

An evaluation of the volume and concentration of alcoholic beverages offered for sale in Port Harcourt, South-South Nigeria

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ABSTRACT

Background: One of the strategies for tackling alcohol-related problem is education and persuasion on how to drink alcohol in moderation. This is often facilitated by the introduction of a standard alcoholic drink measure, and a recommended daily alcohol consumption limit. The objective of this study was to evaluate the volume and alcohol concentration of alcoholic beverages offered for sale in Port Harcourt, with a view to establishing their suitability in the growing effort to achieve moderation in alcohol intake.

Methods: The study was carried out in ten beer bars in various parts of Port Harcourt, using a descriptive cross-sectional study design. Data collection was done using a semi-structured questionnaire, and field observations. The questionnaires were administered on the proprietors of the beer bars and their attendants, while the field observations were carried out using a checklist.

Results: A total of eight different brands of industrial beer were most commonly offered for sale. All the brands were in 600ml bottles, except the stout variety that also had a smaller 330ml bottle. The alcoholic content of the brands ranged from 4.7% to the 7.5%, while the alcohol concentration per bottle ranged from 19.3g to 35.6g. All the brands had their alcoholic contents written on their labels, but none had any health warning. Only two out of the ten proprietors were aware of the Liquor licensing law, but none obtained a license before opening their businesses.

Conclusions: The alcoholic content of the standard bottle of beer sold in Port Harcourt is high. A legislation that would restrict beer bottles to a 330ml capacity is therefore recommended.

Keywords: Alcohol content, Standard drink measure, Sales regulation, Port Harcourt

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INTRODUCTION

Alcoholic beverages are used for various social and religious activities in Nigeria; they are used to entertain visitors, at engagement and marriage ceremonies, to signify the settlement of a quarrel, and at funerals, amongst other social and religious engagements^{1,2}. Alcohol related problems were however kept at a minimal level by some cultural checks and

balances. There was often an unwritten prohibition of alcohol use by women and children; while excessive use by adult men were met with sanctions, including verbal disapproval, and even debarment from drinking for a certain period of time³. Also the ritual associated with drinking was often hierarchical, with the traditional wine cup passing round the communal drinking group according to age and title. This restricts the quantity served to each person, and ensures that the young are shielded from drinking beyond what they can handle¹.

However, alcohol-related problem began to manifest in several Nigerian communities during the slave trade period, when trade spirits were even used to barter for slaves. The extent of drunkenness was so much in Africa that it was discussed at the 1889 Brussels Conference of the European Colonial powers. This led to the signing of the Brussels Act of 1892, in which the signatories agreed to a total prohibition of alcohol sale to natives⁴.

Alcohol-related problem has since assumed pandemic proportion. According to the 2002 World Health Report, alcohol worldwide is responsible 3.2% of all deaths, and 4% of the global disease burden measured in DALYs; which is higher than the 3.7% attributed to poor water and sanitation, and compares well to the 4.1% attributed to tobacco use⁵. In Nigeria, the village drunk can now be found in most communities in Nigeria⁶, even as sporadic heavy or "binge" alcohol drinking has continued to make Nigeria one of the countries with the highest per capita rate of Road Traffic Accidents in the world⁷. The escalation of alcohol-related health and social problems in Nigeria coincides with the displacement of the traditional alcoholic beverages by industrial beer as the favourite alcoholic drink of Nigerians⁸.

One of the strategies for tackling the problem of alcoholism is education and persuasion on how to drink alcohol in moderation. This is often facilitated by the introduction of a standard alcoholic drink measure, and a recommended daily alcohol consumption limit^{9, 10}. Manufacturers of industrial alcoholic beverages were expected to package their products to facilitate the observation of the recommended alcohol consumption limit; while the sale of alcohol is restricted to ensure that drinkers keep to the recommended safe limits. It is thus expected that alcoholic beverages would be dispensed in single alcohol unit containers, while products designed for multiple use would have the total alcohol units they contain clearly indicated on the containers, to guide consumers. This study examined the situation in Port Harcourt, one of the most cosmopolitan cities in Nigeria, and the capital of the oil-rich Rivers State. It also assessed the level of compliance to

the various provisions of Nigeria's Liquor Licensing law.

MATERIALS AND METHODS

The study was carried out in ten drinking bars in various parts of Port Harcourt. The bars were conveniently chosen, but care was taken to represent all sections of the city, especially the inner city and high-brow areas.

A descriptive cross-sectional study design was used for the study; with the data collected using a semi-structured interviewer-administered questionnaire, and field observations. The questionnaires were administered to the proprietors of the beer bars and their attendants, and collected data on the brands of bottled industrial beer sold in the bars, the size of their bottles, and their alcoholic content. The respondents were also asked questions related to the provisions of the Liquor Licensing law, particularly the maximum bottles of beer they could sell to a client in a day, and whether they could sell a beer to an obviously drunk customer.

The field observations were carried out using a checklist, and were designed to revalidate the information collected from the respondents of the questionnaire. They were also used to examine the labeling of the beer bottles, to ascertain if they contained any health warning, or information on the responsible use of the beverage.

RESULTS

A total of eight different brands of industrial beer were offered for sale. Table I shows the different brands, their bottle sizes, and their alcoholic content. All the beer brands were in 600ml bottles, except the stout variety that also had a smaller 330ml bottle, aptly called "small bottle". The alcoholic content of the beer brands ranged from 4.7% found in the Grand lager beer, to the 7.5% found in the stout brands; while the total alcohol content of the beer bottles ranged from 19.3g in the 330ml stout bottles, to 35.6g in the 600ml stout bottles. All the beer brands had their alcoholic contents written on their labels, but none had any health warning.

Only two out of the ten proprietors (20%) were aware of the Liquor Licensing law, but none obtained a license before opening their businesses; and had never been visited by the regulatory authorities to check their compliance to the law. None of the bar attendants had ever heard of the Liquor Licensing law; none knew of the maximum number of bottles to be sold to a customer within a 24 hour period, and would continue to sell, provided the customer has the money to pay, and do not show any obvious sign of drunkenness.

Table I: The brands of beers offered for sale at the bars

Beer brand	Bottle size	Alcoholic content	Total alcohol content (g)
Heineken lager	600ml	5%	23.7g
Gulder lager	600ml	5.2%	24.6g
Legend stout	600ml (big bottle)	7.5%	35.6g
	325ml (Small bottle)	7.5%	19.3g
Star lager	600ml	5.1%	24.2%
Harp lager	600ml	5.15%	24.4%
Guinness stout	600ml (big bottle)	7.5%	35.6g
	325ml (Small bottle)	7.5%	19.3g
Grand lager	600ml	4.7%	22.3g
33 lager	600ml	5%	23.7g

DISCUSSION

The study showed that most of the industrial beers in Port Harcourt were sold in 600ml bottles that contain a minimum of 22g of alcohol. This is up to the daily recommended limit for adults and more than the recommended weekly limit for pregnant women¹⁰. It is also probably the highest standard alcohol drink measure in the world, much more than the 8g of alcohol in the United Kingdom, the 10g in Australia and New Zealand, and the 14g in United States of America¹⁰. This very high standard alcohol drink measure is unhealthy, as epidemiological data suggest that the risks of alcohol-related problems increase significantly when consumption exceeds 20g of pure alcohol per day¹¹. It also facilitates binge drinking, by forcing drinkers to drain their drinks, to at least avoid wastage⁹. A 1988 study by the International Council for Alcoholism and Addiction (ICAA) had found that alcohol drinkers in Nigeria consume more industrial beer in one drinking episode than if they were drinking the traditional alcoholic beverages¹². Studies elsewhere have also been consistent in their findings that beer encourages binge drinking^{13, 14}. In view of these, it would not be out of place to ask that beer be sold in 330ml bottles in Nigeria that contain approximately one unit of alcohol, as done in several countries, including some neighboring African countries^{15, 16}.

Also, it is becoming a standard practice in some countries for alcoholic beverages to carry health warnings, together with information on their total alcohol content, in standard alcohol units; not just their percentage alcohol content⁹. Yet, no health warning was found on any of the beer bottles assessed during the study; perhaps because the brewers of industrial beer in Nigeria would still want their products to be seen as health tonics^{4, 16}.

It is imperative for the relevant authorities in Nigeria to strictly regulate the activities of breweries in Nigeria, in view of the current state of poor regulatory activity¹⁶. This is of vital importance as the study also showed a poor knowledge of the Liquor Licensing law which is perhaps the only subsisting legislation guiding alcohol sale in most States in Nigeria. Although the law can at present be described as a colonial relic designed to raise revenue through alcohol tax, its importance in restricting alcohol sale is still needed. A study carried out between 1985 and 1988 when alcohol was restricted in Russia had revealed that for every one liter drop in per capita alcohol consumption, there can be as much as a 2.7% decline in age-standardized mortality¹⁷. But even as the strict enforcement of the Liquor Licensing law is being advocated, several sections of it need to be amended, such as the section that pegged the maximum number of bottles to be sold to an individual within a 24 hour period, at twelve 600ml bottles; a whopping 264g of alcohol, and ten times the recommended daily limit for an adult male¹⁰. The task of bringing the relevant alcohol policies in Nigeria in line with international best practices should be the priority of regulatory agencies like NAFDAC and Standards Organization of Nigeria.

CONCLUSION

Industrial beer brands in Nigeria are sold in 600ml bottles that contain a minimum of 22g of alcohol, and have no health

warning. These make low risk drinking difficult, and hamper interventions for the effective treatment of alcoholics. A legislation that would restrict beer bottles to a 330ml capacity is hereby recommended.

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CONFLICT OF INTEREST: None.