



Research report

Does personality influence eating styles and food choices? Direct and indirect effects



Carmen Keller*, Michael Siegrist

ETH Zurich, Department of Health Sciences and Technology, Universitatstrasse 22, CHN J75.2, CH-8092, Zurich, Switzerland

ARTICLE INFO

Article history:

Received 23 September 2013
 Received in revised form 11 July 2014
 Accepted 3 October 2014
 Available online 13 October 2014

Keywords:

Big Five
 Personality
 Restrained eating
 Emotional eating
 External eating
 Food choices

ABSTRACT

In a random sample ($N = 951$) from the general population, direct and indirect effects of the Big Five personality traits on eating styles and food choices were examined. Path models revealed that high openness to experience were associated with higher fruit, vegetable and salad and lower meat and soft drink consumption. High agreeableness was associated with low meat consumption. Neuroticism, conscientiousness and extraversion significantly and directly influenced eating styles and significantly indirectly influenced food choices. Conscientiousness mainly promoted fruit consumption by promoting restrained eating and prevented meat consumption by reducing external eating. Conscientiousness prevented consumption of sweet and savory foods, and of sugar-sweetened soft drinks by promoting restrained eating and reducing external eating, and consumption of sweet and savory foods also by reducing emotional eating. Neuroticism promoted consumption of sweet and savory foods by promoting emotional and external eating. Extraversion promoted sweet and savory, meat and soft drink consumption via promoting external eating. Results suggest that neurotic and emotionally unstable individuals seem to adopt counter-regulatory external or emotional eating and eat high-energy dense sweet and savory foods. Highly conscientious individuals adopt regulatory dietary restraint and practice counter-regulatory emotional or external eating less, resulting in more consumption of recommended and less consumption of not recommended food. The higher sociability of extraverted people, which is basically a health beneficial psychological resource, seems to have health-averse effects. Personality traits are stable; however, the resulting more proximal, counter-regulatory eating styles such as emotional or external eating might be more successfully addressed in interventions to prevent overeating and overweight.

© 2014 Published by Elsevier Ltd.

Introduction

Personality traits are correlated with various health outcomes (Raynor & Levine, 2009). Results of recent studies suggest that personality factors also influence people's food choices (Mottus, McNeill, Craig, Starr, & Deary, 2013a; Mottus et al., 2012; Tiainen et al., 2013). Furthermore, personality traits were found to be correlated with (over-) eating styles (Heaven, Mulligan, Merrilees, Woods, & Fairouz, 2001), such as eating in response to a negative mood and stress or in response to environmental food cues (Van Strien, Frijters, Bergers, & Defares, 1986). Therefore, a person's personality may be a risk factor for an unbalanced diet, and this may result in the increased likelihood of developing chronic diseases such as cardiovascular diseases, cancer or diabetes (WHO World Health Organization, 2003, 2013a). To promote a more balanced diet, governments and health organizations have formulated and implemented recommendations and dietary guidelines that include eating more fruits and vegetables and reducing salt, sugar and fat intake, for example (WHO

World Health Organization, 2003, 2013b). However, the extent to which individuals adhere to dietary guidelines and choose recommended rather than not recommended food on a regular or daily basis may depend on individual personality traits and eating styles.

Although previous researchers found evidence that personality traits influence eating styles (Heaven et al., 2001) and food choices (Mottus et al., 2012, 2013a; Tiainen et al., 2013) and that eating styles influence food choices (van Strien, 2000; Van Strien & Van de Laar, 2008), a comprehensive examination has not been conducted yet. Therefore, whether personality directly influences food choices or influences food choices indirectly via eating styles is unknown. The goal of the present study was to close this research gap. We examined what personality traits directly influence food choices and what personality traits indirectly affect food choices by increasing or decreasing dietary restraint or non-adaptive overeating tendencies. According knowledge is required to develop intervention measures. Personality traits are not easy to change, unless difficult and elaborate therapeutic and training interventions are undertaken (Bogg & Roberts, 2013). However, more proximal, counter-regulatory eating styles might be easier and more successfully addressed to prevent unbalanced eating and chronic diseases.

* Corresponding author.

E-mail addresses: ckeller@ethz.ch (C. Keller).

Big Five personality traits, food choices and eating behaviors

Currently, the most influential model for describing personality, the five-factor model, or the Big Five (Costa & McCrae, 1992; Digman, 1990; McCrae & Costa, 1997), characterizes individuals in terms of relatively enduring and universal patterns of thoughts, feelings and actions (McCrae & Costa, 2008). People with high levels of neuroticism tend to be depressed, nervous and hostile and to feel worthless. High levels of extraversion are associated with being active, optimistic, gregarious and assertive. People with high levels of openness to experience are curious, imaginative and open-minded and like aesthetics and new ideas. People with high conscientiousness tend to be strong-willed, orderly and self-disciplined. Agreeableness is characterized by altruism, compliance and sympathy (Costa & McCrae, 1992; McCrae & Costa, 1997, 2008).

The five personality factors are associated with various health behaviors (Raynor & Levine, 2009). Longitudinal research showed that neuroticism negatively and conscientiousness positively influenced physical health and subjective well-being, whereas extraversion was a positive predictor of social competence and having a social network (Friedman, Kern, & Reynolds, 2010). Research reviews further suggest that various factors mediate the influence of personality on health. For example, the positive influence of conscientiousness was found to be mediated by educational attainment, avoiding or controlling stressors, conducting health-beneficial behaviors (e.g., activity) and avoiding health-averse behaviors (e.g., unhealthy eating, alcohol or drug use) (Bogg & Roberts, 2004, 2013; Shanahan, Hill, Roberts, Eccles, & Friedman, 2014).

To date, only a few studies have examined the association between the Big Five and food consumption frequency (Mottus et al., 2012; Mottus, Starr, & Deary, 2013b; Raynor & Levine, 2009; Tiainen et al., 2013). Conscientiousness and openness to experience were positively associated with daily servings of fruit and vegetables among college students (Raynor & Levine, 2009). The same personality traits were positively associated with a health-aware Mediterranean diet, including vegetables and fruits, and conscientiousness was also positively associated with eating fewer meat products (e.g., pork, sausages) (Mottus et al., 2013a). In contrast, neuroticism was negatively associated with the Mediterranean-style diet but positively with a convenience diet (Mottus et al., 2013a). Similar results were found in a large Estonian community sample (Mottus et al., 2012) and in a large Finnish sample in which neuroticism was associated with a poorer-quality diet, whereas openness was also associated with higher fruit and vegetable intake (Tiainen et al., 2013).

A study among undergraduate students found that conscientiousness was negatively associated and neuroticism positively associated with emotional and external eating, whereas conscientiousness and neuroticism were positively associated with restrained eating (Heaven et al., 2001). Results of these studies suggest that in particular neuroticism and conscientiousness might indirectly influence food choices via eating styles.

Eating styles and food choices

What is known about how eating styles influence food choices? A widely accepted approach to eating styles disentangles overeating tendencies from dietary restraint (Van Strien et al., 1986). This approach differentiates between emotional eating (responding to negative emotions and stress by food intake), external eating (eating when external food cues are present in the environment) and restrained eating (cognitive restriction of energy intake) (Van Strien et al., 1986; Van Strien & Van de Laar, 2008). In a sample of non-eating disordered female students, intake of sweet high-energy food such as ice cream was best predicted by emotional eating (van Strien, 2000). Recent research indicates that negative

emotions evoked by exposure to stress drive disinhibited eating and eating more palatable food but fewer vegetables and whole-grain foods (Groesz et al., 2012). In other studies among female students (Anschutz, Van Strien, Van De Ven, & Engels, 2009) and patients with diagnosed type 2 diabetes (Van Strien & Van de Laar, 2008), external eating was positively associated with energy intake; however, fat intake was negatively associated with restrained eating. Similarly, in a sample of the general population, restrained eating was negatively associated with (high-fat) sweet and snack consumption; however, restrained eating was also positively associated with vegetable and fruit consumption (Keller & van der Horst, 2013). Sugar-sweetened soft drinks were negatively associated with restrained eating and positively associated with external eating in a sample of the general population (Elfhag, Tynelius, & Rasmussen, 2007). These results support the idea that counter-regulatory emotional and external eating results in higher consumption of high-energy sweet and salty food, whereas regulatory restrained eating may be associated with fruit and vegetable intake (Anschutz et al., 2009; Keller & van der Horst, 2013; Van Strien & Van de Laar, 2008).

Rationale of the present study

The present study aimed to examine whether and which of the Big Five personality traits directly or indirectly influence food choices (via eating styles) that can be viewed as indicators of a balanced or an unbalanced diet (Hartmann, Siegrist, & van der Horst, 2013). On the one hand, a balanced diet includes the selection of foods such as fruits, vegetables, and salads that are recommended in dietary guidelines (Keller et al., 2012). On the other hand, due to the detrimental health effects linked to their high intake dietary guidelines discourage the frequent consumption of foods such as sweet and savory fare, meat products, or sugary drinks (Faramawi, Johnson, Fry, Sall, & Zhou, 2007; Hartmann et al., 2013; Hu & Malik, 2010).

We hypothesized the initial path model presented in Fig. 1. Based on previous research (Anschutz et al., 2009; Heaven et al., 2001; Mottus et al., 2012, 2013a; Van Strien & Van de Laar, 2008), we assumed that neuroticism and conscientiousness directly influence eating styles, which in turn affect food choices. Particularly, we expected neuroticism's positive indirect effects on the selection of sweet and savory foods, meat products, and sugary drinks via emotional and external eating. Neuroticism is associated with emotional instability and experiencing negative emotions (Costa & McCrae, 1992; Digman, 1990; McCrae & Costa, 1997). Neuroticism might therefore impair self-control to resist available tempting food (resulting in external eating) or facilitate coping with negative emotions and stress by eating high-caloric, sweet, and fatty foods (Groesz et al., 2012; van Strien, 2000). In contrast, due to greater self-control resources (Costa & McCrae, 1992; Digman, 1990; McCrae & Costa, 1997), we expected the related high conscientiousness' positive indirect impacts on choices of fruits, vegetables, and salads by promoting restrained eating, as well as negative indirect effects on choices of sweet and savory foods, meat products, and sweetened drinks by reducing emotional and external eating. Based on previous research (e.g., Mottus et al., 2012, 2013a), we expected openness to experience to directly promote selecting fruits, salads, and vegetables and directly prevent choosing sweet and savory foods, meat products, and sweetened drinks.

We allowed the Big Five personality traits to covary (Costa & McCrae, 1989, 1992). To keep the figures simple, we did not graphically show these covariances. In addition, we did not expect neuroticism and conscientiousness to fully explain the covariance between the eating styles. Previous studies found substantial correlations between eating styles, in particular between the two overeating styles, indicating that additional variables might also account for this covariance (Keller & van der Horst, 2013; Koenders

Download English Version:

<https://daneshyari.com/en/article/7309628>

Download Persian Version:

<https://daneshyari.com/article/7309628>

[Daneshyari.com](https://daneshyari.com)