12 m	121 (27%)	49 (20%)	34 (26%)	38 (48%)	84 (28%)	35 (23%)
> 12 m	126 (28%)	63 (26%)	46 (35%)	17 (21%)	69 (23%)	56 (37%)
Never	91 (20%)	63 (26%)	22 (17%)	6 (8%)	58 (20%)	33 (22%)
Money Management (<i>p</i> = .017)						
Parents	112 (25%)	70 (29%)	21 (16%)	21 (26%)	97 (33%)	13 (9%)
husband or b/f	12 (5%)	5 (2%)	3 (2%)	4 (5%)	9 (3%)	3 (2%)
Self	189 (42%)	99 (41%)	65 (50%)	25 (31%)	96 (32%)	93 (62%)
Spent most	125 (28%)	64 (26%)	37 (28%)	24 (30%)	90 (30%)	33 (22%)
Other	15 (3%)	4 (2%)	5 (4%)	6 (8%)	6 (2%)	9 (6%)
Experience with law						
was arrested	19 (4%)	11 (5%)	6 (5%)	2 (3%)	16 (5%)	3 (2%)
Was fined	12 (3%)	8 (3%)	3 (2%)	1 (1%)	7 (2%)	5 (3%)
Was incarcerated	3 (1%)	3 (1%)	0	0	3 (1%)	0
Who are most of your clients						
Businessmen from other places	120 (26%)	88 (36%)	19 (15%)	13 (16%)	88 (29%)	32 (21%)
Migrant workers in H county	66 (15%)	43 (18%)	15 (12%)	8 (10%)	51 (17%)	14 (9%)*
Local peasants	99 (22%)	35 (14%)	37 (28%)	27 (34%)	74 (25%)	25 (17%)*
Local urban residents	277 (61%)	138 (57%)	85 (65%)	54 (68%)	176 (59%)	98 (65%)
Other	54 (11%)	37 (15%)	10 (8%)	4 (5%)*	33 (11%)	18 (12%)

p < .05,

** p < .01,

*** p < .001,

**** p < .0001

Table 4

Sexual Behaviors of Chinese Female Sex Workers

	Overall	City	Zone	Town	Guangxi	Non-Guangxi
# of stable partners	1.29 ± .58	1.31 ± .59	1.30 ± .64	1.16 ± .42	1.33 ± .65	1.22 ± .47
Had a sugar-daddy in last 6 months	34 (8%)	26 (11%)	4 (3%)	4 (5%)*	26 (9%)	7 (5%)
Average # of clients per week	2.00 ± 1.75	2.40 ± 2.18	1.41 ± .78	1.65 ± .73****	2.13 ± 1.78	1.79 ± 1.67*
Maximum clients per day	1.25 ± .60	1.34 ± .72	1.08 ± .27	1.20 ± .54****	1.28 ± .64	1.17 ± .52
Being rapped in last 6 months	70 (15%)	49 (20%)	17 (13%)	4 (5%)*	49 (16%)	20 (30%)
<i>Sex acts</i>						
Double	12 (3%)	11 (5%)	1 (1%)	0*	9 (3%)	3 (2%)
Group	6 (1%)	5 (2%)	1 (1%)	0	4 (1%)	1 (1%)
Oral Sex	9 (2%)	6 (3%)	2 (2%)	1 (1%)	8 (3%)	1 (1%)
Anal sex	9 (2%)	6 (3%)	3 (2%)	0	7 (2%)	2 (1%)
<i>Protective measure with clients last month</i>						
Pills	62 (14%)	36 (15%)	17 (13%)	9 (11%)	48 (16%)	14 (9%)*
Condom	292 (65%)	190 (78%)	58 (45%)	44 (55%)****	204 (69%)	85 (56%)*
Douching	293 (65%)	152 (63%)	87 (67%)	54 (68%)	203 (68%)	88 (58%)*
Withdraw	54 (12%)	22 (9%)	19 (15%)	13 (16%)	41 (14%)	13 (9%)*
Rhythm methods	48 (11%)	34 (14%)	11 (9%)	3 (4%)*	43 (14%)	5 (3%)*
IUD	59 (13%)	19 (8%)	30 (23%)	10 (13%)****	16 (5%)	43 ((29%))****
Nothing	24 (5%)	7 (3%)	10 (8%)	7 (9%)*	38 (20%)	13 (11%)*
Mean income (100 Yuan)	5.76 ± 5.23	6.96 ± 6.45	4.19 ± 2.39	4.68 ± 3.23****	6.08 ± 5.68	5.11 ± 4.19
<i>Protective measure with partner</i>						
Pills	51 (17%)	33 (19%)	16 (17%)	2 (4%)	38 (20%)	13 (11%)*
Condom	128 (42%)	80 (47%)	34 (37%)	14 (31%)*	80 (43%)	46 (39%)
Douching	191 (62%)	95 (56%)	60 (65%)	36 (80%)*	120 (64%)	71 (60%)
Withdraw	50 (16%)	27 (16%)	14 (15%)	9 (20%)*	35 (19%)	15 (13%)*
Rhythm Method	49 (16%)	34 (20%)	13 (14%)	2 (4%)*	41 (22%)	8 (7%)*
IUD	59 (19%)	26 (15%)	24 (26%)	9 (20%)	15 (8%)	44 (37%)*
<i>Other sexual risks</i>						
Exchanged sex for drug	2 (<.5%)	2 (1%)	0	0	2 (1%)	0
Sex w/alcohol	133 (29%)	71 (29%)	41 (32%)	21 (26%)	96 (32%)	34 (23%)*
Sex during menstruation	30 (7%)	19 (8%)	7 (6%)	4 (5%)*	24 (8%)	6 (4%)*
Ever has a STD	88 (19%)	55 (23%)	26 (20%)	7 (9%)*	61 (20%)	25 (17%)*

* p<.05,

** p<.01,

*** p<.001,

**** p<.0001

Table 5

Other Health Behaviors and Mental Health Indicators

	Overall	City	Zone	Town	Guangxi	Non-Guangxi
Substance Use/abuse						
Daily smoking last 6m	70 (15%)	39 (16%)	22 (17%)	9 (11%)	53 (18%)	16 (11%)*
Alcohol intoxication last 6m	149 (33%)	87 (36%)	51 (39%)	11 (14%)****	111 (37%)	36 (24%)**
Illegal drug use last 6m	10 (2%)	3 (1%)	6 (5%)	1 (1%)	5 (2%)	5 (3%)
IDU last 6m	4 (1%)	2 (1%)	2 (2%)	0	3 (1%)	1 (1%)
Mental Health Indicators						
Satisfaction with work	19 (4%)	9 (4%)	6 (5%)	4 (5%)	17 (6%)	2 (1%)
Satisfaction with life	34 (8%)	15 (6%)	11 (8%)	8 (10%)	30 (10%)	4 (3%)
Suicidal thoughts last 6m	60 (14%)	42 (17%)	16 (12%)	7 (9%)*	42 (14%)	23 (15%)
Suicide attempts last 6m	38 (8%)	29 (12%)	5 (4%)	4 (5%)	29 (10%)	9 (6%)
Issues Worried Most						
Be known by family as a sex worker	253 (56%)	148 (61%)	72 (55%)	33 (42%)*	153 (55%)	87 (58%)
Abused by clients	121 (27%)	67 (28%)	39 (30%)	15 (19%)	86 (29%)	35 (23%)
Can not make enough money	89 (20%)	49 (20%)	29 (22%)	11 (14%)	66 (22%)	23 (15%)*
Get pregnant	198 (44%)	116 (48%)	50 (38%)	32 (41%)	157 (53%)	40 (27%)*
Be rapped and robbed	64 (14%)	44 (18%)	17 (13%)	3 (4%)*	46 (15%)	18 (12%)
Get STD	338 (75%)	188 (77%)	91 (70%)	59 (75%)*	226 (76%)	110 (73%)
GET HIV/AIDS	262 (58%)	160 (66%)	69 (53%)	33 (42%)*	173 (58%)	87 (58%)
Be arrested by police	166 (37%)	97 (40%)	53 (41%)	16 (20%)*	117 (39%)	49 (33%)
Attitudes toward sex work(agree)						
Sex work is the same as other work	119 (26%)	68 (28%)	31 (24%)	20 (25%)	85 (29%)	31 (21%)
I would not be one if I had choice	368 (81%)	200 (82%)	105 (81%)	63 (79%)	241 (81%)	124 (83%)*
Difficult to do something else	167 (37%)	87 (36%)	50 (39%)	30 (38%)*	123 (41%)	43 (29%)*
One day is the same as all the time	86 (19%)	48 (20%)	18 (14%)	20 (25%)	59 (20%)	27 (18%)
Current Plan (p=.000)						
A few more years of sex work	34 (8%)	13 (5%)	9 (7%)	12 (15%)	24 (8%)	10 (7%)
no plan	282 (62%)	148 (61%)	73 (56%)	61 (76%)	192 (64%)	87 (58%)
Change job immediately	136 (30%)	81 (34%)	48 (37%)	7 (9%)	82 (28%)	53 (35%)
Future Plans						
Have my own business	209 (46%)	127 (53%)	62 (48%)	20 (25%)*	128 (43%)	80 (53%)*
Get married/or have child	278 (62%)	158 (66%)	70 (56%)	50 (63%)*	207 (70%)	68 (46%)*
Unmarried	216 (80%)	122 (76%)	52 (81%)	42 (93%)*	182 (81%)	31 (74%)*
Married	60 (34%)	35 (44%)	17 (28%)	8 (23%)*	23 (33%)	37 (35%)

* p<.05.

** p<.01,

*** p<.001,

**** p<.0001