

Food label makes individual healthy

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Abstract: Author of this article has examine the role of food label and its usage and understanding level among consumer by consulting past studies. The growing interest of processed and package food items has enhanced the significance of food label and scheme of label to deliver basic information to end consumers. Past studies have indicated that food label is not merely a printed material but a source of awareness about healthy and nutritional food selection. Researchers have uncovered the fact that usage and understanding of food label and nutritional information label varies country to county, culture to culture and consumer to consumer. Therefore results about relationship between food label usage, at point of purchase and healthy food selection yet unclear and need to be more examine in different countries where food linked diseases are increasing.

Key words: Nutritional food label; Food label and healthy food selection

1. Introduction

Food label is legal requirement which has to be fulfilled by food processing companies for the consumer's better health and safety (Ababio et al., 2012). Food processing companies are having some commitments with consumer to provide proper information regarding fat, saturated fat, sugar, sodium and fiber and to achieve this objective food labelling is the best medium (Leech, 2006). In international market misinformation on food label is an offence and might be the one of the causes of human illness or sometime death. Therefore, according to the Food Law of Ghana (PNDC L 305B), selling food without label or misinformed label is a serious offence. Food label comprises of printed, symbolic or graphical information which is accompanied by food (Asiamah, 2006).

Furthermore, for the consumer safety which is at the top most priority of each food industry and regulatory authority, there are some contents which must be observed on food label before its approval like, name, country of origin, ingredients, batch code, best before date, manufacturing date, net weight and address of manufacturer (USDA, 2010). Understanding and interpretation of food label information is directly linked with consumer health and safety. The lack of understanding of food label divert consumer toward wrong direction and ultimately indulged in unhealthy food selection. Therefore, it has also been observed in various researches that language sometime become a big hurdle in interpreting food label at the point of purchase. Researchers have suggested that international language English and local language both should be accompanied on food label for better

and informed choice decision (Schmidt & Loving, 2011).

Actually the processed food is wrapped with a printed paper which is call package and the information written on it is having the status of label. Therefore, collectively it is called food label. Owing to the growing need of processed food among consumer, food label has been divided into two section, food label and nutritional label. Complete label develop the overall image of the specific food whereas nutritional information provide the information which is related to individual health. According to (Basarir, 2012) food label is an instrument which is used to inform consumer about food safety and nutrients best for his/her health. One of the study in the past has indicted that the consumer awareness about nutrients is as significant as to know about food origin and expire date (Cowburn & Stockley, 2005). Like other countries of the world, gulf has also established a standard organization for food safety and protection of gulf consumer with the name Gulf Standard Organization (GSO, 2001). The responsibility of this organization is to increase the status of food safety among gulf countries according to international standard and law.

Some of the researchers have their view that food packaging inspire consumer during shopping in big stores as well as assist consumer in making comparison with other food items (Butkevičienė et al., 2008). However, the increasing number of food processing companies and availability of several package foods in the market have made consumer confused in decision making. Therefore, food label with nutritional information has simplified the consumer decision making process and also helped consumer in better food selection (Prinsloo et al., 2012). Food label direct consumer in pre-purchase

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and post-purchase decision making (van der Merwe et al., 2014). An efficient food label play multi-dimensional role like, providing nutritional information (Grunert & Wills, 2007), control food related allergies (Voordouw et al., 2009) and expiry date provide food safety (Sanlier & Karakus, 2010).

Some previous studies have also unfolded the fact that food label guide consumer and patients who are suffering from chronic diseases to obey the dietary recommendation available on label in the form of nutritional information (Rothman et al., 2006). The demand of nutritional information on food label has increased and consumer is conscious about his/her health. Consumer search benefits on food label which might keep him/her healthy by taking healthy food (Campos et al., 2011). Several results in the past have indicated the consumer opinions about use of food label as well as the benefits related to food label. There are some consumers who have their opinion that nutritional information on food label is trustworthy (Campos et al., 2011), some of them have their point of view that presence of nutritional information on food label assure the quality of food (Svederberg & Wendin, 2011) and healthiness and few consumer comment that food label provide health information very positively (Bosman et al., 2014).

The objective of this article was to elaborate the decisiveness of food label and nutritional information by consulting aforementioned studies. The increasing interest of consumer in processed food has provoked researchers to have a look on studies related to food label and consumer health or dietary quality. This study would also provide the quick glance of studies conducted on food label importance, usage and understanding among consumers. The consumer perception toward food label reading and its relation with healthy and nutritional food intake would also be the part of this article.

2. Literature

There is no other way except food label to educate consumer about healthy and nutritional food intake. The understanding and usage of food label at the time of purchase leads consumer towards healthy and informed food choices (Hoefkens et al., 2012). Food label is beneficial for fulfilling immediate and future food related needs, guide consumer in changing food shopping behaviour from unhealthy to healthy and nutritional information assist in informed choice decision (Liu et al., 2015). China is the largest populated country of this world. In 2011 China has announced a program with the name "Healthy China 2020". The objective of the program was to promote the healthy eating behaviour and reducing the non-communicable diseases among Chinese such as cardiovascular, sugar and Type 2 diabetes (Hu et al., 2011).

The significance of nutritional information accompanied with overall food label is inevitable.

Placing the nutritional information on food label helps consumer in balancing the routine dietary quality (Campos et al., 2011; Wahlich et al., 2013). After realizing the significance of nutritional information on food label which is in the best interest of the nation, China has published its first Food Nutritional Label Regulation in 2008 (MOH, 2008). Nutritional information labelling scheme has also provided a channel of freedom of choice as well as reduce the cost of information search related to healthy food intake (Capacci et al., 2012). Companies are putting extra efforts on food label and nutritional label to educated consumer and in business point of view for competitive edge. Therefore, easy to understand language is the corner stone for nutritional food labelling, because traditional scientific language for nutritional food labelling is creating gap between consumer and food choice. Some of the researchers have found in their results that understanding of nutritional food labelling is the key of food product success in the competitive food market and understanding also help consumer in processing of nutritional information (Grunert et al., 2010; Hoefkens et al., 2012).

Lack of understanding may develop a negative behaviour among consumers which ultimately lead toward avoidance of food label as well as nutritional information (Besler et al., 2012; Chen & Niu, 2009; EUFIC, 2005; Gorton et al., 2009). According to (International Food Information Council, 2011) consumer conscientiousness has increased over the period of time and a statistical survey conducted on American consumers have indicated that 64% American adults are keen in searching healthy and nutritional food. This behaviour has influenced consumer's food and beverage selection. The realization of healthiness differs among gender. A study has exposed the fact that women are more conscious in avoiding high fat and tilted toward healthy eating behaviour than men in the world (Wardle et al., 2004).

Changing or diverting human regular behaviour toward any new search is difficult and sometime near to impossible. The reason behind this difficulty is the strong footing of any right or wrong perception toward performing any regular behaviour. Therefore perception toward healthfulness is influenced by many factors and familiarity factor is one of them (Priven et al., 2015). Personal relevance with food product label is directly proportional with the perceived benefits linked with food items and healthfulness (Dean et al., 2012). Actually targeting consumer consciousness and fear of illness behaviour is the main goal of food processing companies. A study, in the past, has derived a conclusion from its results that consumer perception about the drastic effect of food on health, direct consumer to avoid any unhealthy food intake and increase the interest in searching healthy food and nutritional related information (Yeung and Yee, 2003).

The appreciation of nutritional food label is not confined to the processed food but also equally

appraised in restaurants and fast food outlets. Some of the researchers have exposed the fact that to decrease the obesity and overweight issue among consumer, the role of food label menu is vital (Burton et al., 2006; Malik et al., 2013). In the light of Patents Protection and Affordable Care Act 2010, it is necessary for all restaurants to disclose the calories related information of food menu (USA, 2010a). In the United Kingdom, the concept of Responsibility Deal, governed by government, is responsible to ensure the caloric information menu in all outside home food setting (UK, 2011). Some of the researchers have observed similar activities in different part of the world and the main aim of all these task were to protect individual consumer from unhealthy food and taking toward nutritional base food selection (McGuffin et al., 2013).

Furthermore, Brazil where all the restaurants and outside home food setting businesses follow the caloric information menu as well as consider municipal and state regulation to disclose the information on menu regarding calories (Oliveira et al., 2012). There are two contradictory facts have been uncovered by the past studies that consumer is demanding caloric information in restaurants food menu labelling whereas he/she does not know the meaning of "Calorie", similarly the infrequent usage of caloric informative label menu found among consumers who claim for the availability of information (Burton & Kees, 2012; Krukowski et al., 2006; Watson et al., 2013).

Moreover, some results in the past studies have unfolded the fact that in the presence of caloric information on food label menu make consumer conscious toward low caloric intake as well as consider the healthier dietary intake (Fernandes et al., 2015). While some research findings have indicated that even in the presence of caloric information on food label menu the selection of low caloric and healthy food lacking (Burton et al., 2006; Harnack & French, 2008; Sinclair et al., 2014; Swartz et al., 2011).

Past studies have described that American consumer demanding nutritional information food label menu due to the increasing ratio of obesity (Roberto et al., 2010; Kreiger and Saelens, 2013).

Researchers have noticed that consumer understanding and usage of food label improve the dietary quality (Jordan Lin et al., 2004), reduce the energy intake (Temple & Fraser, 2013) and increase the consumption of fruit and vegetable (Campos et al., 2011). A study conducted on socio-demographic relationship with use of nutritional food label at point of purchase. It has been observed that higher income, middle age consumer and female are more concern in consulting nutritional food label while purchasing food (Campos et al., 2011). It was noted in analysis of past 20 years that the consumption of package food has raised almost 300% in developing countries (Procter, 2007; St-Onge et al., 2003).

In the present situation, when there is a big shift from homemade food to package food products, the food labelling should be population based (Saha et al., 2013). It means the understanding and interpretation level of food label or nutritional information varies among consumers. Therefore food processing companies should target consumer by designing consumer oriented food label or nutritional information. According to the Food Safety and Regularity Authority of Indian (2011) the nutritional information is necessary on food label along with name, expire date, manufacturing date and ingredients. The objective of this modification in food regulation is to protect consumer health and maintain consumer dietary quality in India.

SubbaRao, Vijayapushpam, Venkaiah and Pavarala (2012) have indicated that creating awareness among consumer regarding nutritional food labelling enhance the consumer skill in selecting correct and healthy food. Therefore it would not be wrong to state that food label can be a formal platform to educate and aware consumer regarding nutritional information for consumer's better health and diet. In some of the studies researchers have observed that in the busy lifestyle of individual consumer the food label or nutritional information is very helpful for taking healthy food decision. Along with that marketer found an easy method to communicate nutrient information to end consumer (Vijaykumar et al., 2013).

Food label is considered to be a bridge between consumer and producer in communicating healthy information also support to consumer to increase dietary quality (Jordan Lin et al., 2004). The implementation of food label with the support of official legislation varies from country to country like in USA, Canada, UK and New Zealand food label with nutritional information is mandatory whereas in European Union and Turkey it is not compulsory with nutritional information, the general food label is acceptable (Besler et al., 2012).

Nutritional information on food label is taken as the encouraging means for consumers to take healthy food in their daily routine life (Cheftel, 2005). The studies have noticed that the traditional nutritional information in a table format on the back of the label has changed its place and appear at front of the package with more easy and simplified form (Wills et al., 2010). Cowburn & Stockley, (2005) have indicated that nutritional labelling is the emerging policy to aware consumer regarding healthy food intake. Following Table 1 would give a quick look of the past studies conducted in relation with food label or nutritional label with consumer healthy food or dietary quality, this table would also explain the significance of relation between food label and consumer health.

Table 1: Food label significance

Author	Country	Research Question	Finding
(Ababio et al., 2012)	Ghana	Relationship between awareness, understanding and food label	Consumer reading and understanding of food label information is associated with individual willingness, but food label can be source of awareness if understood by consumer
(Aydin Basarir, 2012)	United Arab Emirates	Consumer awareness by food label and the effect of socioeconomic and attitude toward food label	Majority of respondents observed to consult food label, but for basic information only, more work required by policy maker to aware consumer to read compete food label which is necessary for the county which import 95% food.
(van der Merwe et al., 2014)	South Africa	Consumer opinion to use and effect of food label	Found relation between usage and food label, effect and food label. it means consumer consider that food label is good source information for food, but in future it must be used for nutrition and healthy food selection.
(Jordan Lin et al., 2004)	USA	Association of fat, saturated fat and cholesterol information with food label reading	Higher the use of food label lower the intake of fat, saturated fat and cholesterol, whereas higher the nutritional information search on food label, higher the quality of diet and health.
(Priven et al., 2015)	USA	Consumer healthfulness associated with factitious free from food product label	Consumer favor the factitious free from product label for healthfulness, but education play important role in understanding such label information
(Liu et al., 2015)	China	Effect of diet status, familiarity, nutritional knowledge and socio-demographic on food label understanding	Positive relation with diet status, nutritional knowledge and familiarity but no relation with socio-demographic
(Lando & Labiner-Wolfe, 2007)	USA	Consumer interest in nutritional information available on food label	Consumer is interested in reading nutritional information on food label. There is a strong association between interest in nutritional information available on food label and healthy food selection.
(Ollberding, Wolf, & Contento, 2010)	USA	Food label reading and nutritional intake	There is an association exist between food label use and intake of nutrients but education and awareness about food label reading and important for increasing the use of food label among consumer for selecting healthy food.
(Stran & Knol, 2013)	USA	Different perception of food label information between men and women	It has been observed that food label is significant for high quality of diet but the importance differ between men and women and companies must target them separately.
(Saha et al., 2013)	India	Knowledge and use of food label among Indian adolescent consumers	Most of the adolescents are interested and used food label at point of purchase but only for basic information, consultation and awareness for nutritional information on food label need to be investigated more
(Kang et al., 2013)	Korea	The correlation between Use of nutritional label and metabolism	There is a low risk of metabolism while consulting nutritional label frequently at the point of purchase
(Vijaykumar et al., 2013)	Singapore	The usage of food label among Chinese, Malay and Indian in Singapore markets	The usage of food label is high but the problem is, consumer who claim knowledge about nutrients actually do not have and sometime misinterpret while purchasing food. This attitude is dangerous for selecting correct food. Awareness is required for understanding correct information on food label.
Besler et al., 2012)	Turkey	Nutritional label use among Turkish consumers	Turkish consumer use nutritional information available on food label. They consider it a best source of education regarding nutrients.
(Sharf et al., 2012)	Israel	Utilization and understanding of food label among Israeli young adults	Partial understanding of food label observed among Israeli young adults, it has also been noticed that concept of misunderstanding also exist among young adults in Israel.
(McCann et al., 2013)	UK	The effect of information regarding fat and energy on	It has been observed that consumer food portion of size effected by fat and energy information but it has also

		food label influence on consumer food portion size	been found that interpretation of label information is difficult and must be altered with easy to understand nutritional information
(Satia, Galanko, & Neuhouser, 2005)	African American (USA)	Reading nutritional label on food package make consumer diet better and guide in healthy food choices	Nutritional label use is strongly linked with healthy dietary practice
(van Herpen & Trijp, 2011)	Netherland	Influence of consumer goal and time constraints on attention and usage of nutritional label	Food label reading is effective but influenced by consumer goal and time, the time constraints can be manage by top down labelling scheme whereas in goals, specific and general have different influence on nutritional label reading
(Post, Mainous, Diaz, Matheson, & Everett, 2010)	USA	Patients with choric diseases are more influenced by nutritional label as compare to non-chronic patients	Positive relation has been noted between the chronic diseases patients and nutritional food labelling reading behaviour
(Barreiro-Hurlé, Gracia, & de-Magistris, 2010)	Spain	Types of nutritional label used among consumer and label effect on healthy diet	Results have exposed the fact that consumer who consult nutritional label at point of purchase has healthy dietary quality
(Campos et al., 2011)	Canada	Use and understand of food label also label effect on consumer dietary quality	Nutritional label is the most suitable source of acquiring nutritional information and also significant source of selecting healthy diet. But this perception varies in subgroups and at national level it is required to make it understandable for average consumer.
(Graham, Heidrick, & Hodgins, 2015)	USA	A contest between front of pack nutritional label and nutritional label facts scheme	Results have unfolded the fact that front of pack nutritional label are famous and popular among young adults as compare to nutritional fact label.
(Fernandes et al., 2015)	Brazil	The association of calories information available on food label and its effect on university students consumer diet	The findings have described that students behaviour toward food has changed in the presence of calories information on food menu. It has also been observed that it is better to provide informative menu rather non-informative menu in university restaurants

3. Discussion

Several researchers in the world have pointed out the significance of food label for selecting healthy food in daily life. Food labelling is a tool or technique to provide information about the food process, ingredients, expire date, manufacturing date and company name or origin. This information is a traditional method of all labelling either edible or nonedible items manufacture in different companies. The main goal of the labelling is to provide basic knowledge about the product for consumer satisfaction. Without labelling consumer is blind about the product safety and effect on his/her health or behaviour as well as uncertain about future decision making regarding any product. Product label also effects on consumer pre purchase and post purchase decision process.

Food is the necessity of human being. Purchasing of food is the most decisive behaviour of an individual because correct or incorrect food item not only throws drastic effect on consumer economic situation but also related to his/her healthiness. Due to the increase in per capita income of countries food purchase pattern has changed and people are diverting their attention toward outside homemade food and processed food products. This change is not happened due to the availability of healthy food outside home but the main cause is ease of use and

busyness of individual to spend time on cooking at home.

This changing behaviour has increased the responsibilities of food processing companies to make healthy food available in the market to protect consumer health. The increasing consumption of processed food is directly proportional with obesity, overweight and non-communicable diseases. Consumers have become lazy in making food at home and found an easy method to fulfil their appetite with processed or labelled food product but could not realize the effect of processed food on their health. Even with the growing ratio of food linked diseases with processed food, it is not an easy task to bring back consumer toward homemade healthy food item.

The developed and developing countries in the world have tackled this situation with designing effective and food safety policies and strategies for food processing companies. Developing food safety authorities, food protection authorities and labelling legislations. The main objective of these government governed bodies is to ensure that food processing companies are providing healthy food to end consumers. Food label authorities and Act have designed a comprehensive list for the food label like name of product, country name or origin, ingredients, expire date, manufacturing date and how to dispose of the product. But along with that in new updated version nutritional information is also

compulsory for food label in some of the countries in the world like USA, UK, Australia, Canada and New Zealand whereas in some area of the world it is voluntarily like in European Countries.

The information provided by food processing companies on food label is not just merely information printed by following the Act or legislation of the country. The task of this printed, graphical or symbolic information is to make consumer informative while purchasing any food item according to their need and requirement. Therefore the concept of "Average consumer" has introduced. The theory in the back of this concept is linked with the understanding of food label information among average consumer. Because without understanding the usage of food label for making correct of healthy food selection is not possible.

The main cause of this average consumer understanding of food label was the language of food label. The difficult and scientific language is used to disclose the nutritional information on food label which is not understandable among illiterate and some difficult for educated consumer. Why the need of easy to understand food label sprout out when some researchers have investigated the link between food label consultation with consumer dietary quality or healthy food selection and found positive results. Some of the results in the literature have unfolded the fact that higher the rate of food label usage, higher the selection of healthy and correct food selection.

Moreover, the canvas of this area has broadened. Researchers, who belong to different culture and country, have tried to investigate the significance of the relationship between food label and healthy food choices. The findings were not similar for every country and culture. The importance of food label and its perception with healthy food selection varies from country to country and culture to culture. In USA and UK, the ratio of food label penetration is high whereas in Europe food labelling is a volunteer concept. In China the nutritional food labelling introduced in 2008 and still struggling to develop the significance among consumer at point of purchase.

Therefore these mixed kind of results have indicate that more efforts are required and more countries consumers' behaviour is still need to be investigated with respect to food label usage, understanding and even for awareness purpose. Because some of the Western researches have uncovered the fact that food label and nutritional food labeling scheme is helpful for creating awareness among consumer regarding healthy food choices. The role of food label in healthy food selection is obvious but the scheme of labeling, techniques used to disclose information on food label and to place nutritional information either back of the package or front of the package, all these questions yet need to be answered in some of the countries and the door for future researchers is open.

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