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## Networking Activities and Perceptions of HIV Risk Among Male Migrant Market Vendors in China

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### Abstract

HIV research among internal migrants in China has not fully explored the contexts and perceptions of “risk”. In 2011, urban markets in Liuzhou, China were mapped, and sixty male vendors, age 22 to 56, were selected for in-depth interviews on migration, social and family life, and perceptions and practices of sexual risk behavior. Participants were evenly divided among higher income shop and small stall vendors. All men were sexually active. Only the shop vendors reported non-marital sexual partners, including concurrent partners (n=15), commercial partners (n=10), and other sexual relationships (n=11). Shop vendors engaged in networking activities that facilitated commercial and non-commercial high-risk sex. Perceptions of HIV risk from commercial sex led some men to doubt the protective ability of condoms and rely on local (unproven) self-protection techniques. Networking activities played a role in high-risk sex and shaping migrants' risk perceptions and health practices. The networks created through these processes could also be used to facilitate health promotion activities.

### Keywords

China; migrant; HIV; network

### Introduction

China has over 200 million internal migrants (<sup>1</sup>). Researchers have long recognized the significance of migration in the spread of HIV (<sup>2–9</sup>). In China, rural-to-urban internal migrants are considered vulnerable to risk-taking behaviors, especially sexual risk behaviors, due to social and economic marginalization and exposure to new sexual attitudes in urban areas (<sup>10–16</sup>). As the majority of new HIV diagnoses in China are now attributable to sexual transmission (<sup>17,18</sup>), it is important to investigate HIV sexual risk among internal migrants.

The internal migrants in China have been generally referred to as a “floating population” (*liudong renkou*) because they have left their hometowns where they have official household registration status (*hukou*) but cannot—or do not—obtain a new official *hukou* in their new locale. In earlier studies, they are generally portrayed as an undifferentiated group of poor and low-paid migrants (<sup>19</sup>). As migrant studies evolved, scholars began to describe greater heterogeneity across this population (<sup>20,21</sup>) including differences in employment and income

patterns<sup>(22)</sup>. Data from the 2005 national census showed that as much as 25% of the migrant labor force had engaged in self-employment activities<sup>(23)</sup>. The wages of these self-employed migrants are, on average, substantially higher than average wages obtained through more traditional paid work (*dagong*)<sup>(24)</sup>. Furthermore, stratification exists among self-employed migrants in terms of their income, social prestige, working and living conditions, social networks, and values<sup>(25,26)</sup>. These marked differences among internal migrants highlight the inappropriateness of viewing them as a homogenous socioeconomic group with unified health risk profiles.

What are the implications of differentiation among migrants to HIV sexual risk? It is commonly assumed that persons from lower social classes are exposed to HIV infection more than people from higher social classes<sup>(27)</sup>. However, data from a population-based study in China<sup>(28)</sup> showed that unprotected commercial sex was more common among men who earned a high income, socialized often, and traveled frequently. Ethnographic research on the exchanges between wealthy Chinese businessmen and government officials similarly revealed that the quest for economic and political success in China's transitional economy engaged upper-class men in the frequent practice of eating, drinking, and female-centered entertainment that contributed to their vulnerability to HIV/STI<sup>(29,30)</sup>. Because these studies were not specifically about migrants, it remains unclear whether their findings are applicable to other socioeconomic groups, including internal migrants. The current study uses qualitative methods to investigate the connections between social stratification and HIV sexual risk and the role of social networking practices in facilitating such connections among male market vendors in China. These self-employed men represent an understudied subgroup of migrants who may play an important role in China's growing HIV and syphilis epidemics due to their documented high prevalence of sexually transmitted infections (STI)<sup>(31)</sup>, low HIV/STI knowledge, and low condom use<sup>(32)</sup>.

## Methods

This study was conducted in Liuzhou, a city in Guangxi Zhuang Autonomous Region with a 2010 registered urban population of about 1 million<sup>(33)</sup>. There is no reliable census of migrants in Liuzhou, but the Liuzhou Statistics Bureau reported through telephone inquiry that there were 551,300 registered temporary residents with a stay of one month or more in 2010. This number covers both urban and rural districts of Liuzhou and excludes unregistered migrants. We mapped markets in Liuzhou's four urban districts identifying over 200 large markets (defined as having more than 50 shops and stalls). The vast majority of shops and stalls are run jointly by at least 2 migrants. We thus conservatively estimate more than twenty thousand migrants worked as market vendors in urban Liuzhou.

We divided the mapped markets into four basic types: food markets, clothing and small commodities markets, construction material markets, and mixed-goods markets (which offer a combination of two or three of these types of goods). Based on geographic location, we sampled two to three markets within each type so that the included markets were from different parts of the city. With the assistance of local CDC staff, we contacted 10 market administrators for permission and asked them to introduce potential participants. None of the administrators declined the request. Male market vendors aged 18 or above and not registered as local urban residents were eligible for the study. About 10% of eligible participants introduced by administrators refused to participate. Each man received 50 RMB (about 8 USD) for their participation. The study protocol was approved by the IRB of Renmin University of China.

The authors of this paper and three social science graduate students conducted semi-structured face-to-face interviews. Sixty male migrant market vendors were interviewed

from January to March 2011. After obtaining consent, we conducted the interviews in a private space based on the participants' convenience. Twenty out of 60 participants agreed to be recorded. For the remaining interviews we took notes during the interview and expanded these notes directly after. Interviews lasted about one hour; topics included socio-economic background, migration experience, social and family life, leisure activities, sexual partners, perceptions of HIV sexual risk, and condom use.

All audio recorded interviews were transcribed verbatim in Chinese. To avoid the loss of nuance, transcribed data and interview notes were not translated into English until the final stage of report writing. Guided by the principles of grounded theory<sup>(34)</sup>, we examined the transcripts and field notes repeatedly to identify emergent themes and coding categories. The categories and themes were then organized into a formal codebook with illustrative quotations. All data were coded by two team members, and discrepancies were resolved by discussion. Themes that emerged during the analysis were used to guide subsequent interviews. This iterative process continued until the researchers reached “saturation” of information within the original interview themes, and were no longer hearing new themes during the interviews. Coded quotes were chosen by group consensus to illustrate the variation as well as most common responses within each theme. Below we first describe our sample of migrant market vendors and then present findings within two broad themes around the interplay of networking activities and sexual risk behaviors, and how network communication practices influence risk perceptions.

## Results

**Demographics:** In order to frame the qualitative findings in the context of the overall sample, Table 1 summarizes basic participant demographics divided by shop and stall vendors. Most of the 60 participants were over 30 years of age (n=49), had completed high school or more (n=47), and were married (n=52) and lived with their wives (n=46/52). More than half came from areas within Guangxi Zhuang Autonomous Region (n=32), while others came from Zhejiang province northeast of Guangxi (n=8), and Hunan (n=5) and Hubei provinces (n=4) north of Guangxi. Almost all were rural-to-urban migrants (n=57 rural *hukou*/residence permit) and the remaining three were registered urban residents from other cities. Most of the rural-to-urban migrants (n=49/57) had supported themselves through employment by factories, companies, or individuals before they became self-employed as market vendors.

Half of the sample (n=30) worked selling vegetables, fruits, meat, or other types of food at a market *stall*; the other half sold clothes (n=13), small commodities (e.g., small electronics, cosmetics) (n=9), and construction materials (n=8) at market *shops*. A market stall is a limited space without barrier walls for separation, whereas a shop is usually larger, better furnished, and clearly separated from neighboring shops.

The two groups, “stall vendors” and “shop vendors”, showed a social stratification among migrant market vendors. They were different not only in the spaces that they occupied, but also in investment practices, income, and leisure time activities. Running a shop demanded much greater financial investment than running a stall, so shop vendors usually started the shop business after earning their “first pot of gold” (*diyì tong jīn*) at other jobs. Shop vendors were generally wealthier than stall vendors. The net profit per day of a stall was usually no more than 100 RMB (~16 USD), whereas that of a shop was usually over 300 RMB (~47 USD). Stall vendors also worked much longer days and enjoyed much less leisure time than shop vendors.

We noted differences in self-reported sexual risk behaviors between shop and stall vendors. Fifteen out of 30 *shop vendors* reported ever having “high-risk” sexual behaviors, while none of the 30 *stall vendors* reported these behaviors. Among these 15 men, ten reported ever having visited female sex workers (FSW) and four reported casual (short-term) sexual partner(s). Additionally, seven married men reported ever having a “minor wife”, generally a longer-term, extra-marital sexual relationship with another woman. Among the 10 men who reported only one of the above three types of sexual partners (five with only FSW, four with only a minor wife, and one with only a casual sexual partner), none reported consistent condom use. The other five men reported more than one of the above three types of sexual partners (two men had FSW and casual sexual partners, two men had FSW and minor wife partners, and one man had all three types of partners). These men reported consistent condom use during commercial sex, but inconsistent condom use during casual sex or sex with a minor wife.

As we describe below, the types of sexual partnerships market vendors formed, and the decisions to use condoms within these partnerships, happened within the overlapping contexts of socialization activities for business and social networking. In the first section we describe the role of networking activities in facilitating sexual risk behaviors (both commercial and non-commercial) among shop and stall vendors. In the second section we describe risk perceptions, strategies to minimize risk, and the role of network communication in shaping perceptions and self-protective strategies.

### Part 1: “Chi-he-wan-le”, networking activities and sexual risk behaviors

Regardless of whether men had ever engaged in risky sexual practices, during discussions of sexual risk behaviors, they frequently mentioned eating and drinking activities. These activities are summarized with a well-known Chinese idiom, “chi-he-wan-le”, which can be literally translated as “eating, drinking, and having a good time”. Eating and drinking play an important role in networking and trust building activities in many societies, but what is unique to China is their accompaniment by various forms of entertainment<sup>(29)</sup>. Such entertainment—usually involving the presence and services (including sexual services) of females—has been practiced since imperial times<sup>(29,35,36)</sup>. In late Imperial (pre-1912) and early Republican (1912–1949) China, brothels served as places for businessmen and friends to network mainly among the elite and educated classes, while prostitutes (especially those of higher ranks, e.g. courtesans) provided company at banquets or celebrations outside the brothel. For men of these time periods who patronized prostitutes, networking involving female-centered entertainment constituted part of their lifestyle by which they manifested their social status<sup>(35,36)</sup>. Through various social and political movements in later Republican and subsequent Socialist China, prostitution was virtually eradicated for a few decades before reemerging after the economic reforms initiated in 1978 (*gaige kaifang*)<sup>(37)</sup>. Due to the illegality of prostitution in modern China, sex work is commonly integrated into other commercialized leisure activities (e.g. karaoke bars, massage parlors, hair salons) and disguised under the names of other services (e.g. massage/*anmo*, foot bath/*xijiao*, sauna/*sangna*). Similar to the former historical period, entertainment establishments continue to function as meeting places for friends and business associates. The commercialization of leisure activities and integration of sex work into entertainment establishments offers greater access and exposure to commercial sex. It was in such context that shop vendors in Liuzhou who networked also more frequently patronized entertainment establishments and FSW.

**Business networking and commercial sex**—Due to different ways of doing business, shop vendors had a stronger need for business networking. Shop vendors in Liuzhou were both retailers and wholesalers. Their clients included individual consumers and retailers or lower-level wholesalers from towns around the city. Shop vendors drew most of their

income from wholesale rather than retail sales. Therefore, their economic success depended on developing and maintaining a stable group of wholesale buyers. In order to strengthen their marketing system, they regularly invited their best clients to dinner, usually once or twice for each client per year. After eating and drinking, they invited clients to entertainment establishments for activities such as singing in a karaoke bar or club, or receiving a massage in a sauna or hotel. These activities were usually followed by commercial sexual service either at the establishment or an arranged private venue (e.g. hotel room). As one man explained:

There must be a lot of people among businessmen like us who have gone to those types of entertainment establishments. This is inevitable. Some clients have kept buying things from me in large amounts and for many years. If they come, you need to welcome them and invite them to eat dinner and have fun. Every man has a desire for sex with more women. I guess that the proportion of men who have not gone to those places [for commercial sex] may not even reach 1%. (56 years old, clothing shop)

In contrast, stall vendors were primarily retail dealers, buying wholesale and selling retail. They might occasionally provide goods in relatively large amounts for some restaurants when the restaurants had urgent needs. However, restaurant owners generally go directly to wholesale markets, as would the stall vendors, for a lower price. Because of this, it was uncommon for stall vendors to court restaurant owners or other clients in the ways that seemed typical for shop vendors. How and why were shop vendors' business networking activities with clients connected to entertainment involving commercial sex? Why was treating clients to dinner not enough? As one shop vendor described:

If it was several decades ago, it would be quite an honor to be treated with a meal. But today, it seems too common and ordinary to treat friends with only dinner. We need to do more to show our special relations with someone important to us. What do men need most besides money and power? Women! So we invite them to entertainment establishments. Such places are everywhere and almost every place provides sexual services. Some places even provide one package service. You can play Mahjong, have dinner, and receive girl's services in the same building or even same room. If a client declines my invitation or feels constrained to enjoy the services, it means that he does not treat me as a friend. If we are friends, he should feel comfortable to satisfy this [sexual] need. (40 years old, small commodities shop)

As the quotation reveals, the sexually implicated entertainment was used to both build and prove close relations between vendors and clients. Visiting FSW together created a particularly strong bond not only because entertainment and commercial sex demonstrated more respect than a meal alone, but also because the commercial sex visit itself was an activity to be shared among intimate friends who felt trust and comfort with each other. For the public and the family, commercial sex was still viewed as an undesirable or even deviant activity. It could bring disgrace to, or be used against, a man if he visited FSW in the presence of someone whom he knew but did not trust. The vendors needed to make sure, at least to some extent, that their partners were trustworthy before inviting them to visit FSW together. By the act of inviting and accepting, the vendors and clients were thus demonstrating their trust to each other.

**Social networking and commercial sex**—Compared to stall vendors, shop vendors were also more likely to engage in social networking. Both stall vendors and shop vendors believed in the traditional wisdom that having more friends would make life easier (*pengyou duole luhaozou* – “when your friends are many, the road is easy”). However, for stall

vendors, social networking was an activity that strained time and financial resources, rather than contributing to profitable activities. A typical work day for stall vendors started early (5 or 6 AM, to buy products at wholesale markets) and ended late (8 or 9 PM). If these men took time to socialize, their business would suffer. Occasionally, when they felt obligated to invite close friends or relatives to dinner, they would cook at home to save money.

In contrast, shop vendors worked fewer hours per day (usually from 9 or 10 AM to 5 or 6 PM), enjoyed more time for socializing and had higher disposable income for social networking. Like most Chinese, these men would meet with friends and family formally to celebrate traditional holidays, especially the Spring Festival (*chunjie*), Lantern Festival (*yuanyaojie*), and Mid-autumn Festival (*zhongqiujie*), all of which emphasize family reunions. However, these holiday meetings were not sufficiently frequent to build and maintain the strong network of connections (*guanxi*) that are considered an essential part of social life in China. Therefore, whenever a shop vendor needed practical help from friends or simply had time to meet, they would gather a group of friends to treat for dinner. After dinner, they would often go to entertainment establishments for relaxation and amusement including commercial sex.

These activities used for building and strengthening social and business connections were part of a regular lifestyle for some shop vendors and in many ways resembled the practice of *yingchou*, a means of establishing and strengthening social relations, which in turn is used as an instrument to seek success in finance, politics, or other various fields. *Yingchou* follows an instrumental rationality in which social relations are a means rather than an end. Migrant vendors in this study reported clear instrumental intentions in inviting someone, including friends, to feasting, drinking, and entertainment. In addition to emotional support, these men sought instant or future practical help through investment in these social relations.

By engaging in leisure activities and commercial sex, men were also demonstrating their purchasing power and social status. At the same time, the leisure activities they sought were not solitary pursuits but social activities which provided a platform for building relationships. As with business networking, commercial sex visits in groups helped to foster a sense of solidarity among participants. As one vendor said, “friends who visit FSW together are very good friends.”

For men who regularly engaged in these networking activities, seeking sexual services seemed commonplace and did not require explicit mention or explanation. However, when a new member joined the activities and was hesitant to patronize commercial sex, the group used peer pressure to persuade him:

After eating and drinking, friends often asked you to have fun together. Initially, I didn't want to go, telling them it might not be good for my family and wife. Before I finished my words, several friends couldn't help stopping me. They said, “look at you such a coward! Do you know what kind of a society we are in now? Which men don't go out for fun?” With their persuasion and encouragement, I went there [to see FSW] several times. (28 years old, clothing shop)

Because of group pressure, some shop vendors reported visiting FSW when they were not psychologically prepared.

In contrast, other shop vendors, whose desire for commercial sex had previously been hindered by fear and lack of information, reported that the social network group provided reassurance and information about patronizing commercial sex. In addition, some vendors were aware that these group networking activities could lead to commercial sex, but they considered commercial sex an acceptable byproduct of socializing rather than the intended

goal. Outside of the context of networking, these men rarely visited FSW alone. These complicated portraits remind us of the importance of both individual motivations and social context in explaining men's engagement in commercial sex.

**Social networking and non-commercial sex**—In addition to commercial sex, ten men also reported multiple non-commercial sexual partners. The women involved in these networking contexts were female coworkers, friends, or former classmates. Many of the women were local (non-migrant) residents that participants met via introduction by their male associates (both migrant and non-migrant), which is evidence that social and sexual networking activities were not bounded by migration status. Entertainment in such contexts was based on the possibility of meeting new women. Such social activities provided opportunities for migrant vendors to develop sexual relationships with these women in the future.

For example, I called my friend and asked, “do you know any beauties? How about inviting some to dinner?” He said, “OK!” Today he brings a girl; tomorrow the girl will bring another girl. So there are more and more girls you can invite. Friends will introduce the girls to you. But after that you will have to depend on yourself because friends cannot exchange flirting glances with girls for you. As long as you drink, you have opportunities. You can propose a toast to girls to show your adoration, and this will make the girls excited.....After exchanging phone numbers, you can ask them out to have dinner, sing in karaoke, and play cards or Mahjong. Feeling grows with time and that thing [*sex*] goes with feeling. We don't do that thing right after the first glance. (45 years old, construction materials shop)

All market vendors who had these types of non-commercial partners reported that they met their sexual partners in situations of eating and drinking. Although some men were familiar with the Internet, they did not consider it a reliable way of seeking sexual partners. From their perspective, the people they could meet through the Internet were strangers, whom they could not trust, whereas the friends of their friends were trustworthy.

One reason that these men engaged in non-commercial sex was for safety against HIV, as we describe in Part 2. Another reason was for sex with emotions, which they thought was better and morally higher than emotionless commercial sex. Some market vendors preferred short-term non-commercial sexual partners over longer term non-commercial partnerships. This was particularly true for married men. As one 42 year-old clothing shop vendor explained, “As time goes on, she may ask you to divorce your wife and marry her. I don't want to bring troubles to my family, so I usually end a relationship after one or two months”. Other men preferred longer-term non-commercial sexual partnerships in which they could build emotion and trust. As one shop vendor described:

I can talk with a lover [*qingren*] about many things that I do not talk about with my wife. We meet not only for sex but also for understanding and comfort. It takes time to develop such relationships, but it is worth it. Besides, condoms may become unnecessary in such relationships.

## Part 2: Risk perceptions and network communication

**Stigmatization of FSW and polarized risk perceptions**—Most participants, whether they were stall vendors or shop vendors, or had had commercial sex or not, associated FSW with words such as “filthy” and “unclean”. They used these words to depict FSW as both morally impure and physically polluted. FSW were thought to accept any client, having no choice at all. Furthermore, their bodies were thought to have collected a multitude of contaminants from their clients, including HIV. This stigmatization of FSW motivated some market vendors to use condoms for commercial sex, a health-promoting outcome. However,

behaviors did not clearly follow from accurate prevention information. Astounded by HIV-related reports in the media, some vendors, both stall and shop vendors, incorrectly believed that the rate of HIV infection among FSW was very high (a few mentioned 80%), particularly in some regions like Liuzhou. They felt it was insufficient to simply use condoms, particularly the condoms provided by FSW. As one shop vendor stated:

FSW are very likely to be infected with HIV. A kiss can lead to infection because the bacteria may come into your mouth when you kiss a FSW. If you have sex with an infected FSW and do not use a condom even just once, you will certainly get infected. A condom is not so effective in prevention. Even though you use it, you will inevitably touch the bacteria when taking off the condom. I do not dare have sex with FSW, even if you bring a FSW to me, even if I put on three condoms at one time.

This vendor perceives FSW (and HIV) as highly infectious. Of note, this man's perception of HIV risk included a number of inaccuracies, including that kissing can lead to infection and that condoms are completely ineffective for prevention.

Conversely, minor wives were thought to be good women (*liangjia-funü*) who would not have sex with random men. In order to avoid HIV risk, stall vendors and some shop vendors chose to stay monogamous, while others chose to find a minor wife among female friends of friends. After building trust with a minor wife, shop vendors would often forgo condom-use for HIV prevention. Although some shop vendors would occasionally use condoms for contraception with these women, they did not consistently use them as an HIV and STI-prevention strategy.

Other shop vendors who had experience with FSW doubted the image of the “dangerous FSW” as portrayed in media and propaganda materials. They thought the rate of HIV infection, both within and outside of commercial sex, was not as high as they were told. Many men they knew had visited FSW without using condoms. Though some of them had been infected with STI, which in their eyes could be cured easily by taking antibiotics, to their knowledge, no one had acquired HIV. In the eyes of several shop vendors, it was possible to find safe FSW with whom condom use was unnecessary. As described below, many of these men drew on local knowledge in determining whether a FSW was infected with HIV/STI.

**Condoms and local substitutes**—All participants knew the risk of HIV infection through sex. Despite this awareness, a number of vendors did not want to use condoms. Instead, men practiced a variety of partner-selection strategies and cleansing practices that they perceived would minimize risk or promote health. As described above, some men chose to be monogamous, or find a “minor” wife considered “safer”. Market vendors who patronized FSW also had substitutes for condoms. As one vendor described:

I have a friend who used to be a doctor. During a dinner, he advised us to use condoms when going outside for fun. But if you really don't like it, you should put your fingers in the vagina, take them out, and examine the smell of the secretion. If the smell is normal, you can go on. But if it is not, you should give up. (50 years old, construction materials shop)

This man frames his strategy as both expert-informed (by his doctor friend) and “evidence-based” (examine the smell of the vaginal secretion). Other partner selection strategies included: city selection (where the rate of HIV infection was thought to be low), establishment selection (where high-tier FSW worked), and manager's recommendation (asking for FSW who had recently received physical examination and were “proven healthy”).



Besides these partner selection techniques, a few shop vendors also mentioned washing (both before and after sex, using salt water or normal water, both for themselves and FSW) as a protective practice. Compared to washing only the genitals prior to commercial sex in a small shop or hair salon, cleaning the entire body in a sauna made men feel safer.

The local substitutes for condoms were part of knowledge shared in specific social network groups. Besides the techniques used to tell which FSW were safe, this knowledge could tell members of the group why FSW were dangerous or not, in which regions and which establishments FSW were safer, why minor wives were safe, how to find a minor wife, etc. Networking contexts opened a comfortable space for market vendors to communicate about HIV-related issues, while outside such contexts, talking about HIV seemed irrelevant or strange. As a result, local knowledge related to sexual risk behaviors was transmitted primarily through interpersonal communications within the social network.

## Discussion

Within this study, wealthier and more socially active shop vendors described more sexual risk behaviors than stall vendors. This finding is consistent with a population-based study in China (28) which found that unprotected commercial sex was more common among men who earned a high income, socialized often, and traveled frequently. Notably, our results also expand on previous ethnographic research on the exchanges between wealthy Chinese businessmen and government officials (29,30). In this work, Uretsky argues that the quest for economic and political success in China's transitional economy engaged upper-class men in the frequent practice of eating, drinking, and female-centered entertainment that contributed to their vulnerability to HIV/STI. We found similar patterns of networking activities for building and strengthening business and social relationships among male migrant *shop vendors*. Our findings among migrant *stall vendors* (lower social class than shop vendors) who reported few sexual risk behaviors contradict a common perception that people from lower social classes are more vulnerable to HIV/AIDS (27). These results underscore the complexity of understanding HIV risk in the context of migration, social networks and socio-economic status.

Among our sample of market vendors, social network groups played an important role in shaping men's sexual behaviors and perceptions of HIV/STD risk. Network activities involving eating, drinking, and entertainment provided an opportunity and impetus for migrant vendors to engage in high-risk sex, both commercial and non-commercial. The overlap of these activities supports the association between alcohol intoxication and sexual risk behaviors among rural-to-urban migrants reported by Lin and colleagues (38), however it should be noted that men did not ascribe condomless sex to being intoxicated, but rather to the characteristics of particular partners. The social nature of commercial sex visits in China has also been observed among male clients of FSW in Sichuan (39,40) and for wealthy businessmen (29), as previously described. No work that we are aware of has addressed the role of these socialization activities for networking in facilitating non-commercial, extramarital sex. Future interventions to target potential male clients of FSW should pay more attention to men who have greater means and access to such networking activities.

This analysis also explored how male migrant market vendors built and strengthened social and business relations through participating in special forms of (sexually implicated) networking activities. Our findings could be used to inform future systematic social network analyses among this population. All the men who participated in sexually implicated networking activities with a specific market vendor constituted for him an ego-centric network, which could be called a "sexual entertaining network". The size and interaction frequency of this type of social network is likely to influence the opportunities of migrant

market vendors to meet and have sex with FSWs, casual sexual partners, and minor wives. Because the norms that shape social interactions within these groups could facilitate both risky and protective sexual health behaviors<sup>(41–43)</sup>, future studies need to explore the norms among the sexual entertaining networks of migrants and their influence on sexual risk behaviors.

This study is subject to several limitations. First, some self-reported sexual behaviors such as unprotected sex and participation in commercial sex may be underreported due to sensitivity in China around talking about these topics. Our conclusion regarding differences between shop and stall vendors would be weaker if social desirability bias more strongly affected stall vendors, however the overall conclusion of a high level of sexual risk behaviors among market vendors would remain. While our data does not suggest that such a bias exists, computer-administered surveys among larger samples of market vendors could test for this difference. Secondly, the qualitative nature of this study may limit its generalizability. We have taken numerous methodological measures to improve the representativeness of our sample (market mapping, random selection of markets across geographic locations, iterative data collection and analysis until saturation of themes was reached) and the accuracy of our descriptive results (audio recorded interviews, team collaborative analysis approach). While we cannot claim statistical significance in the differences described in our sample, our findings have generated hypotheses that can inform the design of future survey and intervention research among migrant market vendors and their social and sexual network members.

The stigmatization of FSW led to polarized perceptions of HIV sexual risk, overemphasizing the danger of commercial sex while neglecting that of non-commercial multi-partner sex. This motivated many market vendors to seek “safer” sexual partners with whom they could forego condom use. Bio-behavioral epidemiological research is warranted among this population as well as further qualitative research to explore strategies for addressing resistance to condom use among these non-commercial sexual partnerships. Simultaneously, HIV/STI prevention interventions may need to emphasize the connection of HIV risk with behavior (unprotected sex) rather than type of partnership (commercial sex), focusing in particular on these non-commercial “trusted” partnerships.

This study also revealed the strength of stigmatization of FSW, which exaggerated HIV risk among FSW to such an extent that some market vendors were suspicious of the ability of condoms to provide sufficient protection in commercial sex. This led some to rely on preferred local (unproven) protection techniques such as genital washing and strategies for selecting “clean” women. The local techniques employed by market vendors for risk reduction in our study were also observed in a study of highly diverse male clients of FSW in Sichuan and Yunnan provinces, China<sup>(44)</sup>. These results revealed that the failure to use condoms was not only due to reduced sexual pleasure, as indicated by Yang and colleagues<sup>(39,40)</sup>, but also because of men's confidence in the effectiveness of local substitute protective measures. Future intervention efforts should consider this type of local knowledge: how it is socially constructed, the role of network communication, and how existing structures and practices might be utilized for disease prevention efforts (e.g. peer educators).

Among these men, well-known reasons for not using condoms—such as inconvenience or reduced sexual pleasure—do not adequately explain condom use behaviors. The vendors we spoke with balanced their desire for sexual pleasure with the desire to avoid HIV infection and believed in the effectiveness of their strategies for accomplishing this. While they were aware of HIV-infection through sexual transmission, their understanding of this was not sufficient to override these other strategies perceived as “risk avoidant”. Under such

circumstances, interpersonal communications within specific network groups might actually put some market vendors at further risk by fostering their confidence in the protective effectiveness of local techniques as substitutes for condom use.

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**Table I**

Sample demographics of market vendors: shops vs. stalls

	Shop vendors (n=30)	Stall vendors (n=30)	Total sample (n=60)
<b>Age</b>			
30	7	4	11
>30	23	26	49
<b>Completed education</b>			
Less than high school	4	9	13
High school	22	20	42
More than high school	4	1	5
<b>Marital status</b>			
Married, lives with wife	21	25	46
Married, lives away from wife	4	2	6
Unmarried	5	3	8
<b>Hometown</b>			
Guangxi Province	10	22	32
Outside of Guangxi	20	8	28
<b>Resident permit status</b>			
Rural	28	29	57
Urban	2	1	3
<b>Type of shop or stall</b>			
Food	NA	30	30
Clothes	13	NA	13
Small commodities	9	NA	9
Construction materials	8	NA	8
<b>Sexual risk behaviors</b>			
Ever visited FSW	10	0	10
Casual (short-term) partner	4	0	4
Ever had a "minor wife"	7	0	7
Any sexual risk behavior	15*	0	15*

FSW = female sex workers

<sup>a</sup>Column does not total 15 as some participants reported multiple high-risk sexual behaviors.