Appetite 59 (2012) 960–967

Contents lists available at SciVerse ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

Research report

The motivational and informational basis of attitudes toward foods with health claims ☆

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ARTICLE INFO

Article history:
Received 28 February 2012
Received in revised form 6 September 2012
Accepted 8 September 2012
Available online 16 September 2012

Keywords:
Dietary change
Food choice motives
Food with health claims
Nutritional knowledge
Label use

ABSTRACT

This research explored the effects of food choice motives, nutritional knowledge, and the use of food labels, on attitude toward food with health claims. Food with health claims was chosen as a relatively novel category of products designed to be beneficial for health. We identified eight motives served by food in general, and tested if they serve as motivations to positively evaluate functional food. Questionnaire was administered on nationally representative samples of 3085 respondents from six Western Balkan countries. We proposed two structural models relating an extensive list of eight and, alternatively, restricted list of three food-choice motives (health, mood and sensory appeal) to attitude toward functional food. We also expected the indirect association between the health motive and attitude, through nutritional knowledge and use of food labels. The results revealed highly positive, although undifferentiated attitude toward functional food, with no significant differences between the countries. The restricted model provided a better fit then the exhaustive model; the health motive was proven to have indirect influence on attitude through knowledge and label use. The implications of these findings for functional approach to attitudes, understanding the demand for functional food and overcoming barriers to dietary change are discussed.

Introduction

Choosing food is an everyday decision that can have many consequences. A diet that contains adequate amounts of certain types of food can help reduce the risk of developing severe non-communicable diseases, such as obesity, diabetes, cardiovascular disease and cancer. This research explored the effects of food choice motives, nutritional knowledge, and use of food labels on attitude toward functional food (food with health claims).

Functional foods were launched in the early 1990s as a new category of products that are supposed to have health enhancing effects. Diplock et al. (1999) provided the most widely accepted definition of functional food, claiming that "a food can be regarded as functional if it is satisfactorily demonstrated to affect beneficially one or more target functions in the body". Functional food sales in Europe have increased significantly in the past decade, with Germany, France, the UK and The Netherlands representing the most important markets (Jago, 2009). It is forecasted that the demand for functional food will also increase in newly emerging and transitional markets (Benkouider, 2004). Throughout history, the addition of compounds to food that originally did not contain them, such as enriching salt with iodine, fortifying cereals with iron and dairy products with vitamins, was proven to be extremely beneficial for health (Frewer, Scholderer, & Lambert, 2003). Although functional food promises concrete benefits to the consumer, its acceptance by consumers is not straightforward.

One way of exploring the factors that guide functional food consumption is examining attitudes toward functional food. Change in dietary behavior might occur through changing food-related attitudes (Aikman, Crites, & Fabrigar, 2006). General agreement among theorists is that attitude represents a summary evaluation (positive or negative) of a psychological object and that attitude guides behavior toward the object (Albarracin, Johnson, & Zanna, 2005; Eagly & Chaiken, 1993; Petty, Wegener, & Fabrigar, 1997). Attitudes have been shown to predict behavior and behavioral intentions in a variety of domains including health related behaviors and food choice (Ajzen & Manstead, 2007; Armitage & Conner, 1999; Åstrøm & Rise, 2001; Povey, Conner, Sparks, James, & Shepperd, 1999; Schifter & Ajzen, 1985; Sparks, 1994). Therefore, it is important to explore which

☆ *Acknowledgements*: This work was supported by the Focus Balkans project, (Contract No. 212579), the European Commission funded project within the Seventh Framework Program theme 2 Food, agriculture and fisheries and Biotechnology. Authors would like to thank European Union's for financial backing of this work.

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http://dx.doi.org/10.1016/j.appet.2012.09.008

motives for food choice in general can be valuable predictors of attitudes toward functional food.

According to the functional theory of attitudes, the motives underlying one's attitude must be identified in order to predict attitude change (Katz, 1960). Later functional approach led by Shavit and Nelson seems to refer more to goals served by attitude objects rather than attitudes themselves (Shavitt & Nelson, 2000). This approach presupposes that attitude objects (e.g. food products) evoke specific motivational concerns across individuals (Shavitt, 1989, 1990). In this regard, a product can serve either a single or multiple functions. This implies that for products that predominantly serve a single utilitarian function, claims that highlight tangible product attributes fulfilling that particular motive are likely to be persuasive; while for products that serve multiple functions, messages will be more efficient if multiple motives are addressed (Shavitt & Nelson, 2000). Products with health claims are designed to serve at least two functions: beyond basic utilitarian purposes (nutrition), they should also contribute to consumers' health status. Therefore, consumers' general attitudes toward health and health motives in food choice should be central in determining consumers' acceptance of functional food (Urala & Lahteenmaki, 2003, 2004; Verbeke, 2005). However, some studies suggest that other motives might also play a role. For example, Verbeke (2005, 2006) stated that consumers are unwilling to compromise taste for other food qualities, even if it means a rejection of healthier choices. Furthermore, the "rejection of functional foods based on taste is equaled to a decisive 'no'" (Verbeke, 2005, p. 49). The latter suggested that sensory appeal is still the prime motive in food choice, even though other motives are gaining in significance. Consumers might expect products with health claims to serve a multitude of functions, instead of just being beneficial for health, so it is worth investigating: (a) if the attitude toward functional food is one or multi dimensional (i.e. is it evaluated similarly or differently on different attributes, such as healthiness and taste) and (b) what comprises the motivational basis for attitude toward this particular product group.

The relationship between health motives and attitudes toward functional food may be complex. Consumers have to be aware of health benefits before choosing a certain product, so it can be expected that choice will be influenced by the level of consumers' nutritional knowledge. It was shown that attitude-relevant knowledge is correlated to attitude importance but not directly to attitude valence (Ajzen, 2001; Holbrook, Berent, Krosnick, Visser, & Boninger, 2005), because a person can accumulate knowledge about an object while maintaining a negative attitude toward that object (e.g. a person afraid of contracting AIDS gathers information about the different ways of contracting the disease) (Biek, Wood, & Chaiken, 1996). Similarly, correlation between nutritional knowledge and attitudes toward food products and/or dietary behavior is not always positive. While some studies show that greater nutritional knowledge is associated with a higher intake of fruits and vegetables (Patterson, Kristal, Lynch, & White, 1995; Wardle, Parmenter, & Waller, 2000), others find that greater knowledge has only a small or no influence on food choice (Rasanen et al., 2003; Shepherd, 1992). For functional food consumption, a lack of nutritional knowledge might limit the acceptance of these products (Ares, Gimenez, & Gambaro, 2008). Studies have correlated general nutritional knowledge, usually measured by the Nutrition Knowledge Questionnaire (Parmenter & Wardle, 1999), with attitude toward functional food, and showed that knowledge about specific compounds (e.g. antioxidants or fiber) is related to a higher acceptance of a product with a claim on that particular compound's effect.

For information about the positive effects of a functional food product to be effective, however, it has to be credible (Kruglanski & Stroebe, 2005). Functional foods typically do not have immediately evident effects on health, rather they are usually observed after regular use over a long period of time. Furthermore, consumers are usually unable to establish themselves if the active ingredient is really present in the product. It is therefore necessary for people to trust: (a) the health claim, i.e. the active ingredient really affects health in the manner that is stated on the product; and (b) the producer, i.e. the active ingredient is really added to the product (Frewer, Howard, Hedderley, & Shepherd, 1996, 1999). Hence, one can expect that use and trust in food labels will affect the influence of knowledge on attitude toward functional food.

Scope of the study

We built our research assumptions on a "motives – knowledge – trust – attitude model", as outlined in Fig. 1. We proposed two structural models relating an extensive list of food choice motives (eight in total) and, alternatively, a restricted list of three food choice motives (comprised of health, mood and sensory appeal) to attitude toward functional food. The restricted list included the three motives assessed as most relevant for food choice in general by European and Western Balkan consumers (Eertmans, Victoir, Notelaers, Vansant, & Van den Bergh, 2006; Fotopoulos, Krystallis, Vassallo, & Pagiaslis, 2009; Januszewska, Pieniak, & Verbeke, 2011; Pollard, Steptoe, & Wardle, 1998). The three motives that entered the restrictive list also reflect the importance of both sensory properties and health benefits to as determinants of attitude toward functional food.[1] Additionally, we expected the health motive to have both a direct and indirect impact on attitude – through knowledge, trust and use of labels. This recognizes that even if a consumer regards health as an important motivation underpinning food choice, a lack of nutritional knowledge, and failure to use and trust food labels, may limit its impact on attitudes to functional foods.

Methods

Sampling and procedures

A consumer quantitative survey was conducted, drawing respondents from the general population of adults who were 18 years of age and older in September, 2010. The sample consisted of citizens of six Western Balkan countries (henceforth WBC): Bosnia-Herzegovina (BIH), Croatia, FYRoM[2], Montenegro, Serbia and Slovenia. In total, 3085 interviews were conducted, with approximately 500 in each country. Data were collected via *face-to-face* interviews in the respondents' homes. In each country, the sample was nationally representative. The sampling universe was based on data from the national Census and estimated population dynamics. Stratified three-staged random representative sampling was implemented. Primary sampling units were polling station territories in all countries, except in Slovenia, where enumeration areas were used. Each polling station territory comprised approximately 200 households (approximate size of enumeration areas). Secondary sampling units were households, which were defined as "a group of people living in the same dwelling and sharing the expenditure for food". Tertiary sampling units were respondents, who were adult members of the household. Stratification for each country was performed by region and type of settlement. The purposes of stratification were to achieve a representative sample and reduce sampling error. Table 1 summarizes the demographic characteristics of the sample.

The questionnaire consisted of five sections. First, respondents were asked about food choice motives in general. Second, the nutritional knowledge scale was applied, followed by questions

[1] We also tested alternative restrictive lists of food choice motives and the proposed one provided the best fit.

[2] Former Yugoslav Republic of Macedonia.