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A QUALITATIVE STUDY OF ALCOHOL RISK PERCEPTIONS AMONG DRINKERS IN BENUE STATE, NIGERIA

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ABSTRACT

There is evidence in the scientific literature linking alcohol-related deaths and morbidities with excessive alcohol consumption, yet individuals are often undeterred by their experiences of negative alcohol-related outcomes. In seeking to understand this behavior, this exploratory qualitative study was undertaken among Benue State civil servants in Makurdi, Nigeria to explore their reasons for drinking, perception of alcohol risk and, how these shape their alcohol consumption behaviors. Utilizing a purposive and network/snowball sampling technique, twenty-nine self administered open ended questionnaires were administered and analyzed. Findings indicated that drinking was primarily undertaken for enhancement and coping motives. Also, drinkers had knowledge of, and had experienced some alcohol-related dangers such as fights, rape, injury, and driving under the influence of alcohol. However, their drinking motives were valued over and above these experiences of negative alcohol effects, thereby minimizing the perception of personal susceptibility to alcohol-related risk. Problem drinking status, the availability of alternative substitutes to drinking and, drinking motives together determine alcohol risk perceptions and drinking behavior. Therefore, in order to fully understand drinking behavior, the influences of drinking motives, personal experiences, drinking status, availability of alcohol substitutes and, risk perceptions should be considered.

Key words: Alcohol risk perceptions, drinking motives, and hazardous drinking

INTRODUCTION

Alcohol use is a major global public health concern. In 2004, the World Health Organization (WHO) estimated that a third of about 2 billion people that consume alcohol globally are likely to suffer alcohol-related disorder. Alcohol

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accounts for 2.3 million premature deaths and 4.5% of the burden of diseases respectively worldwide (WHO, 2009). These figures may be underestimates of the actual problem because in developing countries, some of the effects of alcohol are unrecorded (Dumbili, 2012). In Nigeria alcohol is the most commonly used psychoactive substance with a lifetime use of 58% (Gureje, Degenhardt, Olley, Uwakwe et al, 2007). Among male undergraduates its prevalence is 78.4% , with 27% of them being heavy drinkers consuming about 4 or more drinks per day (Chikere & Mayowa, 2011) and 12% among even secondary school students (Oguntola, 2012).

Nigeria has been identified as one of the countries with very high levels of alcohol consumption. The total adult per capita consumption (APC) of pure alcohol in Nigeria is estimated at 23.10 litres, which is one of the highest in the world (The World Health Organization – WHO, 2014). The pattern of drinking among users in Nigeria is also increasingly characterized by heavy episodic drinking, rather than moderate drinking (Dumbili, 2012). Estimates for 2010 indicated that the level of heavy episodic drinking (15-85+ years) was 25.6% and 17.7% for males and females respectively (WHO, 2014). The 2014 WHO Report scores Nigeria 3 on the pattern of drinking with scores ranging from 1 (least risky) to 5 (most risky). It is therefore not surprising that in sub-Saharan Africa, Nigeria is one of the most affected by alcohol-related deaths and morbidities (Dumbili, 2012).

It is generally believed that daily consumption of small amounts of alcohol is beneficial for health, especially in preventing heart attacks. Moderate consumption of alcohol is protective with certain diseases (Rehm, Baliunas, Borges, Graham et al, 2010) and, the mechanism through which this pattern of drinking has salutary health effects includes: an increase in “high density lipoprotein cholesterol, reduction in plasma viscosity and fibrinogen concentration, increase in fibrinolysis, decrease in platelet aggregation, improvement in endothelial function, reduction in inflammation and, promotion of antioxidant effects” (Kloner & Rezkalla, 2007, p. 1306). But there is a problem with daily consumption of small quantities of alcohol, because most often it increases to damaging levels that may result in alcohol dependence (Desai, Nawamongkolwattana, Ranaweera, Shrestha, & Sobhan, 2003). This is why alcohol has been identified as one of the most important risk factors in the burden of disease (Rehm, Klotsche & Patra, 2007). Studies have indicated that the relationship between alcohol consumption and total mortality can best be represented by J-shaped or U-shaped curves (Kloner & Rezkalla, 2007), suggesting that there are levels above which the health benefits of alcohol consumption are completely lost, resulting instead in increasing morbidity and mortality.

The World Health Organization (WHO) (2011) identified two dimensions of alcohol consumption associated with disease and injuries – the pattern of drinking and, the volume of alcohol consumed, which are mediated through three intermediate mechanisms: toxic and beneficial biochemical effects; intoxication and; dependence (Rehm et al, 2010). Recent studies have found that both volume of consumption and patterns of drinking are related to burden of disease and non-medical consequences of drinking (Kraus, Baumeister, Pabst & Orth, 2009). The comparative risk analysis (CRA) defines a

risky pattern of drinking as: i) consuming alcohol in higher quantities per occasion; ii) usually consuming alcohol to intoxication; iii) drinking in festive occasions and in public places and; iv) less frequent daily drinking and drinking with meals (Astudillo, Kuntsche, Graham & Gmel, 2010). The concept has been described and operationalized as the consumption of ≥60g of pure alcohol or, ≥5 drinks on a single occasion (Rehm et al, 2010) for men or, the consumption of 48g of pure alcohol or, ≥4 drinks for women (Dawson, 2011). It is also referred to as risky single-occasion drinking (RSOD), binge drinking (Astudillo et al, 2010), heavy episodic drinking (HED), or drinking in the event (Dawson, 2011). Some of the acute and observable maladaptive physiological, behavioral or psychological symptoms associated with risky pattern of drinking may include: blackouts, episodes of depression (Desai et al, 2003); ischaemic and haemorrhagic stroke (Rehm et al, 2010); domestic and community level violence, financial strain on the family by diverting funds away from essentials domestic needs, strained family relations, sexual violence – rape (Kafuko & Bukuluki, 2008); accidents (Dumbili, 2012); risky sexual behavior and unprotected casual sex (Oguntola, 2012).

Individuals that chronically use any substance, such as alcohol are often tolerant, as such they may behaviorally adapt and are able to function at work, home or in social situations even when under its effects (Falvo, 2005) and may not display any of the acute effects of alcohol use associated with risky pattern of drinking. Tolerant individuals often pride themselves in what may be termed the 'I can handle my alcohol' syndrome, believing that because they are able to fulfill their major role obligations, they are free of any harm attributable to their drinking. However, that they do not display any of the immediate observable physiological or behavioral symptoms of alcohol use, does not exculpate them from alcohol-related harm. The unobservable yet insidious effects of alcohol use may manifest in chronic diseases experience years after daily or frequent continuous consumption of alcohol. There is ample evidence in the scientific literature linking alcohol-related harm with average volume of alcohol consumption. Some of the chronic disease outcomes that have been causally linked with average volume of alcohol consumption (AVC) include; hypertension, adult diabetes mellitus, tuberculosis, some cancers, ischaemic and haemorrhagic stroke, cirrhosis of the liver, etc. (Rehm et al, 2010). Although there is no agreement on the exact volume of alcohol associated with chronic disease outcomes, increased risk for both mortality and chronic diseases occurs with an average daily volume (ADV) between 35g and 45g or, 245g to 315g per week (Dawson, 2011).

The decision to use alcohol is mediated by the individual's expectancies about alcohol's desirable consequences (Negreiros, 2006) and, it involves an assessment of the balance between the risk and costs of taking it against the personal enjoyment derived from it (Clark, 2010). This implies that risk is not "always harmful and associated with fear and fright, (but) for some risk and for some people it is linked to pleasure and excitement" (Calman, 2001, p. 50). Risk involves decision making and, a risky behavior may be undertaken either because of the element of risk involved or, despite the risk (Mun, 2004). Learning theory suggests alcohol users' expectations of the positive reinforcement derived from the behavior

(Mezquita, Stewart, Ibanez, Ruiperez, Villa, Moya & Ortet, 2011) and may perpetuate future alcohol-related expectancies and future drinking in a feed-forward process (Lee, Maggs, Neighbours, & Patrick, 2011), despite the risk. In the conceptualization of risk, Calman (2001) utilizes the relatedness of the concepts of hazard and risk, defining a hazard as "a set of circumstances that may have harmful consequences" and, risk as "the probability of the hazard causing such effect" (p.48). The probability of either the drinking pattern, or volume of alcohol consumed, or both causing injuries and disease, represents the risk of alcohol consumption, while alcohol risk perception is the degree to which a person believes he or she is susceptible to alcohol-related harm.

Risk perception is influenced by its severity, the consequences arising from its occurrence "as well as the individual's characteristics such as mood, a desire for control, previous experiences and personal belief system" (Walter & Britten, 2002, p. 580). It involves a complex interplay of various subjective factors that may be more important than the mere knowledge of adverse outcomes. Knowledge has been described as neutral and inert because what informs behavior eventually is the perception of that knowledge (Calman, 2001). Much of the work on alcohol-related consequences so far has been dedicated to the negative physical, social, and behavioral aspects, and only a few studies have studied the subjective positive reinforcing consequences of alcohol use (Lee et al, 2011). But, subjective positive consequences determine to a large degree, the perception of risk associated with alcohol use. However, most often, alcohol users' risk ascriptions are not in keeping with reality, for they underestimate the risks associated with their alcohol consumption behavior (Sjoberg, 1998). Therefore, it appears that subjective negative expectancies, rather than positive consequences, are associated with greater drinking behavior to the extent that they serve as a motivation for restrained drinking (Jones & McMahon, 1994). Because of these contrasting views, it has been suggested that the examination of positive and negative consequences need to be addressed in order to fully understand drinking behavior (Lee et al, 2011). From this view point, Karlsson (2012) focused on alcohol users' overall subjective evaluation of positive and negative consequences and concluded that what informs the decision to drink is not so much the absolute size of one's personal experience or observed negative consequences of alcohol, but the balance or ratio between negative and positive consequences.

To the extent that personal experiences with alcohol determine risk perceptions, a story told by an alcohol user recently informed the decision to undertake this study. He reported that on one of his drinking days, he started drinking with his friend from as early as 11am until well past midnight. But all he could recall of the day was, he unknowingly left his friend in the bar and it was not until the next day when his friend rejoined him that he realized he had driven over 120km from the town where they were drinking to his house and went to bed. The immediate danger he faced was a car crash, but he was lucky he was not involved in any. Again, that he could habitually drink at this level for many days of the week without any health problems, to him implied he was a 'good drinker' as such there was no problem to his drinking. This story is

just one of many alcohol users narrate entertaining themselves while drinking. They appear to be oblivious to the dangers associated with their alcohol consumption behaviors because they often get away with the immediate outcomes of drinking such as accidents, or even where they occur, their escaping serious harm. The long-term negative effects of alcohol are even too remote and abstract, and thus are totally disregarded.

Experience is believed to be the best teacher, but among alcohol users in this part of Nigeria, experience, it appears, does not impact on behavior. What is it that makes drinkers in Nigeria, a country known to have one of the highest alcohol-related morbidity and mortality in sub-Saharan Africa, underrate their negative alcohol-related experiences? There is a compelling need to study and understand drivers of drinkers' alcohol risk perceptions, which it is hoped would facilitate the design of appropriate measures targeted at the reduction in alcohol-related morbidity and mortality. This study is one of such studies, which was aimed at exploring qualitatively the determinants of alcohol risk perception among the civil servants in Makurdi. In undertaking this study, four research questions were utilized in assessing alcohol risk perception. These were: What are the respondents' motives for drinking? What is their self-reported frequency and average consumption of alcohol? Are they aware of any adverse health, physical and behavioral consequences of chronic and long-term alcohol use? What are their personal evaluations of the riskiness of their alcohol consumption behavior? It is hoped that knowledge gained from this small scale exploratory study would provide directions for further large scale studies aimed at investigating the drivers of alcohol risk perception and how they interplay to determine alcohol consumption behaviors.

METHOD

Participants

The participants were 29 Benue State civil servants, comprising 21 (72.4%) males and 8 (27.6%) females aged between 20 and 60 years (Mean=35.28, Standard Deviation=8.05). There were 19 (65.5%), 9 (31.0%) and 8 (3.4%) married, single and, divorced/separated participants respectively. Of the total 29 participants, 2 (6.9%), 13 (44.8%) and 14 (48.3%) had a secondary school certificate (SSCE), post-SSCE and, higher national diploma (HND) or university degree respectively.

Materials/Instruments

Data were gathered utilizing a 7-item open-ended questionnaire. Participants were given a structured 7-item open ended questionnaire to record their responses to the items in the spaces provided. Because participants were expected to write their responses in spaces provided on the 7-item questionnaire, inclusion criteria were being a civil servant and having a minimum educational qualification of a secondary school certificate. For informed consent, participants were informed in the questionnaire that participating was voluntary and that they were required to provide their socio-demographic data but should not reveal their identities. Furthermore, they were informed that by accepting to receive, complete, and submit to the researchers the questionnaires they had by that given their consent for participation.

Design and Procedure

This study employed a qualitative cross-sectional exploratory ex-post facto design aimed at understanding participants' drinking behaviors and their perception of risks associated with alcohol consumption.

Data were gathered in two phases. In the first phase, three in-depth interviews were conducted by one of the researchers with the aim of structuring the interview schedule for the study. Being a network/snowballing study, the first participant in the first phase was approached at a social event in which there was drinking. This female participant was asked if she would be ready to participate in the study. Prior to the interview, she was given an overview of the purpose of the study which was to determine drivers of alcohol consumption behavior and perception of risks associated with it. To establish informed consent she was informed that her participation was voluntary and she could opt out at any point she so desired. Therefore, by choosing to go through the interview voluntarily, she had given her consent to participate in the study. The ensuing in-depth interview session was aimed at obtaining as much information from her as possible concerning what informed her drinking behavior and her understanding of risks associated with drinking. The aim was to use the information elicited from her as a basis for further in-depth interviews. At the end of the session, she called and enlisted a male friend of hers, and an interview was scheduled with him in his office. This second interview too followed the pattern of the first and was aimed at eliciting enough information that would facilitate the construction of a structured questionnaire. The second participant also suggested another colleague of his in the same ministry that accepted to be also interviewed. The pattern of responses that evolved from the three in-depth interviews were used in constructing a theoretically driven 7 (seven) item open-ended questionnaire.

As in the first phase, participation in the second phase too was through the enlistment of friends. Participants were free to receive on behalf of their friends' copies of the questionnaire, which after completion, were returned to one of the researchers. Participants were required to return the questionnaires at a mutually agreed time of 3 (three) days from the day they received the questionnaires. The questionnaires were administered over a period of two weeks.

RESULTS

Data Analysis

Analyses of the responses of the participants were deductively generated based on existing theory and research literature and was organized under four themes: alcohol consumption motives; alcohol consumption behavior; risk awareness and; evaluation of personal risk arising from alcohol consumption.

Drinking motives were analyzed from participants' responses to the question, "why do you drink alcohol"? The question, "how many days of the week do you drink, and how much do you drink per sitting on such days?" was used in deriving participants' frequency/quantity measures of alcohol which were converted into standard drinks and used in assessing average volume of consumption and, drinking pattern. While this was easy for beer drinkers, it was not possible to convert into standard drinks quantities of palm wine and *burukutu*, because neither the serving

measure nor alcoholic content of palm wine and *burukutu* are standardized for they differ from one bar to another. The estimates of alcoholic content of wine and spirits could be ascertained but not the servings, therefore, quantification was not possible. Consequently, volume and pattern could be measured only among beer drinkers who disclosed the frequencies and the quantities they consumed.

In converting the quantity of beer the participants consumed into standard drinks, the Australian Department of Health and Aging (2009) formula for calculating standard drinks specified as a product of volume of container in litres (v), percent of alcohol by volume alcohol (abv) and density of ethanol at room temperature (0.789) was used. The volume (v) of a typical bottle of Nigerian beer is 600ml and its alcohol by volume (abv) is 5%. Using this formula the standard drinks in a typical bottle of Nigerian beer is approximately 2.4 drinks (i.e. 0.6*5*0.789=2.4).

The average daily volume (ADV) of alcohol consumption of beer drinkers was obtained as follows:

$$ADV = \frac{f.q(2.4)}{7}$$

Where:

- f = average number of drinking days per week
- q = average number of bottles of beer consumed on each drinking day
- 2.4 = number of standard drinks per bottle of beer
- 7 = number of days of the week

Assuming a standard drink contains 12g of pure alcohol, risky drinking pattern was defined as the consumption of ≥5 drinks (i.e. ≥60g of pure alcohol) for men and, ≥4 (i.e. 48g of pure alcohol) for women.

Risk perception was not directly measured, but was inductively derived through a proxy measure utilizing a set of questions. First, the participants were asked, "do you know of any negative health effects of alcohol, if yes, what are they?" This was used in assessing the participants' knowledge of the adverse social, behavioral and health effects of alcohol consumption. In addition, they were asked the following questions: "You know of these negative health effects of alcohol but why do you still drink?"; "Although you like and enjoy drinking alcohol, is there something about it that you do not like personally?" and; Have you had any negative, or bad experience with alcohol in the past three months?" and they were asked to specify the experience(s). The responses to these items were analyzed to assess risk perception.

In order to evaluate the availability of activities the participants could engage in other than alcohol consumption, they were asked to indicate the activities they knew of that could yield them similar satisfaction as alcohol. The intention behind this item was to determine the reasons why the participants indulge in alcohol consumption even in the face of less health compromising activities.

Findings

Relying on existing theory and research literature, drinking motives evolved deductively. In accordance with the motivational theory of drinking, the *raison d'etre* for the participants' drinking was to obtain either positive or, negative reinforcement. The participants considered alcohol consumption as an activity that enhances and deepens social interactions

and, opens up opportunities for people in the course of drinking. Their responses ranged from "*I drink because of company of my friends*" to "*I do take alcohol based on social aspects attached to it*".

One female participant puts it thus:

> *"I drink to give me pleasure and to socialize with friends. Drinks also make me to know a lot of people especially the prominent people who can help me in time of need".*

At the personal level, they listed relaxation, pleasure and satisfaction as the enhancement motives for engaging in alcohol consumption. One of the male participants succinctly reported that alcohol consumption;

> *". . . is my best way of relaxation. I do drink (and) in the process . . . give it to others. It makes me feel high".*

A female participant reported that she,

> *". . . derives satisfaction from drinking (beer) . . . (and that she) ". . . loves the taste and coldness (of beer) . . ." that is why she drinks only cold beer.*

Many others responded that they consumed alcohol for "*pleasure*", "*relaxation*" "*fun*" and that "*it makes (them) high*". One of the female participants disclosed that alcohol is sexually enhancing to the extent that,

> *". . . it makes me fall in love with my boyfriend. I am shy of him so anytime I drink I fall in love with him."*

Another female participant spoke in the third person when expressing the association between alcohol consumption and sexuality thus:

> *"When I was a very young lady, my friend, a young man told me that alcohol makes him feel like having sex".*

Although sexual enhancement did not feature among the male participants, some of them believed that alcohol consumption enhances health. Some of the male participants stated,

"*Reasonable, responsible drinking is beneficial to one's health*",

> *". . . drink(s) palm wine because it contains yeast that clears eyes. Little quantity of palm wine cures stomach ache and gives pleasure".*

Alcohol consumption was also thought to enhance work productivity as some of the participants stated,

> *"I take drink to make me active especially during work. It enables me to think fast (and) it helps me to detect mistakes from writing".*

> *"I drink in company of peers to match up with them. I take a bottle or 2 to be alert and perform extra hard"*

Coping was also one of the motives listed by the participants. They listed "*easing tension*", "*relieving pressure*" and "*forgetting problems*" as some of the reasons why they consume alcohol.

A female participant reported,

> *"When I am annoyed and not happy I drink and sleep off and forget the whole thing".*

Interestingly, the tendency for alcohol to relieve tension may have been recognized as only transitory, for a male participant reported that alcohol,

". . . takes away my sorrows in a short while. It makes me feel high".

Alcohol also emboldens as a female participant reported,

"It makes me feel bold, and it enables me approach men for assistance".

Alcohol is also used to escape negative emotions associated with boredom as a male participant reported using it

". . . to avoid dullness and solitary lifestyle since I'm a social being that needs the company of others".

The participants' drinking motives conform to the motivational model of alcohol use which posits that individuals choose to consume alcohol with the expectation that the positive affective consequences of drinking outweigh those of not drinking (Cox & Klinger, 1988). In keeping with the model, the participants can be classified either as enhancement motive (EM) or coping motive (CM) drinkers (Birch, Stewart, Wall, McKee, Eisnor & Theakston, 2004).

Given the various reasons they advanced for alcohol consumption, the participants were further asked to indicate if there are other activities they could engage in that would give them the same or similar pleasure as alcohol consumption. In all, 16 participants (55.2%) revealed there are other activities that they could undertake instead of drinking alcohol, but only 6 indicated the activities. Their responses included: "*watching films and engaging in sports*"; "*keeping friends and interacting with them and reading books*" and; "*sport activities, watching comedy films above all, engaging in church activities*". Like any of these listed hobbies, alcohol was described by a participant ". . . *as a hobby, normally* (undertaken) *in social gatherings".* One of the participants had this to say,

"the ability to resort to such things instead of alcohol is that the alternatives are tied to socio-economic conditions which in most cases cannot be automatically realized at once".

This underscores the infrastructural deficits such as power and sporting facilities among others that could enhance people to engage in activities other than drinking, as another participant succinctly put it,

"Regular power failure stops me from watching movies to keep away from taking alcohol and lack of sports facilities within the vicinity".

For others, however, the inebriating effects of alcohol were valued more as was reported by a male participant thus,

"Other things cannot give you the excitement I derive from drinking together with friends'.

The descriptive statistics of the drinking behaviors of the 29 participants are displayed in Table 1. The information in Table 1 indicate that out of the 29 participants, 4 (13.8%) were occasional drinkers (i.e. drinking from 0-<1 days a week), while 16 (55.2%) comprising 11 males and 5 females were regular drinkers who consumed alcohol from 1 – 3 days of the week. Altogether, 9(31%) made up of 6 males and 3 females were classified as frequent drinkers, consuming alcohol for more than 4 or more days of the week. The types of alcoholic beverages consumed by the 29 participants also shown

Table 1. Descriptive statistics of participants' drinking behaviors

		Males (M)		Females (M)		Combined (M&F)	
		No.	**%**	**No.**	**%**	**No.**	**%**
Frequency of Drinking							
0-<1 days/week (Occasional Drinkers)		4	19.0	-	-	4	13.8
1-3 days/week (Regular Drinkers)		11	52.4	5	62.5	16	55.2
4+ days/week (Frequent Drinkers)		6	28.6	3	37.5	9	31.0
	Total	21	100	8	100	29	100
Alcoholic Beverages consumed							
Beer		12	57.1	7	87.5	19	65.5
Palm Wine		3	14.3	1	12.5	4	13.8
Burukutu		3	14.3	-	-	3	10.3
Bottled Wines		2	9.5	-	-	2	7.0
Spirits		1	4.8	-	-	1	3.4
	Total	21	100	8	100	29	100
Average Daily Volume (ADV) in grams (g)							
0-25g (Light drinkers)		4	40.0	2	33.3	6	37.5
26-40g (Drinkers Category I)		3	30.0	3	50.0	6	37.5
41-60g (Drinkers Category II)		3	30.0	-	-	3	18.8
>60g (Drinkers Category III)		-	-	1	16.7	1	6.2
	Total	10	100	6	100	16	100
Drinking Pattern (i.e. frequency of drinking in the event)							
Males							
<60g							
➢ 0-1 times/week		2	10.0				
➢ 2-3 times/week		1	10.0				
➢ >3 times/week		2	20.0				
		5	50.0				
≥60g							
➢ 0-1 times/week		1	10.0				
➢ 2-3 times/week		2	20.0				
➢ >3 times/week		2	20.0				
		5	50.0				
	Total	10	100				
Females							
<48g							
0-1 times/week	-	-					
2-3 times/week	-	-					
>3 times/week	-	-					
≥48g							
0-1 times/week		1	16.7				
2-3 times/week		4	66.6				
>3 times/week		1	16.7				
	Total	6	100				

in Table 2 indicated that; 19 (65.5%), 4 (13.8%), 3 (10.3%), 2 (7.0%) and 1 (3.4%) consumed beer, palm wine, burukutu, wines and, spirits respectively.

Out of 29 participants, 55.2% (16 participants comprising 10 males and 6 females) disclosed the frequencies and quantities of beer they consumed which were converted into standard drinks. From their disclosures their average daily volumes (ADV) and patterns of drinking were derived and are presented in Tables 2.

Employing the drinking categories by Rehm et al (2007) to classify these 16 participants, their average daily volume (ADV) shown in Table 2 indicated that 6 (37.5%) comprising 4 males and 2 females were classified as light drinkers (i.e., their adv's were between 0-25g) and 6 others comprising 3 males and 3 females fell in the drinking category I (i.e. they consumed between 26-40g). The drinking categories II (i.e., adv of 41-60g) and III (i.e. adv >60g) were made up of 3 males and 1 female respectively. Heavy episodic drinking (HED) consists of drinking in the event (or in the local parlance 'drinking per seating') of ≥5 drinks (i.e., 60g of pure alcohol) for men and ≥4 drinks (i.e., 48g of pure alcohol) for women. On the basis of this definition, 5 (50%) of the male participants consumed more than 60g of alcohol per each drinking event. Details (not shown in Table 1) revealed that one of the male participants reported consuming 115g twice each week and, out of the other 4 males that reported consuming 86g of pure alcohol per drinking event, one reported engaging in this pattern of drinking once a week, another thrice a week and, two others four times each week. In addition, 4 others reported consuming approximately 58g of pure alcohol, just under the cutoff at various frequencies: one reported doing this once a week, another twice a week, while one reported this pattern of drinking 4 times a week and the fourth reported this pattern occurred seven days of the week.

The drinking pattern of the 6 females in Table 1 indicates that all of them consumed above 48g per drinking event at various frequencies. From details not shown in Table 1, out of the 6 females, 2 reported a pattern of 115g twice weekly and 7 times per week respectively. Two others reported consuming 86g thrice a week while the last 2 reported consuming 58g each once and twice per week respectively. Overall, the participants' drinking volume and pattern appear to be quite high.

Although there are risks associated with alcohol consumption, on the balance people drink in spite of these risks so as to obtain either positive or negative reinforcement. Even with the awareness that alcohol consumption is risky, many people, it has been found, still choose to drink (e.g., Raymond, Beer, Glazebrook & Sayal, 2009). In line with the literature, the participants' knowledge of the adverse effects of alcohol consumption were decomposed into two; acute and immediate (proximal) and, long-term (distal) alcohol-related harms. The long term health risks associated with prolonged use of alcohol and the frequencies with which they were mentioned by the participants included: liver problems (10); high blood pressure (4); diabetes (4); heart problems (3) and gastrointestinal problems and chest were mentioned once each. The immediate risks associated with alcohol and the frequency with which they were mentioned included: accidents (5); misbehavior (4); waste of money (4); fights (4); rape/unwanted and engagement in regrettable

sex (3); wife beating (2); psychiatric problems (2); hangover, heart burn, weakness of the body and unnecessary exposure to danger were mentioned once each.

In addition to their awareness of the risks associated with alcohol, they were asked to report on anything about alcohol they found detestable. Most of the issues reported related to intoxication and drunkenness which are highly stigmatized. Some male participants reported,

> *"What I don't like about alcohol is over drunkenness which leads to all manners of misbehavior"*

> *"I don't like seeing people drink and misbehave".*

Some female participants reported that alcohol;

> *". . . makes someone change his or her appearance when (drunk). . . (and) it makes someone misbehave",*

> *"talk to people that (she) should not have (talked to)".*

In a similar vein, one male participant reported of alcohol thus,

> *"it makes me dizzy and create room for me to talk too much and makes me behave irresponsibly when taken".*

Some noted smell in addition to intoxication as things associated with alcohol consumption that they detest. For instance, some male participants reported;

> *"The smell from alcohol sometimes discourages me drinking it. Some people misbehave when they take it therefore discouraging me from taking it"*

> *"odor, producing and selling environment is not hygienic . . . (and added) . . . continuous drinking of alcohol pushes one to a higher level which is likely to lead into abuse of it"*

This indicates recognition that habitual drinking could result in alcohol misuse. Financial considerations too are associated with alcohol consumption as some of the participants reported;

> *"it makes me to over spend while under its influence"*

> *". . . makes me spend in excess" which he added, ". . . causes disunity in my family".*

Participants reported several negative effects of alcohol which they experienced in the three months preceding the research such as, *"vomiting"*, *"unnecessary spending"* to what one female participant reported,

> *". . . it makes me have sex with men which ordinarily I shouldn't have sex with".*

Another female participant reported she *"was raped and (had) unwanted sex",* after a drinking event. Fighting and quarrelling were some of the experiences of the participants. One of the male participants reported that alcohol

> *"influenced me to drive my wife away from my home",*

Another reported fighting, while one other reported that alcohol *". . . got me drunk and got me a wound in the head".* A male participant reported staying out for long hours following a drinking event,

". . . thereby exposing (him) to extreme cold and threat of armed robbers".

It is obvious that the participants were aware of risks associated with alcohol consumption and, reported things associated with alcohol which they detest and, some reported experiencing some of the negative effects of alcohol. In spite of these, they continued to consume alcohol regularly for various reasons. Some of the participants waved off their alcohol consumption behaviors as something they choose to do that is within their control; therefore, they would never let it get out of hand. For instance, one of the ladies said,

> *"I am not a good drinker, whenever I feel satisfied I stop I do not continue because I see beer like other people"*

According to her, a good drinker is *". . . a person who drinks a lot*", but did not disclose how much is a lot. While she reported she could restrain herself, she thought others cannot, for they keep drinking as long as beer is available. A gentleman reported similarly saying,

> *"the quantity of alcohol I take and the frequency at which I take it convinces me that it is taken just as a food property or better still a drug supplement".*

Another reported,

> *". . . a glass or 2 of burukutu cannot and will never lead one to any of these enumerated above. It must be noted that if others will keep these, there wouldn't be problem of abuse of alcohol".*

These views suggest that the participants do not think their drinking behaviors put them in harm's way unlike other people who are not in control of their alcohol consumption behaviors. Another participant echoed this view thus,

> *"I strongly believe that people are affected by various alcohol hazards due to over indulgence in it".*

However, in contrast to those who reported that they were in control of their alcohol consumption behaviors, others expressed helplessness. One of the ladies reported,

> *"I cannot imagine giving up beer because I cannot think of anything that can make me feel as happy as drinking beer. I feel fine so why should I give it up, what will I do instead?"*

A male participant said, "I can't help myself", while another reported, "My nature (and) character of indulgence does not permit a good explanation but as a stimulus it becomes automatic as a practice" emphasizing that drinking is a habit that has taken on a character of itself.

DISCUSSION

The literature on alcohol indicates that the decision to consume alcohol is informed by an individual's expectancies of the desirable consequences associated with drinking. Deriving from this theoretical perspective, the civil servants drink for fun, pleasure, relaxation, to facilitate and/or deepen their social relationships, coping with stress, boredom and, for temporary escape from problems. This study has found that individuals' understanding of, and assessment of alcohol-related harm

associated with drinking, is determined by the interplay of motives for drinking, knowledge of adverse health effects of alcohol consumption, observation of the adverse effects of alcohol consumption on others, and personal experience of adverse effects of alcohol. These findings are consistent with other studies that have examined subjective evaluation of positive and negative consequences of alcohol and how they impact on risk perception (e.g., Karlsson, 2012; Lee et al, 2011).

Alcohol-related harm has been found to be erroneously equated with an inability to perform daily social functions. This arises from a conviction that because individuals are able to attend to their daily functions in spite of their alcohol consumption behavior, they are not in any imminent danger. In the study on Irish college undergraduates, Jiang (2009) found a similar attitude. But, linking alcohol-related harm only to the acute events following consumption is deceptive. This is because alcohol is an addictive mood altering substance and people who consume it for prolonged periods of time may develop tolerance to it which may result in an increased average daily consumption and, an increased probability of indulging in risky drinking patterns.

There appear to be tolerance in the participants' drinking behavior which is characterized by large volume consumption and heavy episodic drinking. For instance, their reported weekly volumes were well above those recommended in the guidelines on low risk drinking stipulating a consumption of not more than two standard drinks (i.e. ≤24g of pure alcohol) a day or, ≤14 (i.e. ≤168g of pure alcohol) for men and, ≤9 standard drinks (i.e. ≤108g of pure alcohol) for women weekly (Bondy, Rehm, Ashley, Walsh, Single & Room, 1999). Contrary to the often overemphasized health enhancing effects of alcohol, the beneficial effects of alcohol have been found to occur at an average alcohol consumption level of about 5g/day (Nichols, Scarborough, Allender, & Rayner, 2012). This suggests that the much touted hype about the protective aspects of alcohol is more exaggerated than real. In addition, the participants' drinking pattern is characterized by risky or heavy episodic drinking, often drinking above the positive blood alcohol content (BAC) of 0.75g to 0.80g per kg of body weight which is associated with psychomotor and cognitive impairment (Dawson, 2011). But, negative outcomes such as accidental deaths have been found to be associated with risky drinking patterns. In a study on volume of consumption, patterns of drinking and all-cause mortality in the United States (US), it was found that accidental deaths were 10% higher in people who drank ≥5 drinks (i.e. ≥60g of alcohol) and, 6% higher among those who consumed ≥8 drinks (i.e. ≥72g of alcohol) on any occasion compared to the general population (Rehm, Greenfield & Rogers, 2001). This confirms that though prolonged drinking may result in tolerance, contrary to the common belief among users, tolerance does not insulate them from alcohol-related harm; rather, it increases their susceptibility.

The two major findings of this study relating to risk perceptions are; first, the participants had adequate knowledge of the adverse social, behavioral and health effects of alcohol and, secondly, they had experienced some of these effects but decidedly downplayed their seriousness. Findings show that overall, the participants did not ascribe any harm to their

alcohol consumption behaviors, and alcohol-related harms were more likely to occur in the lives of other people than theirs. This is in conformity with other research findings (e.g., Jiang, 2000) that alcohol users do not generally ascribe harm to their alcohol consumption behavior and, it is consistent with optimistic bias, whereby alcohol users consistently believe they are less at risk for any alcohol-related harm than their peers (Klein & Helweg-Larsen, 2002).

Secondly, they had experienced some negative consequences of alcohol but persisted in their alcohol consumption behaviors. Furthermore, they equated drinking with other leisure time hobbies which they undertook with their friends at the end of each working day in fulfillment of an important aspect of their social lives. This is in conformity with Shacham, Hoffer and Overton (2011) who found that their study participants considered drinking as part of their daily routines. This probably explains why they may have considered as only incidental whatever harms that may have arisen from their drinking behavior.

Alcohol risk perception is strongly influenced by individual experience. For example, women who had a previously healthy pregnancy reported increased alcohol consumption during pregnancy (Peadon, Payne, Henley, D'Antoine, Bartu, O'Leary, Bower & Elliot, 2010; Patterson, Hunnicutt & Stutts, 1992). While these findings suggest that people who have not experienced negative alcohol outcomes believe their drinking is below the harm threshold, what is inexplicable is why individuals who have had negative alcohol experiences do not ascribe risk to their drinking. There is clearly a disjunction between the drinking outcomes and the seriousness attached to the risk, which in conformity with Walter and Britten (2002) suggests the perception of risk seriousness markedly affects the understanding of risk issues. As a strategy used in countering the dissonance between their knowledge, experience and behavior, drinkers are, according to Wild, Hinson, Cunningham and Bacchiohi (2001) generally accurate in the perception of the social and health risk associated with their drinking behaviors even if they tend to minimize their self-perceived risk relative to others, which Agostinelli and Miller (1994, cited on p. 118 in Wild et al, 2001) suggests is undertaken in order to protect themselves from threatening self-knowledge.

The impact of awareness and experience of risk on behavior can be situated within the context of the risk homeostasis theory which states, ". . . in any activity (e.g., alcohol use), people accept a certain level of subjectively estimated risk to their health, safety, and other things they value, in exchange for the benefits they hope to receive from that activity . . ." (Wilde, 1994, p. 1). The theory holds that as people engage in any activity, for example drinking, they constantly monitor the risk they believe they are exposed to (i.e. their actual risk) and compare this with the amount of risk acceptable to them (i.e. their risk target or threshold). The intention of this risk comparison is to reduce to zero, the difference between their actual risk and target risk. In keeping with the theory, that the participants, in spite of having experienced alcohol-related harm persist in drinking is an indication that they subjectively evaluate their negative experiences (actual risk) with alcohol below their risk threshold (target risk). Consistent with the work of Karlsson (2012), that drinkers' evaluation of their

positive experiences with alcohol are often much higher than the negative ones, thereby lowering their risk perception.

The findings also indicate that drinking behaviors may be driven by pleasure, enhancement of social relationships and, the avoidance of negative affect associated with either boredom or, stress of daily living. In keeping with the literature on drinking motives, the participants' drinking is driven by the enhancement (EM) and coping (CM) motives. Although the study did not differentiate between enhancement and coping motives of drinking participants, it can be inferred from the specific comments reported in this study that the motives, at least for the participants in this sample, were largely enhancement. This is consistent with the results of Gire (2002) who, in a cross-national study of drinking motives, found that Nigerian participants were more likely to drink for social and enhancement motives than their US counterparts. Drawing from the scientific literature, the findings of this study may be used to infer that the participants' drinking motives appear to have moderated their awareness and experience to dampen their risk perception. Notwithstanding that this study was not about problem drinking, research findings (e.g., Birch et al, 2004) suggest that there is an increased likelihood of alcohol users whose drinking behaviors are driven by drinking motives (i.e., enhancement and coping) to end up being problem drinkers. The participants' drinking behavior as indicated by the volume and pattern, suggests they are risky drinkers, which may be used as a proxy for problem drinking. It appears that the continuous use of alcohol by some of the participants is maladaptive, especially where negative consequences of alcohol have been experienced, which is an indication of alcohol abuse. In addition, the alcohol consumption behaviors of some of them appear to have met, to some extent, the DSM-IV-TR diagnostic criteria for alcohol dependence (APA, 2004). First, there are indications of tolerance (Criterion 1) in their drinking behavior. Secondly, their persistence in alcohol use as a recreational activity on which lots of time is invested and, the inability to either reduce or, abstain due to helplessness or habit appear to meet a combination of criteria 3 and 4. Lastly, the continued use of alcohol in spite of the awareness of having a physical or health problem that might be caused or exacerbated by alcohol, appear to meet criterion 7. To that extent that these findings are consistent with Wild et al., (2001) that the perceived vulnerability to alcohol-related harm is affected not only by whether a person is a problem drinker, but also by drinking motives. This conclusion implies that there may be alcohol problems in this population, but it should be treated with caution because the diagnostic criteria for alcohol dependence have not been fully met, although for some individuals, symptoms of tolerance or compulsive alcohol use may occur without them being dependent.

In summary, the findings of this study indicate that drinking motives drive alcohol use such that even with the awareness of, and personal and/or other person experiences of alcohol-related harm, people may choose to drink, suggesting that drinking motives more than compensate for whatever negative effects arising from drinking that may be experienced. The decision to drink rather than engage in other safer activities from which drinkers can derive pleasure, social enhancement and, beat stress and boredom, may be

because alcohol users' estimation of the benefits accrued from alcohol are much higher than those associated with other activities. In addition, the costs associated with the alternative activities such as, the energy and time invested in them may be considered more than the benefits (i.e. enhancement) and/or, the benefits may be considered less intense than those derived from alcohol use. Or, because alcohol rewards are proximal and available immediately it may be valued more than the deferred or distal rewards associated with other emotionally enhancing activities. For instance, before the benefits accrued from physical activities are felt and appreciated, one must invest both time and energy in them. But while the costs of physical activity are immediate, the benefits are distal. Other activities such as music, watching movies and, reading, though relaxing and enjoyable, when juxtaposed against alcohol associated benefits which are pleasurable, relaxing and inebriating, alcohol use may be preferred. For this reason, drinkers may minimize the perception of their susceptibility to alcohol-related risks and, persist in their drinking behaviors.

Implications of the study

There are obvious implications of this conclusion on health behavior. As a general proposition, it is expected that awareness of, and experience of personal or other persons' adverse effects of alcohol would motivate drinkers to restrict to the barest minimum their alcohol consumption. This proposition is premised on the determinants of health behavior such as knowledge, experiences, social influence, habits, self-confidence, attitudes, motivation and, possibility for change (Peadon et al, 2010). The health belief model (HBM) for instance, conceptualizes two health beliefs: the perception of threat of illness which depends on perceived susceptibility to the illness and the severity of its consequences and, the evaluation of the effectiveness of behaviors to counteract this threat (Conner, 2002). The HBM posits that individuals will engage in a particular health behavior if they believe they have a susceptibility to a condition or illness they consider serious and, they believe that the benefits outweigh the costs of undertaking the behavior. There are many triggers or cues thought to produce the required changes such as, ". . . own illness, illness of relatives or friends, changes in self-perception, social pressure and exceeding limits determined by the behavior in question" (abstract, Meillier, Lund & Kok, 1997). However, awareness of, and experience of alcohol-related harm contrary to expectations, may not induce people to adopt health protective behavior. This may be explained, in part, by the notion that knowledge is neutral and inert (Calman, 2001) and that awareness alone may not drive health behaviors (Demaio, Dugee, de Courten, Bygbjerg, Enkhtuya & Meyrowitsch, 2013). On the other hand, experienced proximal alcohol-related adverse events may be heavily discounted, suggesting that the enhancing motives for drinking are rated higher and above the alcohol-related harm. In addition, even where the participants had medical problems such as hypertension, diabetes and heart disease, contrary to the sick quitter hypothesis that drinkers choose to discontinue drinking after experiencing medical problems associated with alcohol (Rehm, Greenfield & Rogers, 2001), they persist in drinking. This suggests they neither believed their drinking is a causal factor of their health status nor,

it contributes to disease progression. Addressing these issues has implications on public health policy, not only in the study area but Nigeria as a whole.

Public policy on alcohol aimed at controlling alcohol-related harm through behavior change needs to focus on alcohol users' perceived benefits from the substance and the barriers to limiting or, abstaining from alcohol consumption. It is obvious from the findings that any campaign on excessive alcohol consumption may likely fail if the goal is abstinence, because drinking is a part of our social milieu. There is also a tendency to underrate and downplay very serious alcohol-related experiences such as fights, driving or riding motor bikes under the influence of alcohol, unwanted sex and injuries. While drinkers may underrate their experiences simply because they have not reached their risk thresholds, society must not wait for that to happen before enforcing alcohol control measures. This is because there are externalities associated with alcohol-related harm once they occur. For instance, a car or motor bike crash may result in injury to the drinker alone, but the costs are not restricted to the drinker, they spillover. The costs for medical treatment fall on the individual and his family, stretching family resources, and on the society by burdening the health care system. Where there are fatalities involving other innocent bystanders, the costs to others and society are too high. Therefore, intensive alcohol risk campaigns should be undertaken targeting such events and making people aware of the gravity of these alcohol-related consequences.

Public awareness campaigns in Nigeria urging people to drink responsibly have so far had little or no effect on drinkers. What is required is undertaking alcohol risk campaigns that challenge the self-exempting beliefs about alcohol suggesting drinking is glamorous, macho and, an indication of posterity. For effective alcohol control policy, the first area is to enforce legislation to tighten environmental controls in order to reduce the prevalence of alcohol related cues that currently exist. Presently, alcohol is readily available and sold to the young and old at many spots on nearly every street in Makurdi, without restrictions. It is sold near schools, in homes and, it is practically available twenty four hours a day. These environmental factors such as "proximity to alcohol outlets and neighborhood density" (Abikoye, 2012, p.8) are significant determinants of hazardous drinking. This constitutes great challenges to drinkers, because they are environmental cues alcohol users are exposed to which may serve to diminish any risk associated with its consumption, even if they may have experienced any harm associated with it. To control this, entails rigorously enforcing laws barring underage drinking and, restricting alcohol sale and consumption to legally designated areas and times.

Another policy issue that needs to be tackled is for Nigeria to domesticate a comprehensive alcohol policy. Currently, government is either deliberately or inadvertently failing to take action in correcting the misinformation on alcohol use being propagated by brewers and distillers through their advertisements and sales promotions that glamorize drinking (Dumbili, 2012; 2013). So long as this glamorization and portrayal of drinking even to intoxication as humorous and a *sine qua non* for enjoyment and enhancement of quality of life (Okoro, Brewer, Naimi, Moriarty, Giles & Mokdad, 2004)

continues, alcohol-related harm will not reduce. At the moment, there is no clear cut alcohol policy and drinking guidelines in Nigeria except to drink responsibly which may mean nothing (Dumbili, 2012) hence people continue to engage risky volume and patterns of drinking. It is therefore time Nigeria put in place a comprehensive alcohol policy with recommendations on safe drinking guidelines.

Limitations

Alcohol sizes and alcoholic content could not be ascertained for locally brewed beverages such as *burukutu* and palm wine. In addition, even where alcoholic content of drinks such as bottled wines and spirits are known, serving sizes are different because it is not the practice in Nigerian bars and drinking places to serve these beverages in standardized containers. To this extent, the volume and drinking pattern measures are limited for it could not cover all the participants.

The participants were not asked to directly respond to their estimation of risk associated with their drinking. It was thought this would appear judgmental, therefore the risk perceptions of the participants were derived from proxy questions. This is obviously a limitation because the risk ascriptions of the participants would probably have been different if they were asked directly.

Qualitative, unlike quantitative research, does not reduce everything to numbers, but through its methodology, it brings to the fore, personal experience and factors that drive behavior. To that extent, one of the limitations of this study is the failure to find out from the participants what, in their view, constitutes serious alcohol-related harm that they would factor in their risk perception. Although alcohol use is idiosyncratic, it is from such personal views that a picture would emerge that would facilitate the designing and dissemination of alcohol risk issues and, alcohol use reduction strategies.

Directions for further research

From the preliminary findings of this study, subjective experiences play a key role in alcohol risk perception but, there may be other equally strong factors acting in determining risk perceptions of alcohol-related harm. In exploring multiple factors that determine risk perception, other researchers (e.g., Wild et al, 2001) have studied epidemiological risk status, drinking motives and the interplay of these factors in determining alcohol risk perception. Additional factors, such as personal subjective experience with alcohol, observed experience of others, the availability of alternative substitutes to alcohol consumption could also be factors worth considering. A quantitative design incorporating these factors to assess how they each and jointly determine alcohol risk perception may be employed in future studies, in order to enrich the literature. Although this study was not on problem drinking, the preliminary findings indicate the possibility that there is alcohol dependence among the participants. To that extent there is a need to undertake studies to determine the epidemiological status of drinkers in Nigeria. Although Wild et al (2001) did not find evidence of drinking motives moderating or mediating the relationship between epidemiological status and risk perception, preliminary results of this study suggest there may be inter-relationships between these variables, therefore they are worth investigating.

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