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ORIGINAL ARTICLE

Effects of Alcohol towards Quality of Life in the Indigenous Groups of the West Coast Division, Sabah, Malaysia

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ABSTRACT

Alcohol consumption has consequences for the health and quality of life of individuals and communities. It is a problem among some of the Indigenous groups of Sabah and Sarawak with some of the highest prevalence of risky drinking in Malaysia. Alcohol is considered to be part of the culture of some of these Indigenous groups and a way to maintain the connection to their culture and traditions. However, drinking too much on a single occasion and drinking regularly over time is not a part of the culture. Therefore, this study aimed to investigate the positive and negative effects of alcohol on quality of life (QoL) of an Indigenous community of Sabah. A total of 56 villagers from the West Coast Division of Sabah were interviewed in focus group discussions using the diamond dialogue tool. Data were analysed using thematic analysis and revealed that alcohol consumption has both beneficial and adverse effects on health, behavioural, social, economic and psychological factors, depending on the drinking patterns. These harmful results suggest that awareness and harm-reduction programmes may help to empower the Indigenous groups of Sabah to reduce alcohol-related harm.

INTRODUCTION

According to the World Health Organization (WHO), alcohol is the world's third-largest risk factor fordisease burden[1]. In 2016, alcohol was reported as representing 132.6 million disability-adjusted life years (DALYs) globally which represented 5.1% of all DALYs in that year[1]. It is known to cause more than 200

communicable and non-communicable diseases and injuries[2]. In 2011, there were more than 2 billion people worldwide consuming alcoholic beverages and out of that 76.3 million had an alcohol use disorder[1]. The harmful use of alcohol caused an estimated 3 million deaths globally in 2016[1]. In the same year, Malaysia was reported to be the tenth largest consumer of alcohol in the world[3]. Sabah is listed as having the third-highest prevalence of risky drinkers after Kuala Lumpur and Sarawak[4]. Alcohol is also associated with a significant reduction in quality of life, both for individuals and communities[1]. Quality of life is an important parameter that provides an insight into how a disorder impacts the lives of those affected.

QoL is defined as a measure of the whole person, including physical and mental health and social well-being[1]. A healthy QoL is not just the absence of acute disease or chronic illness but is re-conceived as a positive state of overall subjective well-being. This concept involves the dimensions of biological, psychological, sociological and economic factors that include a sense of achievement and mastery over individual goals. It can also be an important measure in tracking treatment outcomes for alcohol use disorders[5]. Compromised quality of life has been linked to depression, anxiety and alcohol consumption[6]. According to McCulloch (2006),[6] many people drink alcohol to help deal with anxiety and depressive thinking patterns.

In Sabah, alcohol is considered to be a part of traditional culture, especially for some of the Indigenous groups[7]. These Indigenous communities in Sabah, such as Kadazandusun, Murut, Sungai and Rungus[8], consider alcohol to be part of everyday life and as a key factor in maintaining the culture and traditions[7]. A study found that youth in these Indigenous groups start drinking at or before 15 years of age[8]. They often start drinking the traditional home-brewed alcohol (such as *tapai* and *montoku*) and later venture into drinking "western-style" beverages such as beer and spirits[8]. Drinking alcohol is known to have some benefits such as helping to celebrate and socialize and enhancing the joyfulness of ceremonies[9]. It is also used as part of social, business, and family life, an enjoyable and habitual accompaniment to food and celebrations. However, drinking alcohol to the point of intoxication has not been reported to be a part of tradition among these Indigenous groups[10]. Moreover, according to Asmat (2018)[11], the abuse of alcohol can destroy the aim of these cultures. This pattern of drinking contributes to serious health consequences[2] and increases the chances of hurting oneself or others due to accidents, violence and suicide[1].

According to Singh (2012)[12], alcohol consumption in Sabah peaks during the Kaamatan month (yearly in May) among Kadazandusun communities. Kaamatan or Pesta Kaamatan is a form of harvest festival which is celebrated annually by ethnic Kadazandusun in Sabah, Malaysia. Several activities are held during Kaamatan such as cultural dance and music, traditional sports and games, carnivals and the grand Unduk Ngadau, otherwise known as Miss Kaamatan (Harvest Festival Queen). During most festivals in Sabah (including Kaamatan. Christmas and New Year), alcohol prices are controlled by the Government preventing traders from taking advantage of the public and profiting by raising the price. Traders who are found not following the pricing set by the Government are fined. The culture of many Indigenous groups is strongly connected to drinking alcohol but does not encourage abuse[11]. Research has not previously been done looking at the role alcohol plays in the QoL of these communities and this study aimed to address this gap in knowledge through exploring the role of alcohol in the lives of Indigenous groups from the Western Division of Sabah.

MATERIALS AND METHODS

This qualitative study was using focus group discussions for the collection of data. The study was conducted between 2016 and 2017 in numerous villages in the West Coast Division. Communities were purposively selected for this study and identified as Kadazandusun, being an alcohol-consuming community, and having some awareness of the harms caused by alcohol for their people. Participants included community members aged between 15 and 75. More females than males attended, and groups created were gender-specific and of varied ages, with members from each village being placed in the same group where possible.

Participants and Location

Purposive sampling was applied to select hazardous and harmful drinkers among the indigenous communities of Sabah. As recommended by Babor et al. (2013)[13] hazardous and harmful drinkers are suggested for brief education and brief intervention to reduce the alcohol related harm. By knowing the impact of drinking style towards alcohol-related harm would help to develop an appropriate intervention for further study. Screening by using AUDIT was done to select participants who scored between 8 to 19 on AUDIT or known as hazardous and harmful drinkers. The data was collected in one community meeting during the 'Leaders United Event of indigenous people of Sabah' at PACOS-Trust located in Penampang, Sabah. PACOS-Trust stands for Partnership of Community Organization. PACOS-Trust is a community-based organization dedicated to supporting indigenous communities in Sabah. A total of 56 villagers from the communities were involved in this study. In-depth focus group interviews were used to investigate the beneficial and adverse effects of alcohol on wellbeing in these communities.

Materials and Procedure

The Diamond Dialogue tool by Willetts et al. (2018)[14] (Figure 1) was used to identify the impact of alcohol consumption on the health and quality of life of the Indigenous groups included in this study. It has been previously used as a research tool to evaluate the effectiveness of interventions in improving the quality of life in a variety of contexts[14]. Diamond Dialogue: A Tool to Explore Alcohol-related Harm and Strengthen Community Action[10]. The Diamond Dialogue is a diamond-shaped tool, used to capture a diverse number of perspectives during the discussions (Figure 2). A happy face is placed at the top of the diamond representing "perfectly satisfied" and a sad face at the bottom representing "completely dissatisfied" with their sense of the quality of life. The researcher(s) begin by asking participants about their definition of happiness and unhappiness: "What does happiness mean to you?", "What does unhappiness mean to you?", followed by identifying the factors that influence "What makes you happy?", "What makes you unhappy?". Participants were then asked about the effect alcohol has on the quality of life in their community: "What's positive about alcohol?", "What's negative about alcohol?", "What role does alcohol play in your culture?". Participants were also asked to mark on the diamond provided by the researcher(s) the happiest they had ever been and the saddest they had ever been between the extremes very happy and very unhappy. The Diamond Dialogue was used because it was found to be a useful tool to allow each person to reflect and make their meaning in their discussion as well as getting rich qualitative data[15]. Notes were also taken by the researcher(s) in response to these questions.

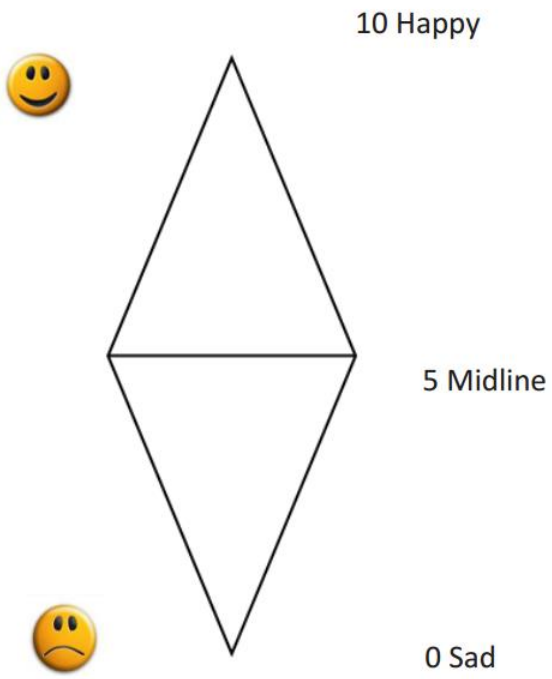

Figure 1 Diamond with categories

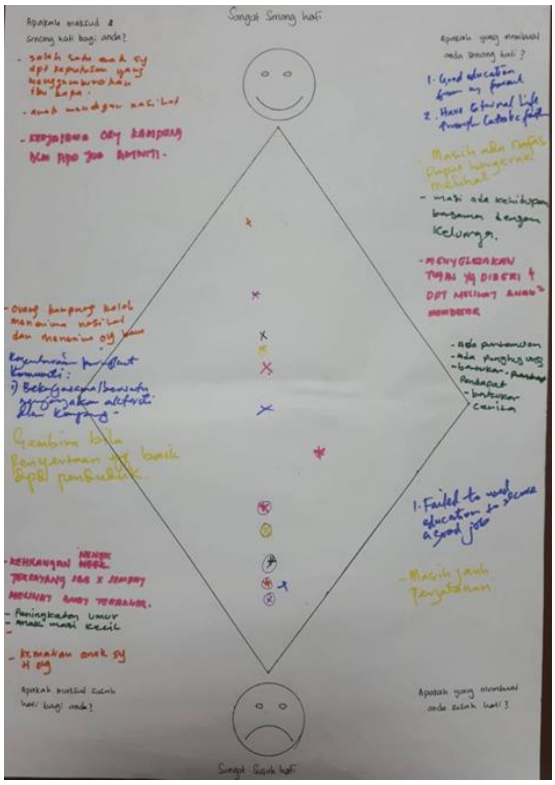

Figure 2 Example of Diamond Dialogue

Notes: This figure illustrates one of the diamond dialogue maps generated during a focus group discussion in the village. Six villagers participated in the discussion. Each villager used a different colour pen to mark their response and their current subjective state of well-being. The happiest they had ever been marked with an X symbol and the saddest they had ever been with (X) symbol.

Data Analysis

To identify themes and subthemes, transcript interviews were entered into a qualitative data analysis tool (Atlas.ti, version 7). The data was analysed using thematic analysis to identify the factors influencing alcohol consumption from the perspective of participants. The thematic analysis allows for understanding the potential of any issue more widely. The analysis followed an inductive approach including coding, writing comments and memos, familiarization, networking and linking and interpretation of the data[16]. The analysis was conducted by the team of researchers, with consultation and negotiation enabling the formation of the final themes explored in this study.

RESULTS

As for gender distribution, there was 29 female and 27 males participated in this study. For the range age, 29 participants were in the range age of 18 to 35 years old, while 27 participants were in the range age of 36 to 55 years old. A total of 24 were single, 29 were married, while 3 were divorced. There were 51 Christian, while 5 were Muslim. As for the job sector, 32 were self-employed, 6 working with government, and 18 were working with a private company. There were 25 smoking and 31 were non-smoking (Table 1). Among the participants, 51 (91.1%) were Kadazandusun and 5 (8.9%) were Bajau (Figure 3).

Table 1 Demographics of participants

Variables	Frequency (*N* = 56)	Percentage (100%)
Gender		
Female	29	51.8
Male	27	48.2
Age		
18 – 35 years	29	51.8
36 – 55 years	27	48.2
Status		
Single	24	42.7
Married	29	51.8
Divorce	3	5.5
Religion		
Christian	51	91.1
Muslim	5	8.9
Job sector		
Government	6	10.7
Private	18	32.2
Self-employed	32	57.1
Smoking		
Yes	25	44.6
No	31	55.4

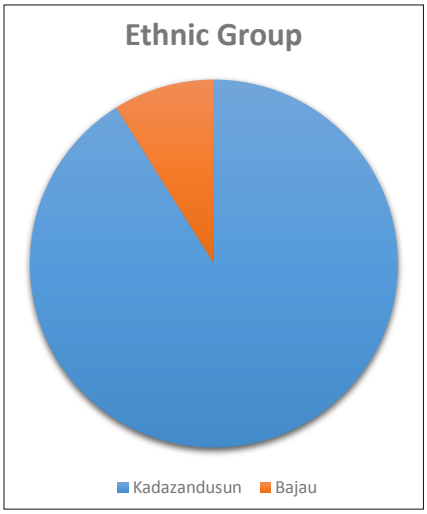

Figure 3 Ethnic group

This study found five primary factors related to alcohol consumption in these communities which contribute both positively and negatively to the overall QoL. These were labelled health, behavioural, social, economic and psychological (Figure 4.).

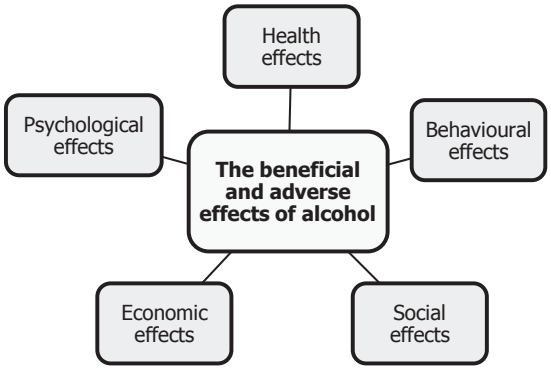

Figure 4 The beneficial and adverse effects of alcohol consumption

Table 2 shows the five beneficial and adverse effects of alcohol consumption.

Table 2 The beneficial and adverse effects of alcohol

	Beneficial effects of alcohol	Said by		Adverse effects of alcohol	Said by	
		K	B		K	B
Health effects	To mix with food (chicken soup)	Yes		Loss of balance	Yes	Yes
	To treat disease	Yes		Headache	Yes	Yes
				Disease	Yes	Yes
				Premature death	Yes	Yes
Behavioural effects	To train the voice to sing	Yes	Yes	Addiction	Yes	Yes
	To become brave	Yes	Yes	Fighting	Yes	Yes
	To achieve goals in playing dart and reach high notes in singing	Yes		Family and domestic violence	Yes	Yes
		Yes		Short temperedness	Yes	Yes
				Homeless	Yes	Yes
				Lies	Yes	Yes
				Family conflict	Yes	Yes
				Children neglected	Yes	Yes
				Loss of control	Yes	Yes
				Forgetfulness	Yes	Yes
				Irrational talk	Yes	Yes
				Waste of money and time		
Social effects	To make new friends	Yes	Yes	Accidents	Yes	Yes
	To spend time with friends and community			Drunkenness	Yes	Yes
	More joyous	Yes	Yes	Injuries	Yes	Yes
	Tighten relationship	Yes	Yes	Danger to other	Yes	Yes
	To open conversation	Yes	Yes	people	Yes	Yes
	Gathering	Yes	Yes	Social problems		
	To fill free time	Yes				
		Yes	Yes			
Economic effects	Business	Yes		Did not turn up for	Yes	Yes
	Tourist attraction	Yes		work	Yes	Yes
				Reduce performance	Yes	Yes
				Financial problem		
Psychological effects	Satisfaction	Yes	Yes	Unsatisfied	Yes	Yes
	Release stress and tired	Yes	Yes	Jealousy	Yes	
	Express feelings	Yes		Depression	Yes	Yes
	Happy	Yes	Yes	Distasteful to women	Yes	

Note: K = Kadazandusun, B = Bajau

Health Factors

According to participants, alcohol was used to improve health and treat illnesses including reducing high blood pressure, to improve blood circulation, and for women post-delivery. Besides drinking alcohol, these groups also use alcohol for cooking, such as to mix with chicken soup. All participants agreed that a high intake of alcohol can have negative impacts on health for example stroke, gout, loss of balance, diabetes and even premature death (Table 3).

Table 3 The quotes of positive and negative effects of alcohol on the health factor

Factor	Positive effects	Negative effects
Health	"Our grandparents they drink alcohol to treat high blood, and after delivery, the *lihing* is more suitable to mix with chicken soup, but just a little bit." (K)	"The bad aspect of drinking is gout, we call it GDL, *Gaut Datang Lagi* (gout come again), it causes stroke and premature death." (K)
	"There's a grandpa who drank one or two can of beer in a day, which he believed improve his blood circulation which was impact very good, If he not has fallen recently, I think he still would be quite well." (K)	"When we drink whole the night, the next morning we feel too sick to work, *kougutan* (drunk). When we are *kougutan* we don't have an appetite to eat, we don't turn up to work, and lack of energy. So, all we can do is sleep." (K, B)

Note: K = Kadazandusun, B = Bajau

Behavioural Factors

Participants agreed that producing and consuming traditional alcohol is one of the ways they seek to maintain their culture. At the same time, participants reported that alcohol helps them to achieve goals such as to excel at playing darts, to reach the high notes singing karaoke, to prepare their voice to sing and to have more courage when talking about emotions and feelings. However, they also recognized that consuming alcohol excessively can lead to negative emotions (short temperedness), erratic thoughts, irrational talk, waste of money and time, family and domestic violence, fighting, accidents, homelessness and being addicted to the alcohol (Table 4).

Table 4 The quotes of positive and negative effects of alcohol on behavioural factor

Factor	Positive effects	Negative effects
Behavioural	"If you get a bit drunk, you can reach the high notes. Same goes for playing dart, there are focus and concentration." (K, B)	"Bad stories from the pass are reemerged when you are drunk. The bad are irrational and hurtful talk which end up with fighting." (K, B)
	"When drunk, we can talk more easily, and we are not afraid to talk." (K, B)	"When you get drunk it can cause fighting, accidents, injuries, danger to other people who do not drink. Like in road or a celebration." (K, B)

Note: K = Kadazandusun, B = Bajau

Social Factors

Alcohol is reported by participants to be an important part of socializing and is used to help make new friends, to open conversations, to tighten relationships, to have time with friends and family as well as to make parties or festive ceremonies more joyous. Alcohol is also recognised to negatively influence behaviour when people become intoxicated. It can lead to fighting and accidents, and danger to oneself and other people such as injuries caused by fighting and road traffic accidents as well as unplanned and unprotected sex (Table 5).

Table 5 The quotes of positive and negative effects of alcohol on the social factor

Factor	Positive effects	Negative effects
Social	"To tighten the relationship with friends and to get know strangers." (K, B)	"The bad effects of alcohol are getting drunk, easily getting angry, erratic thoughts, always wasting money, forgetfulness." (K, B)
	"Drinking is crucial to Kadazandusun culture, you enjoy events with family and friends more if alcohol is included." (K)	"About accident, if too drunk, getting involve in an accident if you are too drunk. Most of them die, only a few survived." (K, B)

Note: K = Kadazandusun, B = Bajau

Economic Factors

Participants discussed how alcohol can provide benefits in terms of business and as a tourist attraction. The groups interviewed agreed that alcohol is a viable source of income for those producing and selling it. They claimed that tourists often want to try the locally produced alcohol. However, alcohol can also cause financial problems either through the cost of purchasing commercial alcohol or the cost of treating illnesses caused by excessive consumption of alcohol. There are also indirect costs such as poor work and/or study performance and the impact of conflicts or domestic violence. Participants in this study claimed that some people did not turn up for work due to drunkenness or being hung-over (or kougutan) (Table 6).

Table 6 The quotes of positive and negative effects of alcohol on the economic factor

Factor	Positive effects	Negative effects
Economic	"Tourism product, cause some white people looking for *lihing* right." (K)	"When drinking alone we can control our alcohol consumption and expense. But when in a group some members may not contribute financially and leave others 'out of pocket'." (K, B)
	"I asked at Sabindo store and they told me that they can sell 2 to 3 hundred crates of Hollandia in a day." (K)	"When you get drunk, you don't realise hit your wife or your child, pounding the wall or damaging furniture in the house (TV, table, chair, etc.)." (K, B)

Note: K = Kadazandusun, B = Bajau

Psychological Factors

Moderate alcohol consumption may provide some psychological benefits such as to help release stress and to recover from tiredness after working long hours. Moderate consumption can also enhance positive emotions. Participants also reported that some people suddenly dare to talk in unfamiliar language, such as English, when they have been drinking. Drinking too much alcohol can lead to loss of memory (for example having no recall of the events from the previous evening), negative emotions (easily becoming angry), family conflict and some of male participants said that it is sometimes distasteful to women (no women like men who are always drunk) (Table 7).

Table 7 The quotes of positive and negative effects of alcohol on the psychological factor

Factor	Positive effects	Negative effects
Psychological	"If sometimes we're tired, and stressed, we feel a bit released after drinking." (K, B)	"Ya, the fighting between husband and wife. Kids can be neglected if overdrinking." (K, B)
	"If you get a bit drunk, you dare to talk in English and even having a conversation in English" (K, B)	"Feel happy only during the drinking but after that easy to get mad." (K, B)

Note: K = Kadazandusun, B = Bajau

DISCUSSION

The results revealed five categories of beneficial and adverse effects of alcohol consumption including health, behavioural, social, economic and psychological factors, depending on the pattern of the individual alcohol consumer. This study found that moderate alcohol consumption can provide some benefit for individuals and communities. However, adverse effects become evident when individuals drink excessively over long periods or engage in heavy episodic drinking. The results from this study confirm previous findings in the literature which report that alcohol can have both positive and negative effects[2, 17]. The harmful use of alcohol affects not only the drinker but also has negative effects on other people around the drinker: their family or household and the wider community.

Health Effects of Alcohol Consumption

We found that some of the Indigenous groups of Sabah use alcohol for cooking food and improving some health conditions. These Indigenous groups believe that alcohol can be used to treat some illness (such as to treat high blood pressure) and is beneficial for women after birth delivery (to heat their body). These findings support the results from a previous study that the benefits of moderate alcohol consumption[1] provide some health benefits to the body such as lowering risks for total mortality, coronary artery disease, diabetes mellitus, congestive heart failure, and stroke[17]. Moderate alcohol consumption may also give protection against heart attack, coronary vascular disease, ischaemic stroke and death from cardiovascular causes[18].

However, the harmful use of alcohol contributes to health consequences such as arrhythmias, heart failure, elevates blood pressure, stroke, diabetes and increased risk of breast cancer for women[17]. According to WHO[1], the harmful use of alcohol contributed to the estimated 3 million alcohol-attributable deaths globally in 2016. These deaths are reported to occur due to digestive diseases, unintentional injuries, cardiovascular diseases and diabetes with the highest percentage of digestive diseases (21.3%) and unintentional injuries (20.9%), followed by cardiovascular diseases and diabetes (19.0%), infectious diseases (12.9%), malignant neoplasms (12.6%), intentional injuries (7.8%), alcohol use disorder (4.9%) and epilepsy (0.6%). In addition, the 2018 Global status report on alcohol and health includes the contribution of some infectious diseases to all alcohol-attributable deaths. Alcohol has also been shown to increase the risk of unplanned and unprotected sex[17] and mortality risk from HIV/AIDS.

Behavioural Effects of Alcohol Consumption

The present study found that drinking small amounts of alcohol provides benefits in terms of positive behavioural effects for individuals (e.g. to have the courage to talk about emotions and feelings, to reach the high notes when singing, or to excel at playing darts). These findings are supported by the results of a previous study that found moderate alcohol consumption can help in making new friends[10, 19], and can improve other social activities through increasing the ability to laugh, to sing and to dance[20]. It was also found that heavy alcohol consumption contributes to many behavioural problems such as fighting, family and domestic violence, family conflict, neglect of children, addiction, etc. As found in other studies, increased behavioural problems include intentional injuries such as self-harm, suicide and interpersonal violence as well as unintentional injuries such as road traffic injuries, drowning, burns, poisoning, falls[21], as well as unintentional self-harm and interpersonal violence attributable to alcohol consumption[22].

The alcohol harm occurs not only to the drinker but also to the people around them, including her or his close family, relatives and friends, as well as to other road users[1]. Previous studies state that regular heavy alcohol consumption and heavy episodic drinking are associated with increased physical problems, antisocial behaviour, violence, accidents, suicide, injuries and road traffic crashes[23].

Social Effects of Alcohol Consumption

This study found that alcohol consumption in these Indigenous groups is influenced by social factors (e.g. forming new friendships network, having time to relax, tightened relationships with friends, etc.). It can be described by the Actor-Network Theory (ANT), where people are willing to connect with others and to interact with their environment[24]. According to ANT, we cannot ignore the web of connections

between all things, both human and non-human. In this study, it suggests that in a given social network, the actors, or the Indigenous people of Sabah are influenced not only by each other but by other non-person factors like alcohol. A study found that some of the Indigenous groups of Sabah use alcohol to improve social connectedness, in social events, and in helping them be more outgoing in social situations[10].

People need to have a connection to and interact with their environment, where they can feel a sense of belonging or being appreciated by the community. It is stated in Maslow's Hierarchy of Needs[25] that in the third stage of human needs, love and belonging are key factors for successful progression in life. According to Maslow's Hierarchy of Needs, people need a sense of belonging, receiving and giving love, as well as appreciation and friendship. As found in this study, having alcohol with others is an opportunity for the participants to socialise with friends, to make new friends and also to tighten the relationship with friends and community. A study found that peer pressure and social influence can have a powerful role in individuals choosing to drink, particularly in situations where alcohol is used or it is a part of socialising with friends[9]. Participants of the study also recognised that some of them were drinking too much alcohol which eventually caused negative effects, not only to themselves but also to their environment, their families and the community as a whole. These findings are similar to those found in the previous studies[40] that report alcohol-related harm occurs not only to the drinker.

Economic Effects of Alcohol Consumption

Alcohol was also reported by participants as providing benefits in terms of business and as a tourist attraction. The local alcoholic drinks in Sabah (e.g. *bahar*, *lihing*, *kinupi*, *tapai*, *montoku* and *sikat*) have become a tourist attraction and can generate income for those who are skilled at producing such drinks. Nevertheless, it also reported being the cause of financial problems for some people, either through the cost of purchasing commercial alcohol or the cost of treating illnesses caused by excessive alcohol consumption. Although Malaysia is a Muslim majority country, the country's population still consumes a high level of alcohol and permits the selling of alcohol to people who are not Muslim[26]. Malaysia was reported as the tenth highest alcohol consumption of alcohol per capita worldwide by the World Health Organization, with annual spending estimated RM2 billion on alcohol beverages[1].

Price is known to be one factor that can impact alcohol consumption and alcohol-related harm[27]. In general, lower socioeconomic groups experience higher levels of alcohol-related harm than wealthier groups with the same level of alcohol consumption[1]. Socioeconomic status is one of the various factors that influence a person's consumption of alcohol and outcomes. To reduce harmful alcohol consumption and alcohol-related harm, governments and other stakeholders recommend taking collective action (e.g. to collaborate with the Secretariat in developing a draft global strategy on harmful use of alcohol, to develop interaction with relevant stakeholders, national systems for monitoring alcohol consumption, to consider strengthening national responses, to prepare a draft global strategy to reduce the harmful use of alcohol, etc.) to support and empower communities[28].

Psychological Effects of Alcohol Consumption

Alcohol consumption and depression are correlated to some degree while recognizing that this association is extremely complex[29]. Although no participant reported drinking being directly related to depressed mood, some participants reported they consume alcohol to provide relief from feeling stressed and tired, to feel happy, to express feelings, or

to feel satisfaction. These findings are in line with other literature that reports many people experiencing anxiety or depression intentionally consume alcohol to reduce their stress and improve mood[30]. A study found some of the Indigenous groups of Sabah consume alcohol to improve their quality of life[10]. It also reported that alcohol was found as a key ingredient in their happiness, whereas, without alcohol, they believed their life to be uninteresting[10].

CONCLUSION

The present study concludes that alcohol has both positive and negative effects on the Indigenous groups of Sabah represented in this research. Drinking alcohol, for these groups is a way to maintain their culture and tradition. The culture allows alcohol consumption but does not encourage abuse of alcohol. Alcohol abuse can destroy the benefits and happiness they gain from drinking. This study also concludes that those who drink at home will not usually face the same social problems (such as fighting, road accidents, wasting time and money, and peer pressure) as those drinking outside the home in venues serving alcohol. Recommendations coming from this study include providing guidance and education on low-risk drinking be conducted in consultation with the communities. Alcohol education can be provided through the implementation of awareness programmes (e.g. campaigns, interventions, healthy lifestyles, etc.) at the community level, and involving the community in the development of these programs, to empower these communities to reduce alcohol-related harm and potentially improve their quality of life.

CONFLICT OF INTEREST

The authors declare that they have no competing interests in publishing this article.

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