Labeling and Certification on Commonly Consumed Beverages in Nigeria: Are They Adequate?

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Abstract: The patterns of product labeling are deemed very important with regards to consumer health. This and other related issues have not received proper attention in developing countries. This informed the need of this study. The aim of the present study is to determine the patterns/adequacy of labeling on food drinks and beverage samples. Fifty most commonly consumed food drinks and beverages in Nigeria were used for the study. All the product labels/inscriptions were reviewed and recorded. Final results were recorded in numbers/percentages in a table. The result show that 94% of the products have their expiry date written, 56% has manufacturing date given on the containers/packs. 48% was registered by regulatory agencies. 48% had information on the nutritional value of the drinks. 34% of products were labeled in foreign languages other than English. 66% had information on how to handle the container after use while 38% had information on directions of use and method of serving. 98% had the volume/net weight of their liquid content stated. The observed pattern show that nearly 50% of the samples studied met the prescription of the Standard Label Format used.

Key words: Labeling · food drinks · beverages · Nigeria

INTRODUCTION

Labeling refers to provision of information describing what a product is, how it is meant to be used and any other relevant description that may benefit the producer or consumer of such a product. Common forms include inscriptions on paper attached to containers and that on the containers themselves. Certification is the act of endorsing or authenticating that a certain product has met the desired requirements, by means of issuing a certificate or a seal on the product label/container.

It has been shown that some pharmaceutical and household products met the requirements set by the Standard Organization of Nigeria (SON) and the National Agency for Food and Drug Administration Control (NAFDAC) among many other products that did not meet the standard in one study [1]. Earlier studies revealed that inadequacy of product labeling occurred in up to 85% of the samples reviewed [2]. It is feared that some cases of poisoning, misuse and unhealthy disposal of products might have been due to inadequate or improper labeling of products [1, 3]. Its importance has also necessitated the Food and Drugs Administration (FDA) to reiterate the demand for detailed information on the package labeling of products [4].

The present study investigated the suitability of the product labels and certification on common food drinks and beverages in Nigeria, whether they meet or deviate from the prescriptions of a Standard label format. The goal is to advise the appropriate regulatory bodies in a bid to ensure consumer health protection.

MATERIALS AND METHODS

Fifty consumable liquid samples were utilized in this research work. Among these samples are fruit juices, beverages such as milk, yoghurt, malt drinks, chocolate drinks, mineral water etc. They represent the most commonly consumed products in Nigeria.

Standard Labeling Format with several criteria was used to check the adequacy of product labeling with a view to establishing the compliance pattern of the manufacturers to proper labeling. The criteria used include: Source of product - whether local or foreign; Proper documentation of the manufacturer’s particulars; Adequate information on ingredients, type of colorings, preservatives and flavorings used in the manufacture of the products; Adequate information on nutritional facts/calorie contents; Inclusion of information on Recommended Daily Allowances (RDA) values of nutrients and elements on the labels; Directions on use and method of serving; Properly indicated manufacture and expiry dates; Directions on safe disposal/recyclability of containers; Documentation of the volume per pack /net weight; Clarity/legibility of print type/size...
Table: Results

<table>
<thead>
<tr>
<th>Criteria considered</th>
<th>No. of products meeting the requirements</th>
<th>Percentage of products</th>
<th>No. of products not meeting requirement</th>
<th>% of Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper documentation of manufacturers particulars-source and distribution of products</td>
<td>50</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Adequate information on ingredients, coloring, preservatives flavorings</td>
<td>50</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Adequate documented nutritional facts/calorie content</td>
<td>24</td>
<td>48</td>
<td>26</td>
<td>52</td>
</tr>
<tr>
<td>Directions on use and method of serving</td>
<td>19</td>
<td>38</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>Availability of well-indicated manufacture/expiry dates</td>
<td>47</td>
<td>94</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Certification/Endorsement by Regulatory Agencies -Foreign/Local endorsement</td>
<td>24</td>
<td>48</td>
<td>26</td>
<td>52</td>
</tr>
<tr>
<td>Inclusion of information on RDA/RDI values of nutrients and elements</td>
<td>12</td>
<td>24</td>
<td>38</td>
<td>76</td>
</tr>
<tr>
<td>Information on safe disposal/recyclability of containers</td>
<td>33</td>
<td>66</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Indication of volume/weight</td>
<td>49</td>
<td>98</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Presence of additional language -foreign and Local</td>
<td>17</td>
<td>34</td>
<td>33</td>
<td>66</td>
</tr>
</tbody>
</table>

Keys:
1. Complete information on ingredients. Incomplete information on coloring, preservative and flavorings.
2. 94% recorded expiry dates. 56% documented manufacturing date.
3. 44% NAFDAC, 2% by SON, 10% by foreign Agencies.
4. Given RDA/RDI values for vitamins. Values for trace metals not reflected.
5. All additional languages are foreign-No local Nigerian language.

DISCUSSION

The Food and Drugs Administration (FDA) mandates that a product be hundred percent fruit juice for a product to be labeled as a fruit juice. For juice reconstituted from concentrate the label must state that the product is reconstituted from concentrate [5]. Alderman et al. [2] showed that inadequacy in product requirements occurred in 85% of reviewed labels. Issues and implications of labeling are very topical to the point that some consumers’ associations have accused manufacturers of obeying the spirit but not the letter of the law on labeling.

In 1992, Orisakwe [1] showed that 23% of Nigerian-made products (pharmaceuticals and consumables) met the set label requirements [1]. In the index study, there was mention of the method of disposal of the packs in 66% of the samples surveyed. The environmental impact of product packs is very important considering the poor waste disposal culture in Nigeria and the general dearth of good recycling plants and incinerators in developing countries. Giving adequate information as regards to the method of disposal of packages will help developing countries cope with the littering pandemic experienced in these countries.

It is generally believed that food drinks are rich in vitamin C and minerals and as such should be part of an average diet. Authorities in pediatrics suggest inclusion of fruit juices in feeding regimen for developing countries [7]. However, though juice consumption has some benefits, it also has potential detrimental effects [5]. Many of the products have high contents of fats and refined sugar, which have been blamed for the causation of cardiovascular diseases and obesity. Surprisingly only 48% of products studied have information on
the nutritional content of the products. 24% of the labels carry information stating the level of nutrients like vitamins in the products compared to the Recommended Daily Allowances/Intake (RDA/RDI). None of the product suggested that trace elements contribute to the detectable part of the contents. This is important, as our analysis has revealed high levels of trace/heavy metals in the products [8].

The study showed that thirty-four percent of the packages were labeled in foreign languages like Arabic, German and French in addition to English language but none was labeled in any local Nigerian language. Since a reasonable part of the Nigerian population is semi-literate, labels in local languages will help people appreciate the contents of the product they consume. Manufacturers like Cadbury Nigeria PLC, makers of Bournvita - a powdered beverage product is already doing this, with their products bearing labels written in the three main local languages in Nigeria, namely Igbo, Hausa and Yoruba. Only ninety-four percent of reviewed labels indicated expiry date and fifty-six percent indicated the manufacture date. Consumption of expired products is a potential source of poisoning in developing countries. This study also shows that some manufacturers do not see the need to indicate date of manufacture and batch number of their products. Fifty-two percent of the samples were certified by regulating authorities viz: NAFDAC (44%), SON (2%) and foreign agencies (10%). Compared to Alderman’s work [2], our results show an improvement in product labeling from 15% to approximately 50%. Orisakwe [1] had reported that only 23% of reviewed labels met the requirements. This also, compared to our findings, show that there is improvement over time in patterns of product labeling. However the current level is not yet adequate.

Proper products labeling and implications of labeling on consumer health need the attention of everybody. We advise therefore that the SON and NAFDAC consider these issues in their bid to ensure adequate protection of consumer health.

ACKNOWLEDGEMENTS

The ZETA-12, (greatzeta12@yahoo.com) a group of undergraduate medical students of Nnamdi Azikiwe University, Nnewi Campus, Nigeria (Maduabuchi John-Moses U., R. Aloke Uchemma, O. Adigha Ese, N. Afuba Anthonia, N. Nzegwu Christine N, Sr., A. Onubueze Ogochukwu, N. Ezomike Chinonso, M. Orji Tohechukwu, C. Uneze Nkemakolam, N. Oguh Lawson, N. Okoye Paul, P. Okonkwo Ikemefuna and I. Oragwu Chikelue) wish to express our gratitude to our lecturers and the Director of ACET Technologies Ltd, for their financial contributions to this work. We also thank the Medical Students’ Research Group, MESREG for bringing us together.

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