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Intention to drink alcohol among rural natives of Sarawak: An application of the Theory of Planned Behavior

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Abstract

The use of alcoholic beverages is increasing worldwide, and it is the reason for the increase in mortality as well as health consequences. The rare explorations on alcohol consumption (AC) among Sarawak Natives indicated that risky drinking among the target ethnicities is higher compared to that of other ethnic groups. This study aims to identify the predictors of alcohol consumption (AC) among Sarawak Natives. The theory of planned behavior (TPB) was applied in this study to predict the intention to drink among the rural adult community in Malaysia. A cross-sectional study was conducted among rural natives of Sarawak. The sample of this study consists of 293 rural adult communities who completed an adapted and reliable survey questionnaire assessing the constructs of TPB. Study factors such as attitudes (ATT), subjective norms (SNs), and perceived behavioral control (PBC) were proximal in predicting the intention to drink alcohol. Using the path analysis, the strongest proximal predictor of intention was ATT. The results of this study revealed that study factors namely ATT, SNs, and PBC have a direct and significant effect on the intention to drink among Malaysian rural adults. Therefore, policymakers have to launch an awareness campaign to increase the knowledge about the risk of drinking alcoholic beverages and enlighten people about the danger and health problems they might face if they continue to drink alcohol.

Keywords: Alcohol consumption, attitudes, intention, social factors, subjective norms, theory of planned behavior.

Introduction

In accordance with the World Health Organization's (WHO) 2018 Global Status Report on Alcohol and Health, alcohol is responsible for more than 3 million fatalities annually and more than 5% of all diseases and injuries that occur worldwide (WHO, 2018). The pattern of consumption must be taken into account in addition to the prevalence of drinking if the burden of illness brought on by alcohol use is to be adequately addressed. For instance, heavy drinkers are those who consume five or more standard drinks in one sitting, which carries with it particularly significant health hazards (Shield et al., 2017). Alcohol Consumption (AC) poses a significant risk for death and injuries, as well as for a number of non-communicable diseases like cardiovascular disease, diabetes, and cancer, and as well as for communicable diseases like tuberculosis (Rehm

et al., 2017). Successful AC prevention and control could be an effective way of not only improving population health but also conserving the environment and promoting socioeconomic development.

Therefore, WHO has taken significant global initiatives to reduce AC. The invention, gathering, and sharing of scientific data on AC, dependence, and related health and social effects are given top priority by the WHO. Additionally, it emphasizes the creation, use, and evaluation of affordable interventions for risky AC. In 2010, WHO Member States supported a worldwide strategy to decrease hazardous AC and the accompanying health and social consequences, reflecting a universal consensus that doing so is a public health priority (WHO, 2010). For governments to work together, for there to be effective global governance, and for all relevant stakeholders to be appropriately included in efforts to reduce harmful alcohol use in line with the SDG 2030 agenda's goals and the WHO Global Monitoring Framework for Non-communicable Diseases, cooperation, and global governance are essential. Successful cooperation may mitigate alcohol's negative impacts on health and society (WHO, 2010). Moreover, AC is known to be a key contributor to socioeconomic inequalities in health and mortality, with mortality risks increasing as socioeconomic position drops (Probst et al., 2021). Previous research (Schmidt, 2009) indicates that lower socioeconomic groups consume less alcohol overall and are more likely to abstain, yet they suffer greater alcohol-related harm than wealthier groups with the same level of use. Variations in AC patterns, particularly binge drinking, can have a greater impact on alcohol-related harm than average AC. Drinkers in lower socioeconomic classes, for example, are more likely to binge drink. However, inequities in alcohol-related harm must be investigated on a nationwide scale. Harmful drinking, for example, is more widespread in lower socioeconomic categories in several nations in Central and Eastern Europe and in newly independent states (Walters & Suhrcke, 2005).

Based on World Health Organization (WHO) statistics, Malaysia is among the 10th highest AC in the world. Its population is 28 million people, indicating alarming health risks. East Malaysia, with more than 80 ethnic groups besides the Malay community and some other non-Muslim ethnicities, still practices risky drinking patterns (Lasimbang et al., 2015; Mutalip et al., 2013, 2014; Shoesmith et al., 2016). According to Amit et al. (2013), AC by the Natives of Sarawak is increasing with age especially among the Christians compared to other races.

However, it was determined that relatively few research have looked into how alcohol intake is linked to poor health in Malaysia, particularly among Sarawak Natives. The purpose of this study was to use the TPB to detect the intention to drink alcohol among rural Natives in East Malaysia.

Literature review

Several factors influence AC, such as socioeconomic and behavioural. One of the theories that have been used in disciplines other than the medical sociology of food product consumption is the TPB by Ajzen (1980). TPB is one of the most influential and well-supported theories of social psychology for predicting human behaviour. In this study, the theory will be used as a guide to explain the sociocultural relationship to AC in the Iban community. ATT, norms, and behaviours in TPB theory are used as variables to explain their relationship to alcohol intake (Ajzen, 1980). The theory on the next page shows a diagram of the original theory introduced by Ajzen (1991) that is the TPB is a theory that describes human behaviour. This theory is an advanced model that

has been improved because there are weaknesses in the previous model known as the Theory of Reasoned Action, developed by Fishbein and Ajzen (1975). This TPB model further expands the TRA with improvements such as including another component which is the perception of behaviour control to strengthen the TPB model in predicting human behaviour. This theory consists of three main components in predicting human behaviour, namely: ATT, SNs, and perceptions of behaviour control which are factors to the intention to perform such a behaviour (Ajzen, 1991). Based on reason action theory, this theory highlights the main focus on the level of desire that leads to the occurrence of such behaviour (Ajzen, 1991). This situation can explain that the desire or intention is based on motivational factors that influence behaviour (Ajzen, 1991). Based on this theory, human behaviour is guided by three types of considerations, namely behavioural beliefs, normative beliefs, and control beliefs. Behavioural beliefs are associated with an individual's ATT, either positively or negatively, toward a particular behaviour. Next are "normative beliefs," which refer to social pressures, and the last is that control beliefs are factors that influence behaviour (Ajzen, 2006). Thus, this theory suggests that intention is the most crucial determinant by which intention drives an individual to perform a specific behaviour.

Thus, intention also refers to his motivation to continue the behaviour. One of the constructs of this theory is that the perception of behavioural control has similarities with the theory introduced by Albert Bandura, which is the "self-efficacy" (DiBello et al., 2020). Ajzen's (1991) model is very influential and well-supported in predicting human behaviour as this model is widely used in various disciplines such as psychological theory. Studies also show that the combination of ATT, SNs, and behavioural control perceptions has a 28–40% variance in AC intentions, while behavioural control perception constructs provide an explanation related to AC by 12–50% (Phuphaibul et al., 2011).

As noted by previous studies, planned behaviour theory is a model capable of predicting addiction-related behaviours, interventions, and even evaluation (Hagger et al., 2012; Haydon et al., 2016). The meta-analysis findings of previous studies also indicate that this theoretical construct is a strong predictor by predicting studies related to intoxication, excessive alcohol intake, and quantity of alcoholic beverage consumption (Cooke et al., 2016; DiBello et al., 2020). Ajzen's (1991) theory assumes that an individual chooses the behaviour. Thus, in order to make this choice, an individual's ATT, SNs, and perceptions of behavioural control (PBC) influence his or her intention to perform the behaviour (Wolfe & Higgins, 2008).

Attitude and AC intention

Four major topics may be found in the AC literature. The first topic addressed societal aspects of the AC. For instance, the research by Murphy et al. (2012) found a connection between Russian social characteristics and AC. The results indicated that men and smokers had higher AC rates. In Malaysia, Ajan and Hanafiah Juni (2016) discovered that societal influences are to blame for a number of habits, including smoking and AC. Robinson et al. (2016) in the UK noted that greater AC will result from more social ingratiation. Agahi et al. (2019)'s research, which discovered that social engagement raises AC, led to conclusions that were similar to those made in Sweden. According to McCartney et al. (2016), the rate of deaths from AC has changed as a result of changes in financial, social, and demographic variables. In a research conducted in Slovenia by Mehanovi et al. (2020), social characteristics were also shown to be AC predictors. The results show that parental AC, low monitoring, peer, beliefs, and denial skills are crucial AC predictors.

DiBello et al. (2020) found that excessive AC leads to blackouts, which is related to ATT. In line with other findings, there was a significant relationship between ATT and intention to drink alcohol among female Aussie adults Haydon et al. (2018). Furthermore, previous findings found that the intention to consume alcohol is influenced by ATT. A study conducted in Thailand found a significant effect between ATT and intention to drink (Phuphaibul et al., 2011). Kim et al. (2019) found that a positive ATT toward AC is related to the person's perception that alcoholic beverages have no harmful impact. Therefore, a study showed that a positive evaluation on AC predicts the individual's intention to continue drinking in the future (Zimmermann & Sieverding, 2010).

Hypothesis 1 (H1): ATT has a direct and negative effect on the intention to drink.

Subjective norms and AC intention

The second theme is the idea that SES and AC are more closely associated. In the UK, Sadler et al. (2017) discovered, for instance, that the SES gradient is a key factor in the AC. The results of the research by Stafström and Agardh (2013) in Uganda demonstrated that the head of house's education, as well as gender, religion, and family ties and relationships, had a significant impact on AC. In the US, Collins (2016) discovered that those with higher SES often drink more. Similar conclusions were reached by Juliana Gabrielle et al. (2016) in Brazil, who discovered that men and people with SES are more likely to drink and by Stapinski et al. (2016) in the UK, who discovered that people with higher incomes are more likely to drink to boost their self-confidence. Low-income people often drink to lift their spirits, and drinking habits are strongly influenced by socioeconomic SES and demographic factors. On the other side, worldwide research by Huckle et al. (2018) found that higher alcohol use is correlated with lower SES. Similar results from research conducted in the UK by Beard et al. (2019) show that people in lower social categories tend to drink more than those in higher ones.

Haydon et al. (2018) show a significant relationship between SNs and the intention to drink. Based on the findings of Alina et al. (2019), SNs refers to a social factor, also known as social pressure, which influences the person's action on whether or not to drink. Smith (2011) mentioned that SNs are related to the environment and relevant surroundings that may affect behaviour. A study conducted in the UK showed a significant effect on the intention to drink and SNs (Norman et al., 2007). Similar findings by Johnston and White (2003) found that SNs are a significant predictor on the intention to drink alcohol.

Hypothesis 2 (H2): SNs have direct and negative effects on the intention to drink.

Perceived behavior control and AC intention

The third issue concerns the impact of social networking on consumer behaviour. The results of Geusens et al. (2017)'s research in Belgium revealed that exposure but not self-sharing had an effect on AC. Personality had no influence on the effect. Quiroga et al. (2018) discovered that females in Spain had high AC owing to social networks. The lesser intensity of friendship and peer interactions, as well as the class structure, is a key predictor of AC.

Previous studies found a significant relationship between PBC and intention to drink (Phuphaibul et al., 2011; Huchting et al., 2008). According to Murgaff et al. (2007), the capability of an individual to have complete control on the intention to drink is relatively difficult. Therefore, the intention to drink among American Latin is based on their perception that AC is not a high-

risk behaviour, even though there is a high risk they could control it, and the decision to quit drinking was a difficult thing to do (Perez et al., 2019). Previous research, however, revealed no significant association between PBC and drinking intention (Dempster et al., 2005). The fourth topic is concerned with social anxiety and tension. Clay and Parker (2018) discovered that the group experiencing stress had a greater inclination to consume alcohol. In the United States, Goodman et al. (2018) discovered that high AC influences the link between social anxiety and the quality of ordinary social contact. Based on the above, it is hypothesized:

Hypothesis 2 (H3): Perceived Behavioural Control (PBC) has a direct and negative influence on drinking intention.

Method and study area

Study area, population & sampling

The district of Lawas, located in the Limbang division, was the research location of this study. This research site is in the state of Sarawak in East Malaysia. Based on Sekaran and Bougie (2019), the sample size of this study is 293. This quantitative study conducts a cross-sectional survey among 293 rural adults aged 18 years and above. Respondents were randomly selected from a sampling list using a random sampling technique generated based on selected three zones. Consent forms were distributed to all respondents before data collection. They were briefed on the purposes of this research comprised of the aims, methods, and benefits of the study, and they were also assured that their information was used only for academic purposes.

Instrument design, reliability and validity

A pilot test of 33 respondents was conducted prior to actual data collection to ensure the validity of the instrument. Adapted questions were taken from various sources. The items of ATT were taken from Ajzen (2002), Ajzen and Sheikh (2013), and Norman and Corner (2006). The items for SNs were taken from Ajzen (2002) and Ajzen and Sheikh (2013). Similarly, the items of PBC were taken from Ajzen (2002). Examples of the question for the ATT, which consists of 7 items, are as follows; drink alcohol is unhealthy, drink alcohol is harmful, drink alcohol is foolish, drink alcohol is bad, drink alcohol is not fun, drink alcohol is unpleasurable, and drink alcohol is irritating. The Cronbach's alpha for ATT, SNS, and PBC were 0.944, 0.933, and 0.840 indicating a reliable measurement. The data was analyzed using Smart PLS version 3.2.8. Through which the measurement and structural models were evaluated.

Results and discussion

The data was collected from 293 respondents. The study was dominated by male respondents (60.8%) while females accounted for 39.2%. The majority of respondents are married (69.3%), with an educational level of secondary school (46.8%). The largest percentage of employees are self-employed (46.4%) and with income (49.1%) less than 1000 MYR (USD 250).

Most of the respondents are aged 26 to 36 years followed by 37 to 46 years. More than half of those who participated in this study were Iban male respondents. Similarly, the majority of the

Iban community in this study are Christians while a small number of respondents are Muslims. Based on marital status, more than half of the respondents who participated in this study are married and a small number are widowed/divorced. Accordingly, the level of the educational background of the Iban respondents is high school and primary school, but there are a small number of respondents who have a satisfactory level of education, namely a diploma and bachelor's degree, and a number of the respondents work as public servants.

The recorded occupations by the Iban respondents to support their families are self-employment, such as farming, owning a medium-sized oil palm plantation which is sufficient for the needs of the family, working as manual labour, taking wages weaving traditional Iban mats and handicrafts, fishing, cutting wood, and cutting grass. A small number of Iban respondents are students. As for household income, it can be seen that the average Iban respondent in this study has an income of less than 1000 MYR (USD 235) per month. However, only a small number of respondents have a high income of 4000 MYR (USD 943) and above.

Measurement model

This study used SmartPLS as statistical analysis software to run Partial Least Squares SEM and evaluate the measurement quality and structural model. The measurement model in SmartPLS is conducted by checking the factor loading of all items on their latent variables, followed by the Average Variance Extracted (AVE), Construct reliability, Cronbach's Alpha, convergent validity, and discriminant validity. The hypotheses were tested using a structural model. The assessment of the measurement model is discussed in this section. It includes convergent validity, factor loading, reliabilities, and discriminant validity.

Convergent validity

Convergent validity of assessments for measuring the correlation of several indicators in the same construct. For the convergent validity test, some of the following criteria are emphasized such as loading factor for the indicator, composite reliability (CR), and mean of extracted variance (AVE). Accepted values range from 0 - 1. In addition, AVE values must be greater than 0.50 for different convergent validity values (Ab Hamid et al., 2017; Awang et al., 2021; Hair et al., 2014). Accordingly, a composite reliability value greater than 0.70, a value of 0.60, is accepted (Awang et al., 2021). Table 1 shows the results of the convergent validity, factor loading, and reliabilities. It can be seen that the factor loading for all items is greater than 0.70 further, Cronbach's Alpha is greater than 0.70 as well as the composite reliability which indicates that the measurement of the variables is reliable. The AVE is above 0.50 indicating that the items of the measurement can measure more than 50% of the variance in the variables.

Discriminant validity

Hair et al. (2018) suggested that the square root of AVE should be greater than the cross-loading to assess the discriminant validity. The square root of AVE is given in bold in Table 2 shows the results of the discriminant validity. The highest value of cross-loading is 0.637 while the lowest value of the square root of AVE is 0.784 which is larger than its row and column and larger than the cross-loading which indicated that the discriminant validity of the variables is fulfilled.

Table 1. Convergent validity of constructs

Latent constructs	Item	Factor loading >0.70	Cronbach alpha >0.70	Composite reliability >0.70	Average variance extracted >0.50
ATT	ATT2	0.741	0.874	0.905	0.614
	ATT3	0.722			
	ATT4	0.781			
	ATT5	0.809			
	ATT6	0.811			
	ATT7	0.832			
SNs	SN1	0.909	0.949	0.961	0.831
	SN2	0.920			
	SN3	0.928			
	SN4	0.904			
	SN6	0.898			
PBC	PBC1	0.806	0.913	0.929	0.654
	PBC2	0.874			
	PBC3	0.713			
	PBC4	0.867			
	PBC5	0.850			
	PBC6	0.787			
	PBC7	0.751			
Intention	Int1	0.836	0.829	0.887	0.664
	Int2	0.783			
	Int3	0.719			
	Int5	0.910			

Source: PLS-SEM analysis

Table 2. Discriminant validity of constructs

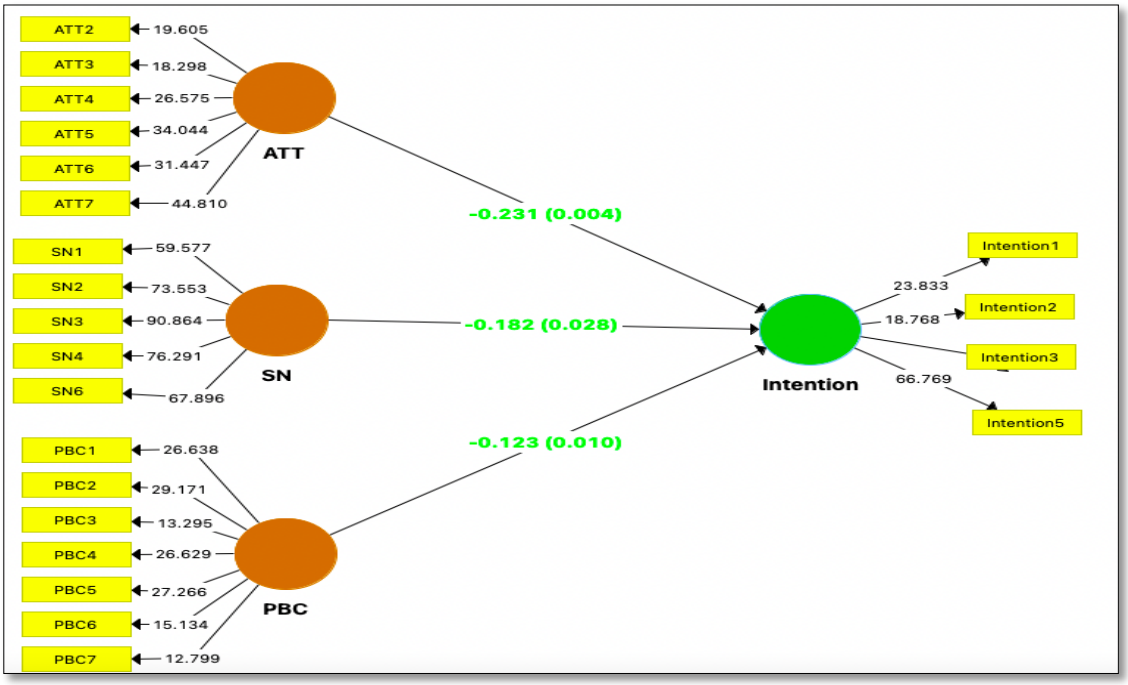
	ATT	INTENTION	PBC	SNs
ATT	0.784			
INTENTION	-0.391	0.815		
PBC	0.352	-0.266	0.809	
SNs	0.637	-0.371	0.337	0.912

Source: PLS-SEM analysis

Structural model

Testing of the model and hypothesis of this study was carried out using a structural equation model (SEM) using Smart PLS software. This measurement involves inner and outer models that aim to evaluate the relationship between the tested constructs by using PLS-SEM to build a path model that connects variables or constructs based on a theory (Hair et al., 2014). The structural model of this study is given in Figure 1. It shows that the effect of the three independent variables on the intention is negative and significant. Values in green represent the path coefficient. As can be seen

in the bracket, the P-value of the effect. All the p-values are less than 0.05 supporting the hypotheses of this study.



Source: PLS-SEM analysis

Figure 1. Predictors of AC

The first hypothesis of the present study assumed that the effect of ATT on the intention to drink is negative and significant. H1: ATT has a direct and negative effect on the intention to drink. Similarly, the two other hypotheses were predicted to be negative and significant. The table shows the result of the hypotheses testing for this study. For the first main hypothesis, the effect of ATT on the intention to drink is negative and significant (ß=-0.231, T=2.745, P=0.004). Thus, H1 is accepted. The second hypothesis of this study is predicted the effect of SNs on the intention to drink is negative and significant. Table 3 shows that the hypothesis is supported (ß=-0.182, T=2.143, P=0.028). Thus, H2 is accepted. For the third hypothesis, it was predicted that PBC has a negative and significant effect on the intention to drink. Table 3 shows that the hypothesis is negative and significant (ß=-0.123, T=2.099, P=0.010). Thus, H3 is accepted.

Table 3. Hypotheses of the direct effect of intention to drink

Hypotheses	LATENT RELATIONSHIP	Original sample (ß)	STDEV	T-Values (T)	P-Values (P)
H1	ATT -> Intention	-0.231	0.084	2.745	0.004
H2	SNs -> Intention	-0.182	0.083	2.143	0.028
H3	PBC -> Intention	-0.123	0.048	2.099	0.010

Source: PLS-SEM analysis

Discussion

The purpose of this study was to examine the predictors of AC among natives in Sarawak. The findings showed that ATT, SNs, and PBC are critical predictors of AC. The highest influential variable is attitude. Decision makers have to launch a campaign to change the attitude of people regarding AC. The findings of this study are in line with previous findings where researchers identified the influence of ATT on AC intentions and found that there was a negative and significant relationship between the constructs tested. For example, the findings of a study by (Norman & Conner, 2006) showed that ATT has a negative and significant influence in predicting the intention to consume alcohol.

Studies found that there is a direct influence relationship between ATT toward the intention to consume alcohol (Norman et al., 2012). According to Norman and Conner (2006), ATT is a strong predictor of the intention to consume alcohol. Discover the direct influence between ATT and alcohol intake. Similar findings were obtained from studies by (Hagger et al., 2012; Haydon et al., 2016; Norman et al., 2007, 2012). Findings of previous studies indicate that SNs or also known as social stress, have a direct and significant influence on AC intentions (Hagger et al., 2012). Similar findings where SNs are predictors of intention to consume alcohol (Elliott & Ainsworth, 2012; Haydon et al., 2016). Previous studies have shown that SNs have a significant relationship to alcohol-consuming intention (Norman et al., 2007). SNs are a fundamental concept in AC among the Iban community because this AC arises from cultures and traditions that encourage the use of alcohol in social activities (Kim et al., 2019).

This study is consistent with the findings obtained by Norman and Conner (2006), showing that the influence of PBC on AC intention is negative and significant. A previous study by (Norman et al., 2007) found that perceptions of behavioural control had a negative and significant relationship as a predictor factor. In line with the findings by Rhodes and Clinkinbeard (2013), PBC has a significant relationship to AC intention. In addition, the perception of behavioural control is a direct predictor of AC intent (Haydon et al., 2016; Norman et al., 2007).

Conclusion

The findings of this study can be of benefit to decision-makers who are concerned about the well-being of the community. The total explained variances in the intention to drink alcohol reached 60%. The findings of this study proposed that the component of TPB are crucial and valid elements to be considered when conducting health and social-related education program or campaign as well as health intervention targeting the right community in order to increase their awareness of the harmful use of alcohol to reduce alcohol-related consequences in the future.

The risk of AC varies based on geographical areas, including urban and rural areas. In the context of the rural regions and indigenous communities, especially those residing in Sarawak, Malaysia, AC patterns are shaped by their social norms, ATT, beliefs, and heritage. The indigenous community in Sarawak, Malaysia, is majority non-Muslim and is vital in their beliefs and heritage that they carry through generations. Therefore, AC, particularly in Malaysia, is divided into two perceptions by the community as large, which are east and west Malaysia. East Malaysia is predominantly non-Muslim and accepts AC; however, west Malaysia, with the majority of Muslim belief, rejects the idea of AC in which they abide by Islamic law. This belief in the context of AC is that this behaviour is accepted in the community as the traditional alcoholic/homemade rice wine

beverages are often used during festivals, weddings, and celebrations in the indigenous community in Sarawak, East Malaysia.

When it comes to policy and regulations from the government, certain aspects of indigenous beliefs, norms, and traditions should be taken into consideration. To reduce the harmful use of alcohol and excessive drinking in the indigenous community of Sarawak, Malaysia needs a holistic measure. The Indigenous community is reluctant as if the measure taken is seen as against their will and disturbs their freedom of practicing their ancestor's tradition. Therefore, the necessary measure could be involvement by the government, public health, non-governmental, organizational, church, community level, school campaign, and village level. For example, the indigenous community has majority Christian beliefs; however, their involvement in AC is derived from their tradition first and religious belief second, and vice versa. Types of alcoholic beverages are important especially homemade rice wine that is sold excessively without being monitored and has a great harmful effect as the commercial alcoholic. Therefore, policymakers from all levels, including the community level, must come and work together to reduce the harmful effect in the future.

This study was conducted to assess rural people's intention to drink alcohol in Malaysia. The study found that ATT, SNs, and PBC have a negative effect on the intention to drink alcohol. The findings were derived from 293 respondents. Thus, it is limited to their perceptions. The study deployed the TPB theory and examined the predictors of intention. Future studies are recommended to extend the findings of this study by collecting more responses and examining the predictors using theories such as the health belief model and including other variables such as demographics.

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