

## Development and Validation of the Alcohol Advertisement Impact Questionnaire (AAIQ) on in-School Adolescents in Makurdi, Nigeria

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### Abstract

Alcohol consumption poses a major challenge for adolescents. This is because its consumption can lead to abuse and dependence. Alcohol advertisement implies promotion or publicity of alcoholic beverages by producers through a variety of media. The role alcohol advertisement plays in consumption and addiction is contestable. Hence a development and validation of a 13-item Alcohol Advertisement Impact Questionnaire on adolescents of between 10-18 years using a descriptive study design. The internal consistency coefficient (Cronbach's  $\alpha$ ) for the instrument was 0.87. Split-half reliability was 0.82. Principal component analysis was done to extract the factors. Rotated factor structure of the 13 items yielded two (2) factors with Eigen value greater than 1. The developed and validated instrument will further strengthen research as it encourages the study of specific parameters in measuring impact of alcohol advertisements on in-school adolescents. The research-friendly questionnaire can be further standardized and tested on a general adolescence population. In view of its derived psychometric properties, the instrument is a ready tool in evaluating the impact of alcohol advertisement on alcohol consumption especially among in-school adolescents.

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**Keywords:** development, validation, alcohol advertisement, impact, questionnaire, adolescents, in-school

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### INTRODUCTION

This report presents a development and validation of an alcohol advertisement impact questionnaire on adolescents. There is an ever growing concern about alcohol consumption among young people in different parts of the world including Nigeria. This can be seen in the volume of research studies indicating teenage experimentation with alcohol. While some signs have emerged that some more young people are starting to drink later, by the time they reach their mid-teens, one in two consume alcohol at least occasionally (Gunter, Hansen & Touri, 2008). Furthermore, growing number of teenage adolescents periodically drink to excess to the point of drunkenness. A number of factors have been identified as responsible for alcohol consumption among adolescents. Advertising and marketing of alcoholic products specifically or deliberately targeting young but legal drinkers are believed to play a part in triggering interest into young ones to purchase alcoholic products.

Alcohol advertising is the promotion of alcoholic beverages by alcohol producers through a variety of media. Healthcare researchers and workers have shown associations between exposure to alcohol advertising and drinking behaviour in cross-sectional surveys (Wyllie, Zhang, Casswell 1998; Aitken, Eadie, Leather, McNeill, & Scott 1998; Thomsen & Rekve, 2006) whereas the alcohol and advertising industry use data from econometric studies showing that advertising bans have little impact on overall alcohol consumption (Waterson 1989; Duffy 1989;1991). A number of studies have examined the

relationship between alcohol advertising and attitudes about alcohol held by young people. Some believe that cultural myths and symbols used in alcohol advertisements have powerful meanings for college students. Others have concluded that alcohol advertising affects knowledge, attitudes and intentions to drink, which in turn are believed to affect drinking. A number of longitudinal studies have been conducted which indicate that alcohol advertising leads to increased alcohol consumption in young people (Anderson et al., 2009). The first longitudinal study on the influence of alcohol advertising, conducted in New Zealand, found that young people's recall of alcohol advertisements increased between the ages of 13 and 15, and that among males greater recall of alcohol advertising at age 15 was associated with higher rates of beer drinking at age 18 (Connolly et al., 1994). In a study of over 2000 middle school students in Los Angeles, exposure to television alcohol advertisements in the seventh grade predicted alcohol consumption, and the frequency of consuming three or more alcoholic drinks on at least one occasion, in eighth grade (Stacy et al., 2004).

Similarly, among 3000 South Dakotan high school students, exposure to in-store beer displays in seventh grade predicted onset of drinking by ninth grade, whilst exposure to magazine advertising for alcohol, and to beer concessions at sports or music events, predicted frequency of drinking in ninth grade (Ellickson et al., 2005). Collins et al. (2007) found that, after adjusting for covariates, exposure to alcohol marketing (including media advertising, store

advertising and ownership of promotional merchandise) in sixth grade predicted seventh-grade drinking and intentions to drink; and young people exposed to more alcohol advertising were 50% more likely to report alcohol consumption. Pasch et al. (2007) also found that exposure to outdoor advertisements (e.g. billboards and bus stops) and storefront advertising during sixth-grade predicted alcohol behaviours, attitudes and intentions at eighth grade after adjusting for a range of potential confounding variables (Pasch et al., 2007).

It should be noted that the availability of so-called 'designer drinks' has been pinpointed as a particularly significant development that has encouraged young people to drink. These drinks do not only have the promotional appeal of marketing messages that play on popular themes to capture the attention of young consumers, but also provide alcohol-based products with varied flavours that attract inexperienced drinkers (Gunter, Hansen & Touri, 2008).

Such provision of drinks which usually do not taste like normal alcoholic drinks is likely to trigger under-age alcohol consumption that is driven by the intrinsic taste appeal of the product as well as responding to social and cultural pressures. The appeal could cut across gender lines as recent trends in alcohol consumption seem not to be gender – specific any more.

Alcohol advertising is the promotion of alcoholic beverages by alcohol producers through a variety of media.

### **Rationale of the Study**

The rate of alcohol consumption among adolescents is seen to be on the increase. Considering that the period of schooling offers a life-time of future opportunities and that alcohol consumption can be a major distraction especially among adolescents is not new in literature.

However, there have been contrasting views on whether the trend in drinking is facilitated by alcohol advertisement. This presents a source for concern because a number of longitudinal studies have pointed out that alcohol advertising leads to increased alcohol consumption and initiation to drink.

In Makurdi, Benue State, Nigeria where this instrument is being developed, there has been a long-time culture of alcohol consumption among young people. In recent times, this has been further enhanced by the ever-growing number of social events, entertaining industry and increasing media activities. Makurdi is a major town in North Central Nigeria where major beer companies hold fiestas to popularise their brands. Alcohol is advertised on local media (TV and radio stations) and there are many

drinking spots. There is no strict adherence to law as regards age and drinking. Where the law exists, it is moribund. Even the legislation on consumption of the local gin (ogogoro) is hardly enforced.

### **Objective**

The objective is to develop a self-administered Alcohol Advertisement Impact Questionnaire in Benue State, Nigeria. The instrument is for the assessment of alcohol consumption in adolescents due to its publicity through advertisement. The questionnaire is being validated for the local population.

### **Statement of Problem**

The development and validation of the questionnaire on impact of alcohol advertisement on in-school adolescents is intended to measure the role of adverts on adolescents' consumption of alcoholic beverages. Adolescence, a human stage of development is often viewed as a period of experimentation and risk-taking behaviour. The many choices which they have to make in life for stable and steady development is heightened by the different messages which they are bombarded and from which their future life choices would invariably depend on. One of these many messages include alcohol adverts which are often provoking and luring. Promoters of alcohol beverages refute claims that adverts on alcohol beverages encourage drinking and that the targets are not adolescents. To concern to prove otherwise has been enforced by large-scale surveys of youth samples and have been indicative of alcohol experimentation by many teenagers and significant minority groups especially in the United States (Gunter, Harisen & Touri, 2008)

### **METHOD**

#### ***Study Design***

Descriptive study – Validation of questionnaire

#### ***Study Population and Setting***

The study population comprised of in-school adolescents from seven (7) secondary schools both of junior and senior school (JSS 1 – SSS 3) categories. Of the seven schools, five were co-educational and two single- sex schools. They were aged 10-18 years and were all public or Government grant-aided schools with the exception of one that is completely privately owned. A total of 750 students were accessed for the study. However, only data from respondents who affirmed to taking alcohol were selected for analysis. The students gave consent to participate after the school authorities were approached and permission was granted for the study. School prefects aided in the distribution and retrieval of the validation material. The study was conducted within a period of seven (7) days.

**Development of Alcohol Advertisement Impact Questionnaire (AAIQ)**

The Alcohol Advertisement Impact Questionnaire was intended to be short, simple, self-administered instrument. The purpose was to capture the dimensions by which alcohol appeals to adolescents and inadvertently aid consumption. The scores generated were expected to be amenable to statistical analysis, with adequate validity and reliability.

**Item Generation**

Ten (10) items to assess alcohol advertisement impact were statements generated by the researchers in English Language. The 10 items were subjected to scrutiny by twelve (12) lecturers of the Department of Psychology, Benue State University, Makurdi for face and content validity. All 10 items were supported but re-worded for precision and accuracy on the subject matter. Acceptance of all 10 statements by the experts was ranged in agreement from 66.6% - 100%. However, three (3) additional items were suggested and added to the 10, bringing to total 13 statements for validation among in-school adolescents.

**Validation Testing for Items**

The 13-item questionnaire was administered to the study sample. The subjective behaviour of the participants as it pertains to alcohol consumption was assessed. Two (2) items were used to test the behaviour (attached to each response is an anchoring score). These were: *i) Do you drink alcohol? Yes (2) or No (1).* *ii) If yes, how often do you drink alcohol – always (4), sometimes (3), not sure (2) or rarely (1).*

Respondents stating ‘no’ to (i) but responding affirmatively to (ii) were regarded as consumers of alcohol. However, the two items to test for subjective behaviour were not a part of the proposed Alcohol Advertisement Impact Questionnaire (AAIQ).The researchers had purposed that only responses affirming to consumption of alcohol would be used for the validation of the instrument. The total score range for the 13-item questionnaire is 13-65 as items are scored under 5 anchors; always (5), sometimes (4), uncertain (3), rarely (2) and not-at-all (1). There were no reversed scores on the items. Of the 750 adolescents sampled, 271 attested to taking alcohol and their responses were selected for the analysis.

**Analysis**

Statistical analysis was done using SPSS version 15.0. Internal consistency and split – half reliability testing were assessed along with face and content validity. Principal component analysis was carried out for extraction of factors. Criterion validity was established through the subjective behavioural report of the participants with regards to alcohol consumption.

**RESULTS**

67.6 % of the 271 respondents were aged between 10 – 18 years. The mean age of the study sample was 17.4 (Standard Deviation (SD) 5.46). The item means scores of the questionnaire ranged from a minimum of 1.03 to maximum 3.03 with a mean of 2.5 (SD 8.35)

Table 1: Item – total correlation of 13-item alcohol advertisement impact questionnaire

Items	Corrected item-total correlation
1. Watching television adverts on alcohol gives me the urge to take it	.63
• Billboards advertising alcohol make me to drink	.60
• The location of drinking spots close to me encourages my drinking	.66
• Souvenirs on alcohol truly promote drinking	.59
• I drink alcohol because of the appealing nature of their adverts	.61
• Radio adverts on alcohol promote my drinking	.56
• I drink more alcohol during festivities because then alcoholic drinks are more advertised	.58
• Just looking at a container of alcohol makes me drink	.61
• I drink alcohol because of the impact its adverts have on my friends	.54
• There would be no consumption of alcohol without its advertisement	.48
• Seeing celebrities advertise for alcohol makes me take it	.60
• Offering of free alcoholic drinks promotes drinking	.47
• Advertisement on alcohol should be continued because it aids my drinking	.58
<b>Options: (a) always (b) sometimes (c) uncertain (d) rarely (e) Not at all</b>	

**Reliability and Validity**

Data analysis was done using SPSS version 15.0. Item analysis was done and correlation matrix

obtained. Item-total correlation was found to be greater than 0.4 for all thirteen (13) items (Table 1). The internal consistency coefficient (Cronbach’s  $\alpha$ ) for the instrument was 0.87. Split-half reliability was

0.82. Principal component analysis was done to extract the factors. An orthogonal rotation of the structure was done by varimax rotation (Table 2), to maximize the variance explained by each factor independently and obtain simpler results. Rotated factor structure of the 13 items yielded two (2) factors with Eigen value greater than 1. These are

labelled as follows: **Component 1**. Alcohol Sensory Stimulation and, **Component 2** Perceived Rewards of Alcohol. However, the cross-loadings for items 7, 8 and 13 are too high and so do not clearly or distinctively fall into any of the two factors.

Table 2: Rotated Component Matrix showing the two components

	Components	
	1	2
1. Watching television adverts on alcohol gives me the urge to take it	.71	
• Billboards advertising alcohol make me to drink	.76	
• The location of drinking spots close to me encourages my drinking	.68	.56
• Souvenirs on alcohol truly promote drinking		
• I drink alcohol because of the appealing nature of their adverts	.69	
• Radio adverts on alcohol promote my drinking	.70	
• I drink more alcohol during festivities because then alcoholic drinks are more advertised		.51
• Just looking at a container of alcohol makes me drink	.50	
• I drink alcohol because of the impact its adverts have on my friends	.52	
• There would be no consumption of alcohol without its advertisement		.60
• Seeing celebrities advertise for alcohol makes me take it		.58
• Offering of free alcoholic drinks promotes drinking		.88
• Advertisement on alcohol should be continued because it aids my drinking	.50	

**DISCUSSION**

The 13-item Alcohol Advertisement Impact Questionnaire had internal consistency reliability (Cronbach’s alpha) of 0.87 which is greater than the acceptable level of 0.7 (Indu, Remadevi, Vidhukumar & Subha, 2011). The split-half reliability was 0.82. All items are retained. Previous studies on alcohol advertisement may not have specifically focused on its impact along the factors extracted in this study; alcohol sensory stimulation and perceived rewards of alcohol. This research may evoke the need for further studies on alcohol advertisement impact by bringing these factors to bear thereby enriching data on its evaluation using adolescents as its target population. To do so, more items may be generated and tested. This will likely strengthen the instrument and add to its stability.

**LIMITATIONS**

This questionnaire is yet to be tested on a general sample of adolescents though the researchers intend to do so. A pilot study using a test-retest reliability to ensure the stability of the instrument over time will be of research value. Such experimentation would have provided a means for comparison between the validation testing and an actual research with a wider range of sample. Beyond that, it may have opened up areas of dichotomy between in-school and out-of-school adolescents and broaden understanding. At the moment, this is not so. In the absence of what has been stated, it would still have been more empirically

rewarding if a similar questionnaire was used so as to test for both convergent and divergent validity.

**CONCLUSION**

From the evidence provided on its basic psychometric elements, the 13-item Alcohol Advertisement impact Questionnaire is a reliable and valid tool for use among in-school adolescents. It is a ready tool in evaluating the impact of alcohol advertisement especially on in-school adolescents.

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