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Promotional Strategies Encouraging the Consumption of Fortified Food Products: A Literature Review

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Abstract

Malnutrition is a major problem in the developing and developed countries with billions of people missing out on essential nutrients. There is an exponential growth of the consumption of unhealthy food which has prompted the regulation of food fortification to eradicate hidden hunger. The purpose of this paper is to assess consumer attitude towards fortified food and to identify the marketing strategies that can influence the consumption of fortified food. Numerous articles and books were reviewed to illuminate on food fortification in relation to the consumer. From a pool of 186 academic sources, 23 sources were selected for reviewing. The findings indicate that consumers are motivated with the functions of fortified food. Consumers are also sceptical about fortified food, but promotional strategies can enhance the consumption of fortified food products. Further studies are crucial in investigating food fortification in relation to promotion, motivation, perception, and obstacles for fortified food consumption.

Keywords: Food fortification, Perception, Motivation, Obstacles, Nutrients, Food promotion.

1. Introduction

Experts estimate that nearly two billion people-mainly from developing countries are progressively becoming victims of malnutrition and hidden hunger (Verma 2015). Saha and Roy (2020) are of the view that developing countries concentrate on the consumption of cereal-based food products which are deficient in essential nutrients leaving a large population to be nutrient deficient. Food fortification is the enrichment of food with dietary minerals

and vitamins to overcome nutrition deficiencies (Hadebych et al. 2016). Turk et al. (2016) report that 60% of deaths worldwide are caused by nutrition-related diseases. Saha and Roy (2020) define food fortification as an intervention to improve health eating by adding essential nutrients to native food products which may lack or contain inadequate minerals and vitamins. A lot has to be done in order to eradicate malnutrition. The world is facing poor dietary

quality which has resulted into the worst health consequences of malnutrition. Steyn et al. (2016) caution that malnutrition has led to the spread of non-communicable diseases such as diabetes and cancer. Schnettler et al. (2018) allege that consumers are not familiar with fortified food products and are not convinced with the purpose of food fortification. Naseem et al (2023) propound that some of the fortified foods are probiotic dietary cereals, dairy products, and beverages taking 90% of the food products in Europe, Japan, and America. Consumers' acceptance of fortified food products relays on attitude towards the information available to support their consumption (Lu 2015). From 2002, the retail market of wellness fortified food in India increased from Rs. 117.5 billion to Rs. 1028.9 billion in 2018 at a rate of 14% (Ali and Ali 2020). Based on the studies about food fortification, the influence of promotion on perception, motivation, and obstacle for fortified food consumption is unknown. Against this backdrop, this paper structured as follows; the motivation is followed by the perception, obstacles, promotion, review method and findings, research contribution, and the conclusion.

2. Motivation

Skolnik (2016) affirms that labour productivity is influenced by intellectual potential enhanced by consuming healthy fortified foods that improve production and preventing health related diseases. Moreover, White et al. (2017) allude that child obesity, morbidity and mortality among African Americans is caused by poor health food consumption. In USA meat is fortified with vitamin D, potassium and fibre which are beneficial for body formation and a preventive measure of communicable diseases (Cashman and Hayes 2017). Rice is fortified with fibre, vitamin B, minerals that contain antioxidants that reduce; cell damage the prevalence of anaemia and anti-inflammatory effect (Pandey et al. 2016). Little is known about the influence of promotional activities to sensitise societies about the health benefits of fortified food products. Notably, consumers are motivated to purchase fortified food products provided that they can prevent health related diseases. Further research is required to investigate whether promotional strategies can inform the consumers about the preventative ingredients found in fortified food. Nonetheless, promotional activities tend to remind consumers to buy fortified food products labelled with essential nutrients. However, further studies are essential to ascertain the influence of promotion on motivation to buy fortified food products. Unfortunately, there are some obstacles hindering the demand for fortified food products.

3. Obstacles

Fortified foods are innovative products requiring consumers to pay an extra cost added to the final price the consumer normally pays (Shan et al. 2017). Hadebych et al. (2016) caution that mineral ingredients used in fortification are costly hence discouraging consumers from buying fortified food. Bloem and de Pee (2016) add that urban households depend on imported fortified foods which causes global food price hikes. The complexity and abundance of label claims such as "high in fibre" has caused consumers to be sceptical about the honesty of these labels hence discouraging consumers from demanding fortified products (Buono 2017). There is a belief among consumers that functional food products or fortified foods carry some harmful substances as compared to conventional food (Bazhan et al. 2017). Based on the available studies, there is a dearth of research about the influence of promotion on addressing the obstacles of food fortification. The motivation and obstacles of fortified food products arouse consumer perception.

Although fortified products are good for health, sensitive consumers need some information regarding the exposure to ingredients used in fortification so that they can detect allergy associated elements. Although promotion shouldn't sugar coat fate, consumers need to be informed about the health benefits of fortified food. Promotional strategies that can allow the consumer to weigh the benefits against the obstacles haven't been investigated. More studies are vital in the sensitisation of consumers that the consequences of poor health outweigh the obstacles of food fortification.

4. Perception

Knowledge and perception of fortified products may not always translate into purchase of fortified food (Magalis et al. 2016). Consumers' perceived benefits, quality, risk of contracting diseases and healthiness act as a motivator to make healthier choices (Kaur and Singh 2017). Longoria-Garcia et al. (2018) affirm that acceptability of fortified bakery products depends on appearance, flavour, texture and aroma, but the diameter, and hardness can also influence consumer desires. Consumers have a negative attitude towards fortified food products in that acceptance of fortified cereal-based products with artificial minerals can be very difficult for consumers who are sceptical of minerals like potassium put in oats and wheat (De and Garrigues 2015). There is a perception that fortified foods have harmful additives compared to conventional food products (Bazhan et al. 2017). Shan et al. (2017) caution that adding healthy nutrients to unhealthy food can be received with criticism. A positive attitude is driven by perceived nutritional benefits and perceived food safety.

Perceived risk of contracting health related diseases (Kaur and Singh 2017) motivate consumers to buy fortified food. There is a problem of unhealthy family habits being transferred to family members by encouraging others to take double portions of good tasting, unhealthy food which limits the spread of nutrition information (White et al. 2017). Further studies are crucial in addressing the influence of promotion on perception focusing on separating myths from facts about fortified food products. Based on the existing studies, the influence of promotion of consumer perception towards the purchase of fortified food products has not been thoroughly investigated. Research focusing on promotional intervention to shape consumer perception towards fortified food products is still in its infancy.

5. Promotion

Developed and developing countries are involved in large-scale fortification of common food products to reach a wider segment (Hadebych et al. 2016). Saha and Roy (2020) add that rice flour is also a raw material for the production of breakfast cereals and noodles which are consumed by a large population. Marketers are developing price discrimination strategies favouring the poor segment in consideration of income levels (Masterson et al. 2017). Fortification of infant foods like formula, cereals, and juice requires prices to be affordable to low-income earners (Hadebych et al. 2016). Marketers have a challenge of promoting compounds that are not visible to a consumer (nutrients). (Kaur and Singh 2017). The unique selling point of new health products focuses on texture, flavour, taste and nutrition has become less on focus (Kanama and Nakazawa 2017:128). Also, fortified food with popular brands packages like Nestle guarantee safety, quality, and achieve high revenue (Kanama and Nakazawa 2017). The appropriate food products fit for food fortification must be popular like rice which is consumed globally although rice may trigger a risk of over

consumption of nutrients as consumers pursue energy intake (Saha and Roy 2020). Koohejan and Lashkari (2022) affirm that food fortification is the most effective method of addressing nutritional deficiency where condiments, cereals, and dairy products are the common foods that are fortified to meet a large segment of consumers. Erhard et al. (2020) caution that Vitamin D deficiency is highly prevalent in Europe requiring full scale implementation of the food fortification intervention involving a wide range of food products like margarine, juice, bread, and milk.

Consumers forge brand association basing on the physical and functional properties a product which results into brand authenticity (Masterson et al. 2017). Normally, consumers obtain nutrition information on television and information on the product packages which influenced their purchase decision of enriched products. Therefore, promotional activities can moderate the perceptions of consumers towards fortified food purchase and consumption. Designing food products of a value-added function requires marketers to identify ideal strategies for product development centred on promoting nutrition. Notably, advertisements, packages, and labels can be investigated as the ideal promotional strategies to inform the consumers about the health benefits and dangers of fortified food products based on perception.

6. Review method and findings

The research process considered peer reviewed scholarly articles from accredited databases. The databases selected include Science direct, Sabinet, ProQuest, Google Scholar, EBSCOhost, and Emerald. Advanced search criteria was based on the following keywords: food fortification and consumer, fortified food acceptance, perception and food fortification, functional food, enriched food, fortified food purchase, fortified food benefits, attitude and food fortification, fortified food dangers, enriching nutrients, marketing fortified food, and health food consumption. In sum, 186 sources including articles books were collected. However, after considering the abstracts and conclusions, 70 articles were dropped. Out of the remaining 116 sources, 40 sources were deemed fit for the review purpose. However, after reviewing all the 40 sources, only 23 sources were included in the final review. Figure 1 shows the types of literature sources that were included in this review study.

Figure 1 Types of sources

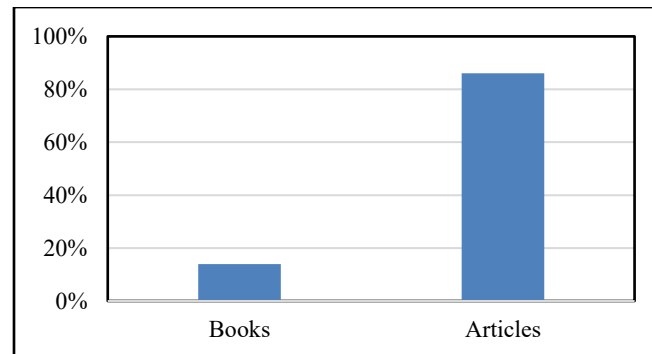


Fig 1 Calculations by the researcher

As indicated in Figure 1, 86% of the sources used in this study are articles while 14% being sourced from books. There are few books about food fortification in relation to a consumer. However, peer reviewed journal articles are slowly capturing researchers' attention. A summary of the publication dates is shown in Figure 2.

Figure 2 Year of publication

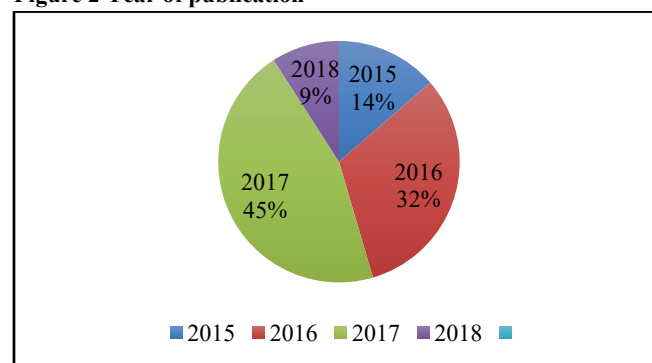


Fig 2 Calculations by researcher

As shown in Figure 2, 45% sources were published in 2017 and 9% of the sources published in 2018. Also, 32% of the sources were published in 2016 while 14% of the sources were published in 2015. Therefore the sources are less than ten years old. There is dearth of literature about food fortification in relation to promotion, perception, motivation and the obstacles for the consumption of fortified food products. After the selection of relevant sources, themes were developed from the key findings as reflected in Table 1 concerning thematic structuring.

Table 1 Findings and discussion based on thematic structuring

Theme	Authors	Key findings and discussion
Motivation	Cashman and Hayes (2017)	<i>Prevention:</i> Consumers are motivated to purchase fortified food in order to prevent health-related illnesses.
	Longoria-Garcia et al. (2018)	<i>Health eating habits:</i> There is a shift towards health eating among consumers who are health conscious.
	Gharibzahedi and Jafari (2017)	<i>Benefits:</i> Consumers are getting aware of the health benefits of fortified food.
Perception	Bloem and de Pee (2016)	<i>Busy lifestyle:</i> Consumers are opting for unhealthy takeaways perceiving fortified food to be time consuming to prepare.
	Bazhan et al. (2017)	<i>Dangerous:</i> Consumers perceive fortified food to be dangerous due to the enrichment of the natural food.

	Kaur and Singh (2017)	<i>Functional properties:</i> However, some consumers perceive fortified food products to be healthy.
	White et al. (2017)	<i>Texture:</i> Due to the changes caused by fortifying food, consumers perceive fortified food to be inferior.
Obstacles	Shan et al. 2017)	<i>Cost:</i> Due to the value-added cost of fortified food products, consumers pay the high price.
	Caleja et al. (2017)	<i>Additives:</i> The naturalness of fortified food is lost due to the additives that carry the nutrients.
	Buono (2017)	<i>Claims:</i> Nutrient claims render consumers to be sceptical about the authenticity of the health content.
Promotion	Hadebych et al. (2016)	<i>Pricing:</i> Price discrimination in favour of the vulnerable children, old age, and the sick, and lactating mothers can motivate consumption.
	Samaniego-Vaeskem et al. (2016)	<i>Packaging:</i> Packages including a clear nutritional benefits are essential in promoting the consumption of fortified food.
	Masterson et al. (2017)	<i>Brand association:</i> Popular brands are positively received.
	Magalis et al. (2016)	<i>Distribution:</i> Food fortification is essential for everyone

Table 1 prepared by the researcher

As reflected in Table 1, four themes were developed. The themes are motivation, perception, obstacles and promotion. The research implications in the next section illuminate on the research contribution for further studies.

7. Research contribution

Based on the findings from this review, further research is essential in investigating the relationship between motivation and promotion. The relationship between perception and promotion should be also investigated. Furthermore, the relationship between the obstacles and promotion needs to be illuminated. The marketing of fortified food products requires a rigorous promotional campaign aimed at informing and reminding consumers about the benefits of food fortification. Although consumers are less informed about the rationale for food fortification, governments have a role to inform the society about the dangers of poor dietary intake and benefits of fortified food. Marketers are tasked to identify the promotional strategies that are designed in line with the government health information alert. Researchers engaging in multidisciplinary research can also consolidate marketing of fortified food with social science and food science to further illuminate this study by operationalising the concept of motivation, perception, promotion, and obstacles of fortified food consumption. Figure 3 indicates the proposed conceptual model for further studies. This proposed model can be utilised to develop hypotheses that may guide further studies.

Figure 3 Conceptual framework

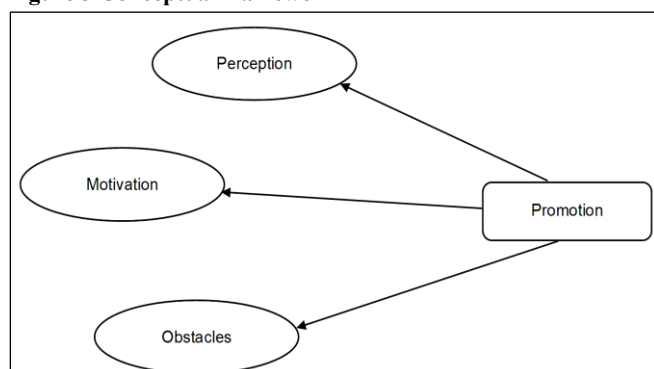


Fig 3 Conceptualisation by researcher

As indicated in Figure 1, promotion relates to motivation, perception, and obstacles. However, the direction of relationship is presently unknown. Further research is necessary to establish the direction of relationships in order to test a hypothesised model. Nonetheless, this review implies that there is some relationship moderated by promotion.

8. Conclusion

The purpose of this study was to assess consumer attitude towards fortified food and to identify the marketing strategies that can influence the consumption of fortified food. Consumers are influenced by perception, motivation, and obstacle to purchase fortified food products. Promotional strategies have an overall influence on fortified food consumption. Since marketers understand the consumer, they can collaborate with manufacturers, health professionals, and supermarkets to create awareness and influence the consumption of fortified products. Strategies can ensure that marketers nutritional claims on labels, additives, pricing, distribution, and safety are encouraged to promote healthy eating habits. The importance of vitamins and minerals on packages of fortified food products is emphasised in order to create consumer awareness which can eventually influence the purchase intention of fortified food products. The marketing strategies can help consumers to overcome nutritional deficiencies. Nutritional labels may help consumers to buy functional food products. If consumers don't see the products with nutritional label, they struggle to make health food choices. Therefore, the promotional message on packages influence consumers to buy and consume fortified food products. Ultimately, promotion can influence motivation, perception, and obstacles of food fortification.

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