Risky Alcohol Use Among Migrant Women in Entertainment Venues in China

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Abstract — Aims: The aims of this study are to describe the prevalence of hazardous drinking among migrant women working in entertainment venues in an urban setting in China and to identify specific risk factors and locations where hazardous drinking occurs.

Methods: From March to July 2012, we conducted a cross-sectional survey of 358 young migrant women working in entertainment venues in the capital city of Hefei, Anhui Province, China. Participants were asked about information regarding their demographic characteristics, sexual behavior, mental health, alcohol use and drug use.

Results: Overall, 203 (57%) participants had an AUDIT score ≥8 (risky drinking) and 95 (27%) women had an AUDIT ≥26 (probable dependence). Greater likelihood of probable alcohol dependence was associated with being younger (OR = 0.85, 95% CI: 0.76-0.95), working at an affluent venue (OR = 2.46, 95% CI: 1.13-5.36) and depressive symptoms during the past week (OR = 2.74, 95% CI = 1.10-6.83).

Conclusion: Our study documents risky drinking practices among female migrants, irrespective of whether or not women reported engaging in commercial sex, working in entertainment venues. Our data suggest that entertainment venues, particularly those that are higher end (i.e. affluent) venues, should be targeted for public health interventions aimed to reduce harmful drinking practices.

INTRODUCTION

During the past several decades, China has experienced the fastest rising rates of alcohol consumption in the world leading to significant increases in the prevalence of alcohol dependence and alcohol-related disorders (Cochrane et al., 2003; Tang et al., 2013). Commercial alcohol production in China has increased >50-fold per capita since 1952 (Cochrane et al., 2003). Concomitantly, significant changes in social norms associated with drinking behavior have given rise to a greater diversity in populations that consume alcohol, including women and adolescents (Zhang et al., 2008). Within modern Chinese society, alcohol is commonly consumed to relieve stress and to maintain good relationships with leaders and friends, the latter being especially important since Chinese often negotiate business over dinner meals which include consuming large quantities of high-grade Chinese white wine (Cochrane et al., 2003; Tang et al., 2013). A recent national survey of drinking behavior in China among general residents revealed stark increases in harmful drinking behaviors (Li et al., 2011).

There is a growing body of global literature documenting the considerable burden of disease associated with alcohol consumption (WHO, 2005; Rehm et al., 2009). World Health Organization (WHO) estimates indicate that the rates of alcohol use disorders in China are 6.9 and 0.2% among men and women, respectively (WHO, 2011). A study involving four Chinese provinces between 2001 and 2005 found that the lifetime prevalence of alcohol use disorders was 9.0% (Phillips et al., 2009). Yet data indicate that few people in China receive treatment for alcohol use disorders. A recent study among individuals in Beijing revealed that only 2.4% of individuals with alcohol dependence were receiving treatment (Tang et al., 2013).

The surge in alcohol consumption has also been impacted in part through internal migration. China now is experiencing the largest flow of migrant population in its history. In 2011, it was estimated that China had an internal migrant population of 230 million individuals, or 17% of the total population (National Population and Family Planning Commission of P.R.China, 2012). Many of these individuals migrate from rural regions of the country to urban areas to find jobs in construction and service industries. Compared with their male counterparts, female migrants face more serious social and cultural vulnerability and gender-related inequalities. Majority of female migrants have low education and are largely unskilled. Thus, many women are only able to find suitable employment in entertainment establishments, commercial venues (e.g. night clubs, bars, karaoke parlors, massage parlors and dance halls) where patrons—mostly male—engage in a variety of entertainment or socialization activities. These commercial venues have been characterized as being either affluent venues, i.e. more physically elaborate settings catering to wealthier customers such as businessmen and foreigners, or moderate/marginal venues, i.e. more humble settings catering to less affluent patrons. Many such entertainment venues—both affluent and moderate/marginal—have a reputation of providing sexual services. As one of the modifiable factors that may influence sexual risk behavior, drinking alcohol has received increased attention in HIV prevention studies in recent years, and alcohol drinking has been found to be associated with sexual risk behavior and an increased risk of sexually transmitted infections (STIs) across a wide variety of populations (WHO, 2005; Kalichman et al., 2007; Li et al., 2010b), including females working in entertainment venues (Chersich et al., 2007; Li et al., 2010a; Chen et al., 2013).

Women working in entertainment establishments, both commercial sex workers (CSWs) and non-CSWs, have significant exposure to high-risk drinking behaviors. For example, women in affluent venues (e.g. karaoke halls and nightclubs) are often required to drink with male clients as part of their job duties. Furthermore, the economic reliance of entertainment establishments on alcohol sales ensures that alcohol is a prominent feature in these commercial places (Wang et al., 2010). Despite a growing awareness of alcohol use and related risk behaviors among women working in entertainment venues, little attention has been given to the hazardous drinking behaviors among female migrants by typology of work environment (affluent versus moderate/marginal). To our knowledge,
METHODS

Participants and recruitment procedure
From March to July 2012, we conducted a cross-sectional survey of young migrant women working in entertainment venues in the capital city of Hefei, Anhui Province, China. A rapidly developing economy in Hefei has created a large and lucrative market for the commercial entertainment industry. To maximize the diversity of the sample of entertainment venues, two of the districts in the city (Luyang district and Baohe district) were selected as the study sites. Luyang is a highly commercial district characterized by a dense concentration of modern retail venues; Baohe district is relatively less developed. The detailed recruitment procedure has been described elsewhere (Huang et al., 2013). Briefly, prior to recruitment, we obtained a list of all 157 registered entertainment venues in both districts from the local Center for Disease Control and Prevention (CDC). Based on the venues’ physical premises, staff size and client profiles (information provided by the local CDC, which conducts regular outreach at these locations), entertainment venues were categorized as ‘affluent’ or ‘average/marginal’. We randomly selected 18 affluent venues (out of 32 total registered affluent venues) and 36 average/marginal venues (out of 125 total registered affluent venues) from the list as our primary recruitment sites. We partnered with staff at the local CDC to contact managers of each establishment in order to explain the nature and purpose of the research and to obtain permission to recruit participants from each venue. Six average/marginal venues (three in Baohe and three in Luyang) declined our request to recruit. In total, 18 affluent venues and 30 average/marginal venues agreed to serve as recruitment sites. Prior to recruitment, informational leaflets about our survey were distributed in each recruitment site to publicize the study. To minimize any disruption of business activities, we conducted staff recruitment prior to the beginning of the evening shift and scheduled interviews outside of working hours.

Eligibility criteria were women who were 18–29 years old, migrants to Hefei (i.e. born outside of the city and immigrated as an adult), working in one of the included entertainment venues and Mandarin speaking. Eligible participants were screened in person and a structured questionnaire was administered to all women who provided written informed consent. The confidential face-to-face survey interviews were conducted in Mandarin by a trained research assistant in a private room in the workplace setting. Interviews took about 30–45 min to complete. Participants were compensated with a gift packet containing safer sex materials worth 50 RMB (approximately $7.8 USD) after they completed the questionnaires. All study procedures were approved by Institutional Review Boards at Anhui Medical University and Brown University.

Survey measures
Participants were asked to provide information regarding their demographic characteristics, sexual behavior, mental health, alcohol use and drug use. Demographic characteristics included age, education, monthly income; employment/job characteristics, including whether they had sex with venue patrons for money; marital status; whether the participant grew up in a nuclear family and the total amount of time the participant had been a migrant. Sexual behavior in this study was defined as vaginal sex and did not include oral or anal sex. Sexual behavior included history of sexual debut (age of first sex, whether first sex was voluntary or not, and contraceptive use during first sex); sexual partner types in the past 6 months (husband, commercial sex partners, boyfriend/lovers and casual partners), and condom use with each partner type (during the past 6 months, during their most recent three sexual episodes and during their most recent sexual episode). Mental health indicators included recent depression symptoms measured by the Center for Epidemiologic Studies Depression Scale (CES-D) (Liu et al., 1995), recent anxiety symptoms measured by the Self-Rating Anxiety Scale (SAS) (Liu et al., 1997) and suicide ideation (yes/no) in the past year. Per validated cutoffs, we created dichotomous variables for presence of depression symptoms (CES-D score ≥23; cutoff based on local norms) and anxiety (SAS score ≥60). Alcohol use was measured by the Alcohol Use Disorder Identification Test (AUDIT) (Babor et al., 2001). Based on guidelines provided in the AUDIT scoring manual, we used a score ≥8 as an indicator of a probable drinking problem and a score ≥16 for probable alcohol dependence. We report the distribution of participants for both cutoff points; only the cutoff ≥16 was used in the multivariate analysis.

Data analysis
We conducted descriptive analyses to describe AUDIT score distribution, individual demographic characteristics, mental health status, drug use and sexual behaviors. Pearson Chi-square statistics and analysis of variance were employed to explore the group differences according to AUDIT scores (two cutoffs: AUDIT 8 and AUDIT 16). We conducted multivariate regression to examine the correlates of two dependent variables: (a) risky drinking (AUDIT ≥8) and (b) probable alcohol dependence (AUDIT ≥16). In order to identify variables for inclusion in the regression models, we used univariate analyses to identify correlates of both dependent variables that were associated with each dependent variable at P<0.10. We entered the independent variables in the multiple logistic regression models using a backward stepwise approach. Data were entered using the EpiData 3.0 software and analyses were conducted using SPSS 10.01.

RESULTS

Participant characteristics
Three hundred and fifty-eight participants met study inclusion criteria and completed the survey. About two-thirds (64%) of participants were recruited from affluent entertainment venues...
and about one-third (36%) were recruited from average or marginal venues (Table 1). The mean age of respondents was 23.5 (SD = 2.9) years and more than half (56%) had a junior high school education or less. About 45% women were married or were currently living with a boyfriend, and the majority (90%) had grown up in a nuclear family with both parents married and living together. More than half (52%) of the women had a monthly income >4000 Yuan (roughly $640 USD), and 54% had been working as a migrant for >3 years.

Alcohol use
Table 1 stratifies participants by AUDIT scores with two separate cutoff categories: AUDIT ≥8 (problem drinking) and AUDIT ≥16 (probable dependence). Among all participants, there was an average AUDIT score of 9.6 (SD = 8.1) with a median of 10.0. Overall, 203 (57%) participants had an AUDIT score ≥8 (risky drinking) and 95 (27%) women had an AUDIT ≥16 (probable dependence).

Participants who had an AUDIT score ≥8 were more likely to be younger, to have received at least a high school education, to be single/divorced or widowed, to have worked in an affluent entertainment venue and to have a monthly income of >4000 Yuan. Participants who had an AUDIT score ≥16 were also more likely to be younger, work in an affluent entertainment venue and have a monthly income of at least 4000 Yuan (Table 1).

Alcohol use, mental health, drug use and sexual behavior
Table 1 also depicts mental health, substance use and sexual risk behavior indicators stratified by AUDIT cutoff values (≥8 and ≥16).
and ≥16). Overall, 14 and 5% endorsed moderate depressive symptoms and anxiety symptoms, respectively, during the past week and 9% of participants endorsed suicidal ideation during the past year. No significant group differences between women with AUDIT scores ≥8 and scores ≥16 were observed for these variables.

About 43% of participants reported having commercial sex during the previous 6 months; more than two-thirds (61%) had risky sexual behavior, as defined by ever not using a condom during vaginal sex, during the previous 6 months. Participants who had an AUDIT scores ≥16 were more likely to have any risky sexual behaviors during the past 6 months. Of note, median AUDIT scores for both AUDIT cutoff categories (≥8 and ≥16) did not significantly differ between women who reported commercial sex in the past 6 months and women who did not report such activity.

About 8% of participants had ever used illicit drugs; participants who had AUDIT scores ≥8 and AUDIT scores ≥16 were both more likely to have ever used illicit drugs. Additionally, statistically significant differences were observed in both AUDIT ≥8 and AUDIT ≥16 groups with respect to getting drunk before having sex during the past 6 months (Table 1).

Independent correlates of risky drinking and probable alcohol dependence

Multivariate logistic regression models examined correlates of both risky drinking behavior and probable alcohol dependence among female migrants. Results are reported in Table 2. Greater likelihood of risky drinking was associated with being younger (OR = 0.85, 95% CI: 0.76–0.95), working at an affluent venue (OR = 2.46, 95% CI: 1.13–5.36) and depressive symptoms during the past week (OR = 2.74, 95% CI: 1.10–6.83).

DISCUSSION

With the more permissive attitude towards alcohol and a growing culture of drinking in China, specific populations may be at risk of developing alcohol use disorders. The current study brings attention to the high prevalence of risky drinking practices and probable alcohol dependence among female migrants working in entertainment venues in an urban setting in China. Our results indicate that more than half (57%) of the women in our study had a probable drinking problem and more than quarter (27%) of participants had probable alcohol dependence. Importantly, our study documents risky drinking practices among both CSWs and non-CSWs working in entertainment venues. Our data suggest that entertainment venues, particularly those that are higher end (i.e. affluent) venues, should be targeted for public health interventions aimed to reduce harmful drinking practices.

Data in the current study identify different demographic characteristics which correlate with different levels of problematic alcohol use. Younger women, women working in affluent venues and women who reported previous use of illicit drugs were more likely to engage in risky drinking (AUDIT ≥8). Additionally, age, venue type and depressive symptoms in the past week were also associated with probable alcohol dependence (AUDIT ≥16). These findings suggest that younger female migrants may be more susceptible to specific risky drinking behaviors. Previous studies have found that CSWs rely on alcohol to cope with the stress and anxiety they face regarding their involvement in commercial sex (Li et al., 2010a). Our study found that both CSWs and non-CSWs.

Table 2. Multivariate logistic regressions: correlates of risky drinking (AUDIT scores ≥8) among 358 female migrants working in entertainment venues in China

<table>
<thead>
<tr>
<th>Variables</th>
<th>Univariate regression</th>
<th></th>
<th>Multivariate regression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>0.78 (0.72–0.84)</td>
<td>&lt;0.001</td>
<td>0.81 (0.74–0.88)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school or higher</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Junior high school or less</td>
<td>1.82 (1.18–2.79)</td>
<td>0.006</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>1.0</td>
<td></td>
<td>1.02 (1.02–10.02)</td>
</tr>
<tr>
<td>Married/living with boyfriend</td>
<td>1.64 (1.07–2.50)</td>
<td>0.022</td>
<td></td>
</tr>
<tr>
<td>Single/divorced or widowed</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly income (RMB)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤4000</td>
<td>1.0</td>
<td></td>
<td>3.20 (1.02–10.02)</td>
</tr>
<tr>
<td>&gt;4000</td>
<td>2.19 (1.43–3.36)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Type of venues</td>
<td>3.83 (2.41–6.05)</td>
<td>&lt;0.001</td>
<td>3.47 (2.13–5.64)</td>
</tr>
<tr>
<td>Average/marginal</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affluent</td>
<td>3.83 (2.41–6.05)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Grown up in a nuclear family</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1.92 (0.92–4.02)</td>
<td>0.083</td>
<td>2.06 (0.90–4.72)</td>
</tr>
<tr>
<td>No</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever used illicit drugs</td>
<td>4.82 (1.63–14.25)</td>
<td>0.004</td>
<td>3.20 (1.02–10.02)</td>
</tr>
<tr>
<td>No</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have commercial sexual behavior in the past 6 months</td>
<td>0.98 (0.65–1.50)</td>
<td>0.944</td>
<td>0.99 (0.62–1.60)</td>
</tr>
<tr>
<td>Yes</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
were exposed to high levels of drinking. Given previous reports about the nature of services provided at entertainment venues, and the fact that these venues rely on the sale of alcohol (Wang et al., 2010), this finding is not surprising. Anecdotally, study participants indicated that often women are rewarded with higher salaries if they sell greater quantities of alcohol to venue patrons. This may in part explain why we found high levels of alcohol use, and are more likely to engage in hazardous drinking behavior compared with females working in less affluent venues. We found that affluent venue type was an independent risk factor for probable alcohol dependence. Compared with average/marginal venues, women working in affluent entertainment venues were nearly 2.5 times as likely to have probable alcohol dependence (AOR = 2.46; 95% CI 1.13–5.36). This finding is consistent with findings from Chen et al. (2012). Thus, our results imply that future venue-based alcohol reduction interventions may be most appropriately targeted toward affluent entertainment venues. Women working in average/marginal venues may face other alcohol-related risks, however. For example, in a study of female sex workers in economically marginal settings in Johannesburg, South Africa, Wojcicki and Malala found these women, while less likely to drink themselves, may be more likely to interact with intoxicated clients or to succumb to clients’ requests to have sex under the influence of alcohol (Wojcicki and Malala, 2001).

There are several limitations of the present study which must be acknowledged. First, the cross-sectional design does not permit us to draw causal inferences regarding possible associations between alcohol use and individual or environmental factors. Second, data were self-reported, and may therefore be subject to social desirability and recall bias. Trained research assistants conducted study interviews in a private room and were careful to avoid asking leading questions or to give any guidance as to how participants responded such that social desirability bias was likely minimized. Third, this is a small-scale pilot study with a convenience sample.
The study was conducted in two districts of Hefei. Hefei is a moderately developed city located in eastern China; it may not be comparable with other geographic settings in China. Thus, caution should be used in generalizing findings from this study to other female migrant populations elsewhere in China.

Despite these limitations, to our knowledge, this is the first study to use a validated and internationally comparable instrument to assess alcohol use problems among young female migrants working in entertainment venues in China. The findings of this study have implications for future research and interventions. Our study reveals that problem drinking behaviors reach alarming levels among female migrants working in entertainment venues, and that drinking behaviors are associated with venue characteristics rather than engagement in sex work. Compared with average/marginal entertainment venues, females working in entertainment venues have higher prevalence of probable alcohol dependence, which implies that alcohol use interventions targeting females working affluent venues are needed. Development of structural interventions targeting the venue as a whole may also be warranted. Excessive alcohol use and alcohol-related health damage to employees can be considered an occupational hazard that merits regular screening and assessment. Potential health promotion strategies include providing alcohol risk reduction education and training to all new employees of entertainment venues, and offering regular screening and referrals for alcohol-related health problems and addiction to venue employees. This study also suggests a need for qualitative investigations to explore perceptions, beliefs, motivations and other mechanisms that under in differential alcohol use across different types of work environments.

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**Conflict of interest statement.** None declared.

**REFERENCES**


