

UNIVERSITY OF EDUCATION, WINNEBA

**EXAMINING THE IMPACT OF NUTRITIONAL LABELLING ON
CONSUMER PURCHASING DECISION: A CASE STUDY OF FOOD BUYERS
WITHIN THE KUMASI METROPOLIS**



2017

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FESTUS BERIGAH

**A Dissertation in the Department of Management Studies, Faculty of Business
Education, submitted to the School of Graduate Studies, University of Education,
Winneba in partial fulfilment of the requirements for award of the Master of
Business (Marketing) Degree.**

AUGUST, 2017

DECLARATION

STUDENT'S DECLARATION

I Festus Berigah declare that this thesis with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE.....

DATE.....

SUPERVISOR'S DECLARATION

I hereby declared that the preparation and presentation of this work was supervised by me in accordance with the guidelines for supervision of dissertations as laid down by the University of Education, Winneba.

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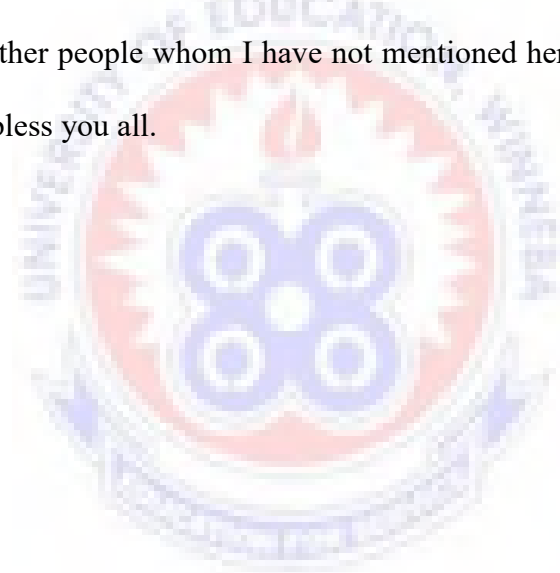
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(Dr. Benjamin Ansu)

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Finally, this research work could not have been completed without the contribution and support of many other people whom I have not mentioned here. To all of you: may the Most High richly bless you all.



DEDICATION

This work is dedicated to my wife.



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ABSTRACT

The study investigated how nutritional labelling affects consumer purchasing decisions of food products within the Kumasi metropolis. Specifically, the objectives of the study were to find out the level of awareness of consumers towards nutritional labelling in terms of buying behaviour, to examine whether nutritional labelling affect consumer decision to purchase healthy food products and finally to ascertain whether a consumer demographic characteristics (i.e. gender, income, educational level) affect their decision to check for a nutritional labelling on food products. This study followed the cross sectional research design hence, quantitative methodology was adopted. The total population for the study covered the undergraduate students of the University of Education-Winneba, Kumasi campus. Therefore the population size for this study was 7500. The study employed probability sampling specifically simple random sampling to select the study participants. Subsequently, the study used the Krejcie and Morgan (1970) sampling table to determine the sample size for the 7500 population size. Based on the table, the sample size for this study was 365 with a 95% confidence interval (error of margin). Since the study was guided on the principles of quantitative methodology, this study used questionnaires item as its research instrument. The study distributed 365 questionnaires to the undergraduate students of the University of Education-Winneba, Kumasi campus. From the questionnaires distributed, a total of 190 completed questionnaires were returned to the researcher. Of these, 120 were usable for analysis, giving an effective response rate of 40.67%. Data was subsequently analysed using descriptive statistics such as Mean and Standard deviation. Inferential statistics included Pearson correlation, multiple regression (enter method) were used for the relationship analysis. Findings from this study revealed that most of the respondents had a low level of awareness of nutritional labelling. Equally it became evident that respondents' personal characteristics (i.e. average monthly income and educational level) had a significant impact on their decision to check for a nutritional labelling on food products. The study recommended that the regulating bodies such as the Ministry of Health, Food and Drug Board and the Ghana Standard Board should as a matter of urgency take it upon themselves to organize sensitization programs across the entire country most especially within the educational institution to educate students about the relevance of nutritional labels.

CHAPTER ONE

INTRODUCTION OF THE STUDY

1.1 Background of the Study

Across the globe, the rates of nutritional-related non communicable diseases (NCDs) are on the rise (World Health Organization, 2011). Although previously these occurrences were seen as a trend in wealthier countries, nevertheless developing economies are beginning to experience same as well (Popkin, Adair & Ng, 2012). For instance, recent statistics provided by the International Diabetes Federation (IDF) have revealed that a total of 500,000 Ghanaians are living with diabetes as at the end of 2014. The report further indicated that, 330,000 of the figure, representing 75 per cent of the cases, remained undiagnosed, posing an increased danger of complications for people living with diabetes whom appear not be aware of their predicament. This figure suggests that the earlier assumption that NCDs was mostly prevalent in advanced economies no longer holds valid.

In response to the ever increasing NCD rates, many governments are implementing multi-faceted policy interventions (Lachat et al., 2013). One of such policies is the adoption of nutritional labelling on pre-packaged foods and beverages. The Codex Alimentarius Commission, established by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), have all reiterated the need for food manufacturers to provide nutritional labelling on their products (Codex Alimentarius Commission, 2012).

The intense adoption of this approach by most countries is not surprising since reports by the World Health Organization [WHO] (2004) show that nutritional label serve as

the one of the best approaches to assist consumers to make healthier food choice when buying their foods products.

Additionally other scholars have argued that nutritional label purpose is to inform consumers of other food alternatives and to likewise stimulate the consumption and production of healthy product (Baltas, 2001). Nutritional label can affect consumers' purchasing behaviour significantly because some evidences reveal that the provision of nutrition information may allow consumers to switch consumption away from 'unhealthy' products in those food categories toward 'healthy' products more easily (Zarkin & Anderson, 1992). It also allows consumers to make an informed judgement of a product's overall value (Asian Productivity Organization [APO], 2002). Therefore, the nutritional panel can be concluded as a form of guidance to a better diet and a healthier life (FDA, 1998) because consumers will have the ability to choose their diets which depend partly on the quantity and quality of information available through a variety of sources, including nutrition panel on food labels (Caswell & Padberg, 1999).

Likewise recent evidence by Bandara, De Silva, Maduwanthi and Warunasinghe (2016) corroborate the earlier views of (Baltas, 2001; Zarkin & Anderson, 1992) when they argued that consumer's attitudes towards the nutritional aspect of the foods and proper eating habits are gradually increasing rapidly across the globe. To them, consumers' are more concern about balance and healthier diet hence, the quest to consider carefully the nutritional label when buying foods products have become the new order of the day by most consumers. Again Bandara et al. (2016) held that consumers are becoming more demanding about nutritional information, safe and quality food. In this context, labels

of food products play a significant role as it provides all the mandatory information regarding nutritional composition, safe and quality food.

A more interesting insight has been shared by (Azman & Sahak, 2014) when they asserted that nutritional label do simplify the whole concept of healthy diet because it helps the customers to keep track on the intake nutrients such as the amount of fat and sugar, sodium and fibre, protein and carbohydrates. Same position was likewise confirmed by Din and colleagues (2011) when they argued that in recent times most consumers are concerned not only on the appearance of the products but also on the nutritional information in the packaged food sold at retail outlets.

Admittedly Ghana is a treaty to most free trade policies; this suggests that both local food producers and foreign producers face immense competition from both imported products and products of multinational companies that have nutritional labels. In this case the consumer has large array of products at his or her disposal. Therefore, it is imperative to understand how nutritional labelling on food products impacts on consumer purchasing decision. Hence, this study seeks to provide empirical findings to both food manufacturers and marketing practitioners to understand how the nutritional labelling on food products affects consumer purchasing decisions.

1.2 Statement of Problem

Osei-Mensah, Lawer and Aidoo (2012) argued that nutritional labels are of tremendous importance to the consumer (i.e. it gives a consumer the means to evaluate the food before purchase), the firm producing and selling the product (i.e. it enables the producer to communicate to the potential consumer the attributes and qualities of the product), and regulatory bodies (i.e. it enables the regulatory agencies to ensure that food

produced and sold meet required standards and equally serve as a means of protecting the interest of the general public).

Equally it has been found that the use of nutritional label affects consumers purchasing behaviour mainly because the consumers want to avoid the adverse nutrients in food products (Drichoutis, Lazaridis & Nayga, 2006). Although studies measuring the impact of nutritional labelling seems to have peaked in developed countries most especially in UK and USA (European Heart Network, 2003) yet the same level of enthusiasm cannot be said to have taken root in developing economies.

For instance, authors like (Cowburn & Stockley, 2005; Hawley, Roberto, Bragg, Liu, Schwartz & Brownell, 2013; Hersey, Wohlgenant, Arsenault, Kosa & Muth, 2013) have all asserted that despite the increase in nutritional labelling regulations on food products, labelling research and reviews have mainly focused on western countries with limited empirical findings on labelling impact in countries in the developing economies. Therefore, the need for more research on nutritional labelling impacts on consumers in developing countries has been flagged as a priority since its impact has become more important than ever before (Cowburn & Stockley, 2005; Campos, Doxey & Hammond, 2011).

Equally similar views were shared by Azman and Sahak (2014) when they argued that there is the need for additional studies regarding how nutritional labelling affects consumer purchasing decisions mostly in developing economies.

More so, the likes of DG SANCO (2005) has argued that since consumer behaviour is complex and very often difficult to understand and also findings from a sector or country cannot be used for all industries or countries more studies are needed to aid marketers and manufacturers to really appreciate what factors really motivate

consumers to purchase a particular product or services at the expense of other products. Accordingly, the main problem of the study is to measure how nutritional labelling on food products affects consumer buying decisions within the context of Ghana.

1.3 Purpose of the Study

The primary objective of the study is to explore how nutritional labelling affects consumer purchasing decisions of food products.

1.4 Objectives of the Study

The following are the research objectives:

1. To find out the level of awareness of consumers towards nutritional labelling in terms of buying behaviour.
2. To examine whether nutritional labelling affect consumer decision to purchase healthy food products.
3. To ascertain whether a consumer demographic characteristics (i.e. gender, income, educational level) affect their decision to check for a nutritional labelling on food products.

1.4.1 Research Questions

To accomplish the aforementioned objectives, the following research questions are formulated:

1. What is the level of awareness of consumers towards nutritional labelling in terms of buying behaviour?
2. Does nutritional labelling affect consumer decision to purchase healthy food products?

3. Does a consumer demographic characteristic affect their decision to check for a nutritional labelling on food products?

1.5 Significance of the study

A number of factors influence consumers' decision-making, but Prathiraja and Ariyawardana (2003) underscored nutritional labelling as one of the factors that affect consumers purchasing behaviour significantly.

Therefore, findings from this study will assist the marketing fraternity to really appreciate whether nutritional labelling do in any way affect consumer purchasing decisions. Also, it will equally assist the food manufacturers to come up with processes where they can fully communicate the value of their products to their customers.

Additionally evidence from the study will assist state authorities to look at how they can enforce nutritional labelling on food products as a means to minimize NCDs that is gradually taking roots within the country.

Finally findings from the study will address the gap in the literature that have been identified with regards to the impact of nutritional labelling impact on consumer purchasing decisions within developing economies in the context of Ghana.

1.7 Limitation of the study

Although precautionary measures will be put in place in ensuring that this propose research will be void of shortcomings in order to make it an ideal study nonetheless, there are other activities or aspects of the study that the researcher will have little or no control over and likely to affect the outcome of the study.

For example, the study will rely on questionnaire items as its data collection instrument, therefore the respondents in their attempt to answer the questionnaire may consciously

or unconsciously skew their responses to a certain direction which may affect the reasonability of the study findings

Also as a result of the time and resource constraints impose on the study, the study will use a convenience sampling techniques in selecting the study respondents. Hence, its findings may not be the exact representation of all the food consumers within the Kumasi metropolis.

1.7.1 Delimitation of the study

The scope of the study will take a cross sectional approach. The study area for this thesis will come from food consumers within the Kumasi metropolis in the Ashanti region of Ghana. The study population will likewise come from food consumers who have purchased any package food product as the time of the study.

1.8 Organization of the Study

The study is organized into five chapters. Chapter One is made up of Introduction which looks at the Background of the Study, Statement of the Problem, and Research Questions. Others include Purpose of the Study, Limitations of the Study, Delimitations of the Study, and Organization of the Study. Chapter Two deals with the review of the related literature whiles Chapter Three covers the Methodology adopted for the study. Chapter Four focuses on Results and Discussions whiles finally, Chapter Five looks at the Summary of Findings, Conclusions and Recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In every study, a good literature review does not only provide knowledge about what has been done in the research area but also strengths and weaknesses upon which one can also build an insightful and purposeful study. This chapter will contain literature reviewed on nutritional labelling and its impact on consumer buying decisions.

2.2 Definitions of Concepts

de Koe (1997) viewed the concept nutritional label as the description used to inform a customer about the nutritional values of a food and the main intent of this act is to assist a customer to buy nutritious food as well as consume nutritionally balanced meal. Moreover, under nutritional label concept there are other sub-concepts that fall under it thus; food labels and nutrition information panel (Azman & Sahak, 2014).

According to Azman and Sahak (2014) food labels include any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, painted, embossed or impressed on, or attached to or included in, belonging to, or accompanying any food whereas nutrition information panel is the table found in one section of a food label declaring the amount of nutrients contained in that particular food. Accordingly, one could argue that the terminologies food labels and nutrition information panel all form part of nutritional labelling with each playing a specific role in the labelling processes.

On the other hand Hieke and Taylor (2012) viewed nutritional labelling as the process involving all forms of information disclosure on a product, ranging from mere nutrition fact panels to daily reference values, recommendations, health claims and disclaimers.

The definitions provided by the two clearly sought to view the concept nutritional labelling from their own perspective thus, de Koe (1997) gave much emphasis to the description of nutritional labels on food products whereas Hieke and Taylor (2012) gave much emphasis to not only the nutrient fact about food but equally issues such as daily reference values, recommendations, health claims and disclaimers were all given attention to in their definition. On this premise the definition provided by Hieke and Taylor (2012) is more encompassing and thorough than the definition provided by de Koe hence; this study will adopt Hieke and Taylor definition as the working definition for the study.

2.3 Theoretical Framework

As posited by Drichoutis et al. (2006) there has been several theories developed to examine nutritional label impact on consumers (see for example, Drichoutis et al., 2006; (utility theoretic framework); Lancaster, 1971 (New Economic Theory of Consumer Behaviour’); Sexton, 1979 (theory on information and its application); Zarkin & Anderson, 1992 (Consumer and producer responses) nonetheless among the numerous theories, the one which still appear to have the most empirical applications with respect to its impact of nutritional label use has been the theory developed by Stigler’s (1961) thus, economics of information. Accordingly, it will be the theory adopted as the theoretical foundation for the study. Originally Stigler employed it to explain the optimal economic search, which he applied to the both product and resource markets within the domain of economics.

Stigler argued that in most often times information is scarce and costly to obtain, and therefore it can be thought of as an economic good. From this viewpoint, obtaining information entails costs and yields benefits, just as obtaining all other economic goods comes with the same reciprocal effects. Because of this assumption, consumers will search for nutrition-related information as long as the costs (mainly viewed as time spent reading labels; ambiguity) do not outweigh the benefits (eating/buying healthier food) (Drichoutis et al., 2006). For example, consumers will judge it to be too costly to waste much time searching through all the information on a food product just to select or purchase a healthier food. The greater the search costs, with all things being equal, the greater it is for the consumer to ignore these information searches on these food products and just select any food category they come across due to its convenience.

Importantly as established by Stigler, information search comes with two forms of costs concurrently. The first form of cost is the direct costs, which include “time wastage” inflexibility, strains resulting from the ambiguity of the nutritional information, etc. These expenses tend to rise as more time is being expended to look additional facts or information about the product. Normally, the person begins the search for the nutritional information at his first point of contact with a product, hence the first point of search for these health facts ought not to take much time and be easily comprehensible. However, as the search broadens due to its format and ambiguity it’s these associated costs tend to rise since not all the nutritional information about a product can be easily obtain at first glance or first time short.

The second cost is the opportunity cost of using one’s time to search for additional information on the food products. Once a person could identify the product he/she

intends to buy from the shelves, he could then pick it and presumably pay for it without wasting any time to inquire about the product nutritional status. However, if the consumer decides to search for the information; by reading the nutritional labels his time will be lost therefore creating additional opportunity costs to the consumer. This opportunity cost is particularly large in those instances where the consumer has other important things to do that is, where the buyer must buy the product immediately and send his son to the movie shop or school immediately. In this case, a significant amount of time is expended hence delaying the time required to complete the other tasks.

Equally Drichoutis et al. (2006) corroborated this opportunity cost in their utility theoretical framework when they postulated that the associated cost that is the extra time spent reading labels at the expense of the other task that could have been completed within the same time period plays a key role in predicting consumer intent to either use a nutritional label or not. Moreover, since the long term benefits are always more important than not searching for the nutritional labelling at all it is always in the best interest of the consumer to read the labelling to identify the products that best address their health needs.

As postulated by Stigler should consumers continue to read the entire nutritional label before they become convinced that they have selected the food with the right nutritional value products therefore being able to eliminate all the associated risk attached to less quality food products? If not, what determines the optimal length of their information reading or search? An information reading increases consumers likelihood of identifying quality food products, but there are associated benefits and costs to this task. Hence, the question is will the wastage time compensate the accrued benefits?

This assumption suggests that the associated cost of not reading the nutritional labelling hence selecting an inferior products far outweighs the little time consumers will spend to read the nutritional facts on the food products. For instance, Todd and Variyam (2008) affirmed this view in their study when they established that household and individual characteristics that reflect costs of acquiring new information, ability to process information, and valuation of health were important determinants of consumers' decision to read nutritional labelling.

Equally Drichoutis et al. (2006) made some observations with regards to the cluster of consumers who were more likely to use or read nutritional labelling. To them several socio-economic or personal factors together with other factors such as consumer flexibility and strain issues played a key role in explaining consumer usability of nutritional labelling.

Accordingly, this study seek to adopt this model to measure how consumers evaluation of the cost and benefits associated with nutritional labelling affects their decision to use or read nutritional labels on food products.

2.4 Types of Nutritional Labelling

According to Azman and Sahak (2014) there are two types of nutritional label viz; back-of-pack nutritional label and front-of-pack nutritional label. Hence, these types of nutritional label will be look at and see its relevance in contemporary times. The back-of-pack label is one of the most common formats that have been widely used in both the food and beverage industries in describing the nutrients contents in their food products (Azman & Sahak, 2014). Equally within the Ghanaian food markets most food products equally employ the back-of-pack nutritional label as their labelling format.

However, it has been reported in the studies of Osei-Mensah et al. (2012) that due to the failures of the regulatory bodies to enforce their constitutionally mandate thus ensuring that manufacturing companies complied with the labelling requirements of both the Ghana Standards Board (GSB) and Food and Drugs Board (FDB) have resulted to instances where the Ghanaian local markets are choked with non-certified, expired, illegal or fake food products, uncertified sachet water as well as the sale of expired canned tomatoes and frozen chickens.

Interestingly, earlier reviews done within the continents of Europe, United State, Australia and New Zealand revealed that most consumers within those continents argued that the back-of-pack nutritional labels were confusing, especially the numerical information and the terminology used in the label format (Cowburn & Stockley, 2005; EUFIC, 2005; Sadler, 1999; Shine, O'Reilly, & O'Sullivan, 1997; Wandel, 1999).

Likewise a study by Cowburn and Stockley (2005) affirmed the in the aforementioned studies when they found out that some segment of consumer thus, older consumers and consumers with lower levels of education and income were likely to have difficulties in understanding back-of-pack nutritional labels. Their study also showed that consumers had difficulty in converting the numerical values in the back-of-pack label.

According to Black and Rayne (1992) the difficulty customers had in interpreting back-of-pack labels led to a wrong food choice because the inscription applied on the back-of-pack were too technical for ordinarily consumers to comprehend.

Hence, in order to address these defects, there came the need to employ a much simple nutritional label that could summarize all the nutritional profiles to enable easy understanding (Azman & Sahak, 2014).

Accordingly, front-of-pack nutritional label was perceived to be a perfect remedy to the labelling defects associated with back-of-pack label (Azman & Sahak, 2014). According to Schor et al. (2010) Front-of-pack label is the form of labelling where a label is positioned on the front of packaged foods aimed at delivering nutritional information to consumers in various formats. In the views of Geiger et al. (1991) and Scott and Worsley (1994), a front-of-pack format is more effective and acts as the addition to the traditional numerical nutrition fact table on the back of pack label. It is useful in assisting the customers in making a healthier food choice since it summarizes the whole nutritional profiles of the packaged food (Azman & Sahak, 2014).

Interestingly, after its adoption most studies have reported that front-of-pack label did reduced the cognitive effort and time needed to process nutritional information as compared to more detailed label thus, back-of-pack (Geiger et al., 1991; Scott & Worsley, 1994).

In the words of authors like Eagly and Chaiken (1993) and Fiske and Neuberg (1990) the reason why most consumers find it difficult to adopt or comprehend back-of-pack labelling was that in most often times consumers usually had limited opportunity to process the label information and also they were less concerned when shopping for groceries items. Hence, customer mostly spent a flash of a second rather than minutes when making a buying decision in a supermarket (Hoyer, 1984). Equally these results were confirmed in the works of Higginson and colleagues (2002) when they observed that consumers only glanced at the nutrition information and did not process the information further at the point of purchase hence, employing a label type like the back-of-pack which was very comprehensive was not an effective label to use. Likewise Verbeke (2005) confirmed Higginson et al. (2002) position when he posits that labels

are more likely to be effective when they address specific informational needs and can be processed and used by their target audience.

2.5 Determinants of Nutritional Label Usage

According to Drichoutis et al. (2006) there are large array of factors that affect consumers decision to either use the nutritional labelling on a food package or not use. For instance, Drichoutis, Lazaridis, and Nayga (2005) as well as Nayga (1999) earlier works categorized the factors affecting the use of on-pack nutrition information into the following forms; individual characteristics; situational, attitudinal and behavioural; product class involvement; knowledge; motivation factors; and other factors. Accordingly, this section seeks to discuss some of the factors as how they affect consumer nutritional label usage within the literature.

With the personal or individual characteristics, Ippolito and Mathios (1990) were the first to establish how a consumer personal characteristic have a significant impact in predicting his ability or decision to use a nutritional labelling. For instance, the authors identified age as one of the personal characteristics that affected use of nutritional labels in different ways. Likewise in the works of Bender and Derby (1992) it became evident that there is a significant difference between how the older people and the younger consumers tend to use nutritional labelling. For instance, Bender and Derby (1992) asserted that older consumers were only more interested in read ingredient list whereas the younger people were more interested in both the nutritional labels and ingredient lists.

Also the likes of Kim, Nayga and Capps (2001a; 2001b) and Cole and Balasubramanian (1993) confirmed this claim in their respective studies when they underscored that as a person age increases, there was a lesser probability of using nutritional labels. In

contrast (Coulson, 2000; Drichoutis et al., 2005; Govindasamy & Italia, 1999) posited a direct opposite of Kim et al. (2001a; 2001b) and Cole and Balasubramanian (1993) findings. To them as a person age increases so did their decision to use nutritional labelling increase in a direct direction (Drichoutis et al., 2005; Lin & Lee, 2003; Nayga, 1996).

Equally educational status has been found to have a significant impact on a person's nutritional labelling usage. For instance, (Drichoutis, et al., 2005; Feick, Herrmann & Warland, 1986; Guthrie et al., 1995; Kim, et al., 2001a; McLean-Meynsse, 2001; Nayga, Lipinski & Savur, 1998; Wang, Fletcher & Carley, 1995) confirmed that the higher a person educational status the more likely the person is to use nutritional labels. Similarly, Bender and Derby (1992) confirmed this view when they established that the highly educated people were more likely to look at both nutritional labels and ingredient lists.

Additionally a more recent study confirmed this claim in their study as well when personal characteristics such as age, educational status and family income were found to have a significant impact on a person decision to use nutritional labelling (e.g. Mahgoub et al., 2007; Ranilovic & Baric, 2011; Wills et al., 2009).

The last personal characteristic to be looked at is a person gender. In the respective studies of (Govindasamy & Italia, 1999; Guthrie et al., 1995; Kim et al., 2001a; 2001b; McLean-Meynsse, 2001), it became evident that females were more willing to use nutritional labelling than their male counterparts. From the perspective of (Nayga, 1999) this phenomenon could be attributed to the fact that most males do not agree with the assertion that nutritional information is useful or that the information can help them in their food selection, or that health is a matter of importance to them.

More so, a study by Nagya (1996) opined that males were less likely to use all the nine types of nutrient information on a food product.

In contrast, females were more likely to pay attention to information about calories, vitamins, and minerals (Drichoutis, et al., 2005) and they tend to use both nutrition labels and ingredient lists (Bender & Derby, 1992).

Likewise Kasapila and Shawa (2011) corroborated Drichoutis et al. (2005) as well as Bender and Derby (1992) study findings when they found out that women were more likely to look at nutritional labels when purchasing food products than men. More so, they reported that there are significant differences in usage across consumers within urban and rural settings with the former being more inclined to read nutrition information than the latter. According to them, income and educational level disparities between urban and rural consumers accounted for the observed usage differences. Similarly, Ranilovic and Baric (2011) postulated in their study that Croatia females, who were highly educated, were more likely to use nutrition information when purchasing food than the less educated female consumers.

More so, with regards to situational factors, it became evident in the studies of (Nayga, 2000; Nayga et al., 1998) that there is no significant difference between a person work status since both unemployed consumers and retired household heads were more likely to use nutritional labels (Schupp, Gillespie & Reed, 1998). Again Drichoutis et al. (2005) found that working people were equally more likely to use nutrient information. Interestingly, within the same study though Drichoutis et al. (2005) opined that working respondents were found more likely to use ingredients most especially vitamins/minerals information nonetheless, when it came to cholesterol information the working people were less likely to consider it. However, Drichoutis et al. (2005) could

not give reasons to what accounted for these disparities among the same study respondents.

More so, consumers with no/less time pressure, as approximated by high levels of time spent in grocery shopping, were more likely to use nutritional labels (Nayga et al., 1998). Similarly, time pressure effects on nutritional labelling usage also became evident in the works of Kim et al. (2001a) and Lin and Lee (2003), where they reported that in instances where shoppers had less time pressures they were more than willing to use nutritional information.

Another situational factor thus, consumers on special diet were found to be most likely to use nutritional information within the context of France (Mannell et al., 2006). Similarly, (Derby & Fein, 1994; Feick et al., 1986; Kim, et al., 2001a) affirmed Mannell et al. (2006) study results when in their respective studies it was established that consumers who were more aware of the diet-health/diet-disease (i.e. consumers who perceive diet as an important factor to their health) were more incentivised to use on-pack nutrition information.

The final factor to be looked into under the determinants of nutritional labelling usage is a consumer nutritional knowledge. Earlier studies by Bender and Derby (1992) posited that there is a significant relationship between a consumer nutrition knowledge and usage of nutritional labelling. Likewise Moorman and Matulich (1993) argued that consumers who tend to have higher levels of health knowledge were the one that extensively used the nutritional labelling on a food product.

Additionally, Guthrie et al. (1995), Szykman, Bloom and Levy (1997), and Kim et al. (2001b) established that there is a positive relationship between label use and nutrition knowledge, even though Nayga (2000) on his part found no evidence for this relationship in his study.

Samely Moorman (1998) affirmed Nayga (2000) study results when he postulated that consumers who had more knowledge on nutrition were less willing to consider the nutritional labelling on foods during grocery shopping. This could be attributed to the fact that they may see themselves as sources of these nutritional knowledge or data hence no need for them to read it again upon purchase.

On another breadth, Levy and Fein (1998) disapprove of Moorman (1998) and Nayga (2000) claim when in their case they revealed a positive significant effect between a consumer knowledge and consumer decision to use or read nutritional label.

Interesting Drichoutis et al. (2005) observed that the more a person uses the nutritional label on foods product the more the consumer increases his/her nutritional knowledge. Accordingly, Drichoutis et al. (2005) posited that there is a direct relationship between nutritional label usage and a person nutritional knowledge. This means that as a person continues to use nutritional label his nutritional knowledge increases concurrently in the same direction.

There above discussed sections clearly show that there are numerous factors or forces that determines a person decision to use nutritional labelling thus, it ranges from personal factors (i.e. age, gender, education level) to situational factors such as income level, diet awareness, work status and time pressures and finally a person nutritional knowledge.

2.6 Relationship between Nutritional Labelling and Consumer Purchasing

Decisions

This section seeks to provide the relationship that exists between nutritional labelling consumer purchasing decisions.

Firstly, in the works of Bandara et al. (2016) within the context of Sri Lanka it became evident that food labelling has a significant impact on consumer purchasing decisions. More so, Bandara et al. (2016) established that the key nutritional labels that consumer gave much prudence to were issues such as; expiry date, monosodium glutamine level, food safety, environmental protection, origin of the food and brand reputation.

Similarly, Rosenthal (2009) corroborated Bandara et al. (2016) within the context of Cornell University when his study established that there were significant impact between nutrition labels and the kind of foods the respondents purchased. For example, the study reported that ever since the school made the decision to ensure that all the foods served on the school dining hall had nutritional labels, there has been a decrease in the percentage of foods sold with high calories, fat, percent calories from fat, and sodium. This confirms that nutritional labelling affect consuming purchasing of food products.

Additionally a study which considered several continents was the study done by AC Nelsen (2005). It was conducted within 38 countries from Europe, Asia Pacific, North America, Latin America and South Africa. The study observed that generally a large segment of the understudied respondents did check labels before they eventually purchased or shopped their food products. Similarly, Drichoutis et al. (2006) confirmed the works of AC Nelsen within a European country thus, Greece. Their study found out that the use of nutritional label affects the purchasing behaviour of Greece consumers.

Additionally the authors attributed this impact to the fact that since consumers would want to avoid the adverse effect of certain nutrients in food products they also preferred to consider the nutritional label before they make their purchasing decision.

Likewise within the context of Sub-Saharan Africa, the study of Themba and Tanjo (2013) established that Botswana consumers had a higher level of awareness nutritional labelling and concurrently considered the nutrition information on food products before they eventually decide on which food product to buy and not to buy. More so, Mahgoub et al. (2007) confirmed similar results within the context of Lesotho. Their study reported over 60% study respondents said that they use nutritional information when shopping which suggest that consumers selected food products based on their nutritional content.

Also same study results were confirmed in South Africa when Wiles et al. (2009) concluded that nutritional information influence the purchasing decision of South African consumers when purchasing some selected foods.

A study done by Satia et al. (2005) which surveyed 658 African Americans between the ages of 20 and 70 living in North Carolina and had them fill out an 11-page questionnaire to assess their nutrition label use. Out of the subjects understudied, a total of 41% of respondents were men, 37% were college graduates, and 75% were overweight or obese. The study found that 78% of respondents claimed to read nutrition labels when purchasing packaged foods hence its played a key role in their food selection. This statistics was very impressive judging from the total number of sample used for the study.

In contrast Krukowski et al. (2006) used data from two separate telephone surveys to question subjects about their nutrition label use. One survey questioned a community

sample in Vermont while the other surveyed Vermont college students. The community sample consisted of 649 subjects (53.3% female), and the college student survey was composed of 316 subjects (56.0% female). Response rates were 39.8% and 60.34% for the community and college samples, respectively. Of the subjects, 52% of the college students and 33% of the community sample reported that nutrition labels did not affect their purchasing decisions.

The enumerated studies show that the relationship between nutritional labelling and consumer purchasing decisions have been mixed thus, some reported positive impacts whereas others reported negative impact.

2.7 Empirical Review

The study of Themba and Tanjo (2013) sought to investigate nutrition information awareness and usage among Botswana consumers. The study further employed descriptive statistics and used structured questionnaire to collect data from 150 consumers in Gaborone, the Capital City of Botswana. The study used mall-intercept technique in selecting the study respondents. The main findings of the study showed that the level of awareness of nutrition information among the sampled consumers was relatively high, and that the majority of them use nutrition information to inform food purchases. The study further posited that whereas nutrition information awareness does not significantly differ across the demographic segments, usage differs. Finally the study observed that the understudied consumers tend to use the nutrition information mostly when comparing products or when buying food products for the first time.

Interestingly, the study was conducted within the context of Sub-Saharan African nonetheless, its study participants were largely restricted to consumers within Gaborone

thus the Capital City of Botswana hence its study results cannot be used to represent that of Ghana.

Equally Bandara et al. (2016) on their part sought to identify the important nutritional labelling aspects that consumers of Sri Lanka examined most during time of purchase. Their study employed pre-tested structured questionnaire to elicit data from random sample of 90 respondents. The study used rank based quotient test and descriptive analytical tools to analyze the data. Findings from the study showed that majority of the respondents tend to examine the labels when making the purchasing decision. They attributed this phenomenon to the fact that consumers placed much emphasis to the nutritional labelling since some were found to be vegetarians, religious and health conscious

Similarly Banda and colleagues study was conducted in a setting which is highly dominated by Muslims on this score its study results cannot be used to be an exact representation of Ghana since within the Ghanaian context most of the inhabitants are Christians.

Additionally a study by Annunziata, Pomarici, Vecchio and Mariani (2016) investigated whether consumers within European countries and the USA want more nutritional and health information on wine products. The study was undertaken in four core wine-producing and consuming countries viz; Italy, France, Spain, and the United States of America. Annunziata et al. (2016) used rating-based conjoint analysis to ascertain consumer preferences for different formats of additional information on wine labels. Further a segmentation of the sample was performed to determine the existence of homogeneous groups of consumers in relation to the degrees of usefulness attached to

the nutritional and health information on wine labels. Their study results highlighted the interest expressed by European and United States consumers for introducing nutrition and health information on wine labels. However, the results of conjoint analysis show some significant differences among stated preferences of the information delivery modes in different countries. In addition, segmentation analysis revealed the existence of significant differences between consumer groups with respect to their interest in receiving additional information on wine labels. These differences were not only linked to the geographic origin of the consumers, or to socio-demographic variables, but are also related to wine consumption habits, attitudes towards nutritional information, and the degree of involvement with wine.

Interestingly, Annunziata and colleagues selected food category which has not received much attention and for that demands some recommendation. However, a clear look at the study reveals that its main aim was solely to ascertain whether consumers within the four understudied countries would prefer more nutritional information on the wines being produced and sold within those markets. Hence, the emphasis was not to investigate whether the nutritional labelling will affect their purchasing decisions. On this score the present study and that of Annunziata et al. (2016) cannot be said to be same or produce similar study results.

Also the study of Rosenthal (2009) sought to determine whether the introduction of nutrition labels will help the Cornell community to purchase healthier food items. Food sales data were analyzed using SPSS statistical software (version 14.0) to test for how sales data changed from the spring of 2007 to the spring of 2008. The results indicated that there were significant effects of the nutrition labels on which foods were

purchased between the two study years. Specifically, there was a decrease in the percentage of foods sold with high calories, fat, percent calories from fat, and sodium.

Arguably, this study did not employ self-administered data but rather sought to rely on secondary and evidential data to measure the effect on the consumer purchasing pattern. Though his approach is quite revealing since it produces fresh insight as to how consumer purchasing patterns change when there were policy guidelines with regards to how food labelling policy implemented by Cornell University affected its community purchasing decisions.

In spite of this insightful perspective, the context of the study is an advanced economy hence its findings cannot be used as an exact representation for a developing economy like Ghana.

Finally a study by Majid et al. (2015) investigated the construct nutritional labelling awareness and how it affected consumer purchasing behaviour among Malaysia consumers. The study relied on secondary data source as its main source of data. Their study concluded that there are a few differences regarding the awareness of nutritional labelling among different groups of the understudied consumers. The study equally observed that Malaysia consumers gave much credence to the nutritional label on food products before they eventually make their purchasing decision.

As argued earlier Ghana is high dominated by Christians hence study findings coming from a country which is largely dominated by Muslims could not be used for the context of Ghana.

To sum up the above enumerated studies clearly show that most of the studies have been largely conducted outside the scope of Ghana hence, this study seeks to address

the dearth in literature with reference to the Ghanaian perspective by undertaking this study.

2.8 Conceptual framework

A conceptual framework shows the relationship between the independent, moderating and dependent variables. The conceptual framework of this study is based on the study variables nutritional labelling awareness being the independent variable, customers personal characteristics (age, gender, diet/health conscious, educational background and low level of time pressures) being the moderating variables and customers decision to purchase healthy products being the dependent variable respectively. A conceptualization of the relationship between the independent variables and the dependent variable is illustrated in Figure 2.1.

Conceptual framework for the Study

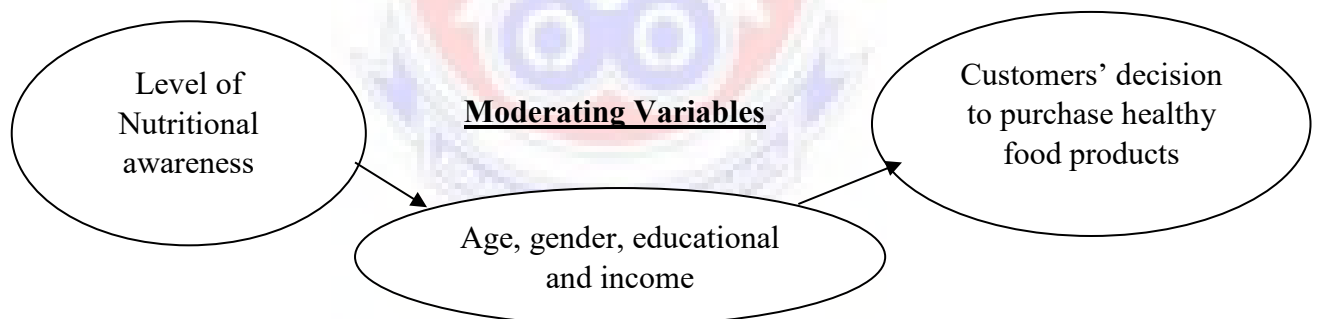


Figure 2.1 Framework for analyzing the impact of nutritional labelling on consumer purchasing decision of health food products

Source: Author's construct

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter discussed the research design employed in this study. It discussed the basic research designs, which include the quantitative, qualitative and mixed methods approach. Subsequently the chapter presented the method adopted for this study context as well its justification. The research design is examined followed by a discussion of population, sampling methods and data collection procedures. The chapter ends with a discussion of the ethical issues and how the data gathered would be analysed.

3.1 Research Design

The choice of research design in management and social sciences draw its source from a researcher's assumptions about the nature of the social world, the nature of the knowledge to be obtained and methods of gaining knowledge (Creswell & Clark, 2007). Accordingly, the assumption on how the nature exist as well as how to acquire knowledge in guides a study to appreciate which paradigm will enable its study to achieve valid and reliable results.

According to Creswell (2014) research design are the forms of investigation within qualitative, quantitative, and mixed methods approaches that present the exact direction for processes with which a scientific enquiry may be carried out. Equally Denzin and Lincoln (2011) viewed it as strategies for scientific investigation. Creswell (2014) identified three main research designs namely; qualitative, quantitative, and mixed methods as the main approaches that provide specific direction for procedures in any research study.

Importantly, quantitative studies are positioned within the positivist worldview whereas the qualitative research are positioned within the constructivist and interpretivist perspective (Creswell, 2014).

The positivism posits that situations that can be assessed through our senses (i.e. sight, hearing, touching, taste, etc.) really produce knowledge. From this predisposition, the real world can only be studied from the utilization of these senses through experimentation, theory testing, and theory creation, pretesting and post-testing measures of attitudes (Creswell, 2014). Hence, it argued that research ought to be objective rather than subjective statement for that matter objectivity is the only proper domain of science.

In contrast, the interpretivist or constructivist paradigms seek to establish the meaning of a problem or situation from the views of the participants (Creswell, 2014). This means identifying a culture-sharing group and studying how it develops shared patterns of behavior over time (i.e., ethnography). Interestingly, one of the key elements of collecting data from this perspective is to assess participants' behaviors during their engagement in activities. Therefore, from this perspective appreciating this interaction of individuals and the environment can produce knowledge of phenomena under investigation. Hence, direct knowledge of the social world according to the interpretivist/subjectivist view is impossible.

However, as this study seeks to measure how nutritional labelling affects consumer purchasing decisions of food products, positivists' paradigm provides the best medium for the study to achieve its study objective.

Accordingly, this study employed a quantitative research design to measure how nutritional labelling affects consumer purchasing decisions of food products. Bryman

(2012) held that quantitative research can be viewed as a research approach that betone quantification in the collection and analysis of data and that entails a deductive approach to the connection between theory and research, in which the prominence is placed on the testing of theories. Accordingly, as this study seeks to follow positivist worldview, quantitative methods are best suited. Also, in reviewing previous studies that has been carried out in nutritional labelling and consumer purchasing decision (see for example, Annunziata, et al. 2016; Bandara et al., 2016; Themba & Tanjo, 2013; Rosenthal, 2009).

Moreover, as argued earlier by Denzin and Lincoln (2011) research desig are strategies employed for scientific investigation. As the researcher wants objective and valid answers, quantitative research is best suited as it can minimises the risk of any possible bias, something which can seriously threaten the validity of any study.

Despite the associated benefits of quantitative design it equally has some weaknesses as well. For instance, Ponterotto (2005) argues that quantitative research neglects the interviewee perspective within the context of their lives. Nevertheless, the quantitative methodology is viewed by the researcher as the best approach as this approach will enable the researcher address its research objectives more adequately than a qualitative perspective.

3.2 Population of the Study

Bryman (2012) viewed a study population as the universe of units from which the sample is to be selected from. Equally it has been argued that the key thing to consider when defining a study population is the exact specification of who should and who should not be included in the sample (Malhorta & Birks, 2007). More so, as this study seeks to investigate how nutritional labelling affects consumer purchasing decisions of

food products, the researcher found it more prudent to employ a student population whom are known to be a segment of a population that like reading and likewise read a lot in the private circles. From this qualification the institution selected for this research work was the undergraduate students of the University of Education-Winneba campus. Based on the researcher's initial enquiry at registrar office, it became evident that the Kumasi campus has total undergraduate students population of 7,500. Therefore the population size for this study was 7,500.

3.3 Sample and Sampling Techniques

According to Bryman (2012) a sample is a segment of the population that is selected for investigation. In another words it is a subset of a population. The method of selection may be based on a probability or a non-probability sampling approach. However, the decision to select a sampling approach is informed by what the study seeks to achieve. For instance, if a study seeks to ensure that each unit in the population has a fair or equal chance of being selected, then random sampling should be employed (Bryman, 2012). In contrast if a study purpose is to collect data or information from a selected few then non-probability sampling approach should be used. However, what each researcher ought to know beforehand is that each sampling approach has its own consequences.

Moreover, as this study seeks to ensure that each sample has an equal and fairer chance of being selected for the study, the study employed probability sampling specifically simple random sampling. Subsequently, the study used the Krejcie and Morgan (1970) sampling table to determine the sample size for the 7500 population size. Based on the

table, the sample size for this study was 365 with a 95% confidence interval (error of margin).

3.4 Research Method

According to Bryman (2012) research method are the instruments employed for a study data collection. Research method can take the form of self-administering questionnaire or a structured interview schedule and other forms of techniques guides a study uses to collate information from the subject under enquiry.

Additionally Bryman (2012) added that in a decision to select or employ a particular research instrument a researcher ought to take notice of some possible conditions. For example, Bryman (2012) posit that in certain occasions, the demographic profile of a study subjects may affect the answers the respondents will give. Therefore, a respondents characteristics such as educational qualification, religion, and perception about the study may influence his response rate. Obviously, since the present study participants are highly literate and could all read and understand the study items, the demographic characteristics in this case is not expected to have any direct impact on the way and manner the participants will respond to the study items. Accordingly, self-administering questionnaire is more appropriate for the study since it will eschew all these defects from its study findings.

Equally, questionnaires over time have proven to be one of the less expensive instrument to implement (Kumar, 2011) to use to collect study primary data. Bryman (2012) on his part argued that self-administering questionnaires provide greater anonymity and likewise minimize Hawthorne effect than other forms of data collection instruments.

Nonetheless, questionnaires have some weaknesses too for example, Bryman (2012) established that with questionnaire a researcher may find it to establish whether the selected sample actually answered the questionnaire by himself or not. Yet Bryman (2012) maintained that, this problem largely applies to open questions as well, which are not necessarily a great deal in self-completion questionnaire.

Saunders et al. (2007) define reliability as the extent to which data collection technique(s) will yield consistent findings, similar observations would be made or conclusions reached by other researchers would be realized or there is transparency in how sense was made from the raw data. Validity is the degree to which an instrument measures what it is intended to measure and whether it measures the concept accurately.

In order to ensure that the research instrument was reliable, a thorough theoretical study of Stigler's (1961) economics of information theory was reviewed before the questionnaires were eventually drafted. The factors to be considered were then converted into test items. Content validity on the other hand can be determined by expert judgement. In this study, experts mostly within marketing industry were approached to evaluate the validity of the questionnaire. The high internal consistency obtained for the questionnaire, hints that the items in the questionnaire are measuring the particular concept or construct it is purposed to measure. To further ensure the validity, the questionnaires items were designed carefully, which relate to the topic of the theories and concepts used. In order to make the study as reliable as possible, the researcher also consulted with his supervisor before the final questionnaires items were developed for distribution.

3.5 Data Collection Procedures

The questionnaires were sent out to the study samples of the undergraduate students of the University of Education-Winneba Kumasi campus to enable the researcher have adequate insight into the problem under study. Additionally, permission was sought from the course representative before the questionnaires were administered to the students. Also a cover letter was attached to each questionnaire. The letter outlined the purpose of the study and provided assurance of confidentiality. It also included the researcher's name and contact details. Churchill and Iacobucci (2002) added that cover letters are very important in convincing respondents to cooperate in a study.

3.6 Reliability and Validity of the Measuring Instrument

According to Bryman (2012) measurement validity applies primarily to quantitative research and to the search for measures of social scientific concepts. To the author with measurement validity the emphasis is to check and ensure whether a measure (i.e. nutritional labelling and consumer purchasing) that is devised of a concept really does reflect the concept that it is supposed to be denoting. In order to ensure that that the measuring constructs denoted the exact measure, a thorough theoretical review of the literature was undertaken to identify what previous studies used in measuring these constructs before the questions were eventually developed. Also Bryman added that with validity it is mostly concerned with the integrity of the conclusions that are generated from a piece of research. Hence, in order to ensure integrity of the study findings the APA referencing style was thoroughly followed and applied.

However, reliability is concerned with the question of whether the results of a study are repeatable. Hence, to achieve study reliability prior works in the scope of nutritional labeling and consumer purchasing decisions was reviewed and current findings were compared to them to identify where similarities existed.

3.7 Ethical considerations

Ethical consideration places enormous responsibility on the researcher to assess carefully the possibility of any harm that could affect the study participants and also to provide appropriate measures to control these effects (Bryman & Bell, 2007). When carrying out research it is important that participants are aware of why it is being carried out, and what will be done with the information they provide. If this is not made clear, the information given may not be entirely truthful or may be slant towards a certain direction. Equally it is important to assure participants that their identities will not be shared and that there is full confidentiality. It is also important that in quantitative research, investigators must be completely objective and try not to influence a study with their own values and perceptions (Bryman, 2012). In order to address these issues firstly, permission was sought from the respondents before the researcher distributed the questionnaires to the participants to complete.

Moreover, every questionnaire that was sent out had a cover letter included in it which clearly espoused the purpose of the survey. The questionnaire didn't require the names of the respondents; this was to protect their identity and remain anonymous. As a result, the employees were aware from the beginning what the researcher was doing, why and where the information was going and why it was being gathered.

3.8 Data analysis

The empirical analysis for the present study aims at investigating how nutritional labelling affects consumer purchasing decisions of food products. The data collected were keyed into The IBM Statistical Package for Social Sciences (SPSS) version 20.0 and the result of the study was analysed on the basis of descriptive statistics, Pearson correlations and regression analyses. However in identifying the correlation between the variables, regression analysis was carried out to know the strength of association or amount of influence the nutritional labelling had on the respondents purchasing decisions of food products.



CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction

This chapter presents the analysis of the final data collected from the study and summarizes the basic statistics related to the respondents' demographic profile and the other measuring scales of the study. The Statistical Package for Social Sciences (SPSS) version 20.0 was used for the descriptive as well as the inferential analysis of the study data.

4.2 Response Rate and Response Bias

The study distributed 365 questionnaires to the selected undergraduate students of the University of Education-Winneba, Kumasi campus. From the questionnaires distributed, a total of 190 completed questionnaires were returned to the researcher. Of these, 120 were usable for analysis, giving an effective response rate of 40.67%. This response rate is considered to be satisfactory, since from the perspective of Baruch and Holtom (2008) the average response rate for surveys in management and behavioural science research ought to be 52.7%.

4.4.1 Analysis of Measurement Reliability Scale

The reliability (internal consistency) of the items comprising each measuring construct was examined using Cronbach's alpha (α). The reliability of the three measuring constructs is presented in Table 1.

Table 1: *Reliability of Brand Equity measuring items*

No.	Brand equity	Cronbach Alpha
1.	Nutritional labelling awareness	0.953
2.	Purchasing decisions	0.923
3.	Checking Nutritional information	0.914

Source: Field Survey, June 2017.

In all 20-item instruments were employed to elicit participants response on how nutritional labelling affect their purchasing decision. The first determinant item, labelled 'nutritional labelling awareness', included 5 items measuring how buyers or consumers understand the nutritional labelling or aware the nutritional labelling food products (Cronbach alpha=0.953). The second determinants item, labelled 'purchasing decision' had four items measuring factors respondents consider when buying food products (Cronbach alpha=0.923).

The next and final determinants, labelled 'checking nutritional information' consisted of four items and measured whether the respondents did checked nutritional label on food products when making a purchase (Cronbach alpha= 0.980). It could be observed from the Table 2 that the reliability score for all the constructs ranged between 0.914 and 0.953. This proves that the instruments were highly reliable (Kline, 2005).

4.3 Demographic Profile of Sample

The demographic profile of the survey respondents are presented in Table 2; age, gender, educational qualification and the average monthly salary the respondents received.

Table 2: *Demographic Profile of Survey Respondents*

Demographic variable	Category	Frequency	Percentage
Gender	Male	75	62.5%
	Female	45	37.5%
Age	21-30	70	58.3%
	31-40	50	41.7%
Education	SSCE/WASSCE	85	70.8%
	Diploma	35	29.2%
	Bachelor's degree		
Average monthly income	¢100-500	80	66.7%
	¢600-1000	30	25.0%
	¢1100-1500	10	8.3%

Source: Author's fieldwork, 2017.

Note: Sample (Gender, N= 120, Age, N=120, Educational qualification, N=120, Average monthly income, N=120)

The demographic profile of the survey respondents in Table 2 shows that 75 of the respondents, 62.5% were male whereas 45 representing 37.5% were female. As for the age of the respondents, more than half of the respondents 70(58.3%) were between the ages of 21-30 years and the remaining were between 31-40 years. More so, for the educational level of the respondents, results from Table 1 show that 70.8% of the respondents had WASSCE/SSCE as their academic qualification and 35 of the respondents representing 29.2% had Diploma as their academic qualification. In total, 80(66.7%) of the respondents received an average monthly income within the ranges of ¢100-500 per month, 30(25.0%) of the respondents on the other hand received an

average monthly income within the ranges of ₵600-1000 with the remaining thus, 10(8.3%) receiving an average monthly income within the ranges of ₵1100-1500.

4.4 The Level of Awareness of Consumers towards Nutritional Labelling

With this study construct the study sought to establish the respondents' level of awareness towards nutritional labelling. Hence, this study objective sought to ascertain how often the respondents read nutritional label on food products, also how they understood what they read, the kind of information they often look out for when reading the label on food product and finally when did they normally read the nutritional label on food product. Accordingly, respondents rating on these measuring items have been presented in Table 3-Table 6.

Table 3: *Do you refer to the nutritional label on a food product when buying?*

Responses	Frequency	Percent
Not at all	40	33.3
Rarely	40	33.3
Occasionally	30	25.0
Always	10	8.3
Total	120	100.0

Source: Author's fieldwork, 2017.

Results from Table 3 indicate that most of the study respondents thus, 33.3% held that they do not at all refer to the nutritional label on food product when buying. Equally the same percentage points of the survey participants said they rarely refer to the nutritional label on a food product when buying. This suggests that this section of the respondents once a while did referred to the nutritional label on a food product when buying but not on a frequent basis.

Also, 25% of the respondents held that to them they occasionally refer to the nutritional label on a food product when buying. This suggests that 58.3% of the respondents

though agreed to somewhat refer to the nutritional label on a food product but their level of agreement suggest that this act was not done on a frequent basis thus only done on a sporadic basis.

However, only a small segment of the respondents thus, 8.3% agreed that to them they always did referred to the nutritional label on a food product when buying. On this score, findings from this study is inconsistent with the study done by AC Nelsen (2005) which reported that most consumers within Europe, Asia Pacific, North America, Latin America and South Africa always checked the nutritional labels before they eventually purchased or shopped their food products. Within this study context the evidence available suggests that the sampled respondents sporadically checked the nutritional label on food products. Likewise findings from this study is not in tandem with the study of Mahgoub et al. (2007) which reported that over 60% of consumers in Lesotho agreed that they always refer to the nutritional information on food products when shopping for food products.

Table 4: *How often do you read Nutritional Label on Food Product?*

Responses	Frequency	Percent
Not at all	20	16.7
Rarely	30	25.0
Occasionally	60	50.0
Always	10	8.3
Total	120	100.0

Source: Author's fieldwork, 2017.

Results from Table 4 show that most of the respondents thus, 60% agreed that they occasionally read nutritional label on food product when asked to indicate their level of agreement as to how often they read nutritional label on food product. Also 25% of the respondents held that to them they rarely read nutritional label on food product. This suggests that in all 85% of the respondents agreed to be reading the nutritional label on food product nonetheless, their responses suggest that they did not read the nutritional label on food product very often. However, only 8.3% of the survey respondents held that to them they always read the nutritional label on food product.

In contrast, 16.7% of the respondents held that to them they do not at all the read nutritional label on food product. Findings from the study could not confirm the works of Bandara et al. (2016) when their study established that consumers within Sri Lanka at most often times read the nutritional label on food product.

Table 5: *Do you understand what you Read?*

Responses	Frequency	Percent
Don't understand	70	58.3
Somehow	30	25.0
Very well	20	16.7
Total	120	100.0

Source: Author's fieldwork, 2017.

Results from Table 5 show that most of the respondents said they do not understand what they read on the nutritional label on food products. Thus, 58.3% of the participants said this. However, 25% of the respondents said to them they somehow understood the nutritional label they read on food products. Interestingly, only 16.7% of the respondents could be definitive in their responses. To them they agreed that they understood the nutritional label on food products very well. Evidently, having a high

level of the respondents not understanding the nutritional label they read on food products could some contribute to the randomness they chose to read or refer to the nutritional label on food products when making a purchase. Hence, the argument a person within such a distress situation will put forward will be, if I do not or cannot understand the information I am reading from a product then what will be the need for me to continue or always read such information. Findings from the study affirm the works of Cowburn and Stockley (2005) when their study reported that consumers appear to have difficulty understanding the nutritional label on food products most especially how to convert the numerical values in the back-of-pack label. Equally findings from this study corroborate the studies of (Cowburn & Stockley, 2005; EUFIC, 2005; Sadler, 1999; Shine, O'Reilly, & O'Sullivan, 1997 & Wandel, 1999) when they established that consumers within continents such as; Europe, United State, Australia and New Zealand revealed that they most often find it difficult to understand the nutritional label on food products because the numerical information and the terminology used in the label format were confusing.

Table 6: *What Kind of Information did you look out for when you read Label on a Food product?*

Responses	Frequency	Percent
Nutritional information	10	8.3
Food ingredients	10	8.3
Expiry date/use before	70	58.3
Country of origin	10	8.3
Producer/manufacturer	20	16.7
Total	120	100.0

Source: Author's fieldwork, 2017.

Results from Table 6 show that more than half of the respondents held that the first thing they look out for when reading a label on a food product was the expiry date or use before date. Thus, 58.3% of the respondents said this. Equally 16.7% of the respondents said to them the specific thing they look out for when reading a label on a food product was the name of the producer or the manufacturer. Interestingly, nutritional information, food ingredients and country of origin were the factors that were least looked out for by the respondents when reading label on food product. On these items, only 8.3% of the respondents agreed to be the main things they look out for when reading a label on a food product.

Findings from this study is consistent with the works of Bandara et al. (2016) which established that consumers in Sri Lanka looked out for the expiry dates, producer and country of origin when reading a label on food product.

Table 7: *When do you normally read the Nutritional label on a Food Product?*

Responses	Frequency	Percent
When buying a product for the first time	50	41.7
When comparing food products	30	25.0
When buying some kinds of food product	40	33.3
Total	120	100.0

Source: Author's fieldwork, 2017.

Results from Table 7 show that a large part of the study respondents thus, 41.7% held that the time they normally read the nutritional label on a food product was when they were buying a food product for the first time. However, 33.3% of the survey respondents said to them they normally read the nutritional label on a food when buying some kinds of food product (i.e. vegetarian or organic food types). Also 25% of the

respondents on the other hand said they normally read the nutritional label on food product when comparing food product?

Findings from the study suggest that most of the respondents often read the nutritional label on food products when purchasing a food product for the first time.

4.5 Descriptive Analysis of the Impact of Nutritional Labelling on Consumer

Purchasing Decision of Healthy Food Products

Having established the level of awareness the respondents had towards nutritional labelling the study proceeded to ascertain whether nutritional labelling affect the respondents purchasing decision of healthy food products. Accordingly, respondents rating as to whether nutritional labelling affected their purchasing decision of healthy foods have been presented in Table 8.

Table 8: *Impact of nutritional labelling on consumer purchasing decision of healthy food products*

Responses	N	Minimum	Maximum	Mean	Std. Deviation
I do check the nutritional label on a food product before I decide to purchase the product	120	1	5	2.00	1.296
The nutritional information on a food product will influence my decision to select a product over the other	120	1	5	2.42	1.192
The nutritional information on a food product will enable me to select a healthy product to buy	120	1	5	3.71	1.024
I always look out for the nutritional label on a food product before I purchase a food product	120	1	4	1.71	1.103
Valid N (list wise)	120				

Source: Author's fieldwork, 2017.

Results from Table 8 show that most of the respondents disagreed when asked to indicate their level of agreement on whether they did check the nutritional label on a food product before they decided to purchase the product. On this item it had a Mean value of 2.00 and a SD of 1.296. This suggests that most of the respondents rating on this measuring item fell within the disagreed score.

Also it became evident that most of the survey respondents held that the nutritional information on a food product will not influence their decision to select a product over the other. This item had a Mean value of 2.42 and SD of 1.192. This means that the nutritional information on food product did not influence the respondents' decision to select a product over the other.

Findings from this study is inconsistent with the works of Themba and Tanjo (2013) which established that nutritional information on food product influenced Botswana consumers on the kinds of food to buy or select. Likewise findings from this study could not affirm the study of Satia et al. (2005) which found out that 78% of 658 African Americans sampled in a study with ages between 20 and 70 living in North Carolina agreed that they read nutrition labels when purchasing packaged foods hence its played a key role in their food selection. Samely, findings from this study could not confirm the results of Mahgoub et al. (2007) which reported that over 60% of sampled respondents in a study conducted in Lesotho agreed to be using nutritional information when shopping.

However, findings from this study is in tandem with the works of Krukowski et al. (2006) which posited that 52% of the college students of Vermont college sampled and 33% of the Vermont community sampled reported that nutrition labels did not affect their purchasing decisions.

With the third measuring item it sought to establish from the respondents as to whether the nutritional information on a food product will enable them to select a healthy product to buy. On this item, it became evident that most of the respondents' ratings fell within the agreed score. Meaning most of the survey participants agreed that the nutritional information on a food product will enable them to select a healthy product to buy. It had a Mean value of 3.71 and a SD of 1.024.

Findings from this study corroborate the study of Rosenthal (2009) which reported that Cornell University decision to ensure that all the foods served on the school dining hall had nutritional labels made it possible for the students within the school community to purchase healthy food products.

The final item under this construct sought to ascertain was to establish whether the respondents always look out for the nutritional label on a food product before they purchase a food product. On this item it became evident that most of the respondents' ratings fell within the disagreed rating. This suggests that most of the respondents did not always look out for the nutritional label on a food product before they purchase a food product. It had a Mean value of 1.71 and SD of 1.103.

Findings from this study could not confirm the works of AC Nelsen (2005) which established that respondents in countries like Europe, Asia Pacific, North America, Latin America and South Africa agreed that they always check the nutritional labels on food products before they eventually purchased or shopped their food products. Likewise findings from this study is not consistent with the earlier works of Themba and Tanjo (2013) which established that consumers within Botswana did considered the nutrition information on food products before they decided which food product to buy and not to buy.

Findings from the study suggests that nutritional labelling impact on the respondents became only evident only when the respondents wanted to purchase healthy foods. Meaning consumers who may in one way or the other might be having a chronic disease or would want to have healthier foods relied on the nutritional labelling. Nonetheless, respondents who might not be in these categories did not relied on the nutritional label on food products to inform their purchasing decisions.

4.6 Regression Analysis of Impact of Nutritional Labelling on Respondents

Decision to Purchase Healthy Food Products

This section sought to examine the impact of nutritional labelling on respondents purchasing decision of healthy food products. Accordingly, the regression analyses have been presented in Table 9.

The model is presented algebraically as follows:

$$\text{Purchasing of healthy food} = \beta_0 + \beta X_1 (\text{Nutritional labelling}) + E$$

Table 9: *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 ^a	.958	.958	.72753

a. Predictors: (Constant), Nutritional labelling

Table 9: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.	Remarks
1	Regression	1421.905	1	1421.905	2686.409	.000 ^b	S
	Residual	62.457	118	.529			
	Total	1484.362	119				

a. Dependent Variable: Purch.decision, Use Note (S= significant, NS= not significant)

b. Predictors: (Constant), Nutritional labelling

Simple linear regression analysis was carried out and it was established that there is significant impact between the independent variable (i.e. nutritional labelling) and the dependent variable (purchasing of healthy food) $F(118, 119) = 2686.409, p < 0.01$. The correlation coefficient for the predictor variable was at ($R=0.979$). This suggests that there is a significant correlation between nutritional labelling and respondents purchasing decision of healthy product. Also the *Adjusted R square* value of 0.958 means that the model fitted is indeed a good model. Likewise the *Adjusted R square* value of 0.958 means that 96% of the variability in the dependent variable could be predicted by the independent variable.

Table 10: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
		B	Std. Error	Beta			
1	(Constant)	-.922	.194		-4.742	.000	S
	Nutritional labelling	.975	.019	.979	51.831	.000	S

a. Dependent Variable: Purch.decision, Use Note (S= significant, NS= not significant)

Model summary: Purchasing of healthy food= $-0.922+0.975X_1$

It became evident that nutritional labelling had a significant positive impact on respondents purchasing decision of healthy food product $p < 0.01$. This means that as nutritional labelling on food products or respondents' awareness on nutritional labelling increases, the respondents' decision to purchase healthy food products will increase concurrently by a percentage points of 0.975. On this score the null hypothesis which suggested that nutritional labelling will have no significant impact on consumer purchasing decision of healthy food products is rejected and concurrently the alternative hypothesis is accepted.

Findings from this study is consistent with the study of Rosenthal (2009) which posited that nutritional labelling have a significant impact on respondents purchasing decision of healthy food products. Likewise findings from this study corroborate the works of Drichoutis et al. (2006) which established a significant impact between nutritional labelling and consumer buying decisions of healthy food products.

In contrast, findings from this study is inconsistent with the earlier works of Krukowski et al. (2006) which establish an insignificant impact between nutritional labelling and consumer purchasing decision of healthy food product. More so, findings from this study affirm the studies of Wiles et al. (2009) and Satia et al. (2005) which all reported a significant impact between nutritional labelling and consumer purchasing decision of healthy food products.

4.7 To ascertain whether a Consumer Demographic Characteristics (i.e. gender, income, educational level) Affect their Decision to Check for a Nutritional Labelling on Food Products

This section sought to determine how respondents personal characteristics thus, gender, income and educational qualification would influence the respondents' decisions to check for nutritional labelling on food products. Accordingly, this model is presented to identify how the independent variables would have a significant impact on the dependent variable.

The model is presented algebraically as follows:

$$\text{Checking out for nutritional labelling} = \beta_0 + \beta X_1 (\text{Gender}) + \beta X_2 (\text{Age}) + \beta X_3 (\text{Income}) + \beta X_4 (\text{Educational qualification}) + E$$

Where: Y is the dependent variable, purchasing decisions

β_0 is the constant

E is the error term

βX_1 (Gender) βX_2 (Age) βX_3 (Educational qualification) and βX_4 (Income) are the independent variables

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.858 ^a	.736	.727	.74281

a. Predictors: (Constant), What is your average monthly income, Age, Education, Gender

Table 12: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.	Remarks
1	Regression	177.173	4	44.293	80.276	.000 ^b	S
	Residual	63.452	115	.552			
	Total	240.625	119				

a. Dependent Variable: Checking nutritional label, Use Note (S= significant, NS= not significant)

b. Predictors: (Constant), average monthly income, Age, Education, Gender

Table 13: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Remarks
		B	Std. Error	Beta			
1	(Constant)	.706	.228		3.099	.002	S
	Gender	-.111	.424	-.038	-.262	.794	NS
	Age	.786	.344	.274	2.285	.024	S
	Education	1.111	.326	.357	3.408	.001	S
	Average monthly income	.722	.239	.326	3.019	.003	S

a. Dependent Variable: Checking out for nutritional label, Use Note (S= significant, NS= not significant)

Multiple linear regression analysis was carried out and it was established that respondent age, education, and average monthly income have a significant impact on respondents decision to check out for nutritional labelling on food product since $F(115, 119) = 80.276, p < 0.01$, the correlation coefficient for all the predictors variable was at ($R=0.858$). The *Adjusted R square* value of 0. 727 means 72.7% of the variability in the

dependent variable could be predicted by the independent variables. Equally the *Adjusted R square* value of 0.727 suggests that the model fitted is a good model.

Model summary: Checking for nutritional labelling= $0.706 - 0.111X_1 + 0.786X_2 + 1.111X_3 + 0.722X_4$

Results from Table 13 indicate that there is a significant impact between a respondents age, education and average monthly income and his decision to check out for the nutritional labelling on a food product since the p value for all the three variables were $p < 0.05$.

However, it became evident that a respondent gender did not have a significant impact on his or her decision to check out for the nutritional label on a food product since $p > 0.05$.

Moreover, among all the four demographic characteristics, education had the highest coefficient value thus, 1.111. This suggests that as a person educational status increases his willingness to check for the nutritional label on a food product will increase concurrently. On the other hand a respondent gender had the least coefficient value as well as the variable with the insignificant impact among all the predicting variables.

Findings from this study affirm the earlier works of Ippolito and Mathios (1990) which established that a consumer personal characteristic thus, age had a significant impact in predicting a consumer decision to check out for a nutritional labelling.

Equally findings from this research corroborate the works of (Drichoutis, et al., 2005; Feick, Herrmann & Warland, 1986; Guthrie et al., 1995; Kim, et al., 2001a; McLean-Meynsse, 2001; Nayga, Lipinski, & Savur, 1998; Wang, Fletcher & Carley, 1995) which all confirmed a significant impact between a person educational status and his or her decision to check out or use nutritional labels.

Likewise findings from this study is in tandem with the works of (Mahgoub et al., 2007; Ranilovic & Baric, 2011; Wiles et al. 2009) which posited that a consumer personal characteristics thus, age, educational status and income had a significant impact on a person decision to use nutritional labelling.

In contrast, findings from this study could not confirm the works of (Govindasamy & Italia, 1999; Guthrie et al., 1995; Kim et al., 2001a; 2001b; McLean-Meyinsse, 2001) which reported a significant impact between a person gender and his or her decision to use or check out for the nutritional label on a food product.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary of the study as guided by the research questions, research objectives and conclusions reached based on the study findings as well as recommendations for additional research studies.

5.2 Summary

The main problem of the study was to explore how nutritional labelling affects consumer purchasing decisions of food products. The literature review of the study was developed around these areas thus, definition of concepts, theoretical framework, types of nutritional labelling, determinants of nutritional label usage, relationship between nutritional labelling and consumer purchasing decisions, empirical review and conceptual framework.

The target population for the study constituted all the undergraduate students of the University of Education-Winneba, Kumasi campus. Therefore the population size for this study stood at 7,500. Moreover, the study employed the Krejcie and Morgan (1970) sampling table to determine the sample size for the entire population size. Based on the table, the sample size for this study employed was 365 with 95% confidence level with 5.0% confidence interval (i.e. ± 5 per cent). Since the study employed cross sectional research design and was equally guided on the principles of quantitative research methodology, the study used questionnaires with a 5-point Likert scale as the data collection instrument.

With the first research question, the study established that 58.3% of the respondents though agreed to be referring to the nutritional label on a food product when buying food product but their agreement suggest that this act was not done on a more frequent basis but only done on a sporadic basis. On this same research question it was established that 60% of the respondents agreed that they occasionally read nutritional label on food product. Also it was revealed that 58.3% said that they do not understand the nutritional label on food product when they read. Finally it became evident that more than half of the respondents thus, 58.3% said that the first thing they normally look out for when reading a label on a food product is the expiry date or use before date. Shockingly, only 8.3% of the respondents said they did checked the nutritional label on food products.

With the second research question it became evident that generally nutritional labelling did not have any impact on the respondents purchasing decision of food products. However, when it came to the purchasing of healthy food products it became evident that nutritional labelling have a significant impact on the respondents buying decisions of healthy food product.

Moreover, on the final research question, it was established that respondent age, education and average monthly income had a significant impact on respondents' decision to check out for nutritional labelling on food product. However, with reference to the respondents' gender, it became evident that a respondent gender did not have a significant impact on a person decision to check out for the nutritional labelling on a food product.

5.3 Conclusions

The first specific objective the study sought to measure was to find out the level of awareness of consumers towards nutritional labelling in terms of buying behaviour. With this research objective, results from the study show that generally most of the respondents had a low level of awareness of nutritional labelling. This suggests that the respondents did not care about the nutritional labelling on a food product.

The next objective the study sought to measure was to examine whether nutritional labelling affect consumer decision to purchase healthy food products. On this research objective, findings from the study revealed that nutritional labelling had a significant impact on the respondents' decision to purchase healthy food products. This suggests that the nutritional labelling impact only became significant in times when the respondents wanted to buy healthy product however, in instances where they did not want to buy a healthy product it did not have a significant impact on their buying decisions.

The third objective was to ascertain whether a consumer demographic characteristics (i.e. gender, income, educational level) affect their decision to check for a nutritional labelling on food products. Evidence from the study established that respondents' personal characteristics (i.e. average monthly income and educational level) had a significant impact on their decision to check for a nutritional labelling on food products. In contrast, a person gender did not have a significant impact on their decision to check for a nutritional labelling on food products.

5.4 Implications of the Study to research

Firstly, with reference to the literature earlier reviews indicated that nutritional labelling research and reviews have mainly focused on western countries with limited empirical findings on labelling impact in countries in the developing economies particularly Ghana. Hence, findings from this study have in a way attempted to make a modest contribution to the dearth literature in this regards.

However, as it became evident that the study respondents had low level of awareness towards the essence of nutritional labelling, it is suggested that the regulating bodies such as the Ministry of Health, Food and Drug Board and the Ghana Standard Board should as a matter of urgency take it upon themselves to organize sensitization programmes across the entire country most especially within our educational institution to educate students about the relevance of nutritional labels and the need to check when buying a food product since failure to do that will have a greater consequences on the country's ability to control its obese population and likewise promote healthy lifestyle.

5.4.1 Recommendation to Manufacturers

- It became evident that most of the respondents said they do not understand the nutritional labels on food products, on this note it is recommended that the food manufacturers and food importers should adopt a less complicated nutritional label that will make it easier for the buyer to read and understand.
- Also it was revealed that most of the respondents did checked out for the expiry dates on food product. This suggests that the less ambiguity in reading the expiry dates on food products as well as where these date are mostly written thus, on top of food product contributed to the respondents' willingness to check for it. On this score, it is recommended to the manufacturers to if possible adopt

similar approach or use a less ambiguous means to communicate the nutritional label on its product to its customers.

- Finally it was revealed that nutritional label has a significant impact on respondents' decision to purchase healthy product. On this score it is recommended to the marketers to know that certain segment of its market thus, those who are health conscious as well as those who want to buy healthy food products takes the nutritional label on foods into account when making a purchase hence, they should know these segments very well and the kind of labelling that will satisfy these segments to purchase their products.

5.4.2 Recommendations for further research

First and foremost this study confined itself to nutritional labelling on consumer purchasing decisions hence, the study did not sought to understand why consumers did check or did not check the nutritional labelling on food products when making a purchase. Accordingly, it is recommended that additional studies will be required to explore why consumers choose to look out for the nutritional labelling on food product and the vice versa. Studies in this regard will guide policy drafters and makers to know the reasons why consumers especially Ghanaians do check or do not check the nutritional label on food products.

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APPENDIX A

UNIVERSITY OF EDUCATION WINNEBA-KUMASI CAMPUS

Master of Business Administration Marketing

Questionnaire Items

Dear Sir/Madam,

This questionnaire is designed to collect information about how nutritional labelling affects consumer purchasing decision of food products. The results of the study would provide a better understanding of how businesses in Ghana can build upon their food labelling. The study is for academic purpose solely, your responses, though voluntary, are greatly appreciated and would be treated with the utmost confidentiality. Thank you.

Instructions: Please tick [v] the response that best describe your view.

SECTION A: RESPONDENTS PROFILE

1. Age

- 21-30
- 31-40
- 41-50
- above 50

2. Gender

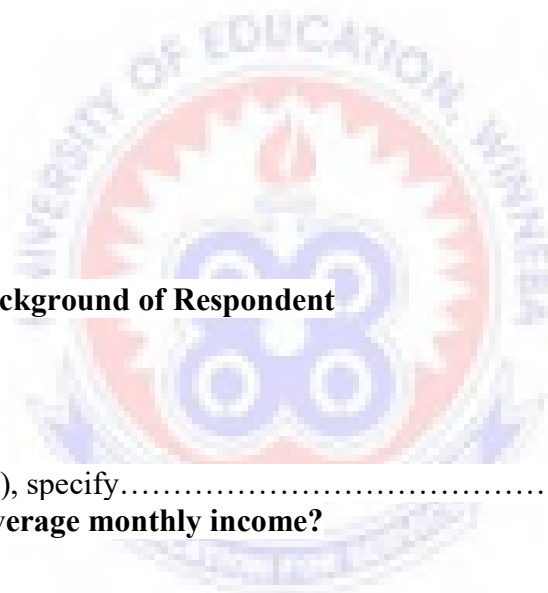
- Male
- Female

3. Educational Background of Respondent

- Diploma
- Degree
- Post-degree
- Doctorate
- Please others(s), specify.....

4. What is your average monthly income?

- ¢100-¢500
- ¢600-¢1000
- ¢1100-¢1500
- ¢1600-¢2000
- ¢2100 and above



SECTION B: CONSUMERS LEVEL OF AWARENESS TOWARDS NUTRITIONAL LABELLING

Please tick [v] the response that best describe your view.

6. Do you refer to the nutritional label on a food product when buying?

Not at all

Rarely

Occasionally

Always

7. How often do you read the nutritional label on food product?

Not at all

Rarely

Occasionally

Always

8. Do you understand what you read?

Don't understand

Somehow

Very well

9. What kind of information do you look out for when you read the label on food?

Nutritional information

Food Ingredient

Expiry Date/ Use Before

Country of Origin

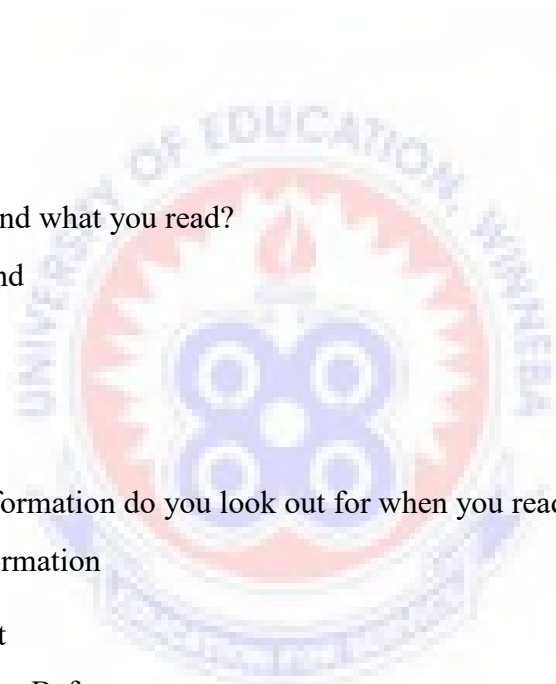
Producers /manufacturers

10. When do you normally read the nutritional label on a food product?

When buying a product for the first time

When comparing food products

When buying some kinds of food product



SECTION B: PURCHASING DECISIONS

This section seeks to measure factors you will consider when deciding to purchase electronic a food product. Please indicate how you agree or disagree with each of the following statements about how these nutritional labelling affect your purchasing decision of food products

10. I do check the nutritional label on a food product before I decide to purchase the product?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

11. The nutritional information on a food product will influence my decision to select a product over the other?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

12. The nutritional information on a food product will enable me to select a healthy product to buy?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

13. I always look out for the nutritional label on a food product before I purchase a food product?

Strongly agree

Agree

Neutral

Disagree

Strongly disagree