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Understanding the Factors Underlying Czech Consumers' Choice of Healthy Food: a Conceptual Framework

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Abstract

Obesity and other diet-related diseases remain a significant public health concern around the world. Besides, obesity rates continue to overwhelm in the Czech Republic, pressing policymakers to design interventions that support disease prevention and promote overall health among the population. However, crafting effective interventions requires comprehensive knowledge about consumers' food choices and dietary patterns, which remains limited in the context of Czechia. In an attempt to narrow this gap, this paper presents a conceptual framework for understanding the factors underlying Czech consumers' choice of healthy food. A comprehensive review and synthesis of the literature in various domains was performed to establish the concept. Founded on the theory of planned behavior, it is postulated that consumers' attitudes toward healthy food form their intention to consume healthy food. Concurrently, the attitude toward healthy food is preceded by food choice motives (e.g., health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern). It is also argued that personality traits could potentially moderate the strength of motive-attitude-intention relationships. It is important to empirically examine the parameter relationships specified in the proposed research framework to expand theoretical knowledge about the motivation, attitude, and intention paradigm and the indirect effects of personality traits. Most importantly, future empirical assessment of the research model will offer practical insights into the design of behavioral interventions that promote healthy dietary patterns and promote overall health among Czech consumers, especially in the post-pandemic era.

Keywords: personality traits, theory of planned behaviour, healthy food choice, consumer behaviour.

JEL Classification: M30, I12, E20.

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1. Introduction

The increasing urbanization of societies is inciting the shifts in lifestyles, consumption, and dietary patterns among consumers, exacerbating the gravity of obesity and other diet-related health concerns (World Health Organization, 2020). The World Health Organization (WHO) continues to emphasize the urgency in addressing the issue of "globesity" as it escalates around the world. The WHO instituted a global strategy framework that promotes a cooperative response effort from the civil society and stakeholders in the public and private sectors. It mainly encompasses supporting healthy diets and physical activity towards disease prevention and overall health promotion, consequently reducing healthcare expenditures and yielding economic incentives.

The Czech Republic is one of the European countries that suffers from a high incidence of obesity. Obesity rates reached 20% of the population in 2017, exceeding the 15% EU average (OECD/European Observatory on Health Systems and Policies, 2019). Rising unemployment, poor sleeping habits for certain groups of the population (Olišarová et al., 2018), low physical activity, high tobacco/cigarette consumption, and alcohol consumption all contributed to the prevalence of obesity in the country (Fialova, 2018). Overweight and obesity appear to be most common among men, people over the age of 64, people living in rural areas, and lower socioeconomic class (Marques et al., 2018, Olišarová et al., 2018).

National policies and programs combatting diet-related health concerns are still underdeveloped in the Czech Republic (Voráčová et al., 2015). Some efforts are being made to increase nutrition literacy, and reportedly more and more Czech consumers express interest in calories, carbohydrates, and sugar information on food (Vesela et al., 2021). However, the prevalence of overweight and obesity continues to challenge the country. The trend is even stretching toward children (Landovska, 2021). Family affluence seems to be a contributing factor (Sigmund et al., 2018), where overweight problems among adolescents and school children have been found in families with lower welfare. Furthermore, Czech children and adolescents have a low daily consumption of fruit and vegetables compared to other European countries (Voracova et al., 2015).

Obesity and dietary issues are important economic discourses. The associated costs of these problems seem to increase substantially in the future, especially when left ignored. As this transpires, Czech health care may become unsustainable as obesity among adults and children grows (Landovska, 2021, Vesela et al., 2021). Only a handful of research investigations accent the eating habits in the Czech Republic (Vesela et al., 2021) to promote healthy dietary patterns and consequently alleviate obesity and dietary-related issues. Little is known about Czech consumers' motives and other factors influencing their food choices. Securing information on such matters is crucial, as the efficacy of the proposed resolution demands a comprehensive understanding of the population's behavior regarding food consumption.

2. Problem Statement

Urging consumers to adopt a healthy dietary pattern demands understanding their food choices' motives (Mielmann & Brunner, 2020). Scholars claim that health considerations do not solely drive healthy food selection or dietary habits. Individuals hold on to different motives (i.e., health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern) in selecting food (Steptoe et al., 1995). The level at which these motives affect their food consumption varies in different socioeconomic and cultural settings. As far as the existing literature is concerned, knowledge about the motives and biases toward healthy food consumption among Czech consumers remains limited. It is critical to acquire information about such matters to devise countermeasures that alleviate obesity and other diet-related issues pervading the country.

Meanwhile, the choice of what food to consume may also be affected by personality traits. Previous studies operationalized the five-factor theory of personality (i.e., openness, extraversion, conscientiousness, agreeableness, and neuroticism) to predict general health-related behaviors (Bogg & Roberts, 2004), eating habits (Mõttus et al., 2012), acceptance of controversial food technology (Lin et al., 2019), and in other contexts. Nystrand et al. (2021) reveal the significance of personality traits in functional food consumption, featuring the dominant influence of *conscientiousness*, *agreeableness*, *and neuroticism*. However, the authors suggested incorporating the moderator-mediator interaction effects of health habits, eating values, or attitudes towards food.

Notably, recent studies reported that the ongoing pandemic engendered a shift in consumer behaviour in general (Di Crosta et al., 2021; Guthrie et al., 2021; Hesham et al., 2021). Given the pandemic's economic and social repercussions, it is argued that consumers' overall consumption habits and food choices may have changed. In addition, the initial observation of Snuggs & McGregor (2021) reveals that consumers have amended priorities and needs since the pandemic-related measures were enforced. The authors point out that the pandemic caused anxiety and a feeling of loneliness among consumers, which have changed their shopping patterns and even caused weight gain. Głabska et al. (2020) assert the role of pandemic stressors in changing the dynamics behind the motives and the choice of healthy food. Tribst et al. (2021) highlight improvements in diet quality during the pandemic for Brazilians who have adequate time to cook, have positive feelings and are not overworked. Enriquez-Martinez et al. (2021) also reported that eating habits are mostly left unchanged during the pandemic, yet, lifestyle changes and anxiety levels suffuse. The authors argue that individuals with high anxiety levels and who were positively diagnosed with COVID-19 adopted changes in dietary patterns favoring healthier food alternatives. Essentially, the evidence reported on consumer changes in consumption habits is still contrasting on a country-to-country basis. More research is needed to comprehensively understand people's dietary patterns as influenced by the pandemic occurrence. These are important to design and implement custom policies and inventions that promote health in the post-pandemic world.

3. Research Questions / Aims of the Research

This paper reviews the literature and presents a conceptual framework for understanding the factors that influence the consumers' intention to consume healthy food. Based on the theory of planned behaviour, this work elucidates the motivations underlying consumers' healthy food choices and the potential role of individual personality traits on their food choice. Alternately, this study addresses the following research questions: i) what are the potential determinants of consumers' intention to consume healthy food?; ii) what motives influence consumers' cognitive evaluation to consume healthy food?; iii) what is the role of personality traits in food choice?

4. Research Methods

This paper used data from secondary literature sources to secure sufficient theoretical support in developing the conceptual framework for understanding consumers' choice of healthy food in the Czech Republic. *Google Scholar*, *Web of Science, and Scopus* databases were consulted, and queering keywords like "healthy food," "food choice motives," "theory of planned behaviour," and "personality and consumer behaviour." The keyword search resulted in a considerable number of research articles. Hence, the articles were carefully chosen based on three major screening criteria: a) articulates the determinants/factors related to healthy food choice, b) theory of planned behaviour and food choice, and c) personality traits and food choice. As the study aims to explore and bridge the relationships between food choice motives, the theory of planned behaviour, and personality traits, the review of the articles focuses on identifying potential links between the concepts in the healthy food choice context. Subsequently, the accumulated evidence was used to develop and explain the conceptual framework presented in this paper.

5. Findings

5.1 Theory of Planned Behaviour and Food Choice

Several studies have utilized the Theory of Planned Behaviour (TPB) (Ajzen, 1991) to explain consumer behaviour in diverse social contexts. The theory postulates that behavioural intention is a proximal determinant of actual behaviour (Ajzen, 1991; Armitage & Conner, 2001). Meanwhile, behavioural intention is influenced by attitudes (appraisal of a given behaviour), subjective norms (perceived social pressure affecting a given behaviour), and perceived behaviour control (perceived ease of performing a given behaviour) (Ajzen, 1991) (p. 188). A review of the literature reveals that dietary patterns (M. S. McDermott et al., 2015), food choice (Dowd & Burke, 2013; Nardi et al., 2019), and health-related behaviour in general (McEachan et al., 2011) can be robustly explained by the TPB model. Existing meta-analytic evidence also argues that the attitude exerts the strongest effect among other predictors of behavioural intention in the TPB model (Máirtín S. McDermott et al., 2015; McEachan et al., 2011; Nardi et al., 2019). Despite the robustness and flexibility of the TPB model to explain such behaviours, pioneering

authors of TPB assert the importance of understanding salient belief factors that shape attitude and other predictors of behavioural intentions (Ajzen, 1991).

5.2 Food Choice Motivations

Previous studies have investigated the underlying motivations of consumers in selecting food. Scholars typically operationalized the food choice questionnaire (FCQ), pioneered by Steptoe et al. (1995), to measure and identify what motives unpin consumers' food-related choices. The FCQ underscores nine food choice motives: health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern. However, the authors accentuate differences in the relevance of each motive according to sex, age, and income (Steptoe et al., 1995). For example, individuals in the low socioeconomic class tend to choose food for price and social reasons (Moraes et al., 2020). Young people's awareness of the health and nutrition aspects of food remains poor (Marsola et al., 2020). For parents choosing food for children, the motivations for weight control, price, and mood were insignificant (Roos et al., 2012).

Moreover, the evidence acquired from recent studies similarly reported the varying extent to which the motives influence food choice. For example, consumers driven by convenience motivation are more likely to consume fast food, processed, and less healthy food (Marsola et al., 2020). In cultures that emphasize the importance of body image, food selection is influenced by nutrient content and weight control motives (Gong et al., 2020). In the incidence of the COVID-19 pandemic, recent findings reported the relevance of health motives in the dietary patterns of consumers (Tan et al., 2021). Many more FCQ-research replications have been done; however, as context and regional variations matter, pressed FCQ variables to be re-examined, revised, and adjusted (Pula et al., 2014).

5.3 The Role of Personality Traits on Food Choice

The extent to which people prefer healthy food has become an important research theme, but preferences may differ due to personality traits. Several studies have associated five-factor personality traits: openness, extraversion, conscientiousness, agreeableness, and neuroticism with food choice. Existing evidence reported the importance of personality dimensions in explaining health behaviour, and thus should be used as input when designing health interventions. For example, high levels of neuroticism were more likely to consume carbohydrate-rich and salty foods (Golestanbagh et al., 2021; Pfeiler & Egloff, 2020; Keller & Siegrist, 2015). Neurotic or emotionally unstable individuals appear to engage in counter-regulatory emotional eating, consuming sweet and savory foods to cope with mood or unpleasant feelings (Keller & Siegrist, 2015; Golestanbagh et al., 2021). Meanwhile, the people's propensity to consume nutritious foods was favourably associated with their level of conscientiousness (Golestanbagh et al., 2021; Machado-Oliveira et al., 2020). Conscientious individuals are determined and deliberate and thus more

concerned with maintaining healthy eating habits and avoiding negative long-term health consequences (Nystrand et al., 2021).

Moreover, a high level of openness was connected with increased consumption of fruits, vegetables, salads, and fish among pregnant women in the US (Leszko et al., 2020). Individuals who score well on agreeableness exhibit trust, simplicity, camaraderie, and a great capacity for adapting to people and surroundings. Kessler et al. (2016) reported that vegan consumers exhibit more open and agreeable personalities and manifest universalistic and ethical motives in consuming food. In the Netherlands, in addition to openness, extraversion was the most consistently observed personality predictor of increased fruit and vegetable consumption among students (Conner et al., 2017). Extraversion is associated with increased urgency and motivation, enabling individuals to overcome innate aversions to fruit and vegetables (Conner et al., 2017).

5.4 The Conceptual Framework

Given the arguments presented above, this work postulates a potential association of food choice motives in the attitude-intention nexus within the bounds of TPB. A few attempts have been made to explore and validate such a conception. For example, Kim & Jeon (2020) associated motives (i.e., health, sensory response, mood, and weight control) in consumers' cognitive evaluation (attitude) and the selection of chocolate products. Ahmad et al. (2020) similarly investigated the link between food choice motives (i.e., health, mood, familiarity, sensory appeal, natural content, and price) towards attitude and consumption of ethnic food in Pakistan. Studies on the choice of organic food products also postulate the link behind food choice motives and constructs in the TPB model (Chen, 2007; Lee et al., 2015). These investigations imply that bearing certain food choice motivations influence the attitude formation toward the food product and its subsequent consumption. However, what food choice motivations and the extent of their influence on attitude vary from country to country. Pearcey & Zhan (2018) argue that food cultures, social and economic situations, and other contextual factors affect the differences in food choice motivation scores across nationalities. Furthermore, this work emphasizes that personality traits can strengthen or weaken the relationships between the consumers' food choice motivations and attitudes toward healthy food (Figure 1). Empirical evidence to validate the study's research concept can help design custom strategies and interventions to address obesity and other diet-related health issues in less-explored territories, such as the Czech Republic.

Five-factor Theory Of Personality Openness, Extraversion, Conscientiousness, Agreeableness, Neuroticism Food Choice Motives Health Mood Theory of Planned Behavior Convenience Perceived behavioral control Sensory appeal Natural Content Intention to consume healthy Attitude towards healthy food food Price Subjective norms Weight Control Familiarity Ethical concern

Figure 1. Conceptual framework for healthy food consumption

Source: Authors' own creation.

6. Conclusions

This paper presents a conceptual framework for understanding the factors influencing consumers' choice of healthy food. Building on the theory of planned behaviour (TPB), this work proposes that consumers' attitudes toward healthy food, subjective norms, and perceived behavioural control can predict healthy food consumption intentions. Meanwhile, it is postulated that consumers' food choice motivations form part of one's appraisal (attitudes) of eating healthy food. Previous findings also reported the role of personality traits on food choice and consumption. Therefore, this study argues that the strength of motives - attitude relationships can be moderated by personality traits. This work contributes to the literature by expounding on the potential links among consumers' food choice motives, attitudes, and intention to consume healthy food, including the possible indirect effects of personality traits.

Nevertheless, to validate the study's postulations, future studies should empirically test the conceptual model proposed by the study, especially in countries facing overwhelming obesity rates (e.g., the Czech Republic). With the growing importance of health and lifestyle adaptation from the current COVID-19 pandemic, such investigations can secure information required to design more targeted public policy interventions addressing costs associated with obesity and other diet-related health issues.

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