

# Attention and use of Food Pack Information on Baby Formula Products among Nursing Mothers in Anambra State

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**Abstract:-** The information section as found especially on Front-of-Pack and Back-of-Pack of packaged food have today served as an ‘on-the-spot’ medium for the dissemination of information on what the consumer is offered nutrient-wise. Anchored on Health Belief Model and Theory of Reasoned Action, the aim of this study was to determine the attention and use of food pack information on baby formula products among nursing mothers in Anambra State, in addition to factors that could influence attention and use. In order to achieve these objectives, a mixed method approach of Survey and Focus Group Discussion was adopted; while quantitative data was collected from a sample of 390 women selected through simple random sampling, another 12 was selected through snowballing for Focus Group Discussion which elicited qualitative data. Findings from the study showed that majority of the respondents had observed the information section on baby formula packs. In addition, majority of the respondents who stated that they had observed information on baby formula packs stated that they attempted to read it. However, majority of the respondents who stated that they read information baby formula packs stated that they read causally. More so, findings from the study showed that such factors as technicality of language, health beliefs, literacy limitations, little regard for information and illegibility of text influenced attention and use of information on baby formula packs. Based on these findings, the study recommended that government and non-governmental health bodies should organize campaigns to sensitize nursing mothers on the need to read information on baby formula packs.

## I. INTRODUCTION

Although such regulatory bodies as the World Health Organization recommend exclusive breastfeeding for the first six months of a baby’s life, and supplemental breastfeeding for up to two years, or more due to the antibodies, hormones and enzymes contained in breast milk (WHO, 2013), many mothers still choose infant formula as an alternative to the former. This choice is mostly due to mother’s health, baby’s inability to breastfeed due to birth defects and mother’s personal preferences and health beliefs.

To ensure its optimum use, the information section as found especially on Front-of-Pack, Back-of-Pack and inside the packs of infant formula products have today served as an ‘on-the-spot’ medium for the dissemination of information on what babies are offered nutrient-wise. The calorie, sugar, carbohydrate, protein, fat and other content of food have been presented as information on the labels to enable mothers make healthier food choices for their babies (Prathiraja & Ariyawardana, 2011). Information on the nutritional value of food for instance has since been made compulsory for food manufacturers due to the need to prevent and treat diet-related diseases and has thus become an indispensable part of today’s food consumption (Singla, 2010).

However, the availability of information on food pack labels does not guarantee its use among consumers especially as it concerns purchase decision which is arguably the starting point of consumption. There is evidence that even though consumers see nutritional value information on labels, there is no guarantee they will consider it when purchasing and consuming food (Hoefken, Lachat, Kolsteren, Van Camp & Verbeke, 2011; Prathiraja & Ariyawardana, 2011). The factors that can influence use of food pack information especially as it concerns purchase decision can offer an explanation for this non-use. Against this backdrop, this study aims at finding out how nursing mothers in Anambra State pay attention and use information on baby formula packs and factors that can influence attention and use.

## II. STATEMENT OF THE PROBLEM

Nursing mothers choose to formula feed their babies for different reasons and product information on infant formula is vital for correct choice of formula and method of use by nursing mothers. Labels on processed food packs generally provide a source of health-related information to consumers to enable them compare products. It can also be their first exposure to a health related issue, which helps them make healthy food choices.

However, studies have shown that consumers may not pay attention to nutrition labels and may ultimately not use them. This is in part due to such factors as education, household size, health consciousness, nutrition knowledge, age and gender (Aprile & Annunziata, 2005; Prathiraja & Ariyawardana, 2011). This could be due to confusion that

can arise while reading information. More so, the consumers' ability to interpret it accurately reduces as the complexity of the task increases (Annunziata & Vecchio, 2012).

Unfortunately, there seems to be a paucity of findings on the extent to which nursing mothers in Nigeria pay attention and respond to information on baby formula packs. This study notes that despite the attention nutritionists and doctors have given to issues of child malnutrition in Nigeria, there seems to be no framework for the study and understanding of how nursing mothers pay attention and respond to information on baby formula packs and packaged food generally. This constitutes a knowledge gap which becomes all the more important considering the vulnerable state of children and the findings from studies conducted by such scholars as Nwaru, Onyeka, Ndiokwelu, Esangbedo, Ngwu & Okoli (2012) which show that almost half of child deaths are due to mothers' inadequate knowledge, inappropriate health behaviour or both, with poor knowledge, awareness and practices regarding infant feeding contributing significantly to these deaths.

Therefore, this study focuses on finding out the extent to which nursing mothers in Anambra State pay attention and respond to information on baby formula packs, in addition to factors that can influence attention and response. This study is significant as its findings will help advertisers and health campaigners to target mothers who bottle feed their babies but who do not pay attention to information leaflets with more and effective and helpful messages. More so, findings from this study will help Nigeria's Ministry of Health to formulate policies on baby formula use by nursing mothers.

### III. OBJECTIVES OF THE STUDY

The purpose of this study was to assess the attention and use of food pack information on Baby formula products among nursing mothers in Anambra State. Stated differently, the research was interested in understanding how much nursing mothers in Anambra State read and utilize this information. In precise terms the objectives of the study are as follows:

- To assess the proportion of nursing mothers in Anambra State who pay attention to information on baby formula packs;
- To explore the use of information on baby formula packs among nursing mothers in Anambra State;
- To find out factors that can influence attention and use of information on baby formula packs among nursing mothers in Anambra State.

### IV. EMPIRICAL REVIEW

Studies have focused on the attention and use of packaged food labeling or information on packaged food labels. One of such as conducted by Jacobs (2010) was designed as a quantitative study. The respondents were 546 randomly selected women in Cape town, South Africa. Data for the study were collected in supermarkets which

were chosen as the appropriate site for data collection since the consumers who buy from such places tend to consult food labels during purchase of pre- packaged foods. The researchers observed that consumers have different motivations in searching for or using information on food labels according to the perceived risk they associate with the use of a particular prepackaged food. The study further documented that large proportion of consumers read food labels but they do not necessarily have an understanding of how to maximise the benefits of reading food labels.

Washi (2012) conducted a study in the UAE to explore consumers' knowledge, attitude and practice towards food labeling. The study adopted a qualitative method and data was gotten from 2 focus groups of 12 participants each. Findings from the study showed that production and expiry dates were the necessary information preferred by consumers, a fact that indicated their concern about the risk of consuming expired foods. Nutrition information (calories and low cholesterol) was given attention by many consumers. They also expressed concern about the country of manufacturing which indicates that they are concerned about buying foods from preferred sources. The researchers concluded that there is need to raise level of awareness of consumers especially on nutrition aspects of food labelling in order to assist consumers to make healthy choices of food.

Gwantan (2012) conducted a research in Ilala Municipality on awareness of food labelling and use of the information in purchasing pre-packaged food among consumers. Two Hundred and Fifty shoppers were randomly selected for the study and copies of questionnaire were used as instruments for data collection. Findings from the study showed the extent of reading food labelling before purchase of pre-packaged foods was relatively high as 195 (93.8%) of the study participants reported to read labelling information prior purchase of pre-packaged foods. However, this high extent of reading food labels did not reflect the awareness and use of the information in purchasing pre-packaged foods. On the other hand, this high proportion, as the researcher notes, could possibly be attributed by the supermarket settings since consumers who buy from such places tend to encounter food labels because normally they pick products from shelves by themselves.

However, Gwantan's report states that this is different from 24.7% of respondents who 'always' read food labels and 42.0% who 'sometimes' read food labels as reported by Jacobs (2010) in South Africa. Findings from his study revealed that only small proportion 57 (27.4%) of respondents were very much informed about food labelling. In addition, the computed awareness scores based on the number of items respondents declared to be familiar with, among the previously mentioned basic food labelling information that are normally found on food labels showed that only 49 (23.5%) of respondents had high awareness on food labelling. A study by Washi (2012) in the UAE reported similar low level of awareness on food labelling. However, this is different from 80% awareness in the USA, as reported by Rodolfo (1999) and 83% awareness on

nutrition information as documented by Borra (2006) in the USA. In Lesotho, Mahgoub *et al* (2007) reported 59.6% food labelling knowledge and 63.8% utilization of the knowledge in shopping for pre-packaged foods among consumers. Results of his study also showed that, level of education and type occupation of respondents had statistically significant association with awareness and use of food labelling information. This finding is similar to what Jacobs (2010) reported in South Africa and Mahgoub *et al* (2007) in Lesotho.

Contrary to Gwantwa's findings, Washi (2012) reported that there was no statistically significant relationship between level of education and level of awareness on food labelling among food consumers in the UAE. Similarly, results from the studies conducted by Gellynck, Verbeke & Vermeire (2006) suggested that social demographics variables such as occupation, gender and education were less important in explaining consumer variability in reading and using food labelling information.

In a Nigerian study, Falola (2012) focused on food label use among consumers. His study examined perception of Nigerians about food labels using Kwara State as a case study. His objectives were to: describe the socio-economic characteristics of food shoppers in the study area, examine their opinion about food labels, and determine factors influencing willingness to read food labels by the respondents. The results of his research showed that the respondents opined that food labels were used mainly for traceability, registration status of the food producer, advertisement, as a legal requirement, to know the expiry dates and to distinguish the product from that of other competitors. Results of his analysis also revealed that women were more willing to read food labels than men, and positively related to age of respondent, household income level, educational status of food planner and nutritional knowledge of the food planner. However results also showed that, willingness-to-read food labels by the respondents declined with household size and number of preschool children, comparing this with the result of Gwantwa's study carried out in Ilala Municipality, there is significant relationship between the age, gender and level of education of the study subjects in utilisation of food label information and contrary to the findings of Philip *et al*, that socio demographic variables has little influence on consumers reading and use of food label.

Edem, Nzonzi and Richardson (2013) carried out a survey on exploring consumers' knowledge and use age of label information in Ho municipality of Ghana their survey examined the relevance of label reading and consumer product choice within the Ho Municipality in Ghana. A descriptive univariate analysis was used by the researchers. Self-administered questions were completed by 1,800 respondents, selected using both proportional quota and convenience sampling techniques from supermarkets and small stores. The study revealed low level of label reading among consumers on the basis of gender and age categories. Furthermore their results showed that, for those

who read, there is a strong link between label information or knowledge and their purchasing behaviour.

In a study conducted by Alsaddah (2014), findings showed that consumers especially college students read nutritional labels on pre-packed food. However, many of them disbelieved the information and nutritional claims on it. Findings from the study showed that overall, knowledge and utilization of nutrition labels among the students was poor. This lack of knowledge and utilization of the labels according to her findings might be due to the lack of nutrition education and practices specific to labels use.

## V. THEORETICAL FRAMEWORK

Admittedly, this study is conceptualized based on the assumption that nursing mothers are active and discerning vis-a-vis information on baby formula packs. Therefore, to place this study in proper theoretical framework, the researcher proposes the Health Belief Model (HBM) and the Reasoned Action Theory.

The Health Belief Model and Reasoned Action Theory help to explain why a food consumer may or may not pay attention to information on baby formula packs. HBM emphasizes a person's perceived disadvantages and advantages of a health action as the major motivating factor. Thus, if a food consumer perceives reading information on baby formula packs as helpful for healthy food intake and failure to read it as potentially detrimental to these, then they are likely to pay attention to the nutritional information. The same thing obtains with the extent they perceive themselves as capable of reading and comprehending the nutritional information. In a nutshell, a food consumer's health beliefs or perceptions are critical to how they approach nutritional information i.e. whether they consider it as something that deserves attention or not.

Similarly, from the perspective of the Reasoned Action Theory, such a user is likely to pay attention or not to information on baby formula packs based on the outcomes the individual expect from performing the behaviour (Miller, 2005). In other words, if the individual expects healthy food consumption as outcome, he or she would be motivated to give their attention to the nutritional information. However, their intention to pay attention will translate to behaviour only when the requisite conditions are met – correspondence, stability and control.

## VI. RESEARCH METHODOLOGY

A mixed method approach involving survey and Focus Group Discussion were adopted for the study. The researcher used both quantitative (survey) and qualitative research (Focus Group Discussion) approaches in the study in order to elicit rich insights.

The study focused on nursing mothers in Anambra State. More specifically, for the purpose of data manageability, it was focused on nursing mothers who attend Post Natal sessions in selected federal and state

government hospitals in Anambra State. The research population for the study was all nursing mothers, who attend post natal session from the month of June, 2018 to the month of March, 2019. The population of nursing mothers as obtained from the hospital’s National Program on Immunization (NPI) department within the aforementioned period is 14,743.

Anambra State comprises of three senatorial zones: Anambra North; Anambra Central; and, Anambra South. A purposeful decision was made to select the three major health facilities from these zones. Accordingly, Onitsha General Hospital was chosen from Anambra North Senatorial Zone. More so, Anambra State University Teaching Hospital, Awka, was chosen from Anambra Central Senatorial Zone; and, Nnamdi Azikiwe University Teaching Hospital, Nnewi was chosen from Anambra South Senatorial Zone. A sample of 390 was drawn from the study population of 14,743. This sample was arrived at using Taro Yamane’s formula ( $n=N$ ) for determining sample size.

The systematic sampling procedure was adopted to arrive at the individuals who were the final respondents. To achieve this, the researcher prepared a comprehensive list of all nursing mothers present at each post natal session, numbering from 1 to the last individual. Using every fourth individual as the sampling interval, the table of random digits was used to select the required number of respondents from each of the selected hospitals.

However, the sample size of 390 was proportionally divided among the selected hospitals using the formula:

$$R = \frac{I \times S}{N}$$

Where R = number of respondents allotted to a secondary school

I = student population of the senior classes

N = total population of the three institutions sampled

S = sample size

Thus R =

For Anambra State University Teaching Hospital, Awka, R will be:  $\frac{4191 \times 390}{14743} = 111$

$$14743 = 111$$

For Nnamdi Azikiwe University Teaching Hospital, Nnewi, R will be:  $6145 \times 390$

$$14743 = 162$$

For General Hospital, Onitsha, R will be:  $\frac{4407 \times 390}{14743} = 117$

For qualitative data, focus group was also chosen because it suits health research that seeks to explore complex issues and to collect in-depth data at little cost (Kreuger, 1988; Carey, 1994). A focus group was conducted with a total of 12 nursing mothers living in

Awka, Anambra, Nigeria. Inclusion criteria for participation in the study were the nursing mothers who had bought a baby formula product at least two months before the time of the study. It was assumed that recency in purchase of baby formula products would enable the participants provide more useful responses.

The discussants were gathered through the snowball technique where one contact generated further contacts. Therefore, in the focus group, the participants knew each other to varying degrees. This had the advantage of making the focus group have natural settings which enhanced the quality of the data. The ages of the participants ranged from 20 to 40 years. The focus group took place on February 5, 2019 and lasted for two (2) hours at an approved hall in Anambra State University Teaching Hospital, Awka. The same Focus Group Discussion guide, as derived from the objectives of the study, was used to facilitate each group. This ensured some comparability between the groups despite the questions being open-ended to encourage in-depth discussion and to allow the researcher some flexibility to explore specific issues raised in the course of the group discussions. The discussion session were audio-taped and moderated by the researcher; while one facilitated the discussion, the other made field notes which were useful in the analysis of the data as it helped in the identification of speakers and their nonverbal communication. Before the commencement of each focus group, consent forms and information sheets were distributed, and the participants were allowed to ask questions about the study. All of the procedures to be adopted in the study were presented explicitly to the participants before they consented to participate in the study. They were also asked to fill copies of a demographic questionnaire. After the focus group discussions, the participants were asked to verify a verbal summary of key points to check for validity, as suggested by Krueger (2000).

The recordings from the focus group were transcribed verbatim and analysed thematically. The researcher listened to each tape and cross-checked the transcripts and field notes to ensure accuracy. The transcripts were then coded. Each phenomenon was labeled as it occurred and the context, frequency, specificity and elaborateness of each response were noted. This way, patterns, themes, in addition to contradictions within each focus group were noted. Comparisons were also made between the groups. Quotations that best illustrated the main themes were selected for inclusion in the report. An academic colleague independently read the transcripts and identified the themes which were similar to those identified by the researcher. This provided a validity check for the data analysis. Ethical approval for the study was obtained from Anambra State University Teaching Hospital, Awka.

In order to maintain confidentiality, access to the data was restricted. Safe storage of data was also ensured during data analysis and the data was destroyed afterwards. More so, names were not attached to the transcripts. A summary of the report was later sent to all participating groups.

The instrument used for data collection for survey was a pre-coded thirty (30) item questionnaire. Copies of the questionnaire were administered face-to-face by trained research assistants and the researcher. More so, Focus Group Discussion guides were used in the focus group.

**VII. RESULTS**

Results from the survey which involved 390 respondents were as follows:

➤ *Response Rate*

A total of 390 copies of the questionnaire were distributed to respondents. However, 375 were returned by respondents, representing a return rate of 96%. The copies of questionnaire were collated and were analyzed.

➤ *Demographic Variables*

Data on the demographics of the respondents showed that 31% of them were aged between 30-35. This was followed by 30% who were aged between 24-29 and 23% who were aged between 18-23. Only 16% of the respondents were aged 38 and above.

With regard to the respondents' occupation, 52% of the respondents stated that they were government workers; while 15% stated that they were professionals who worked in private firms. In addition, another 11% of the respondents stated that they were housewives and 9% stated that they were traders. The respondents also gave answers on their marital status. As shown on Table 2, majority of them (87%) stated that they were married; while 6% stated that they were widows. In addition, 3% described themselves as single, and 2% stated that they were separated. Furthermore, of the 375 respondents, 45% (N=170) stated that they had first degrees/HND; while 22%, 16%, 11% and 6% stated that they had OND/NCE, SSCE/equivalent, First School Leaving Certificates and Postgraduate degrees, respectively.

Response	Frequency	Percent
Yes	302	80.0
No	73	20.0
<b>Total</b>	<b>375</b>	<b>100.0</b>

Table 1:- Respondents' purchase of baby formula products

Table 1 presented data on respondents' purchase of baby formula products. As shown in the table, 80% (n=302) of the respondents had purchased a baby formula product, while 20.0% (n=73) have not. This result suggests that the use of baby formula products is common among the sampled women despite recommendations for exclusive breastfeeding.

Response	Frequency	Percent
Yes	289	95.0
No	13	5.0
<b>Total</b>	<b>302</b>	<b>100.0</b>

Table 2:- Respondents' observation of information section on baby formula packs

Table 2 presented data on the proportion of respondents who have observed the information section on baby formula packs. As shown on the table, 95.0% (N=289) stated that they observed the nutrition information section on baby formula packs; while 5.0% (N=13) stated that they have not. This result suggests that information sections are common on baby formula packs.

	Response	Frequency	Percent
Respondents' attempt to read information on baby formula packs	Yes	250	86.0
	No	39	14.0
	<b>Total</b>	<b>289</b>	<b>100.0</b>
Respondents' extent of reading information on baby formula packs	Interestedly	79	31.0
	Casually	171	69.0
	<b>Total</b>	<b>250</b>	<b>100.0</b>

Table 3:- Respondents' reading of information on baby formula packs

Table 3 presented data on the number of respondents who attempt to read nutrition information on baby formula packs and their extent of reading. As shown in the table, of the 289 that had stated that they had observed information on baby formula packs, 250 (n=86.0) attempted to read, while 39 (n=14) did not. More so, the table showed that majority of the respondents (69.0%) who stated that they read nutrition information baby formula packs stated that did so casually, while 31.0% stated that they did so interestedly. The implication of these results is that the respondents are generally health conscious since majority of them attempt to read information on baby formula packs. However, majority of them may not benefit out rightly from food pack information on baby formula products since they do not read it interestedly.

Qualitative data also showed that most of the respondents paid attention to the information section of baby formula packs. According to **Participant 1 (Civil Servant, 35)** *"I always pay attention to nutrition information on baby food. I check the container. I read any information I see on it..."*

Qualitative data also presented insights on why the respondents paid attention to information on baby formula packs. The participants shared a common view that the information was important for the good health of their babies. For them, reading the nutrition information can help them make healthier food choices that can help the prevention of diseases and ultimately save their babies lives. As stated by **Participant 2 (Student, 30)**:

*I read the information to see if it is the original one. I like to buy SMA gold and there are many imitations in the market these days so I need to pay attention to be sure of what I am buying. Those labels on baby formula are very*

important. When you read it, you will know what the doctor has recommended for your baby especially when you are not doing exclusive breastfeeding...

More so, in the course of the discussion, it was found that the respondents had the belief that babies were susceptible to diet-related diseases or diseases that can be aggravated by unhealthy diet. According to **Participant 4 (Housewife, 36)**, “We all know that babies are very fragile. If they don’t eat healthy food, they are more likely to suffer from a lot of diseases especially when the mother is not practicing exclusive breastfeeding...”

The focus group participants also shared a common view that diet-related diseases can be deadly for children. According to **Participant 5 (Civil Servant, 35)**:

*I have personally experienced the effect of feeding my baby with an infant formula that was not good for her. It made my baby lose a lot of weight. I almost lost him. I had a very sad experience. Since then, I have been very careful with what I feed him. I always look at information on baby food before I buy...*

Responses	Frequency	Percent
Yes	201	80.0
No	49	20.0
<b>Total</b>	<b>250</b>	<b>100.0</b>

Table 4:- Respondents’ adherence to directions stipulated on information section of baby formula packs

Table 4 presented data on the number of respondents who adhere to directions stipulated on information section of baby formula packs out of the number that stated that they attempted to read it. As shown on the table, 80%

(n=80) of these respondents stated that they adhered to directions stipulated on nutrition information section of baby formula packs, while (n=20) stated that they did not.

Responses	Frequency	Percent
Rarely	140	70.0
Sometimes	33	16.0
Often	28	14.0
<b>Total</b>	<b>201</b>	<b>100.0</b>

Table 5:- Respondents’ frequency of adherence to directions stipulated on baby formula packs

Table 5 presented data on the frequency at which the respondents who stated that they adhered to directions stipulated on the baby formula packs did so. As shown in the table, majority of the respondents who stated that they adhered to directions stipulated on baby formula packs

(70%; N=140) stated that they rarely did so. This was followed by the percentage that stated that they adhered to the directions sometimes (16%) and the 14% that stated that they often did so.

	Responses	Frequency	Percent
<b>Respondents’ reason for reading information on baby formula packs</b>	Health consciousness	185	74.0
	It is recommended by doctor/nutritionist	65	26.0
	<b>Total</b>	<b>250</b>	<b>100.0</b>
<b>Respondents’ baby formula of focus</b>	Popular baby formula products	42	18.0
	New-in-the market baby formula products	60	24.0
	Baby formula products I buy repeatedly	20	8.0
	Baby formula products I am buying for the first time	128	51.0
	<b>Total</b>	<b>250</b>	<b>100.0</b>
<b>Respondents’ major consideration when purchasing a baby formula product</b>	My baby’s health needs	230	92.0
	Price	20	8.0
	<b>Total</b>	<b>250</b>	<b>100.0</b>

<b>Position of nutrition information most likely to draw attention</b>	Information in front of baby formula packs	<b>232</b>	<b>80.0</b>
	Information inside baby formula packs	<b>23</b>	<b>8.0</b>
	Information at the back of baby formula packs	<b>34</b>	<b>12.0</b>
	<b>Total</b>	<b>289</b>	<b>100.0</b>

Table 6:- Factors that influence attention and use of information on baby formula packs

Table 6 presented data on the factors that influenced attention and use of information on baby formula packs among the 250 respondents who stated that they attempted to read this information. With regard to the respondents' reasons for reading information on baby formula packs, majority of them (74%; n=185) stated that the major reason why they read the information was health consciousness; while 26% stated that they read the nutrition information because it was recommended by a doctor/ nutritionist.

With regard to baby formula products which the respondents are most likely to read from, majority of the respondents (51%) stated they were most likely to read from baby formula products they were buying for the first time. This was followed by the 24% that stated they were most likely to read from new-in-the market baby formula products and the 18% that stated they were most likely to read from popular baby formula products. However, only

8% of the respondents stated that they were most likely to read from baby formula products they bought repeatedly.

Table 6 also presented data on respondents' major consideration when purchasing a baby formula product. As shown in the table, majority of the respondents (92%) stated that their major consideration when purchasing a baby formula product was their baby's health needs; while only 8% stated that their major consideration was price.

All the respondents who had stated that they observed information of the baby formula packs (n=289) were asked the position of information most likely to draw their attention. As shown in Table 6, 80.0% of these respondents stated that information on the front of baby formula packs were more likely to draw their attention; 8.0% inside the baby formula pack; and 12.0% at the back of back of baby formula packs.

<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
Illegibility of the text	140	48.4
My literary limitations	28	9.6
Technicality of the language	61	21.1
My little regard for the information	22	7.6
Poor eyesight	38	13.1
Total	289	100.0

Table 7:- Major factors that hinder attention and use of nutrition information on baby formula products

The respondents that stated that they observed information on baby formula packs were asked the factors that could hinder its use. As shown in Table 7, (48.4%; n=140) stated that illegibility of text could hinder them from paying attention and using nutrition information on baby formula products; (21.1%; n=61) technicality of the language used; 13.1% (n=38) poor eyesight; (9.6%; n=28) literacy limitations; and 7.6% (n=22) little regard for the information. The implication of this result is that despite the availability of information on baby formula packs, it may not be useful to the nursing mothers due to these major factors that hindered use and attention.

Similarly, qualitative data showed that most of the focus group discussants were of the view that illegibility of text used in presenting information of baby formula and technicality of language were the main factors that hindered its attention and use.

The respondents shared a common view that illegibility of text used in nutrition information and illiteracy were main factors that could hinder women from

reading of nutrition information. According to **Participant 8 (Civil Servant, 30)**:

*Those producers of baby food sometimes make their information very small. It is not easy to read except you strain your eyes. This will make a lot of people to just leave it. Onye nyoo ma ofuro ya, o rapu ya. The only information that is very clear atimes and always comes with illustrations is information on how to prepare the baby formula, how may spoons you have to put and the volume of water you need and all that. Apart from that, other information there come with tiny fonts...*

**Participant 12 (Professional employed in private firm, 38) stated that**, "Yes. The information can be very technical especially in the nutrition or ingredients section. A times you don't even know what they are talking about..."

The implication of these views is that even when the respondents are willing to use nutrition information, they are likely to be hindered by such barriers as illegibility of text and technicality of language.

**Interestingly however**, the views shared by the focus group discussants suggest that their perceived benefits of using information on baby formula packs outweighed their perceived barriers. According *Participant 1 (Civil Servant, 35)*:

*No matter how you look at it, it is better to try hard to read nutrition information than to allow your baby suffer from diseases as a result of unsuitable baby food or food that the doctor has advised us to avoid...*

The Health Belief Model suggests that for individuals to change to positive health behaviour, their perceived benefits of doing so should outweigh the perceived barriers. The implications of the respondents' view here suggests that generally, they would adopt positive health behaviour since they didn't see such issues as illegibility of text and technicality of language used on information as presented on baby formula packs as enough reasons for not using it considering the health benefits they can get from doing so.

This study also sought to find the relationship between respondents' age and education and their attempt to read nutrition information on baby formula packs. This was to provide richer insights and help any planned action especially with regards to designing targeted messages which this study intends to elicit. Findings showed that 80% of the respondents aged 38 and above stated that they attempted to read information on baby formula packs. This was followed by 64% of the respondents aged 30-35 and 33% of those aged 24-29. However, only 14% of the respondents aged 18-23 stated that they attempted to read the nutrition information. This result suggests that the older the respondents, the more interested they were in attempting to read nutrition information on baby formula packs.

The study also presented data on the relationship between respondents' education and their attempt to read nutrition information on baby formula packs. Findings showed that 86% of the respondents that had postgraduate degrees stated that they attempted to read nutrition information on baby formula packs. This was followed by the 83% of respondents who had first degree/HND and then 60% of those that had NCE/OND. However, only 34% and 26% of respondents that had SSCE/Equivalent and First School Leaving Certificates respectively attempted to read the nutrition information. This result suggests that with more education comes more interest to read nutrition information on baby formula packs.

## VIII. DISCUSSION OF FINDINGS

The first findings from this study suggest that information on baby formula packs has been made mandatory for manufacturers of baby formula products and they have adhered by presenting it on their products. This is evident as 95% of the respondents stated that they have seen nutrition information on baby formula products. However, the availability of this information is one thing and attention paid to it and the extent to which it is being

utilised is another. Literature has shown various reasons why nutrition information may not elicit desired positive results and have pointed at the factors that can affect individuals' attention and response to it. It was found in literature that such factors as legibility, comprehensibility, literacy and language can affect individuals' attention to health information. More so, use habit, which such scholars as Drichoutis, Lazaridas and Nayga (2014) opine affects purchasing behaviour mainly because consumers want to avoid the negative nutrients in food products, is also influenced by several factors. Nayga (1999) group these factors into the following categories: individual characteristics; situational, attitudinal, and behavioral; product class involvement; knowledge; motivation factors; and other factors like the format the nutritional information is presented. The factors that influence attention and utilisation of information as found in this study also fell considerable under these categories.

Findings from this study showed that 86% of the respondents who stated they had seen information on baby formula products attempted to read it and 69% of this number read it causally. With regard to utilisation, majority of the respondents (66%) who read information on baby formula packs stated that they did so before purchasing baby formula products. In addition, majority of these respondents (47%) rarely read information before purchase of baby formula products, while those that read sometimes and often were 30% and 23%, respectively. This result generally suggests that most of the nursing mothers were conscious of their babies health, and in a health belief sense, they had the perception, as confirmed by findings from the focus group, that they their babies were susceptible to diet-related diseases. More so, the diet-related diseases were also perceived as severe. These perceptions are most likely to make them seek information.

Findings from this study highlighted the reason why there were disparities in the use of information among the respondents. Such factors as illegibility of text, literacy limitations, technicality of language and little regard for the information were stated by the respondents as some of the factors that hindered their reading of information on baby formula packs. Some of these factors were mentioned by Drichoutis, Lazaridis, and Nayga (2005) and Nayga (1999) and were group grouped under such categories as individual characteristics; situational, attitudinal and behavioral factors. These factors were explicitly described in the Health Belief Model as 'barriers' which when perceived can hinder the adoption of health behaviour. However, for some of the respondents, these barriers were not enough to deter them from using information on baby formula packs which they see as important for the good health of their babies, and in this case, it can be said that perceived benefits has outweighed perceived barriers— a condition prerequisite for the adoption of beneficial health behaviour.

Furthermore, this study showed that utilisation of information varied with age and education. It was shown in the study that a higher percentage of the older respondents



and those of them that were more educated attempted to read information. This was also shown in the study conducted by Drichoutis et al (2005). Even though the higher educated individuals are less likely to perceive that reading labels makes it easier to choose foods, as found in qualitative data, this study, just like several others (Kim, Nayga & Capps, 2001; McLean-Meynsse, 2001; Drichoutis, Lazaridis & Nayga, 2005; Guthrie et al., 2010) also confirmed the hypothesis that higher educated individuals are more likely to use information on food packs. This, however, as shown in qualitative data, does not necessarily mean that the less educated do not engage in information search behaviors at all, but rather their focus may be restricted whereas the better educated individuals may look in-depth.

## IX. CONCLUSION

The essence of information on baby formula products is to ensure healthy diet for individuals, especially those in need of special diet such as babies. This is the reason why attaching necessary information is made mandatory for manufacturers of baby formula products. However, the presence of information alone is not what makes for good health. Though majority of the respondents admit attempting to read information on baby formula products which they perceive as important, and frequently too, they have faced illegibility of text and technicality of language as factors that could hinder them from using it.

This study argues that the respondents' predisposition to information generally, which is more likely to outweigh such issues as text illegibility and technicality, is what determines if they would use it or not. This assertion is backed by the Health Belief Model and Theory of Reasoned Action. While the Health Belief Model is based on the assumption that a person will apply a health related action, for instance, decide to read information on baby formula packs if that person feels that a negative health consequence such as disability or death can be avoided and has a positive expectation that by doing so he or she will avoid a negative health condition, the Reasoned Action Theory presents a perspective that a user is likely to pay attention nutrition information based on the outcomes the individual expects will come as a result of the behaviour (Miller, 2005).

The findings derived from this study build on existing literature on attention and use habit of information among consumers, (Kim, Nayga & Capps, 2001; Drichoutis, Lazaridas & Nayga, 2014) by focusing on the attention and use habit of nursing mothers and factors that can influence these. The study has shown that most nursing mothers attempt to read information on baby formula packs but are faced with illegible text and technical language. This study also presents age and level of education as intervening factors in the use of health information

In addition, the tendency of nursing mother's use of nutrition information to be pre-determined by such demographic characteristics as educational qualification

and age, calls for planned action by way of sensitization campaigns.

## RECOMMENDATIONS

The following recommendations are made based on the findings of this study:

- The National Agency for Food and Drug Administration and Control (NAFDAC) should ensure that baby formula producers are mandated to make information attached to their products legible and bereft of technical language.
- Government and non-governmental health bodies should organize campaigns to sensitize nursing mothers on the need to read nutrition information on baby formula packs. They should be sensitized on the need to report baby formula manufacturers who do not attach useful information to their products.
- Studies should be carried out by relevant authorities to find out the population whose health beliefs, perception and expectations can counter attention and use nutrition information.
- There is need to find out other factors that can influence use apart from the ones highlighted in this study. There is also need to study other demographics. Since this study was limited to Anambra, a state out of the thirty six (36) in Nigeria, there is need for replication in other states to find out similarities and contrasts in results.

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