

An ethnographic mapping of alcohol accessibility in different ethnic communities residing in urban and semi-urban areas within Klang Valley, Malaysia.

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ABSTRACT

Low priority is accorded to public policy in dealing with alcoholism in Malaysia. This study will explore accessibility, knowledge and general attitudes towards alcohol within three ethnic groups in Malaysia. Ethnography field assessment and application of questionnaire on drunkenness was administered by 207 youths who frequented the mapped urban/semi agglomerations areas within six selected sites in Klang Valley was conducted. Results indicate that the Chinese populated area has the highest density of alcohol outlets (0.9-10.9/100m radius). Most (33%) of the stores operated over 24 hours while others closed at 10 p.m. Beer (94%) and liquor (58%) were more commonly sold. In addition, youth (21%) believed that it is acceptable to consume alcohol at home, while 26% said that it is acceptable to consume at dance/nightclub or a family residence. It is also found that 64% of the youths agreed that Malaysians should be concerned with alcohol-associated problems. 49% of the youths believe that there is insufficient enforcement on alcohol misuse. This study suggests that due to prohibition concerns, alcohol-related communication channels are usually associated with abstinence. Acknowledgement that alcohol consumption is an existing problem in the country is cardinal; based on this effective policies and interventions, could be devised and implemented with the full support of the community.

Keywords: Alcohol used, ethnographic study, image area

1. INTRODUCTION

Since 2009 the government of Malaysia believes that health consequences from alcohol use are of low priority as consumption is only reported within the Chinese and minority Indian ethnic groups (Wan, Kaur, Amal, & Lim, 2005);(Assuntha, 2001);(Jernigan & Indran, 1997). This belief is factored in Malaysia, as it is a predominantly Muslim nation with Islamic religion governed by “Sharia Law¹”; which prohibits Muslims from consuming alcohol unless it is a matter of life and death or with the approval of a Muslim doctor (Mohd Ramlan Mohd, Munirah, & Nurul Afiqah Shahdan, 2015);(Fadzli & Amer, 2014);(WHO, 2004);(Musalip, Kamarudin, Manickam, Hamid, & Saari, 2014). Abstinence levels of alcohol consumption amongst Muslims in Malaysia, stand at 81%, which denotes a national prevalence within the range of 2% to 5% (WHO, 2004);(Musalip et al., 2014). Hence, there is limited evidence that accentuated riskier consumption patterns is evident (Mohd Ramlan Mohd et al., 2015);(Musalip et al., 2013);(Musalip et al., 2014);(Yahaya, 2000);(Maniam, 1994) within the local context. However, by 2011 local studies continued to quote “Malaysia ranked as the 10th highest alcohol consumption nation in the world” (Mohd Ramlan Mohd et al., 2015);(Yahaya, 2000). By 2013, the Ministry of Health reported that approximately 7% of Malaysians aged 15-19 years old were labelled as current alcohol

¹ Muslims in Malaysia are governed by Islamic personal and family law, which has been in existence since the 15th century. Islamic laws have been administered, not only by the Syaria-ah Courts, but also the Civil Courts. “Syariah Laws In Malaysia”. Herald Malaysia. Online Edition on 25th Feb 2017. <http://www.heraldmalaysia.com/news/syariah-laws-in-malaysia/34923/14>

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consumers (Mutalip et al., 2013);(WHO, 2014) and riskier alcohol consumption patterns continued to ascend indicating binge drinking prevalence of 5.7% which doubled since 2006 (Mutalip et al., 2013).

Riskier consumption patterns predisposed to exhibit more negative behavioural risk factors (WHO, 2014);(Poikolainen, 2000), that were equally perturbing within the local context. For instance, a 2012 MIROS's report on a road-related fatality in Kuala Lumpur revealed that 23.3% drivers were under the influence of alcohol. This report was primarily driven to address systematic gaps in policies to deal with drunk driving laws within the local context (Lee, Chen, Lee, & Kaur, 2006). Currently, offenders are being charged under the Road Transport Act 1987; if found to have exceeded the limit of alcohol content in the body (Cheah, 2014). A local study done on 1622 undergraduates students indicated that 7.2% have driven under the influence of alcohol and 19.3% were passengers in a car driven by a driver under the influence (Liew, Noor, Raymond, Nadzrah, & Moy, 2011). By 2011, the National Health Morbidity Survey indicated that people from the low economic background and low education level displayed heavier consumption patterns (Mutalip et al., 2014). In addition, a local study among 4500 adolescents noted that riskier sexual practices were prominent among those who were alcohol consumers (Lee et al., 2006).

As per the evidence discussed above, local alcohol consumption patterns were prominent amongst certain ethnic groups and riskier consumption patterns were prevalent among youth. However, evidence discussed above has also alluded to the fact that, alcohol consumption patterns in Malaysia is only a hint of a much larger complex issue. This is primarily due to the sensitive nature of alcohol consumption specifically among the Malays and youths. Thus, it is at times difficult to ensure that the national level and school-based data reveals the actual consumption patterns (Cheah, 2014);(Fadzli & Amer, 2014);(Liew et al., 2011);(Flynn & Wells, 2014). Such limitations in presenting the actual scenario on local riskier consumption patterns were also noted by a general practitioner back in 1994 (Maniam, 1994). These forms of limitations are known to be associated with the fact that alcohol consumption is socially sanctioned in Malaysian context (Mutalip et al., 2014);(Maniam, 1994); (Cheah, 2014). Sanctions such as this may accentuate the behaviour on consuming alcohol privately; due to the fear of legal implication if caught consuming alcohol at localities where communities congregate. Hence, emphasizing the need for community-based studies which aims at addressing the social, environmental and cultural effects on alcohol consumption patterns (Holder, 2000); (Shakeshaft, Petrie, Doran, Breen, & Sanson-Fisher, 2012);(Fagan, Hawkins, & Catalano, 2011). In addition, community-based studies may also address the benefits of abstinence versus a negative impact of riskier consumption which is a necessary approach to address social sanction issues in Malaysia (Maniam, 1994);(Room et al., 1984);(Moore, 1992);(LeCompte & Schensul, 2010).

In this study, the application of community-based is based on mixed method concept. The initial phase of the study was initiated with geographical mapping that would address the availability and accessibility of alcohol within researched areas. There was a need to integrate the geographical mapping exercise along with ethnographic mapping; such approach is adapted to document alcohol use and its harms within communities that are being observed (Flynn & Wells, 2014);(Hallgren, 2012);(White & Hingson, 2013);(Maniam, 1994). This integrated mapping exercise is conducted within geographical makeup in Klang Valley, Malaysia (*see Image 1, a map of Klang Valley*).

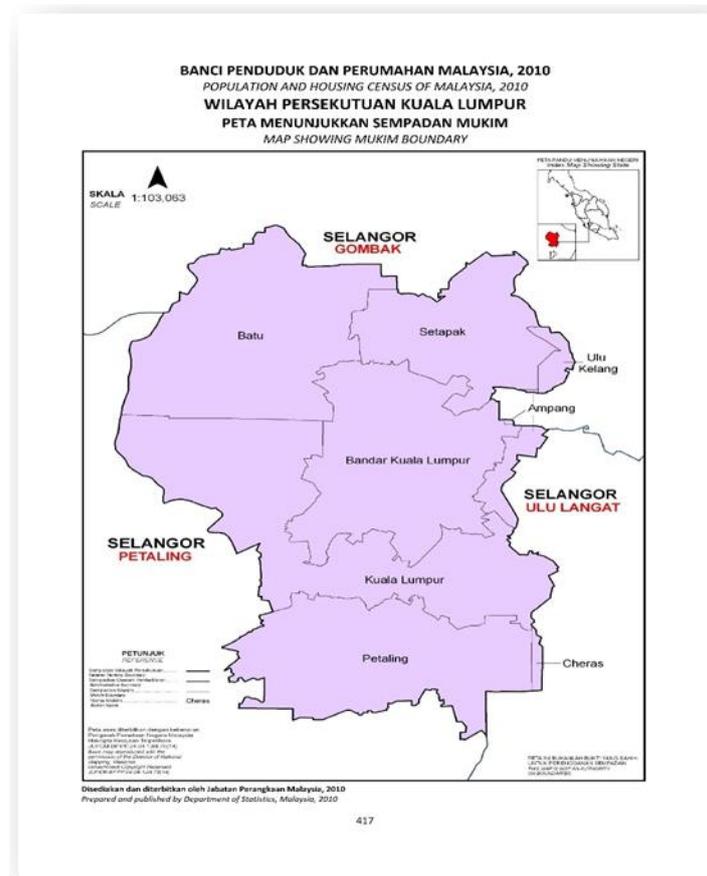


Image 1: Map of Klang Valley, Malaysia

The integration of an ethnographic mapping approach was used to comprehend the behaviours of young adults from respective ethnic groups on how they consume alcohol within their own residential areas (LeCompte & Schensul, 2010);(Moore, 1992). This form of knowledge on alcohol use or misuse in community settings is sorely needed, not only to monitor the magnitude and trends of alcohol use and its related harms; but, also to strengthen advocacy and help in the design and application of evidence-based interventions (Griffin, 2007);(Douglas, 2003). Therefore, the objective of this study is to carry out an ethnographic mapping that reflects the geographical relationships of alcohol accessibility and availability within community settings. The study also aims to encapsulate the community and youth norms in terms of alcohol use within their residential areas.

2. METHODS

Ethnographic mapping: Ethnography is both a research method and a product, typically a qualitative approach that is based on direct observation (Silverman, 2013);(LeCompte & Schensul, 2010). It emphasizes the importance of studying *first-hand* what people do and say in particular contexts. The purpose of applying ethnographic research is centred on two goals: (i) understanding the social and cultural problems in communities/institutions-since sensitive social and cultural norms do apply to all ethnic groups in Malaysian context (Mohammed, Marican, Nadiyah, & Yahya, 2008);(Steinka-Fry, Tanner-Smith, Dakof, & Henderson, 2017);(LeCompte & Schensul, 2010) and (ii) using the research to develop and assess approaches to solving problems or bringing about positive change in institutions and communities (Flynn & Wells, 2014).

Geographical Mapping: The initial process was to identify residential areas of respective ethnic groups. Therefore, 2010 National Population and Housing Survey (NPHS) data were used to identify the research areas. The NPHS in 2010 was based on a population density of 86 persons per square kilometre (DOSM, 2010). The study is based in the large conurbation within Malaysian city of Klang Valley area. Klang Valley is a larger segment of the area surrounding Kuala Lumpur, that is covered by ten municipalities which are also densely populated with 7.2 million people (Kushairi, 2017). These form of densified municipalities areas are formed with communal and recreational facilities in central commercial blocks. These commercial blocks serve to bring people

together in shared activities (State, n.d.). For this study's purpose; the communal areas with low-density of a certain ethnic group that ranged within 1,000-5,000 will be considered as semi-urban site and high-density areas that are above 5,000 are identified as urban areas. Based on this characterization, the researcher classified the study sites as listed, in Table 1.

Table 1. Classification of identifies sites

Site	Population size (based on 2010 census)	Ethnic Groups	Classification
Setapak	159,610	Malay	Urban
Cheras	3, 101	Malay	Semi-Urban
	4,910	Chinese	Semi Urban
Petaling Jaya	147,934	Chinese	Urban
Batu	33,643	Indian	Urban
Ampang	3,372	Indian	Semi-Urban

Adapted from: Department of Statistics Malaysia. Total population by ethnic group, mukim and state, Malaysia, 2010.

Identification of research sites: Once the identification of semi-urban and urban areas of a certain ethnic group is classified; the researcher applied a second selection criterion that identifies higher education institutions within a five kilometres radius from the selected communal areas. This is a necessary criterion, because youth may select living in spaces that were within close proximity to their educational or work sites (Leh, Mansor, & Musthafa, 2016). Based on the academic institution mapping; the third criterion was applied to identify a minimum of three commercial blocks within the selected communal areas.

The researcher was cautious not to expand these selection sites to areas where the population density may include high migrated or expatriated population such as Bangsar, Damansara, Mont Kiara or even selected areas in Petaling Jaya which also fall within Klang Valley boundaries. This was done as such areas may have more food and beverage outlets that serve alcohol to cater to its residential foreign market. Once the commercial blocks are identified, the researcher mapped out food and beverage locations that were frequented by youths. The identification of respective locations is borrowed from Spradley in 1980. He described observations that help to explore/identify the spaces and environment or structures that support the use/misuse of alcohol and other risk behaviours in areas where youth congregate (Leh et al., 2016);(Gruenewald, 2007);(Spradley, 1980). Spradley's observational method was useful since it specifically addresses the structural elements that are reflective of consumption behaviours and provided a quick overview of how to quantify the accessibility and availability of alcohol within these sites. Even though the temporal relationship between accessibility and availability that impacts youth consumption patterns may be difficult to determine; this process was helpful to observe consumption behaviours within respective communities. As described by LeCompte and Schensul the validity of ethnographic research can be difficult but various measures and triangulation efforts have been taken into consideration to avoid bias in reporting (LeCompte & Schensul, 2010).

Each commercial block was assigned with a unique identification code as described in Table 2 below. This process was essential to ensure anonymity in the data collection processes. It is important to note here; that the datasheet on several localities that sell/serve alcohol cannot be shared with any third party other than the research team. This is due to the fact that the datasheet comprises information on the communal areas, commercial blocks and street address that identifies each producer/seller/supplier of alcohol in respective research sites. In views of the social sanctions on alcohol use impose on a certain ethnic group in this country; this type of information is sensitive and protection of privacy of these localities is merited. If required, data sharing can be considered if the terms of a data sharing agreement are abided and if the rights and privacy of the provider/sellers/suppliers are protected.

Table 2. Sites classification, identification codes and populations size

Site	Unique ID & description on population size (for selected sites)	Description of selected urban/semi agglomerations area
Setapak (urban Malays)	STP:M/UR/01/001: Approximately 152,505 Malay residing in Setapak. 17% of youth (age 15-29) Est = 25,925. Within each age range $25,925/14 = 1,825$. 18-25 are Est at 14,816. 10 metropolitan sites identified $\{14,816/10 = 1,482$ youths at respective metro sites}. 3 metro sites were selected, hence sample size for Malay youth 4,446	{area of 62 square miles (160 km ²)} In the middle of Setapak is the township of Wangsa Maju [source: NPHS data]. Assessed on 15.10.14].
Petaling Jaya (urban Chinese)	PSS: C/UR/02/001: Approximately 160,652 Chinese and estimated no of youth (age 15-29) 17% (27,311 youth): with the age of 15-95 = $27311/14 = 1,951$ youth. $\{1951/85 = 23$ youths at respective metro sites}. $23 \times 3 =$ sample size of 69 youth	{97.2 square kilometres (37.5 sq mi)}. Central Business District of Petaling Jaya with the landmark Menara MBPJ as a focal point [source: NPHS data].
Batu (urban Indian)	BKL:I/UR/03/001: Approximately 48,175 Indian and estimated no of youth (age 15-29) 17% (8,190). $8190/14$ of youth age 15-29 = 585 youth in each age range. 18-25 = $585 \times 8 = 4,680$ youth within the age range of 18-25. $\{4680/28 = 167$ youths at respective sites}. At 3 metro sites, there were $167 \times 3 = 501$ sample size of the youth	Batu constituency includes Sentul. Sentul Raya is a new township located in the proximity of Sentul in Kuala Lumpur, Malaysia. Bandar Baru Sentul is located next to Sentul Raya [source: NPHS data]. Mapping of area-km actual will be done onsite.
Cheras (semi-urban Malays)	CSL:M/SUR/011/001: Approximately 1,219 (semi urban.5000) Malay residents in Cheras. 17% youth (age 15-29) Est = 207. Within each age range $207/14 = 15$. Hence, 18-25 are Est = 120 youth at @ Metropolitan sites $\{120/12 = 10$ youths at respective sites}. 3 metro sites we selected $3 \times 10 = 30$ Malay youth sample size	Pusat Komuniti Bandar Tun Razak which is located at Taman Mulia [source: NPHS data]. Mapping of area-km actual will be done onsite.
Cheras (semi-urban Chinese)	CSL: C/SUR/022/001: Approximately 4,910 Chinese (< among all others because the semi-urban site is below 5,000 markers) and estimated no of youth (age 15-29) 4,949 all ethnicities. 17% youth age 15-29 = $835/14 = 60$. Hence, 18-25 age youth are $60 \times 8 = 480$ per site. $480/12$ metropolitan sites = 40 youths at 3 respective metro sites = 120 Chinese youth sample size	Bandar Tun Razak. [source: NPHS data]. Mapping of area-km actual will be done onsite.
Ampang (semi-urban Indian)	ASL:I/SUR/033/001: Approximately 3482 Indian & estimated 17% of youth (age 15-29) = $592/14 = 42$. 42 youth from 18-25yrs old $42 \times 8 = 336$ $\{328/10$ metro sites = 34 youths at respective sites}. 3 metro sites = $34 \times 3 =$ this site sample size of youth is 102 youth	Pandan Jaya and Pandan Indah. [source: NPHS data]. Mapping of area-km actual will be done onsite.

Once the localities were identified; Cohen's store observational tool was used to document localities placement of alcohol and promotional adverts of alcoholic beverages in outlets within respective research sites (Cohen et al., 2007). The applicability of this tool in the US and its reliability findings was taken into consideration before it's applied in local context. Some adjustment and simplification were necessary in order to ensure that local localities representatives were not intimidated when such a tool was administered. The adapted tool reflected some of the key criterion listed in Table 3. There was a need to apply some form of diplomacy when this tool was administered at respective localities. An overview of the study, with detailed information of anonymity process, was assured to vicinity representatives because some of these representatives believed that they might face legal implication if such information was shared with others. Thus, verbal consent was obtained from the vicinity owner or manager before the tool is administered. This consent process was beneficial for the researcher. For example, an unexpected outcome resulted in voluntary sharing session by vicinity owners, managers and staff that provided information

on selling process, buyers profile and their observation on youth consumption patterns within the communities they operated.

Other than the spatial dimension, observation and interactions that took place when the store observation tool was administered; it was evident that there is also a need to capture youth's perspective on alcohol use within their neighbourhood. Such information was necessary since youths were observed loitering around off-premises retail outlets or even supermarkets in which alcohol is sold.

The site identification and application of store observational tool reflected cyclic iterative process, which is used in ethnographic mapping. This process encapsulates the observation, interactions and quantitative data on youth's day to day behavioural patterns around alcohol use and how this impacted youth's ecology (Whitehead, 2005). Also, the cyclic iterative process was used to avoid self-bias in understanding or interpreting the findings. The next step in ensuring a cyclic iterative process was to capture youth's perspective on alcohol use within their neighbourhood.

Table 3. Observational instrument (Identification of alcohol service sites or service providers).

Category	Includes	Researcher note
Mapping of service providers or sellers	Stores who sell alcohol- including food & beverage outlets where youth hangout	Observation would include: type of outlet; the extent of alcohol advertising inside or outside of the outlet; purchase price; placement and availability (timing of the stores or visible signs that indicates that sale is not permitted to anyone below 21 years)-Geo code was applied to identified sites.
Verbal behaviour and interactions	Who speaks to whom and for how long, who initiates interactions, language or dialects spoken, the tone of voice that is used to describe patterns of alcohol use	Gender, age, ethnicity and groups of which youth interacts – dynamics of interaction
Hang out joints	Approximately how many youths hang out, what time are more youth visible, how long do they stay in a certain locality and how could they be approached	Type of groups identified, preference or their association to alcohol availability and drinking patterns- also the application of geocoding (geographic coordinates) adhered.

Source: A combination of Reliability of a Store Observation Tool in Measuring Availability of alcohol and selected foods: (b) Point of purchase alcohol marketing and promotion by store type-US, 2000-2001. MMWR Morb Mortal Wkly Rep and (c) Qualitative research method: A data collector's field guide from Family Health International.

Self-administered questionnaires on opinions and drunkenness among youth who consume alcohol: As highlighted earlier, the application of store observational tool was challenging. One of the challenges was to assure anonymity of the information gathered. Thus, a non-confrontational approach was required to approach youth to provide their perspective on alcohol use within these sites. Keeping this in mind, the researcher applied an adapted version of opinions and drunkenness self-administered survey; that was developed by Health Promotion Agency, in Wellington, New Zealand in 2013 (Health Promotion Agency, 2013). This tool was adapted to ensure a non-confrontational approach is applied to probe opinions and behaviours of youth around alcohol use. This form of approach is necessary; as described by Seddon and Ahmed in their book on "Muslim youth; challenges opportunities and expectation", it is important to ensure that the youth who participated in this study were not impeded by the Muslim integrity and religious fidelity (Seddon & Ahmad, 2012). Therefore, this questionnaire which comprises of twenty questions; explored demographic characteristics, intrapersonal, interpersonal and environmental factors around alcohol use. At an individual level, questions are directed at exploring perception and awareness of alcohol use within their residential areas. As for the interpersonal explorations; questions explored the issues around family and peer's knowledge or norms around alcohol use. As for the environmental factors; questions were posed to assess youth awareness of legal implications and accessibility factors around alcohol use. The self-administered survey was distributed to youths at respective sites (*target to reach 25 males and 25 females from each of the six areas*). Due to the multi-ethnic origins of participants, the questionnaire was written in English and translated into Bahasa Malaysia². Most of the Malaysian youth have obtained academic

² The official language of Malaysia.

qualifications from public schools; hence, they can understand and read both these languages. However, participants were provided with options whether they would like to respond in English or Bahasa Malaysia questionnaire. The consistency of the questions in dual language was checked by native Malay speaking academic members; who also ensured that forward and back translation were tested. Pilot testing of the tool was carried out to ensure reliability and consistency of the adapted version. The pilot testing comprises the face (Bolarinwa, 2015) and content (Kelley, Clark, Brown, & Sitzia, 2003) validity. Based on the ethnographic mapping activity described above; youths from respective ethnic groups were approached at urban/semi urban-commercial blocks. Informed consent was obtained before the self-administered questionnaire was administered. Probability (*ethnic representation, youth within the age range of 18-25-year-old, residing within the residential areas*) and convenience (*once selection criteria were met, youth interest in participation is explored*) sampling method was applied. At each site, the researcher aimed at recruiting 100 ($100 = 50 \text{ male and } 50 \text{ females} \times 6 \text{ sites} = 600$) youth. Hence, a total of 600 youths was approached, and the final number of youth who completed the questionnaire was 207. A response rate of 34% is attained. A complete overview of the methodology applied in phase one is illustrated in Figure 1.

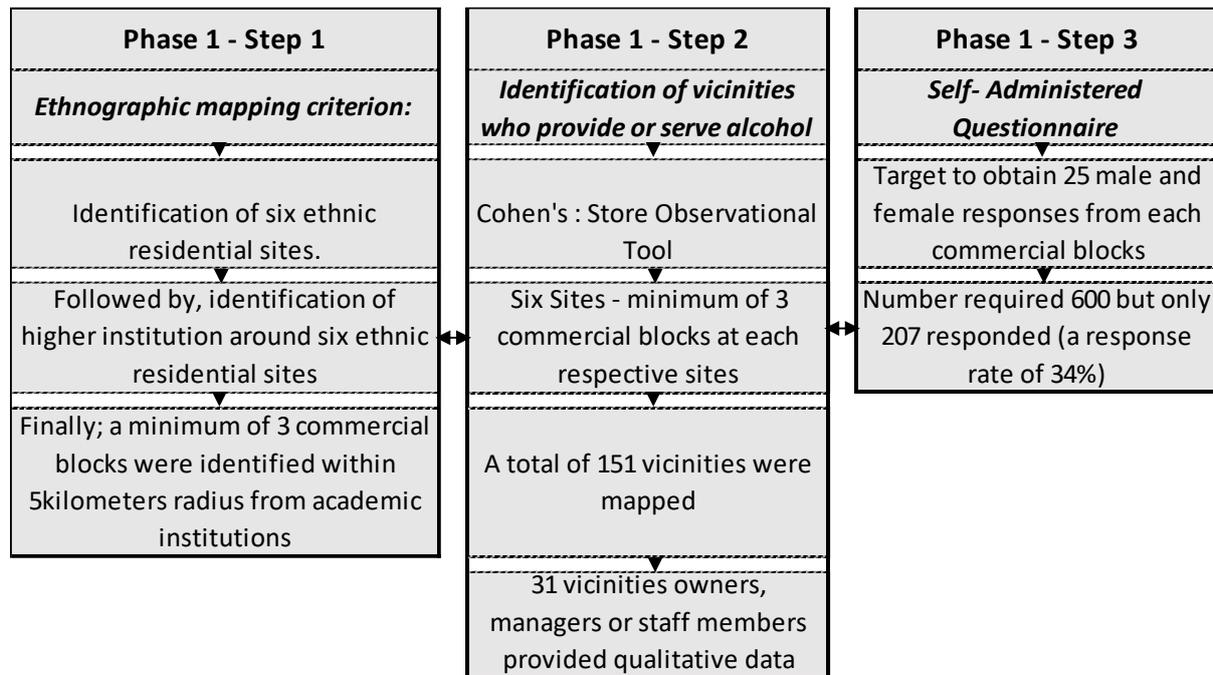


Fig 1: Mechanism, activities and tools used in ethnographic mapping

3. RESULTS

The study findings are a record of images, field notes, face to face interviews and self-administered questionnaires. The qualitative component applied a descriptive process; that documents the observation that occurred over a two-year period from 2014 to 2015. This field activity occurred at different times during weekdays and weekends. The filed notes also documented the observations over festival seasons, school and institutional holidays as well as other public holidays. In addition, to the descriptive process of the fields notes and images, the researcher also obtained quantitative data via self-administered questionnaire and recorded voluntary face to face interviews with community members and alcohol service providers, suppliers or producers.

The initial findings were in the form of geographical images of the researched areas. An example of the researched areas is shown in image 2. This image shows the map of Klang Valley, Malaysia - with labels of identified sites. Once the areas were identified, the next step was to map out the urban/semi agglomerations as shown in image 3.

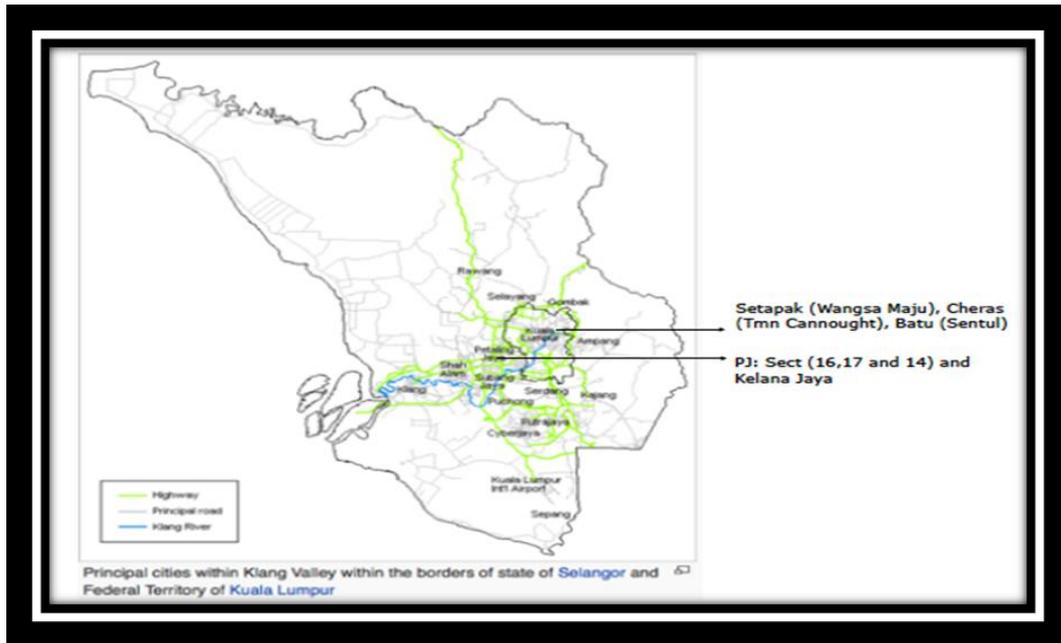


Image 2. Klang Valley Map in Malaysia and identified research sites



Image 3. Petaling urban agglomerations mapping on 6h June 2015

3.1 Identification of urban/semi agglomerations

As shown in image 3, identification of coverage areas was applied with the use of google earth images in relevant research sites. Image 3, is a research site in Petaling Jaya. It is an urban/semi agglomerations area, that is primarily occupied by Chinese ethnic group and this image was taken on 6th July 2015. The researcher ensured that rigorous monitoring of urban/semi agglomerations sites was adhered accordingly. In addition, to google maps images (Image 3 and 4), the researcher also took picture evidence to record extended marketing and promotional activities of alcohol sales in various outlets within research areas [Image 5].



Image 4: Setapak area mapping on 7th July 2015



Image 5: Aeon Supermarket in Sentul, display on 14th Feb 2016

3.2 Observational findings

Based on the data collected through observation fieldwork and through the application of the observation tool, the researcher identified 151 Service Providers (SP) or outlets (Os) that sold alcohol at research sites. As displayed in Table 4, the numbers of SP/Os in each respective area are as follows: 3 identified areas with 59 SP/Os in Cheras, 3 areas with 32 SP/Os in Batu, 3 areas with 28 SP/Os in Petaling Jaya, 3 areas with 26 SP/Os in Setapak and 1 area with 6 SP/Os in Ampang. Only one area was identified in Ampang as it has just one specific area that was populated by an Indian ethnic group. The rest of the urban/semi agglomerations [i.e.: identified] areas in Ampang were primarily populated with foreigners or Malay ethnic groups. Due to the sensitive nature of alcohol sales and legislation in this country, the data sheet on sites identified with timing and listed addresses will not be shared here. Generally, there were more alcohol SP/Os in Chinese populated areas (Cheras+Petaling Jaya n=77 between n=9-15 providers in an urban/semi-commercial block), compared to Indians (Ampang+Batu n=38 between 5-20

providers in a certain urban/semi agglomeration block) and for Malays (Cheras+Setapak n=36 between 0-22 providers in a certain urban/semi-metropolitan block). Average operating hours of these SP/Os is approximately 15hours a day. Basically, 33% of youth frequented and consumed alcohol at these localities. Majority of youths who were observed consuming alcohol were Chinese and Indians. It is important to note that 85% of the SP/Os were able to sell or serve alcohol from 10 am to 10 pm. The density of the SP/Os in respective areas was within the 0.9-10.9/100m radius in Chinese populated sites, followed by a 0-4.2/100m radius in Malay populated areas and finally 0.-5.97/100m radius within Indian populated areas (*the distance is subjected to extrapolation, providing an indication of the maximum number of SP/Os observed in each area*).

Table 4. Observational findings

No of Service Providers (SP) and Outlets (Os) n = 151			
No of SP & Os at respective research sites n = 59 in Cheras, n= 32 in Batu, n = 28 in Petaling Jaya, n= 26 in Setapak and n= 6 in Ampang.			
Ethnic Group	Malay	Chinese	Indian
<i>No of SP & O's in researched areas</i>	36	77	38
<i>The density of SP & Os within each commercial block at research sites</i>	0-22	9-15	5-20
<i>No of alcohol advertisements in researched sites</i>	26-34	60-183	6-32

- **Characteristics of service outlets**

SP/Os were mainly located at normal shop lots in the main urban/semi agglomerations areas. The majority (40%) were in the form of convenience stores (7-Eleven, 99 Speedmart and KK Mart), followed by supermarkets (*approximately 36% of the supermarkets were Aeon, Giant or Tesco*). Approximately 33% of stores operated for 24 hours. Most of the stores stopped service or sale by 10 pm. In supermarkets, beers are placed separately outside the wine and liquor section. However, alcohol is an easily available item to purchase and is even available to consumers after the liquor section closes at 9 pm, prolonging the hours of sales. Liquor Stores are usually managed by Chinese or Indians. All types of alcoholic beverages were available without any visible restriction notes. Online information on 7/11 (a 24-hour convenience store) retailers confirms that the “General Manager” is of Malay ethnic group and most (70%) of the attendants at respective stores are also Malays. There were restriction notes against selling alcohol to anyone less than 18 years of age and Malay consumption violation in relation to religious laws in all 7/11 outlets. Based on communication with store employees, there is a high turnover of staffing within 7/11 stores. Based on the voluntary information offered by an employee, he claims that ethnic client profiling is difficult to ascertain visually. However, when a number of 7/11 employee gathered to speak to the researcher, they claimed that Chinese and Indian youth groups will purchase large quantities of alcohol during weekends. The employees also shared that the older Malay men were noted to purchase quite randomly at different times of the week. The other two commonly observed convenience stores are KK Mart and Speedy Mart, which are both managed by Chinese owned corporate companies. There was a much wider selection of alcohol available in these two outlets compared to 7/11.

- **Display of alcohol beverages and advertisements:**

Most (75%) of the stores, displayed alcohol in refrigerator/cooler; whereby some (55%) would also display alcohol bottles on shelves. The percentages do not sum up to 100% due to the observational method deployed. Marketing advertisements, as displayed in Image 6, were widely visible in areas populated by Chinese (*average of five ads per outlet*) and some were noted in multi-ethnic areas such as Cheras (*average of 3.67 ads per outlets*). Advertisements were most commonly seen in Chinese food courts, cafés and liquor stores, but were rarely found in supermarkets, chain stores and convenience stores.



Image 6: Advertisement on Chinese restaurant wall, located in Cheras

Type of alcohol: Beer (94%) and liquor (58%) were more commonly sold compared to other alcoholic drinks, with wine more popular among the younger age groups (20-30 years of age). The percentages do not sum up to 100% due to the observational method deployed. It was physically difficult to provide numeric data on items displayed. Each site may be selling more than one type of alcohol. The beer was relatively cheaper (*RM3 to RM20-ranging from 300ml bottles to 1litre bottles, which is equivalent to USD1-USD5*) and based on observation it is the most widely accessible alcoholic drink and is preferred by all ethnic groups.

Alcohol purchasing pattern: Informal interactions with SP/Os representatives indicate that most of the clientele are above 20 years of age. However, upon further exploration, none were able to clarify how guesstimates of age were made since no identification was requested. Regardless, supermarkets and convenience stores have signage on shelves which indicate that a sale of alcohol is prohibited to those less than 18 years of age and Muslims.

3.3 Field Notes

As indicated above, the SP/Os representatives were vigilant of the researcher's presence since the researcher frequented these sites over two years which comprised of 15-25 visits at each respective area. Similar reservations and concerns were also observed among the community members and enforcement officers, who were also patrons of these areas. Once the community members were provided with an overview of the study, they were ever so willing to share their opinions on the subject matter. However, they were equally cautious and requested anonymity from the researcher. Such concerns were voiced so that social sections on alcohol use are abided within the community. Thus, assurance was provided that information such as the nature of locality, licensing issues or identifiable facts on community members will not be shared with local enforcement authorities.

The SP/Os interacted by sharing information on how the local youth consumed alcohol and behaved after consumption within their respective premises. Approximately 31 SP/Os offered information that supported findings in this study. Some ($n=7$) alcohol SP/Os revealed that there were older and younger Malay groups who were seen buying alcohol occasionally. However, this form of information was only shared in areas where Malay residents were the minority ethnic group. The information also revealed that most Malay respondents preferred to consume in private due to religious prohibitions and because of the social sanctions they are subject to. A local street vendor, who was situated in the middle of a pathway that separated Indians and Malay residential blocks, shared the fact that most of Malays do not consume alcohol but for those who do consume, they do it in hidden spaces such as dark alleyways or behind shop lots. She also revealed that Malay youth would probably consume in parks because it is their usual hangout spot during the night. However, she also mentioned witnessing unhealthy consumption patterns amongst the Indian ethnic group. She continued to share an incident that occurred a day earlier; she revealed that she saw a corpse of an Indian man on the side of the road and she believes that it was primarily due to alcohol overdose. She continued to stress that the social sanctions on alcohol use within the Malays promote abstinence, thus harmful consumption patterns are not visible in Malay community settings.

Most of the informal communication and observation revealed that beer was the preferred type of alcohol, followed by liquor, cider beer and wine. Based on observations and informal interactions, Chinese consumers

were mostly consuming alcohol in food stalls and restaurants. While Indians, however, were noted gulping down alcohol from bottles directly after purchase and Malay consumers were observed purchasing alcoholic beverages and consuming it at the back of shops to avoid being seen.

Most (80%) of SP/Os representatives claimed that Chinese and Indians were the majority of alcohol consumers. The SP/Os representatives are aware that Malays are expected to refrain from buying alcohol due to religious reasons; however, some SP/Os representatives revealed that there were Malays seen purchasing alcohol through their Non-Malay friends (*this was also observed by the researcher, especially during weekends around urban/semi agglomerations sites that had nightclubs close by*).

Through shopkeepers, SP/Os information and observation noted that alcohol sales increased after 5 pm in certain areas or after 10 pm in most areas. Majority of Chinese youth or even older groups tend to purchase alcohol in bulk during festive seasons or for special occasions. Indians were known to purchase alcohol in small quantities; however, this does not reflect patterns of alcohol consumption.

3.4 Self-Administered Questionnaires on Opinions and Drunkenness among youth who consume alcohol

As mentioned above, out of 600 youths approached, only 207 responded to the questionnaire. Individuals who refused participation, did so because of the sensitive nature of the research title or simply because they did not want to. The ethnic group representations of the 207 participants are 73 Malays, 79 Chinese, and 55 Indians. The 20 questions in a self-administered questionnaire were mainly designed in a manner that the youth didn't feel intimidated to answer. The questionnaire was designed to explore local knowledge of alcohol use, youth behaviours, perceptions and opinions around alcohol use within their residential areas.

Opinions: Alcohol consumption was identified as a social ill by 64% of respondents who were aware of Malaysia being a tenth largest consumer of alcohol consumption globally. While the majority (58%) deemed it as one of many social problems Malaysia is confronting, 31% of respondents believed it is the most serious social problem that requires attention.

Although 59% of respondents agreed that alcohol consumption increases with accessibility, only 41% perceived that there is insufficient enforcement of alcohol misuse in Malaysia. However, respondents within each ethnic group perceived enforcement measures differently. For instance, 52% of Malays and 54% of Chinese agreed that there are limited enforcement measures on alcohol use within a local context, while 53% of Indians believed otherwise. Most (68%) of the respondents, agreed that youths are consuming alcohol within their community settings/areas. Thus, the majority (77%) believed that it's important to educate children on risks associated with alcohol consumption. Forty-two percent indicated that alcohol consumption is influenced by a parent who consumes alcohol. There were 12% of respondents who believed in total abstinence from alcohol consumption. Respondents who considered alcohol consumption acceptable indicated that those with a mean age of 16 years of age, should consume under adult supervision; whereas, those above 18 years of age, may consume without adult supervision.

In terms of gender, the majority believed safe alcohol consumption for both men and women is between 1-2 glasses (55% and 45% respectively). Twenty-eight percent agreed that 2-4 glasses of alcohol is safe for men. Only 2% believed that no one should consume alcohol. Some (21%) of the youth indicated that it's acceptable to consume at home, whereby most of the youth (65%) agreed that dance/nightclubs or family/relatives' homes are suitable places to consume alcohol. Out of 102 respondents who answered alcohol consumption should be at home, 57% were Chinese. Whereas 27% of Malays and 31% of Indians agreed that pub/bar is an acceptable venue for alcohol consumption. Figure 2, below shows the respective ethnic group of youths who selected options on a suitable venue for alcohol consumption. However, this variable was based on multiple selection options, thus the percentage would not round up to hundred percent.

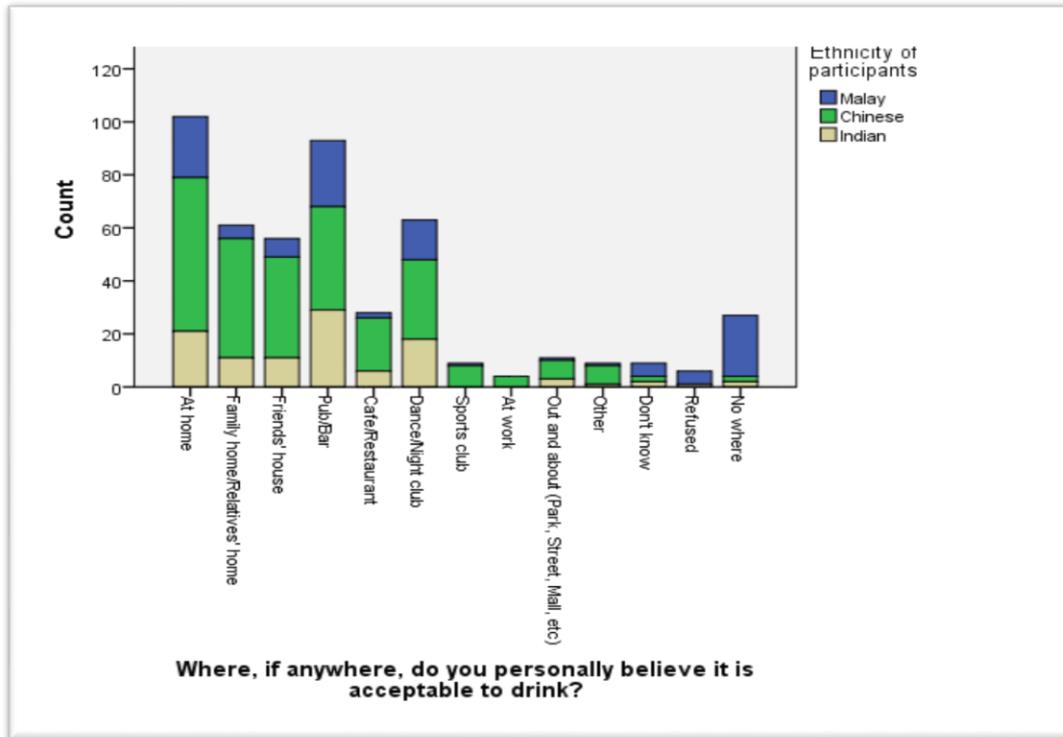


Fig 2. Percentage of preferred venue for alcohol consumption

Drunkness: Many (72%) responders agreed that alcohol consumption leads to risky behaviour. A total of 57% of respondents disagreed with the statement “It’s ok to get drunk, as long as it’s not every day”. Almost half (50%) were against the fact, that drunkenness is accepted in any situation.

About half of the respondents (54%) had heard of or communicated harms associated with unhealthy alcohol consumption with others. Most (62%) of the respondents were approached by family or friends on issues pertaining to risks associated with alcohol consumption. A large portion (67%) acknowledged the importance of talking to friends whose harmful alcohol consumption patterns were observed. The three ethnic groups had different opinions on how often risky alcohol consumption patterns amongst family and friends should be discussed/addressed. For instance, nine out of ten Malay youths agreed that it should be addressed by family and friends. Fifty-eight percent of the Chinese and Indian youth (6 out of 10) believed that there were benefits of discussing and sharing such information on harmful alcohol consumption patterns among family members or friends. Despite this, only 38% of the youth believed their family and friends would heed any advice on reducing the amount of alcohol consumption.

4. DISCUSSION

Findings from this study indicate that restricted access and social sanctions on consumption of alcohol is only noted in areas with a large Muslim population. Whereas, there are limited restrictions noted in areas resided by Chinese and Indians. Thus, alcohol accessibility is a major concern, since the number of vicinities selling or serving alcohol in areas researched ranged within 6-50 providers within a 500-meter radius. In Malaysia, there is a clear guide on a licensing system for sales of alcohol; however, local Institute of Alcohol Studies has pointed out that these licensing boards rarely turn down applications, thus explaining the surplus of alcohol availability (Assuntha, 2001);(IAS, 2001). In addition, local industrial bulletin estimated that there are about 35,000 licensed outlets nation-wide. Findings from this study concur to the fact that was also reflected in Kortteinen’s study; that Chinese and Indian ethnic groups may be part of the suppliers, producers, servers and consumers (Assuntha, 2001);(Kortteinen, 2008);(IAS, 2001).

These forms of accessibility and availability issues within the local context are not only detrimental to youths who reside in the studied areas but also impact their families and peers. This is a crucial issue for consideration since evidence has indicated that parental monitoring and effective engagement are all relevant indicators in addressing risky consumption patterns (McMorris, Catalano, Kim, Toumbourou, & Hemphill, 2011);(Wood, Read, Mitchell,

& Brand, 2004);(Patock-Peckham, King, Morgan-Lopez, Ulloa, & Moses, 2011);(Kuntsche et al., 2011). Similarly, alcohol use amongst the peers of youths is also known to be a major predictor of youth's own alcohol use (Salamé, Barbour, & Salameh, 2013);(Anderson, Tomlinson, Robinson, & Brown, 2011);(Henry, Slater, & Oetting, 2005).

At an individual level; the lack of knowledge on the risk associated with alcohol consumption is limited to none among the youth. Similar concerns are also noted by SP/Os and community members in this study. This was also reported by a local researcher in 2015 and currently, the local authorities are also enforcing stringent guidelines on tackling such matters in certain communities in Malaysia (Mohd Ramlan Mohd et al., 2015);(Bavani & Lim, 2015). Improving knowledge is certainly needed since most of the youth in this study believe it's crucial to communicate on riskier alcohol consumption patterns with their family and friends. Similarly, other health risk and substance use studies within the local context have also emphasized the need for an evidence-based preventions program that addresses the knowledge gap of youth on certain associated risk factors (Fauziah, Mohamad, Chong, & Manaf, 2012);(Al-Naggar, Bobryshev, & Mohd Noor, 2013).

5. RECOMMENDATIONS

- The findings from this study, have shown accessibility to alcohol within community settings is a concerning aspect. Thus, as global evidence has suggested, an increase in alcohol taxes [*which exalt alcohol price*] would impact accessibility and lower riskier consumption among the youth (Xu & Chaloupka, 2011);(UK Home Office, 2011);(Skolnik, 2015);(Toumbourou et al., 2007).
- In addition, evidence has also suggested that government-linked alcohol-related health services should be offered to the public as a way of reducing riskier alcohol consumption related to negative health outcomes. This would also address the barriers to access healthcare or counselling services which may be dominantly due to the fact of social sanction, stigma and discrimination associated with alcohol-related comorbidities (WHO, 2010).
- The awareness and knowledge on riskier alcohol consumption among youths should be made available to the general population via alternative forms of mass media such as radio, television ads, magazines and even social network to ensure such information is existent, relevant and available to all (Seaman & Theresa, 2010);(Toumbourou et al., 2007).
- In addition, targeted intervention for youth should also be developed. Risk factors associated with unhealthy alcohol consumption patterns need to be addressed through a customized approach specific to each ethnic group (Toumbourou et al., 2007);(Conrod, Castellanos, & Mackie, 2008)

6. LIMITATIONS

Off-premise alcohol sales³ were focused outlets in the mapping activity. Bearing the concern of traffic congestion at peak hour and personal safety, selling patterns of on-premise alcohol outlets e.g. pubs and bars could not be accurately captured due to them only being open at night. As mapping was done before 12 am, the study is not reflective of consumption patterns that occur after midnight.

Alcohol consumption is a highly sensitive issue in Malaysia, making a random sampling of participants difficult. The specified time frame of the survey (10am-11pm), selection of survey site based on the availability of respondents and the presence of alcohol outlets, are all limitations which result in the sample being less

³ Off-premise retail sale refers to the selling of alcoholic beverages for consumption elsewhere and not on the site of sale. Off-premise sale takes place, for example, in state monopoly stores, wine shops, supermarkets, and petrol stations or kiosks, depending on the regulations of the country.

On-premise retail sale refers to the selling of alcoholic beverages for consumption at the site of the sale, generally in pubs, bars, cafes or restaurants.

representative of the true population, especially in regard to Indian residents. In addition, the response is poor among Indians as there may be a language barrier or lack of rapport with the youths.

DISCLAIMERS

The following is author's statement; hence views expressed in the submitted article are the teams and not an official position of the institution or funder.

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CONFLICT OF INTEREST

The authors confirm there are no conflicts of interest pertaining to the article.

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