

**A qualitative examination of alcohol use among international students in
Armenia**

**Master of Public Health Integrating Experience Project
Professional Publication Framework**

by

Sona Sam, MD(c), MPH(c)

Advising Team:

Tsovinar Harutyunyan, PhD, MPH

Nour Alayan, PhD, RN

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2. List of abbreviations

AUA- American University of Armenia

AUD- Alcohol Use Disorder

BAC-blood alcohol concentration

HRQoL-Health Related Quality of Life

IRB- Institutional Review Board

MPH- Masters in Public Health

PTSD- Post Traumatic Stress Disorder

SUD-Substance Use Disorder

TRA-Theory of Reasoned Action

TPB- theory of planned behavior

USA-United States of America

WHO-World Health Organization

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Abstract

Introduction: Ethyl alcohol, or alcohol, is an intoxicating ingredient and a psychoactive substance with dependence-producing properties. Alcohol is a significant risk factor for premature mortality and other disability-causing diseases among those aged 15 to 49, accounting for almost 10% of all deaths globally. Based on the last publicly available recorded data in Armenia, the prevalence of alcohol use disorders was 5.7 % in 2016.

Alcohol is commonly considered a cheap stress reliever and a mood enhancer among younger adults. Peer pressure, lower levels of parental monitoring, and social and academic challenges that may arise due to moving to a new country or a city led to engagement in binge drinking among college/university students globally. Among international students in particular, the difficulty of assimilating into a different culture, coupled with other pressures of being an international student, might impact their mental, physical, and emotional well-being and lead to increased engagement in risky behaviors. Relatively easy access to risky behaviors when compared to their country of origin might also contribute to increased alcohol use.

This study aimed to qualitatively explore alcohol use among international students in Armenia using the Theory of Planned Behavior (TPB) as the theoretical framework. The following research questions guided the investigation: 1) What is the international students' attitude toward alcohol use? 2) What are the perceived social norms regarding alcohol use among international students? 3) What are the students' beliefs regarding the control over alcohol use? and 4) How do attitudes, social norms, and control beliefs influence students' decisions about alcohol use?

Methods: The study participant selection was conducted using convenience and snowball sampling methods. The study population included international university students aged 18-26 residing in Yerevan, Armenia. The primary data collection process was conducted in March and April 2023 via 10 face-to-face in-depth interviews using a semi-structured interview guide which was self-developed based on the constructs of TPB. The data analysis was done using deductive and inductive approaches.

Results: The students' attitudes, subjective norms, and perceived control played an essential role in their intention to drink and actual drinking behavior. Although alcohol use was considered dangerous to health, moderate and responsible drinking was considered a reasonably safe behavior, with participants following binge drinking patterns without recognizing it. Several students also reported smoking and using other substances, such as marijuana and LSD, while drinking.

The students mostly used alcohol due to peer influence and to be accepted into cliques and social circles. Drinking to get energy bursts and alleviate emotional stress was also common.

When compared to home countries of India, Sri Lanka, and the Philippines, social settings within Armenia seemed to support the students' drinking behavior.

The students considered direct pressure from friends and lack of financial control by parents as the most important reasons for pursuing their drinking habits. The international students' perception that their drinking behavior is transient and explained mainly by their life conditions in a foreign country was one of this study's unique findings.

Conclusions: This is the first study in Armenia to explore the experiences and perceptions of alcohol use among international students. Quantitative studies within the same study population

could help to test the associations between the constructs of TPB and drinking behavior, as suggested by this study.

Since high accessibility of alcohol seems to be one of the critical facilitating conditions of alcohol consumption among students, stopping sales or increasing the price of alcoholic beverages in shops near dormitories should be considered by the government. Educational programs focusing on the health consequences and addictive properties of alcohol and resistance to peer pressure could be effective in the student population. Underestimating the addictive properties of alcohol and false confidence in the ability to quit whenever necessary should also be targeted by educational interventions in this population. Tailoring counseling services to international students considering their cultural and social backgrounds, is recommended.

1 Background

1.1 Problem definition and magnitude

Ethyl alcohol, or alcohol, is an intoxicating ingredient¹ and a psychoactive substance with dependence-producing properties¹ found in beverages such as beer, wine and liquor.¹

Globally, 2.8 million deaths per year is caused by alcohol consumption.³ Harmful use of alcohol is responsible for 7.1% and 2.2% of the global disease burden for males and females, respectively.⁴ Alcohol is a major risk factor for premature mortality and other disability-causing diseases among the population aged 15 to 49 years, thereby being responsible for almost 10% of all deaths.²

In the U.S., during 2015–2019, excessive use of alcohol was liable for the loss of 3.6 million years of potential life, and more than 140,000 lives were lost, on average.⁵ Overall, approximately 10.1% of all deaths in the European Region were caused by alcohol.⁶

Alcohol, as an intoxicant, can affect the central nervous system, increase the risk of injuries (both intentional and unintentional), and cause adverse social consequences.⁴ It can also affect the digestive, cardiovascular, and immune systems, increasing the risk of diseases such as tuberculosis, HIV, acid reflux, gastritis, heart failure, and stroke.⁴ According to the International Agency for Research on Cancer, alcoholic beverages are classified as carcinogenic and can increase the risk of several cancer types, such as oral cancer, laryngeal cancer, esophageal cancer, colorectal cancer, liver cancer, and breast cancer in women.^{7–9} In 2018, within the WHO European Region, about 4.2 million people had developed cancer (without factoring in non-melanoma skin cancer) of which 4.3% were due to alcohol.¹⁰ The risks depend primarily on the

proportion of alcohol consumed and the frequentness of drinking which can exponentially increase with the quantity consumed on a single occasion¹¹

Approximately 25% of worldwide alcohol production or sale is not controlled by the government. This includes alcohol made at home, smuggled alcohol, or surrogate alcohol, which is a type of alcohol that is not meant for human consumption.^{12,13} In addition to unrestricted availability and generally being cheaper than regulated alcohol due to the lack of taxes, there are concerns that unrecorded alcohol may contain harmful ingredients such as methanol¹⁴ or botulinum toxin¹⁵ that could lead to increased morbidity and mortality due to poisoning^{14,15}.

Excessive alcohol use includes “binge drinking (drinking five or more drinks on occasion for men or four or more drinks on occasion for women), heavy drinking (drinking 15 or more drinks per week for men or eight or more drinks per week for women), and any alcohol use by people younger than 21 or pregnant women.”¹⁶

Binge drinking is associated with severe injuries and diseases and a higher risk for alcohol use disorder, which is a medical condition “characterized by an impaired ability to stop or control alcohol use despite adverse social, occupational, or health consequences¹⁷⁻¹⁹”. Binge drinking usually leads to alcohol-induced blackouts, considered as time period or interval of anterograde amnesia where a person may be engaged in drinking and its related behaviors but has no retention of those memories.²⁰

In 2018, one in six U.S. adults had reported binge drinking, thereby increasing their risk for adverse health outcomes which could have been prevented.²¹ Binge drinking accounts for virtually for all of excessive drinking. Over 90% of U.S. adults who reported binge drinking were also those who followed patterns of excessive drinking.²¹

In Armenia, according to WHO, the prevalence of alcohol use disorders was 5.7 % in 2016²², which is lower than the WHO European region prevalence of 8.8%. According to WHO, in Armenia, the total alcohol per capita (15+) consumption, drinkers only (in liters of pure alcohol) for males and females, was 27.4 liters and 9.7 liters, respectively, in 2016²². The unrecorded alcohol consumption had also increased to 1.7 liters in 2016 from 1.5 liters in 2010.²² This is the last publicly available recorded data about alcohol sales and consumption in Armenia.

1.2 Risk factors for alcohol consumption

Various components that affect the patterns of alcohol consumption and its magnitude in various populations and ethnicities can be classified into individual and societal factors.²

The risk factors contributing to alcohol use and its related disorders on an individual level include the familial history of alcohol use disorder or any other substance disorder, age, gender, history of childhood abuse and trauma, having any other mental health disorders such as post-traumatic stress disorder (PTSD) or depression.^{23,24}

Societal factors include financial considerations, culture, societal norms, access to alcohol, and administration and execution of alcohol policies.²⁵ Poverty stricken individuals encounter greater health and social issues due to consumption of alcohol when compared to affluent individuals.²⁴

1.3 Alcohol use in university students

The age group of 18 to 25 years is considered the period of "emerging adulthood."²⁶ It is theorized to be a period with limited responsibilities usually considered part of adulthood. This is also when most individuals try to explore the various aspects and create new definitions for their identity.²⁶ During this time frame, some of them enroll in various educational institutions and, as

students, often become exposed to various cultures, including religious and ethnic cultures.²⁶ In an attempt to gain social acceptance, students may deviate from their understanding of perceptions of social norms and behaviors. Sometimes, one of the ways to be socially accepted into a wide student circle is the usage of alcohol.^{26,27}

Some students have described alcohol as a cheap stress reliever and mood enhancer²⁸. Other factors associated with alcohol use among students include peer pressure which may be due to living on campus with the inability to handle independence when students move away from their homes, lower level of parental monitoring,²⁹ same-age peers,³⁰ and social and academic challenges that may arise due to shifting to a new country or a city.^{9,28-30}

Among international students, the difficulty of assimilating into a different culture, coupled with other pressures of being an international student such as specified deadlines of the course, new formats of teaching and learning, and the pressure to perform well, might have an impact on their mental, physical and emotional wellbeing.³¹ Although engagement in risky behaviors is often seen among young people, it may be even more appealing for international students due to the relatively easy access to the risky behaviors compared to their country of origin.³²

Engaging in the behavior of binge drinking is quite common among university students globally; this age group encompasses the largest proportion of individuals routinely engaging in binge drinking^{20,22}. In the US, 33% of college students aged 18-22 reported binge drinking in 2019. About 8.2 % of college students reported heavy use of alcohol.³³

The most common consequences of alcohol misuse among students are increased motor vehicle accidents³⁴(due to drunk driving³⁵), poor academic performance^{36,37} unsafe sexual practices³⁵, excessive substance use³⁴, which in turn would lead to substance use disorders, increased cases

of violence, along with police involvement^{36,37} where the students can either be perpetrators or victims³⁴.

In Armenia, only a few studies have explored alcohol use among university students.

A study conducted in 2014 to estimate the prevalence of depression among Armenian and Indian medical students at Yerevan State Medical University (YSMU) in Armenia found that 25.5% of the students consumed alcohol in the past week, with higher proportion of consumption among Armenian students³⁸ No statistically significant association between probable depression and any alcohol consumption and any club/disco/bar visitations was observed in the sample.³⁸

Another study conducted in 2018, assessed the health-related Quality of Life (HRQoL) level among Indian medical students aged 18 years and above studying at Yerevan State Medical University (YSMU) in Armenia.³⁹ The quantitative cross-sectional survey was conducted among 353 students with a self-administered questionnaire. About 32% of the Indian students reported drinking occasionally or frequently. No significant association between alcohol use and HRQoL was found.³⁹

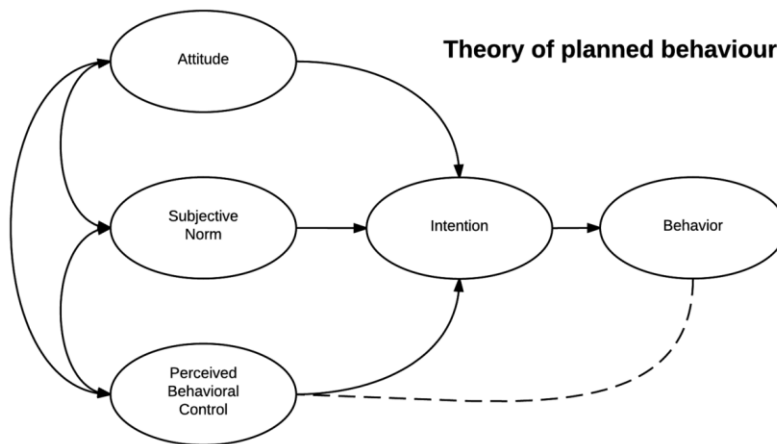
1.4 Theoretical framework

This study used the Theory of Planned Behavior (TPB) to understand alcohol use among international students (Figure 1). The (TPB) main components of this model are behavioral intention, which is influenced by a person's attitude towards performing a behavior, subjective norms, which are the person's beliefs about approval and disapproval of the behavior by those the person considers essential in their life, and perceived behavioral control, which is based on factors that can hinder or ease a behavior's performance Attitude toward the behavior is a combination of beliefs regarding the behavior's likely consequences and a value attached to those

consequences⁴⁰ The normative beliefs determine an individual's subjective norm. It depends on what those around them (i.e., family, friends, or others close to them) think about their behavior and whether they are motivated to comply with those thoughts.⁴⁰ Each behavioral control belief contributes to perceived behavioral control, which also interacts with the person's perceived power to hinder or ease the performance of the behavior.⁴⁰

The TPB has been used over the years successfully to predict and explain multiple health behaviors and intentions, including but not limited to smoking⁴¹, smoking cessation⁴², drinking, substance abuse^{43,44}, breastfeeding⁴⁵, etc. In the case of alcohol abuse, multiple studies have been conducted using TPB as the theoretical framework for both quantitative and qualitative studies.^{43,44,46,47} The studies evidenced the utility of TPB in explaining alcohol use behavior.

Figure 1. Theory of planned behavior



1.5 Study aims and objectives

This study will provide insights into alcohol use among international students, an understudied population in Armenia. This study's results will help create programs such as educational interventions and counselling services tailored to the needs of international students in various universities in Armenia.

The following are the research questions:

- 1) What is the international student population's attitude towards alcohol use?
- 2) What are the perceived social norms regarding alcohol use among international students?
- 3) What are the students' beliefs regarding the control over alcohol use?
- 4) How do attitudes, social norms, and control beliefs influence students' decisions about alcohol use?

2 Methods

2.1 Study design

A qualitative study using in-depth interviews can provide detailed insight into the perceptions and experiences of students related to alcohol use, and help us understand to what extent alcohol drinking is a part of international student life in Armenia. In-depth interviews help in exploring and understanding an individual's perspectives and experiences about various topics in a detailed but comfortable manner. When compared to other qualitative research methods such as focus groups, in depth interviews introduce lower chance of interviewer bias and each participant can

freely express themselves about sensitive subjects (such as alcohol use) within more flexible time frame^{.48}

2.2 Study population and setting

The intended population included international students, residing in Yerevan, Armenia and studying in various universities, aged 18 to 26. This age group was chosen since nearly 13.5% of deaths in this age group are attributed to alcohol consumption²⁵ and also due to the large ratio of this population involved in binge drinking^{20,25}

According to the Ministry of Education, Science, Culture and Sports of the Republic of Armenia, as of 2022, a total of 3,760 foreign students and 4,248 diasporan Armenian students were studying within various educational institutions in Armenia.⁴⁹

1. Inclusion criteria

1. International student
2. Age 18-26 years
3. Currently enrolled in a university
4. Currently residing in Yerevan, Armenia.
5. Fluency in English

2. Exclusion Criteria

1. Undergoing treatment for alcohol use disorders
2. Not using alcohol for the past year

2.3 Sample size

A total of 10 students were interviewed. Both code and meaning saturation were reached by the 10th interview.

2.4 Sampling method

Participants were selected from the student investigator's social network based on convenience. In addition, the student investigator used the snowballing technique to enroll more participants in the study. When those from the student investigator's social network refused to participate, they were asked to suggest at least 3 other participants who could be included in the study instead. The selected students were first contacted by the participant who refused, and were notified about the study. If they agreed to participate, they were approached by the student investigator.

2.5 Data collection

The student investigator notified the interviewees about the interview via call or in person. If the subjects consented, they were asked to choose the location and time of the interview. The participants gave their informed consent orally, after which the interview was conducted. The interviews were recorded unless the participants did not consent to record. All the interviews were done face-to-face, and all the interviews were recorded. Also, the student investigator took extensive field notes. The student investigator created verbatim transcripts of the audio recordings. After the first few interviews, the student investigator had to change the formulation and the sequence of a few questions based on the study team's review of transcripts. The data collection began after the study was approved by AUA IRB on March 20, 2023, and was completed on April 12, 2023.

2.6 Study tool

The interview guide development was guided by the literature review and the constructs of the TPB model, including Attitudes, Subjective Norms, and Perceived behavioral control ⁴¹.

The guide was developed in English, as the conversation medium that was most comfortable for all international students. The guide comprised a total of 13 open-ended questions with multiple probe questions. Sociodemographic characteristics were also collected, such as age, sex, and current field of study.

2.7 Analysis

The study data were analyzed using inductive and deductive approaches. The deductive method was used to guide the categorization of the content into main domains based on the TPB, while the inductive method helped to reveal specific patterns and themes within major domains.

All the recorded interviews were transcribed verbatim. Data coding was done using field notes and transcribed interviews. In the first coding cycle, the transcripts were broadly coded into the domains corresponding to the TPB. In the second stage, codes were derived inductively, then grouped into themes under each broader category. Each theme was examined thoroughly to see if it could be merged or if it should be kept as a separate entity, after which each theme was defined and named.

2.8 Ethical considerations

Data collection began after AUA IRB approval was obtained. All participants were asked to provide oral informed consent before partaking in the study and to be audio-recorded during the interview. If they did not consent to audio recording, oral consent for taking extensive field notes was taken. The consent form comprised of necessary information and details, such as the study's

aim and research questions, maintenance of the privacy and confidentiality of information, the consent to audio record the interview, and the benefits and risks of participating in this study. No personal identifying information, such as name, phone number, etc., was collected from the participants.

All the audio recordings were recorded on the student investigator's phone, which was password-protected (biometric and facial recognition). As soon as the interview was wholly recorded, the student investigator transferred the audio clipping into a password-protected file that was saved on the student investigator's laptop with biometrics protection. All the audio recordings were deleted from the student investigator's phone. The audio recording files, which were named using the interviewee ID only, were deleted after the verbatim transcription of the file, which was done on the same day as the audio recording.

3 Results

Out of 23 participants invited to participate in the study, only 10 agreed to participate. Six individuals refused participation because they felt uncomfortable talking about their drinking habits, and two individuals refused participation, citing fear of being identified. Others cited lack of time as the reason for refusal. The average interview duration was 33.1 minutes ranging from 28 to 42 minutes.

3.1 Socio-demographic characteristics of the study participants

Table 1 illustrates the socio-demographic characteristics of the study participants. Five of them were women, and five were men. The mean age of the participants was 23.3, ranging from 19 to 25 years.

Table 1. Socio-demographic characteristics of the study participants

<i>Characteristic</i>		<i>N</i>	
Mean age of the participants (mean)		23.3	
Sex	male	5	
	female	5	
Country of origin	India	5	
	Sri Lanka	3	
	Philippines	2	
Field of study	MD	6	
	Architecture	3	
	Other	1	
Type of residence	Hostel	Alone	2
		With friends	3
	Apartment/House	Alone	2
		With friends	3

3.2 Drinking patterns

The frequency of drinking varied among the participants. Six out of 10 participants (five males and one female) said they drink at least once a week, mainly on the weekends or after exams. All participants said they drink for special occasions such as birthday parties, New Year, and other

celebrations. Most of them drank with their friends and romantic partners. The number of drinks consumed per occasion ranged from two to ten.

“I drink on weekends. Mostly we have exams on Friday so after that usually... Then if there are birthday parties or other get-togethers, then also, we will drink...”

-Male,25

The average duration of drinking among the participants was 5.6 years, ranging from 2 to 10 years. The most preferred drinks among the participants were wine, beer, whisky, and cognac. These preferences were primarily based on the participant’s budget and taste.

Cigarette use during drinking was reported by six out of ten people (four males and two females). Some participants reported using weed while drinking.

“...I don't mind smoking while drinking...I usually smoke maybe like 3 or 4 cigarettes a day...I think I smoke more when I am drinking. It makes me feel more relaxed and chill.”

-Female,23

All participants had reported hangovers, with side effects such as headaches, body pain, unquenchable thirst, hunger, and sleeplessness.

“So for me....whenever I drink close to my max limit...I will have a headache the next day...if I cross the limit then it turns to stomach pain the same day...especially if I hadn't eaten anything before drinking...and the next day I definitely have to take medicines to kind of ease the pain...the headache kind of wears off by the afternoon or if I have a lot of coffee...but the joint pain and stomach pain will be there till I get good sleep for the next 2 days or so...”

-Female,23

Some of the participants mentioned that the intensity of hangovers depended on the quantity and the types of consumed beverages.

“Mixing drinks... that depends... if we mix vodka with juice. The hit and the hangover are different...if we do vodka plus wine or maybe beer...the hit is way better...but the hangover is bad...like the extreme ends of the scale...what you drink and how much you drink will affect your hangover I think.”

- Male,21

Also, some of the participants reported having blackouts during drinking and going out of control when having consumed too many drinks.

“So, it depends on the number of bottles, I will not know if I have exceeded my max limit or not...so if I drink like that...I won't remember what I did. I will sometimes vomit and all but then I will not remember it at all then.... next day someone will say “you said this joke” or something like that. Sometimes I will not remember when they ask me but maybe at night or next day, I will remember some parts of it”

- Male,24

This mostly happened during parties or get-togethers. All those who had reported blackouts also said having “hazy memories” about the various incidents that occurred during the blackouts and understood the situations during blackouts through their friends.

“It depends...like my friends usually say what has happenedso whenever I drink in a group. There are people who don't drink as well in my friend circle...they usually see everything so they usually let us know...” do you remember what you did?” ...then maybe flashes of

memories come back...so then I realize what had happened maybe I will remember a scene of what happened...before and after that most of the time is blank”

-Male, 24

3.3 Attitude

3.3.1 Students’ perceptions of health consequences of alcohol use

All participants believed drinking, although not good for health, is okay if done moderately and responsibly.

"It's all about a person's perspective, like if they're drinking too much, it is bad for them if they are drinking like once in a while and all it's okay. I don't think that there will be a problem with that."

- Male,24

“Health wise...I think it's fine if you drink only once in a while...even then, make sure that the amount is not a lot... maybe a glass or 2 is fine, I think... don't go overboard...that's all”

-Female,24

All participants stated that excessive drinking of alcohol may lead to health effects, including stroke, liver cirrhosis, memory lapses, etc. Both medical and non-medical students believed that alcohol in small amounts will not harm the body, with a small amount mostly understood by the participants as one drink per week. Medical students were more aware of the side effects and diseases that could be caused by excessive alcohol use.

“If you drink excessively, there can be liver cirrhosis or stroke, I think; I have read somewhere that you can have memory issues if you drink a lot”

-Female,24

“If you always drink every day, you will get liver cirrhosis. Apart from that, if you have it only occasionally, like once a week, that's fine, I think”

-Female,24

Another student stated that she had heard that alcohol can help in curing cholecystitis and therefore it is ok to drink in small amounts. One student said that in their country, there had been instances where small amounts of alcohol, mixed with ginger juice and coffee grounds, were given to decrease headaches.

“I have heard some doctors prescribe, for example, if you have cholecystitis, drink a can of beer daily. It will be good for the disease, so in my opinion, it is not that bad or good... it is neutral”

-Female,24

“So uh, in my country they sometimes uh if you have headaches, they say that if you drink coffee with little alcohol and ginger juice it will be better faster than paracetamol.... also, it makes you stay awake...that could be the coffee doing its job most probably but it's something that my dad said that uncle drinks to stay awake (he is a security guard)”

-Male,21

Also, many interviewees had stated that their “sleep cycles” have been affected by excessive drinking.

3.3.2 Impact of alcohol on academic performance

Most male participants said that drinking had affected their academic performances. This was an important consequence of drinking mentioned by many students. The students said that they have

been trying to adjust their alcohol consumption to avoid missing classes and getting lower grades. However, it has not forced them to abandon the behavior completely.

” Yea, like in the beginning when I came here, I drank a lot, then I couldn't go to class, so that is why I try to drink on the weekends only... health...no, I don't think, headaches will be there; that is normal. Marks and all, no problem so far. So, if I drink on weekdays, also I only drink a little, like 5 shots, maybe, but I can go to class. I will sleep in a taxi or Mashooka (minibus), then drink coffee and take medicine. I am ok then.... Now I am confident that I will not have that issue. It will not affect anything”

-Male,21

“Yea, I have missed classes before...not now, that's because of headaches and then not getting previous night a good sleep...nowadays, I am more careful not to let that happen”

-Male,24

“Like ya...once I drank for like 3 days continuously, and then I didn't go to the university for like 2 days, and so I got the absence there. My seniors said I would have to pay extra money to attend the missed classes. Then after that, I was feeling very sick, like I didn't eat properly and couldn't sleep properly. I was always very nauseous. It took me the entire weekend to get ok. so, after that; I always make sure I don't drink like back-to-back days”

-Male,24

3.3.3 Feelings of decreased social inhibitions and enjoyment associated with using alcohol

All the interviewees reported feeling high, pleasure and relaxation when drinking alcohol. Few students also mentioned ‘energy bursts’ after drinking, along with feelings of a carefree attitude

and decreased social inhibitions. Also, some mentioned that drinking with friends helps them to bring out their thoughts without getting into trouble.

"So, while dancing...we feel thirstier and more dehydrated...usually it's wine we drink because it's also very sugary...so like you think sudden energy bursts like that...like umm like hyperactive? Just sudden energy bursts it's not the same as drinking an energy drink. But I am not so sure how to explain it.

- Male,21

"They (friends) will start talking more after drinking, so slowly, everything we wanted to say comes out. If we have issues with someone and we try to talk about it, then we won't have to worry about saying the right or wrong thing. Even if we say something bad or not very accurate that's considered fine; It's all because of alcohol. That's all everyone will say"

- Female,23

3.3.4 Curiosity and trying new flavors of alcohol

Some participants said that they want to try new and exciting flavors of alcohol and understand how various drinks mix. By going to various establishments that provide alcoholic beverages and ordering them to "understand the flavor" some of the participants were able to figure out their favorite drinks and also "how to drink without having intense hangovers", while simultaneously finding new ways to "save money by making it at home".

"So, whenever we drink, my friends ask me to pour the drinks because I am able to correctly measure and mix the drinks...I love making sunrises (a type of cocktail) for them (friends) and if you don't do it in the proper ratio, it will not taste good, and also you can easily get high with like very bad hangovers..."

-Male 21

“I like trying out new drinks...so whenever I go out, I will try new cocktails...what I had noticed was like even though the cocktails are named the same like let’s say margaritas, they kind of taste different in each restaurant and clubs...so when I make for me and my friends...we usually use vodka instead of tequila and mix it with lime juice and since I know what is the amount each of them need to get high. I mix accordingly and give them”

-Female,25

3.3.5 Escaping emotions and forgetting about worries

For most of the participants, alcoholic drinks allowed them to forget about their problems and helped them cope with difficult emotions.

“Like when you are with them (friends), and you have maybe 3 or 4 pegs, all you can think about is fun and peace...at that point...whatever problems you have...they feel like. They are small...”

- Male,23

“...It made me sleepy.... like a mindless sleep.... I don't have to worry about anything till I wake up.... especially with the sirens going on (air raid siren) ...you can't sleep at all...and also, you have this constant fear of what is going to happen...that goes down...”

Female,25

“So...after mom passed...I don't know...like to kind of...feel better...more like filling an empty space... that's what I felt alcohol did for me...when I am awake and when I think about her, I can't really express myself...but when I drink, I can let my emotions go...I also sleep well...so yea, that was when I thought...ok alcohol is good...”

3.4 Perceived social norms

3.4.1 Perceptions of friends' approval/disapproval of drinking habits

Almost all interviewees stated that either their friends or partners or both were the ones who were the most supportive of their drinking habits due to “having similar beliefs” on “life” and due to being part of the “same friend circles”

“I would say that my friends are the most supportive.... because that is how I bond I feel... as we talk more, we become more sociable and all”

Female,24

“So, at a party, there are people who drink and don't drink, right? usually, they don't mingle very well once alcohol is brought into the mix; you kind of miss out on a lot of stuff because of that, a lot of fun and enjoyment...also like if you drink just a bit...like not the extreme I feel like you can fit in both the circles well, get the bit of both worlds I would say.”

-Female,24

Due to the fear of missing out on friend circles and creating better bonds, a few of the interviewees resorted to using alcohol.

“... I know now it is not necessary to drink to make friends...but earlier it was not like that...I didn't want to be like an outsider...new country and new people and all that...and most of them made friends with seniors and all because of drinking...so yea...”

- Female,24

While most friends were supportive of interviewees' drinking habits some were against the idea of their friend being an "alcoholic" and an "outcast"

"Some of my friends say that if I keep on drinking like this, I will become an alcoholic, and once I come back to (country of origin) I will not be able to control the cravings and umm later on I will be caught by my parents"

-Male,24

"So, my best friend... When I first said about the drinking, she warned me just to be sure that it is only for tasting and not to make a habit Nowadays I won't say it's a habit but still umm it kind of depends on the occasion, right? And I know she will be against it...so usually I don't tell her when I am drinking..."

-Female,24

3.4.2 Perceptions of parental approval/disapproval of drinking habits

All interviewees stated that their parents would be the ones who would be against their drinking habits.

"My Dad knows that I drink. He doesn't know the extent or the reasons. I don't think they (my family) would be happy if they came to know I started drinking because of mom (passed away). If he knows that I can drink almost 6 or 7 beers. He might be disappointed in me."

Male,24

"I don't want them (parents) to know. I know they will not accept me after that, they are completely against drinking, people who drink for them are those who are bad I would say, they

are just nuisance makers in a society according to them, so as a girl if they come to know about this...(laughs)...I am done”

Female,24

Some of the interviewees mentioned that they did not want to disappoint their parents and hurt them. A few also reported feelings of regret, guilt, and betrayal toward their family members. Most of these feelings surfaced after getting drunk. The feelings of shame and guilt usually occur after “the high and also the next day.” However, these feelings were generally short-lived and did not lead to abstaining from drinking in the present.

“... I am a very serious person.... but when I drink, I feel like I can talk to anyone and say anything...then I am betraying my parents...on that same day and if friends call me again to drink...then I am not thinking like that like no regret anymore. I am again ready to drink like I want to enjoy...”

– Male,24

“So, once I get drunk...I will be happy and hyper...then the next day...after the high...I sometimes feel sad and guilty that I am cheating my family and not studying when I am supposed to and all...then that will go away...”

Female,23

Yet many stated that they have considered making a change in their drinking habits when they go back to their home countries. Current drinking behavior was perceived by many as “only for the moment” and a habit that can be easily abandoned after returning home.

“Definitely, yes, I will be hurting them. I don’t think they will accept this behavior because, for them, I am still their tiny child. I think they will be disappointed in me because I am still their

child who was sent to a different place for the first time in my life. I am staying away from them for the first time. I am supposed to be a good doctor. So, if they come to know about me, I don't think that would be nice. I think I will also be disappointed in myself. After going back to India, I think I will stop it. It's all just for the moment"

- Male,24

Some of them also stated that religious beliefs and the societal standings of families, along with the general belief that "alcohol is dangerous to health" in most cultural settings are the other main factors for the disapproval of behavior by parents.

".... they are pretty much against it since umm because of religious perspective and social standing like it's a taboo in my family.... there are people who only see the negative side of drinking like the health issues and the social issues and all and the bad behaviors.... they are seeing that only and obviously it also depends, I feel, on the generational perspective, they have seen only that...not to go through all that and keep a healthy life too..."

Male,24

Those with parents who only disapprove drinking large quantity of alcohol believed that they will have to only decrease the amount they drink to gain approval from parents, whereas those with "conservative family background" thought that would have to either completely stop drinking or "hide the behavior"

"...the quantity that I have will change I think because here we can keep a party whenever we want. There it's special occasions like birthday parties or family reunions. So, there will be fewer occasions...so obviously the quantity would go down. With my friends I can drink a lot, they won't be scared... seeing the amount that goes in, so with parents that's not going to be

there because obviously they are parents, they will try to control the alcohol intake...I am sure they will get alarmed by seeing my tolerance...then once I am not with my friends obviously drinking would go down. Then I am with my family back home then when I get stressed or like sad, I cannot just go and grab a drink like I do here so yea that's all going to like come to get then bring the quantity down I feel"

Female,25

"The moment they know that they know that I drink...I am done...they will never accept this... so yea...either you need to hide the truth from your parents or change yourself"

-Female,24

"...they will also feel sad...I respect their words especially my father...like I haven't done anything wrong till now."

-Male,24

3.4.3 Perceived social acceptance of alcohol use in Armenia

Social settings in Armenia were generally regarded as conducive for drinking, mostly due to the easy accessibility of alcoholic beverages. At the same time several students stressed that people in Armenia seem to control their drinking habits and that it is not socially acceptable to get very drunk in public.

"I have seen people being too drunk to walk and all but that's very rare for Armenians..."

Male,24

"I would say like here in Armenia...they know their limits when it comes to drinking...they know how to drink I would say...I honestly have never had an issue here umm

based on safety or anything because of drunkards actually...well I haven't seen anyone like that either...then availability...its everywhere..."

Female,25

3.4.4 Perceived social acceptance of alcohol use in the country of origin

Social approval of drinking behavior in the countries of origin varied by country. Drinking seemed to be less acceptable for women than for men in both Indian and Sri Lankan societies. In contrast, it is considered normal to drink with superiors, elders, and friends of the same gender in the Philippines,

"Usually, girls don't go out to drink but they do get the drinks home like by their friends and all... you have to be careful...especially girls if you go to the pub and club and all harassment is common for girls apart from that, but in the rural areas it is different girls are not supposed to drink at all like they are considered as characterless women if they drink in the public"

Male,21

"I am not sure, but yea I am kind of from the half town half, village side, and yea everyone drinks, but usually, when you drink, you don't mix with the different age groups, you know what I mean (SS nods) like college students drink only with college students, so you don't drink with your seniors from college. No one cares honestly "

-Female,25

"...also once back in India I cannot go out and get drinks like this so definitely I will completely stop...for boys umm they can go out with their friends till late night and all so I feel it's easier for them to hide the drinking...I have seen my brother do that...and no one cares but I can't do that..."

-Female,24

3.5 Perceived control over drinking behavior

3.5.1 Spontaneity of drinking

All interviewees stated that the most common occasions for drinking were birthday parties, or clubbing and get-togethers with their friends. However, when asked about how spontaneous their drinking is, few interviewees had stated that it depends on why the party was held. According to them, drinking on special occasions was rarely spontaneous. Also, some of the participants mentioned that they intentionally “pre-booze” (drink in advance) before going to clubs.

“...when I say get-togethers it’s like...sometimes we get together to catch up with others...that can be like a sudden decision...but umm let’s say we plan a get-together like set a date and all...cook food and all...that’s a planned one...either way there will be alcohol...we sometimes keep get together just to drink also. That’s spontaneous”

Male,24

“Like the plan to drink on weekends are usually spontaneous.... the special occasions are usually planned...”

Female,21

“ so it can be both...like suddenly if I want to drink...I can go alone and drink...that’s spontaneous...when we go to club...umm before going we usually pre-booze...that’s planned...but once inside to get even more high we might order drinks...that’s spontaneous...then birthday parties and other stuff....so yea we have kept parties just to get drunk...that’s usually planned...because we don’t want anything else to be spoiled....but also it

could happen suddenly as well like after exams or during the weekend when we don't have any other plans...that's spontaneous"

Female,25

3.5.2 Perceived self-control over drinking

All the interviewees believed that they have self-control over their drinking habits even if they indulge in binge drinking or heavy drinking. They mostly understood self-control as being in control of the number of drinks they get on an occasion.

"No...umm one thing is that I have never had like a vomiting situation after drinking so far like in these 4 years so I feel like I am still in control and also like usually what I prefer after drinking like to my max amount is to sit in a corner and just chill rather than running around and all and dancing so usually no one notice me "

Male,24

"I know I am in complete control even after 6/7 shots...I can stop when I want to...I can't get easily tempted...I am the one who decides if I want to drink or not...so yes. I think I have great self-control"

Male,24

"Even if I go overboard with my drinking...I know I am still in control...I won't do or say something that I as a sober person wouldn't do or say.... I stay the same except for the dancing and talking...for me that's great self-control"

Female,25

“Self-control for me is like me not going to a blackout scenario...like me not remembering anythingso yea I have good self-control...”

Female,24

However, some of them also stated that smoking and using other substances such as marijuana and LSD made them feel that they could drink more than usual. Also, several participants stated that once they have crossed their maximum limit to consume alcohol, they can't control themselves and can be easily “tempted” into drinking more.

“So umm once I get high and reach an extreme high situation, and then if someone gives me something to drink...I will drink that...I don't think I can control then...I will keep drinking till I blackout...”

Male,24

“Umm generally it's easy for me to get tempted...like if I see my friends drink...I want to as well...but something changes when I drink my maximum...like after the 4th or 5th shot, I will get extremely high for some time...uh during that time if I get more to drink, I will like to maybe 8 or 9 shots.... after I come down from that high...I can have better control...I can decide if I should drink more or not...”

Male,24

Mixing multiple types of alcohol and the quality of alcohol can also lead to being easily tempted into drinking more drinks than expected. Some also believed that the sudden loss of parental control could have increased the alcohol intake.

3.5.3 Pressure from friends

Peer pressure was felt by many participants and was an important facilitating factor for getting engaged in drinking.

“They (friends) are always with me for everything...so I also should be with them I feel...I know they don’t force me for anything...but then when they plan on drinking, they will just add me without asking. If I say no after that they will feel bad... if I am sick and all they won’t consider it...but if I say I am not in the mood for it...they will not accept it...and I don’t want to really talk about it and create issues...so I will drink with them...but when I am not in the mood, I will just keep them company...like maybe 1 bottle and then I stop”

-Male,21

“When we (friends) are together...everything is fun...if I don’t join in drinking...I will miss out on that...so when we buy we make sure all of us are in the mood to drink...if someone is not we will ask them to sit with us...slowly they will join in...even if it is only a little...then it depends on how we top up the drink...you will always be part of the party when you are with us...that’s how best friends are supposed to work...”

-Female,24

There were instances where the senior course mates directly pushed the juniors to drink.

“For seniors to get closer to you they usually will take you out to drink, even if we are not in the mood...you can’t say no to them so definitely I have gone with them and they will get you drunk to see your max limit and all”

-Male,24

All interviewees have stated that being around their friends was a key point to continuing the behavior and that once this influence subsides, they might limit the consumption of alcohol.

“I know for a fact that I will change my drinking if I am not around them...like even if I am here in Armenia...but not staying with them maybe then the weekend drinking will change.... I know I won't stop but bringing down the number of drinks would definitely happen”

Male,21

3.5.4 Alcohol cravings

Most of the students stated that they believe they would not have cravings or urges to drink alcohol should they decide to stop drinking.

“Yea, I am in control I feel because before I came here, I was not drinking like for nearly 1 or 2 years...like occasionally yea but not like now...so then I didn't have any cravings to drink.... then... when I am with my family, I am not drinking then also I am not drinking and I usually don't feel like drinking as well...I have control like that”

-Male,24

“If I decide not to drink at all I don't think I will have any cravings for alcohol, sure I will miss the taste but that is what I have to be prepared for when I go back home...like I said parents won't allow this behavior. And they don't know about this either. And it's not like I can't leave without wine and beer...it's just now I can do it. So, I think I won't have an issue with not drinking for umm long time”

-Female,24

3.5.5 Binge-drinking in safe environments

More commonly for females, trusted friend circles and safe spaces while deciding to binge drink are a necessity. This is mainly due to “safety concerns” such as issues of being “harassed” or getting “unwanted attention.”

“So generally, I like wineso when um we buy wine...the 1st 2 or 3 glasses I will kind of gulp down...if my friends are with me or if I am at home, I am ok with going over the limit...I will drink without thinking twice... it's ok even if I lose my senses because my friends will take care of me...usually, I don't drink when I go outside...even if I drink, I will limit myself...”

Female,25

“I don't go overboard with my drinks if I am not with my friends, I will easily get attracted to drinks if I go above 2 drinks...so I try my level best not to drink when I am in restaurants or when I am at parties where my friends are not there...”

Female,24

3.5.6 Limiting drinking to protect companions

In contrast, male interviewees stated that “protecting their female companions” would be a reason why they would decide “not to go overboard with drinks in a public space”.

“I definitely need my friend circle to get drunk and high to an extent where I can't think straight...but umm if my girlfriend or if girls like who are our friends are with us...then we dial down the drinking a bit”

Male,24

“I have noticed that like when we are out with our friends who are girls...we kind of ask them beforehand if they plan to go into a totally drunk state or not...if they say ‘yes or maybe’, we drink less...it’s not always that they (girls) drink and can have fun...so yea we just want to make sure that that they are safe”

Male,24

3.5.7 Higher access to alcohol in Armenia

All the interviewees stated that alcohol was more expensive in their country compared to Armenia. This was mostly attributed to taxes imposed by the government to collect money from the industry and “increased need due to the large population” in the country of origin when compared to Armenia. Lower accessibility in rural areas and long waiting times in the countries of origin were also stated.

“Here it's cheap as well so even if I am broke, I can still afford to get a drink...and if I am too drunk to get more, I can always order it in...so that’s easy...”

-Female,25

“Then...umm... then the alcohol is cheap here actually like when compared to India...I was shocked about that too...like cola and beer are almost priced the same...then it's available everywhere too like in India it's only available in bars and specific outlets only...like beverage outlets...then there will be queues in front of them...but here it’s very cheap and available everywhere and we can also order it online... It’s not like that in India...”

Male 24

3.5.8 Parental control over finances

Most interviewees told that upon moving to their country of origin, they would either stop or decrease drinking due to losing control over finances, which will be overtaken by their parents.

“I do respect my parents’ wishes and their beliefs...they are the ones who took care of us all these years anyways...and they still are taking care of us...but sometimes I feel that I can’t be myself around them. They will not listen to what I feel or think...so when I get the chance now, I want to try everything I can...”

-Female,24

“I know if I am with my parents...I won't be able to do what I am doing right now...God, I am going to miss this part of my life soon.... I would have not even known what beer and whisky tastes like if I had not come here...I have the freedom to try anything and everything.... within the scope of law of course (laughs)”

-Female,24

“Yes, I will change...I am using their money...they have sent me here to study...and when they come to know about this, they will be like I am wasting my time and all ...

-Male,24

3.5.9 Overcoming financial constraints to continue alcohol consumption

Almost all interviewees had stated that budget is the main factor during the decision-making process of buying alcohol with many opting for pocket-friendly options such as beer or wine for

drinks or using the method of “pre boozing “before entering areas which serve alcohol at much higher prices such as clubs and pubs.

“... or if we go to clubs...this is rare...but we do umm drink before clubbing...pre-boozing because of budget issues (laughs)...it's expensive inside clubs' yea like that.... See as a student...I am not earning now...so I can't really have a very rich lifestyle. So, in that case yea...budget friendly options like beer and vodka are good...so if I don't have money means I will drink only little...”

Male,24

” if they (the shops) have discounts I will buy or else if I am rich. So, I become rich during the 2nd week of the month usually (laughs) so then I will see the store what I have not tried and then go get that...like splurge then and later I will go back to beer and all when I don't have money”

Female,25

“If we are going to a club and all, then we drink before going inside because it's very expensive in the good clubs like c view, rooftop and paparazzi.”

Male,21

When down on budget most of the interviewees do not mind borrowing or pooling money to get alcoholic beverages.

“I am with my friends, which means I will ask them to put the money in now and I will pay them later...so in the beginning of the month I will put aside some money or buy one bottle of whisky and save it up with friends.

Male,24

“If everyone is broke then we go ask our non-drinking friends also...or else we will wait till one of us gets the money from home...then we will buy...usually like in the beginning of the month is when we but whisky and we mix it with beer or wine...if we want to get high but no money means vodka plus juice or wine...if we don't have money for that also means...wine (laughs)...it depends on the week of the month.”

Male,21

“My psychology is like if the wine is expensive, it should be like a good wine or else nope...for whisky it's always expensive...so yea you can splurge like in the beginning of the month maybe then just to get the buzz drink once every day...or else pool money with friends and then buy stuff...then it will be cheaper... pocket friendly...you can go bougie on a budget.”

Female,25

Very few of the interviewee's mentioned working part time jobs such as food deliveries to earn the money required for drinking. One interviewee stated that he and his friends do not mind “going for work so as to get money for drinks” in case there is no money that can be borrowed.

“...For us we need money...like in, you know, in Sri Lanka ...parents will put money and all but if we need more money like that is not enough then we go for work...like drinking and buying cigarettes and going out, and all that is extra money needed...so for that, we go for work...and we will only go like till we get for a week like maybe 10.000 drams...so money for the weekends we get it like that.

Male,24

4 Discussion

This study explored the experiences and perceptions of alcohol use among the international students in Yerevan, Armenia, based on the framework of the TPB. As expected, students' attitudes, subjective norms, and perceived control played an important role in their intention to engage in drinking and their actual drinking behavior.

While most participants had denied that they were binge drinkers, many of them did follow the pattern of binge drinking without recognizing it. Most of the participants of this study reported drinking at least once a week with the number of drinking ranging from 2 to 10 with most participants stating that at least 4 to 5 drinks are needed to get to an inebriated state. This is in line with the definition of binge drinking.^{17,19} Drinking with their friends or romantic partners, which was mainly on the weekends, after exams, and special occasions such as birthday parties and other celebrations, was quite common. Several students also reported smoking and using other substances such as marijuana and LSD while drinking. Similar results within the same age group were reported in other studies.⁵⁰ This is a high-risk behavior as simultaneous use of alcohol and marijuana (SAM) can lead to excess depression of the central nervous system⁵¹.

All of the students reported having hangovers, while some also had blackouts during binge drinking episodes. Similar patterns of drinking behavior in college students were reported in the literature^{52,53,54}

In general, although alcohol use was considered as dangerous to health, moderate and responsible drinking was considered to be a reasonably safe behavior. Although the consequences of alcohol use were known by all, the medical students were more aware of the health effects. This could be mainly due to their supposedly in-depth knowledge of human body

systems and functions and the influence of various substances on health. However, irrespective of the field of study, the impact of the alcohol on sleep cycles, general health and academic performance, while experienced by many students directly, was taken lightly and did not substantially affect drinking intentions, which is in line with other studies^{36,37}.

Use of alcohol as a coping mechanism to alleviate feelings of emotional stress, found in this study, has been well documented in the previous literature⁵⁵⁻⁶⁰. Drinking to get energy burst has also been mentioned in one study which was conducted among adolescents in Sweden in 2021.⁶²

Peer influence played an important role in the students' intention to drink and the consumption of higher number of drinks on drinking occasions. Drinking was considered by many as a prerequisite for acceptance into cliques and social circles. Many feared that stopping the behavior could negatively impact their social life. The behavior of alcohol consumption could have been mimicked by the participants to integrate themselves into their social circles.

For example, in a study conducted in the UK it, the participants would mimic alcohol consumption of their peers when they were motivated to ingratiate themselves, thus proving that the approval of their peers was a factor that directly contributed to participants' drinking habits²⁷. Existing literature suggest that peer influence strongly impacts the behavior chosen by the young adults.^{63,64}

Most of the participants felt that their parents were against drinking behavior due to multiple factors such as religious and health beliefs and the societal standings, which is in line with the findings from other studies⁶⁵. The experience of feelings of regret and shame because of doing something inappropriate under alcohol influence has been reported by other authors⁵³; however, in this study such feelings were also caused by the perceived betrayal of parents' trust and expectations of good behavior from their children. Such feelings were short-lived though and did

not seem to exert substantial influence on the current alcohol use practices. However, many participants considered changing their behavior or completely hiding the behavior when moving to the country of origin, where the parents could learn about their drinking habits.⁶⁶

Social settings within Armenia when compared to home countries of India, Sri Lanka and Philippines seemed to support drinking behavior in the students. According to the interviewees, in the Philippines, it is considered normal to drink with superiors, elders, and friends of the same gender. Drinking seemed to be less acceptable for women than for men in both Indian and Sri Lankan societies when compared to Filipino societies.

Higher accessibility of alcoholic beverages through most stores including grocery stores and mini markets in Armenia was also mentioned as a supportive factor for the behavior.⁶⁷

In India and Srilanka⁶⁸ apart from certain alcohol outlets and restaurants, alcohol is not publicly available.

One of the unique findings of this study was that the spontaneity of the drinking behavior among students seemed to be directly related to the type of gathering in which the participants were present, with most of the students mentioning that they would drink more when with their friends in private settings such as their homes when compared to public spaces. This could be due to the feeling of sense of security and lessened fear of judgements from strangers.⁶⁹

All the participants believed that they have self-control over their drinking habits even if they indulge in binge drinking or heavy drinking. At the same time, they stated that they could easily get tempted into drinking more than their usual norm if they have already gone over their regular drinking capacity or if they mix drinks and also if they are using other substances such as cigarettes or psychoactive substances. This phenomenon has been reported in a study published

in 2020 where people under 25 years had consistently reported to increasing the number of drinks consumed to reach the various stages of intoxication⁷⁰

Direct pressure from friends and lack of financial control by parents were considered by the students as the most important reasons for pursuing their drinking habits at the present time⁶⁷.

Interestingly, many students thought that once they return to their home country, they would quit drinking alcohol, either because of losing their financial freedom or due to changing their friends' circles, thus avoiding their influence and pressure on the behavior.

The international students' perception that their drinking behavior is transient and mostly explained by conditions of their life in a foreign country was one of the unique findings of this study. Such perceptions can lead to false confidence in the ability to quit whenever necessary which could possibly become one of the main targets of educational interventions in this population. A study conducted in 2014 had found that binge drinking was significantly related to financial availability among young adults.⁷¹

Some of our study participants were ready to start jobs that could provide them with finances to sustain their drinking habits. This has rarely been reported in the literature among younger adults specifically, and this finding warrants further exploration and confirmation.⁷²

Our finding that female students were more likely to not drink or would control their drinking if they were in public spaces or if they did not feel safe, is in line with other investigations of drinking behavior in females.^{73,74}

5 Strengths and limitations of the study

To the best of our knowledge, this is the first study in Armenia to explore the experiences and perceptions of alcohol use among international students. The study expanded the literature on the

application of TPB to alcohol use behavior by exploring its constructs in a specific population of students living in a foreign country. The use of TPB helped to capture the mechanisms underlying the behavior and highlight possible avenues for interventions aiming to decrease alcohol consumption in younger adults.

This study also has limitations which have to be acknowledged. The participants were selected via convenience and snowball sampling, which could have resulted in a sample that does not adequately represent the international student population in Armenia. However, it is hoped that the detailed description of the participants' background and diversity of opinions obtained in the study could help with increasing transferability of the study findings. Also, participants may have answered in more socially desirable ways which may have led to social desirability bias. However, good rapport with the participants established by the student investigator, and detailed accounts of the interviews, reviewed and discussed by the study team, should have helped to minimize this weakness as well.

6 Implications for research and practice

Quantitative studies within the same study population would help to test the associations between the constructs of the TPB and drinking behavior, suggested by this study. Such studies could target a more diverse group of international students from various countries. This would help in clarifying the patterns and factors associated with alcohol use among the international students in Armenia and also help in developing better support systems such as counseling services at the universities.

Since high accessibility of alcohol seems to be one of the important facilitating conditions of alcohol consumption among students, stopping sales or increasing the price of alcoholic

beverages in shops near dormitories should be considered by the government. Educational programs focusing on peer pressure and substance misuse focusing on the health consequences and addictive properties of alcohol and resistance to peer pressure could be effective in the student population. Counseling services which are tailored to international students taking into account their cultural and social backgrounds should also be considered at the university level.

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7 Appendices

2. Appendix 1: In-depth interview guide

“A qualitative examination of alcohol use among international university students in Yerevan, Armenia: A qualitative study”

Interviewee ID:

Interview date:

Start time:

Ice breaker questions

General Information:

1) Age:

2) Sex:

3) Field of study:

4) Who do you stay with?

a. Hostel:

b. House/apartment:

i. Alone:

ii. With friends:

Once again, thank you for taking the time and agreeing to participate in this study. Please feel free to express yourself and share your experiences throughout the interview. If you need help understanding any questions, feel free to ask for clarification.

1. What do you think about alcohol use in general?

Probe: why do people do it? Is it OK, good, bad, etc.?

2. Can you please describe your drinking habits? How long have you been drinking? When was the first time you decided to drink? Can you describe the occasion and who you were with?

Probe: How often do you drink?

3. How does drinking make you feel? What do you like about drinking? What do you not like about drinking? Why do you think alcohol use may be good/bad for you?

Probe: does drinking make you feel Anxious? Confident? Happy? Sad? Powerful? Do you like drinking because of the Taste, aftertaste, fizziness, etc.? Do you not like drinking because of the aftereffects, such as headaches, etc. how does it affect your health, academic performance, etc.?

4. How many drinks do you assume you need to get drunk in a single sitting? How do you describe a hangover on occasions you happen to have one? Does it change based on the type of drink you decide to have? Does it change based on the amount you have consumed? How would you describe a blackout on occasions you happen to have one?

Probe: How do you come to know about your blackout episode? (From friends or someone unrelated?) Can you please describe your emotions after learning that you had a blackout?

5. Have you tried binge drinking? (explain binge drinking if they don't know about it: drink a lot on a single occasion).

Probe: why do you think that this behavior has happened? Do you like or dislike this behavior? if like, what are the reasons you like this behavior? if dislike, why do you think you dislike the behavior? Are there any steps you have taken to change the behavior? How many drinks do you think is needed to be considered as a binge drinker?

6. Have you ever tried heavy drinking? (explain heavy drinking if they don't know about it: drink a lot throughout the week)

probe: Why do you think that this behavior has happened? Do you like or dislike this behavior? if like, what are the reasons you like this behavior? if dislike, why do you think you dislike the behavior? Are there any steps you have taken to change the behavior? How many drinks do you think is needed to be called a heavy drinker?

7. Who do you think are supportive of your drinking habits? Why do you think they are supportive of it? How do they react to alcohol use in general?

Probe: do you feel that your family, friends, and peers are in support?

8. Who do you think are against your drinking habits? Why do you think they are against it? How do they react to alcohol use in general? How do you think your drinking habits may change should those who are against your drinking come to know about your habits?

Probe: do you feel your family, friends, and peers might be against drinking?

9. What do you think is the social setting here in Armenia regarding drinking? What is the social norm in your country of origin regarding drinking? How do you think the social norm here in Armenia may have affected your drinking behavior and habits compared to that of (country of origin)? How do you envision changing your drinking habits should you move back to your country of origin?

10. In your opinion, how many of your 10 closest friends/acquaintances drink sometimes? How many drinks often?

11. Do you feel that you can control your drinking behavior? Why/why not?

12. Can you describe the typical occasions on which you decide to drink? Does your drinking happen spontaneously, or is it planned? What are the main reasons you decide to drink on these occasions? Do you prefer to have company while drinking? Why /why not?

Probe: is it peer pressure? Stress? To fit in?

13. Have there been scenarios where you were in a social gathering and decided not to drink? Why/why not did you decide so?

Probe: What would make you more likely to drink? What would make you less likely to drink?

Conclusion: thank you so much for your valuable time. Is there anything more that you would like to share?

End time:

3. Appendix 2: informed consent form

American University of Armenia
Turpanjian College of Health Sciences
Institutional Review Board # 1
Informed Consent Form

“A qualitative examination of alcohol use among international university students in Yerevan, Armenia: A qualitative study”

Hello, my name is Sona Sam. I am a second-year student doing my Master’s in Public Health Program at the Turpanjian College of Health Sciences at the American University of Armenia(AUA). For my thesis project, I am conducting a qualitative study to explore alcohol use among international university students in Yerevan, Armenia.

I invite you and about 15 other students to participate in this study because you are a student here in Armenia and might have had experience using alcohol. The interview will take approximately 30 minutes and will be conducted only once.

During this interview, I will ask about your perceptions and experiences using alcohol and drinking habits. This study has your voluntary involvement. If you choose not to take part, there are no repercussions. You can leave the interview at any point or decline to answer any questions. There are no known risks to you should you decide to be interviewed. There will be no personal benefits or financial compensation for participating in this interview; however, your sincere answers will help us better understand alcohol use among international students and its consequences.

All the information given by you will remain confidential. No identifying information, such as your name/family name, or contact information, will be recorded or mentioned anywhere. Only a summary of the findings from all interviews will be presented in the final report of my thesis. For reporting the final project findings, some quotes from the interview may be used; again, I will assure confidentiality.

With your permission, I would like to record the interview, and I would like to take notes to ensure that I get all of the valuable information which you will be sharing with me. If you disagree with the audio recording, only field notes will be taken during our interview.

If you have any questions regarding this study, please contact the Principal Investigator, Dr. Tsovinar Harutyunyan, Associate Professor in the Turpanjian College of Health Sciences of the American University of Armenia, at +374-060-612-592. If you believe you have not been handled correctly or that your participation in the study has caused you harm, please contact Varduhi Hayrumyan, the Institutional Review Board’s Human Protections Administrator, at (37460)612561.

Please let me know if you have any further questions.

Do you agree to participate? If yes, may I turn on the recorder?