Binge Drinking Among African International Students Who are Studying and Living in China: An Emerging Concern

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ABSTRACT

Binge drinking poses a growing concern, particularly among higher education students, with a notable impact on Black African students in China. This cross-sectional study employed the Alcohol Use Disorders Identification Test (AUDIT) to survey 370 students aged 18 to 45 in a prominent Chinese educational institution. Results indicated that 18.5% refrained from alcohol, while 61% exhibited low-risk use, 18.5% displayed hazardous use, and 5% showed harmful use. Notably, 38% of low-risk students consumed more than two drinks on occasion, and 35% had more than six drinks in a single instance. Given the evident issue of alcohol misuse, it is imperative to implement educational interventions and legislative measures to control the availability of alcohol.

Keywords: African students, Alcohol, Alcohol consumption, Binge drinking.

1. Introduction

The issue of alcohol consumption in university settings, particularly in China, has garnered considerable attention due to reports of escalating misuse among students. The increasing prevalence of alcohol and drug use poses a substantial threat to academic focus, resulting in a decline in students’ performance within higher education institutions. Addressing this growing concern presents numerous challenges, with some observations underscoring the inherent difficulties universities face in managing alcohol consumption [1]. These challenges are attributed, in part, to the newfound freedom and exploratory behaviors displayed by young adults transitioning from the constraints of parental and school environments.

Despite the mounting evidence, there is a noticeable lack of data concerning the binge drinking trend, especially among Black Africans in Asian countries like China. The dynamics of binge drinking, including drinking patterns and preferences, can vary widely based on urbanity, regionality, and even among migrant groups. A clear disparity exists between Chinese and Black African students in Chinese universities. Black African students, many of whom are first-generation scholars, encounter multiple barriers, including cultural norms, discrimination, and challenges associated with being immigrants. Factors such as societal discrimination, acculturation stresses, and the unique pressures faced by first-generation scholars further contribute to alcohol misuse. Researchers have delved into the intricate interaction of these factors, emphasizing the importance of acknowledging cultural nuances when addressing this issue [2].

Excessive alcohol consumption can significantly impact human health and well-being, leading to an increased risk of criminal and antisocial behavior, as well as long-term negative consequences for individuals’ futures [3], [4]. Therefore, any attempt to study alcohol consumption in Black African populations necessitates an approach rooted in their specific cultural and socio-economic realities.

Research into alcohol consumption among university students worldwide reveals troubling trends. A significant study emphasized a heightened inclination toward alcohol misuse among students globally [5]. In the United States, nearly half of all adolescents engage in drug use, and an even higher percentage, 60%, partake in alcohol consumption. These statistics are closely mirrored in Asia, where almost half of the university-going population acknowledges alcohol consumption. Notably, a quarter of these are freshmen, while a staggering 75.6% are in their final year of studies. Despite these alarming figures, Africa and Asia generally report lower rates of high-risk drinking compared to other continents [5].
Shifting focus to Ethiopia, alcohol emerges as the primary substance of choice for half the student population [6]. South Africa also presents distinct challenges. One research initiative revealed an alcohol abuse rate of 39.1% [7]. A detailed examination at a South African university uncovered varying levels of alcohol misuse. Utilizing the Alcohol Use Disorder Identification Test (AUDIT), it was observed that a third were prone to risky drinking habits, with some displaying signs of potential alcohol dependency. A subsequent study at the same institution, employing a slightly adjusted measurement criterion, indicated that over half of the participants could be classified as either risky or harmful drinkers [8].

1.1. The Present Study

This study addresses a research gap by focusing on the alcohol consumption patterns of young African adults, specifically students in China. While previous research has often covered broader age ranges, our emphasis is on this specific demographic, highlighting the significance of understanding their binge drinking behaviors. Our approach involves a two-fold methodology. Firstly, we utilized the AUDIT score, setting a threshold at 8 to identify hazardous drinking. Concurrently, we conducted a detailed examination of distinct binge drinking behaviors and their consequences. We also sought finer insights into correlations between binge drinking and demographic variables, such as gender and age.

Certain data points to a tendency for binge drinking among individuals under the age of 26, while older African individuals show an increasing inclination for binge drinking as they age [9], [10]. As a result, our research is guided by three hypotheses:

1. We anticipated that cultural influences linked to African masculinity might lead to higher alcohol consumption rates among young males compared to females, with societal norms potentially driving young African men to engage in more frequent heavy drinking.
2. Based on age trends, we hypothesized that students under the age of 26 are predisposed to binge drinking.
3. Additionally, we expected that female students might experience more adverse consequences compared to their male counterparts.

2. Method

2.1. Participants

The data for our investigation into binge drinking was extracted from the research study titled ‘Zimbardo’s Time Perspective and Binge Drinking among International Students of African Origin in China’ [11]. We compiled data from three public universities in Chongqing City to conduct a comprehensive analysis. The study spanned from March to June 2023, with the primary objective of deciphering binge drinking patterns among college students.

To ensure a wide-reaching and inclusive participant pool, we employed a dual recruitment strategy. This involved online surveys for broad outreach and snowballing methods, leveraging interconnected student networks to reach potential participants who might be overlooked through traditional outreach. Our focus centered on students identifying as social drinkers. Although our initial data collection included both eligible and ineligible students, subsequent analyses were refined to include only those meeting our criteria. Specifically, we narrowed down our focus to Black African students, resulting in a sample size of 370 participants. Among them, 65% were male, and the average age was 30.3 years with a standard deviation of 3.48 years. It is noteworthy that this sample constituted a substantial 95.64% of the entire student body we aimed to study.

The reported statistics and frequencies were derived from what is termed a ‘complex sample analysis’. This methodological approach is tailored to handle data from multifaceted sampling designs, ensuring that estimates and inferences are statistically sound and representative of the larger population.

2.2. Measures

The Alcohol Use Disorders Identification Test (AUDIT), developed by the World Health Organization, is a self-report instrument designed to evaluate participants’ current and past drinking behaviors and consumption rates [12]. Comprising a total of 10 questions, the tool addresses three aspects: an individual’s alcohol use (3 questions), problems and negative reactions to alcohol (4 questions), and the presence of dependence (3 questions). The maximum achievable score on the test is 40, with points ranging from 0 (not applicable) to 4 (very strong) for correct answers. It’s crucial to note that one’s level of alcohol-related risk is directly linked to the cumulative score, underscoring its importance.

The AUDIT questions explore various facets, such as the frequency and quantity of alcohol consumption, symptoms of alcohol dependency (including questions on control, guilt, and memory lapses), and the adverse consequences of alcohol use on physical health, employment, and relationships. Each question is assigned a score from 0 to 4, contributing to the total score out of 40. The AUDIT demonstrates robust sensitivity and specificity in identifying hazardous and harmful drinking, and its validation across diverse situations and demographics makes it a valuable tool for diagnosing problematic alcohol use.

3. Results

Table 1 presents the demographic information, revealing that 47.6% of respondents were aged between 18 and 25 years, with 77.6% identified as binge drinkers. Among respondents, 64.9% were predominantly male students. The majority (54.6%) engaged in binge drinking at a dependence level of alcohol abuse, scoring 20 or higher on the AUDIT scale.

In contrast to gender, age exhibited an association with binge drinking. A Pearson correlation showed that younger students (18–25 years) reported a significantly low negative correlation (r = −0.165, p < 0.001) compared to their older counterparts. Despite male students (M = 1.7583, SD = 0.42899) reporting higher levels of
TABLE I: DEMOGRAPHIC INFORMATION

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequencies (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18–25</td>
<td>176 (47.6)</td>
</tr>
<tr>
<td>26–35</td>
<td>136 (36.8)</td>
</tr>
<tr>
<td>36–45</td>
<td>58 (15.7)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>240 (64.9%)</td>
</tr>
<tr>
<td>Female</td>
<td>130 (35.1%)</td>
</tr>
<tr>
<td>Alcohol drinking level</td>
<td></td>
</tr>
<tr>
<td>Drinkers</td>
<td>83 (22.4%)</td>
</tr>
<tr>
<td>Binge Drinkers</td>
<td>287 (77.6%)</td>
</tr>
<tr>
<td>AUDIT Score</td>
<td></td>
</tr>
<tr>
<td>0–7</td>
<td>83 (22.4%)</td>
</tr>
<tr>
<td>8–15</td>
<td>53 (14.3%)</td>
</tr>
<tr>
<td>16–19</td>
<td>32 (8.6%)</td>
</tr>
<tr>
<td>20+</td>
<td>202 (54.6%)</td>
</tr>
</tbody>
</table>

Fig. 1. Alcohol consumption by gender (frequencies).

binge drinking than female students (M = 1.8077, SD = 0.39564), an independent t-test indicated that gender was not significantly associated with binge drinking, (t (360) = −1.085, p > 0.05).

To explore the relationship between gender and various patterns and consequences of binge drinking, a series of simple linear regression analyses were conducted for Consumption, Dependence, and Alcohol-related problems. The regression model predicting dependence symptoms from gender was significant, F (1, 317) = 3.866, p < 0.001, explaining approximately 12% of the variance in dependence symptoms (R² = 0.12). For each unit increase in binge drinking, there was a corresponding increase in symptoms of dependence. Additionally, female college students exhibited a higher likelihood of experiencing dependence-indicative items compared to male students. These symptoms primarily included impaired control over drinking, increased salience of drinking, and morning drinking. No significant interactions between gender and binge drinking patterns were observed.

In entirety, there were 83 individuals classified as non-binge drinkers and 287 categorized as binge drinkers. Among the non-binge drinkers, 58 were male, and 25 were female. On the other hand, among the binge drinkers, 182 were male, and 105 were female. Notably, nearly 22% of the students, on average, reported never engaging in binge drinking, as illustrated in Fig. 1.

Fig. 2 illustrates the distribution of alcohol consumption patterns based on gender. The findings are categorized into five groups: “Never,” “Monthly or less,” “2 to 4 times a month,” “2 to 3 times a week,” and “4 or more times a week.” Among male survey participants, 26 reported never consuming alcohol, 27 reported a frequency of once a month or less, 42 reported twice a month, 75 reported twice a week, and 70 reported four or more times a week. Conversely, among female participants, 13 reported never consuming alcohol, 14 reported once a month or less, 24 reported twice a month, 48 reported twice a week, 48 reported three times a week, and 31 reported four times a week. The data from the table indicate a higher prevalence of men reporting alcohol consumption two to three times per week and four times per week compared to women.

Fig. 3 illustrates the alcohol consumption patterns of males and females based on the typical number of drinks consumed per day. The data is categorized into five groups, ranging from 1–2 drinks to 10 or more drinks. Across all categories, a greater number of men reported consuming alcohol in the surveys. In the initial group, men represented 37 responses, whereas women accounted for only 14. This trend persisted across the subsequent categories, with men consistently comprising a larger proportion of responses in inquiries regarding 3–4 drinks (24), 5–6 drinks (32), 7–9 drinks (71), and 10 or more drinks (44).

Fig. 4 illustrates the comparative representation of men and women engaging in binge drinking, defined here as consuming six or more alcoholic beverages in a single session. Except for the “monthly” group, where 29 men and 23 females reported binge drinking six or more
drinks monthly, a higher percentage of males than females disclosed involvement in excessive alcohol consumption. Across the other categories, the proportion of males engaging in heavy alcohol consumption exceeded that of females. For instance, in the “Daily or almost daily” category, 86 males reported heavy alcohol consumption, contrasting with 48 females.

Fig. 5 demonstrates the occurrence of alcohol-related problems over the past year is analyzed in relation to participants’ drinking frequency. The findings reveal a clear trend: as the frequency of drinking behaviors increases, so does the frequency of alcohol-related problems. For instance, considering the question “How often during the last year have you had a feeling of guilt or remorse after drinking?” the percentage of participants experiencing this issue increased from 69 in the “Never” category to 71 in the “Daily or almost daily” category. Similarly, for the question “How often during the last year have you been unable to remember what happened the night before because you had been drinking?” the percentage of participants facing this problem increased from 69 in the “Never” category to 71 in the “weekly” category.

Responding to question 9, 158 women acknowledged experiencing harm due to their drinking, while 74 indicated no recent injuries, and 134 reported recent harm. More than a third of the women (133) responding to question 10 revealed that someone close, be it a friend, family member, doctor, or another healthcare professional, had expressed concern about their drinking habits and urged them to reduce it. In the past year, 81 individuals reported feeling entirely free of worries, whereas 154 individuals disclosed experiencing moments of concern. The findings are visually represented in Fig. 7.

Among the survey respondents, 55% obtained AUDIT scores falling within the high-risk range of 20 to 40, indicating a heightened susceptibility to alcohol dependency. This is particularly concerning given that these individuals are college students, a demographic for whom the perils of alcohol misuse are extensively documented. Conversely, 83 participants (22%) attained scores ranging from 0 to 7 on the AUDIT, signaling a minimal risk of alcohol addiction. The remaining respondents, constituting 14%, scored within the range of 8–19 on the AUDIT. These results are graphically represented in Fig. 8.
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3.1. Statistical Analysis

Descriptive statistics, including frequencies and percentages, were utilized to examine the dataset. Frequency tables, a common tool in descriptive research, were employed for effective data presentation [13]. The analysis was conducted using SPSS Statistics. Gender-based comparisons employed a t-test, while examinations of age groups utilized analysis of variance (ANOVA). Furthermore, the chi-square test, a statistical method designed to assess the relationship between two categorical variables, was applied.

4. Discussion

This research delved into the drinking patterns of Black African students enrolled at two universities in Chongqing. These students navigate complex intersectional identities, encompassing their racial identity as Black individuals, diverse national origins from various African countries, cultural intricacies, and their status as international students in a predominantly Chinese academic milieu. These overlapping identities could potentially influence their drinking behaviors and attitudes toward alcohol use. The findings revealed an elevated inclination among these students toward binge drinking and alcohol dependence. Out of the 370 surveyed students, 70% acknowledged consuming alcohol. Among this cohort of drinkers, approximately 40% to 45% met the criteria for heavy or “binge” drinking, defined as consuming 5 or more consecutive drinks for men and 4 or more for women at least once in the past two weeks. These prevalence rates align with studies conducted in South Africa and Malawi, where 75% and 72%, respectively, of the populations reported engaging in harmful drinking behaviors [14], [15]. The consistency of these results with those from South Africa and Malawi suggests a potential broader trend prevalent among Black students across diverse geographical settings. Given the concerning prevalence rates, there are urgent implications to consider.

This study reveals concerning patterns of alcohol consumption among university students. A significant 77.5% (287 students) acknowledged engaging in alcohol abuse, with 40.2% (149 students) reporting daily binge drinking. The severity of the issue is underscored by the AUDIT scores: 55% (202 students) scored 20 or above, indicating a substantial risk of alcohol abuse and its associated harms. Furthermore, 14% exhibited harmful drinking levels, and 9% scored between 16–19, both suggestive of perilous consumption patterns. These findings imply that a majority of respondents may be caught in a cycle of either alcohol dependency or hazardous drinking behaviors. The immediate health risks are evident, but the broader consequences extend to academic realms, encompassing absenteeism and diminished performance. While the direct impact of binge drinking on academic outcomes might be nuanced, its long-term effects mirror those of chronic daily consumption. Given these implications, it is crucial for universities and relevant stakeholders to acknowledge and address this pervasive issue. Tailored interventions within the university setting, combined with awareness campaigns and support services, could serve as pivotal steps in mitigating these troubling trends.

A statistically significant negative correlation emerged between age and alcohol consumption ($r = -0.18; p < 0.001$), indicating that as age increases, there is a corresponding decrease in alcohol consumption. This finding aligns with the established knowledge that alcohol consumption tends to decline with age. Specifically, in certain settings or societies, younger individuals, such as adolescents or young adults, exhibit higher rates of alcohol consumption compared to their older counterparts. This observation is consistent with the research conducted by Bachman and colleagues, as well as Sax and colleagues, who documented increased substance use among younger cohorts [16], [17]. The underlying reasons for heightened substance use in younger populations remain a subject of research. It can be hypothesized that during crucial emotional and physical developmental stages, young individuals may grapple with heightened academic and social challenges, potentially leading some to resort to substance use as a coping mechanism. Further studies are necessary to validate this hypothesis and delve into the intricate factors influencing these patterns.
Traditionally, men have been noted for higher levels of alcohol consumption, a trend likely influenced by cultural norms, societal pressures, or other factors yet to be explored [18]. However, a shift seems to be occurring. Contrary to conventional findings, our recent research revealed that female students now surpass their male counterparts in alcohol consumption. This observation aligns with a changing trend noted in 2004 by White and Jackson, who found that female substance use had exceeded that of males [19]. Moreover, both male and female undergraduates have reported similar experiences of inebriation and a majority of alcohol-related problems [20]. A potential explanation for this shift in alcohol consumption patterns may be rooted in psychological factors. Research indicates that females, especially those aged 18 to 25, are more predisposed to internalized stress, anxiety, and depression compared to males. This predisposition is further accentuated by the observation that girls with heightened anxiety levels not only initiate alcohol consumption earlier but also engage in heavier drinking and binge drinking. This prompts the question: Are young females turning to alcohol as a coping mechanism for their increased stress and anxiety levels?

Our results suggest that gender serves as a significant predictor of symptoms associated with alcohol dependence among college students, indicating a higher susceptibility in females. Notably, within the realm of binge-drinking patterns—encompassing consumption, dependence, and related issues—only alcohol dependence demonstrated statistical significance. Interestingly, female students reported a higher incidence of alcohol dependence in comparison to their male counterparts. This gender disparity aligns with established literature; for example, two previous studies that controlled for alcohol use revealed that women reported more negative consequences than men [21], [22]. This observation is consistent with broader research indicating women’s heightened vulnerability to the biological and psychological impacts of alcohol [23]. Physiological distinctions, such as lower body weight, a higher fat-to-muscle ratio, and fewer enzymes for alcohol metabolism, contribute to women’s increased susceptibility to the adverse effects of alcohol. Consequently, women tend to experience higher blood alcohol concentrations than men, even with similar alcohol consumption [22], [24], [25].

5. Conclusion

Cultural norms and daily pressures play a pivotal role in shaping the alcohol consumption patterns of international students, particularly those adjusting to novel academic environments. Among the surveyed students, 22% had refrained from alcohol consumption, and there was a notable gender difference, with females exhibiting lower alcohol consumption than males. Furthermore, 22% displayed a minimal risk of alcohol addiction according to the AUDIT scale, whereas 14% were identified as having an elevated risk. Given the substantial risks associated with excessive drinking, comprehending its influences within college settings becomes imperative, underscoring the necessity for targeted interventions and supportive structures.

5.1. Future Work

Our discoveries center on a demographic that has been less explored, providing insights into more comprehensive drinking behaviors. While these findings contribute to the development of therapeutic interventions, further investigation is necessary to establish causality, especially in relation to psychological distress. Institutions should take proactive measures to provide mental health services, with a specific emphasis on addressing the distinct needs of females.

5.2. Limitations

The research, which focused on African students in Chinese universities, heavily leaned on data from a singular institution, underscoring the importance of broader representation in subsequent studies. It is recommended to broaden demographic scopes and investigate correlations between binge drinking and academic performance. Recognizing self-report bias and the concentration on university settings as limitations, future studies should delve more profoundly into motivations and socio-cultural factors that influence drinking patterns.

CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

REFERENCES


