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**Fast food addiction and anti-consumption behavior:  
The moderating role of consumer social responsibility**

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**Fast food addiction and anti-consumption behaviour:  
The moderating role of consumer social responsibility**

**ABSTRACT:** This study aims to understand the drivers of fast-food addiction and the role of consumer social responsibility (CSR) on the relationship between fast-food addiction and anti-consumption. Due to growing health concerns, an increasing number of consumers have been avoiding the consumption of fast-food. Based on a sample of 539 respondents, all pertaining to generation Y in Pakistan, this study tests a model including addiction and anti-consumption behaviour. Empirical results provide strong evidence that individual and socio-cultural factors together with advertising practices influence consumers' fast-food addiction. Results also reveal that CSR moderates the relationship between fast-food addiction and anti-consumption behaviour. Interestingly, the present study pioneers the discussion on how addiction can drive anti-consumption. The findings can help public policy makers and managers to understand consumers' anti-consumption tendencies and help promote healthier consumption habits.

## **1. Introduction**

Zavestoski (2002) defines anti-consumption as “a function of a preference to consume one object over another,” whereas more profound anti-consumption attitudes include “a resistance to, distaste of, or even resentment or rejection of consumption more generally” (p. 121). The extant research focuses on fast-food product anti-consumption, taking into consideration the addictive behaviour, thus defining addiction as excessive physical or psychological dependence on a substance or activity (Chatzidakis & Lee, 2013; Abdo, Zeenny & Salameh, 2016). Anti-consumption studies have generated recurrent attention among marketing practitioners and academics alike (Oral & Thurner, 2019).

Extant research reveals that consumers can form anti-consumption behaviour for a variety of reasons (Farah & Newman, 2010; Lee, Motion, & Conroy, 2009). Indeed, consumers may boycott a product for environmental sustainability concerns (García-de-Frutos, Ortega-Egea & Martínez-del-Río, 2018), religious or cultural animosity reasons (Abosag & Farah, 2014), and/or other business practices (Sandıkcı & Ekici, 2009). Likewise, individual health interests, lifestyle factors, sustainability, and social responsibility are significant factors that drive anti-consumption practices (Black & Cherrier, 2010; Lee et al., 2011). Herman and Mack (1975) proposed restrained theory (RT), indicating that controlled eating is a conscious practice enforced by individuals' personal preferences as well as their environment (Tosun & Yanar Gürce, 2018). This implies that a person's consumption behaviours are directly associated with

both his/her individual characteristics (Goyal & Singh, 2007) and his/her socio-cultural context.

Nonetheless, research indicates that fast-food stimuli are often hard to control, even among the most health-conscious consumers (Akbat, Tiryaki, & Gul, 2007). In addition, mindful food consumption habits tend to be less common among members of Generation Y (Donazar-ezurra & Burgo, 2017). Nevertheless, a positive self-image is believed to generate anti-consumption feelings, especially in young individuals (Chao, Yang, & Chiou, 2012). Accordingly, a positive self-image tends to restrict a consumer's likelihood to consume food excessively, as he/she is more likely to closely monitor his/her weight.

Even so, a growing trend of fast-food consumption has emerged among the youth. Health practitioners indicate that the recent rise in obesity is caused by modern eating and drinking habits, and particularly fast-food consumption. Additionally, fast-food overconsumption has caused an increase in cases of heart disease, which has sparked global attention. Indeed, a recent WHO report indicates that obesity is a major risk factor for chronic diseases, which can be reduced significantly through changes in consumption and dietary patterns (Donazar-ezurra & Burgo, 2017).

In spite of the health warnings, fast-food consumption has increased in recent years (Ehsan, 2012). Moreover, food addiction is being catalysed by the abundance of food adverts that motivate unhealthy consumption habits, resulting in the development of various eating disorders and harmful food consumption behaviours (Contini et al., 2018). In their effort to increase consumption and promote sales, advertisers have often induced consumer addictive behaviour (Cheng, 2009). Nonetheless, research on this matter is inconsistent; few studies assess the impact of consumer addictive behaviour on fast-food anti-consumption behaviour (Burmeister et al., 2013). Existing research highlights the conflict between consumer willingness to avoid fast-food consumption and their attachment (and at times addiction) to this type of food (Chao, Yang, & Chiou, 2012).

Thus, further understanding of consumer anti-consumption triggers and behaviours is necessary (Gupta et al., 2018). The deteriorating quality of life resulting from unsustainable consumption has further increased the need for anti-consumption research (Tosun & Yanar Gürce, 2018). Consumer social responsibility also calls for research attention toward unhealthy consumption practices and ways to control them in order to promote the overall well-being of society (Riley & Kohlbacher, 2018). Likewise, and from a consumer welfare perspective, addiction is a central issue, as excessive consumption of addictive commodities leads to obesity and negative health consequences. However, in-depth analysis of the existing literature

indicates a large knowledge gap concerning this topic. Research primarily asserts that food product anti-consumption is associated with sustainability and health concerns (Tosun & Yanar Gürce, 2018). This is confirmed in the case of meat and dairy products (Allen, Goddard, & Farmer, 2018). Nonetheless, the published research lacks insight into anti-consumption regarding other food product categories, such as fast food, despite its extensive market share due to its convenient and instant nature when compared with other food service operators (Ehsan, 2012). Moreover, no study has examined the relationship between food anti-consumption and consumer social responsibility (Sudbury-Riley & Kohlbacher, 2018). Accordingly, this research considers the present gap in the literature with relation to experimental research on the antecedents of food-related anti-consumption behaviour (Allen, Goddard, & Farmer, 2018).

Fast-food addiction and its related risks of obesity highlight the need to examine the factors affecting food addiction and the associated drivers of anti-consumption behaviour. Nonetheless, analysis of the related literature indicates a large knowledge gap in this area (Tosun & Yanar Gürce, 2018; Shaban, & El-Bassiony, 2017; Galvagno, 2011). Specifically, few studies if any have been conducted on the subject in developing countries. However, research is largely needed within the specific context of Pakistan. Significant foreign investment in Pakistan has focused on the area of food services, with over \$US492 million spent on this sector alone (SMEDA, 2016); this investment is causing a significant change in consumer eating habits (Chao, Yang, & Chiou, 2012). The resulting rise in obesity rates among the Pakistani youth has reached alarming levels, thus urging authorities in Pakistan to promote healthy eating habits (Ehsan, 2012).

Accordingly, this study contributes to the existing literature by presenting and discussing the factors that can initiate addictive behaviour and how the latter can drive anti-consumption. It aims to examine the factors that drive consumer addiction and the subsequent impact of addiction on anti-consumption behaviour within the Pakistani context. This study aims to utilize the findings to help public policy makers and managers to understand consumers' anti-consumption tendencies and help promote healthier consumption habits.

## **2. Literature review**

### **Anti-consumption**

Anti-consumption is defined as a form of “resistance that is both a consumer activity and an attitude” (Cherrier, 2009, p. 181). It is further defined as a consumer sense of resentment or

aversion towards the consumption of a given product group (Armstrong & Sekhon, 2019). It encompasses all behaviours whereby a consumer purposefully avoids the purchase of a given product or brand (Shaban & El-Bassiouny, 2017). Anti-consumption can occur due to: (1) personal motives and addictive tendencies, (2) negative experiences with the given brand/product, (3) social and environmental concerns, and (4) political or social activism (Abosag & Farah, 2014). Indeed, research indicates that the various types of consumer anti-consumption behaviours include boycotting, switching (Farah, 2016) anti-branding, negative word of mouth, and voluntary brand rejection (Sudbury-Riley & Kohlbacher, 2018).

Unfortunately, anti-consumption as a variable remains highly difficult to measure. Consumer preferences, especially for food, tend to be complex. For instance, a person may avoid consuming meat because he/she is concerned with animal welfare and environment sustainability. On the other hand, individuals who choose to consume meat may do so for a rich source of protein, not because they are against environmental sustainability or animal welfare (Tosun & Yanar Gürce, 2018). Accordingly, anti-consumption studies focus on determining the reasons hindering consumption and influencing consumer attitudes (Galvagno, 2011).

## **2.1 Personal Factors and addiction**

Personal factors that promote anti-consumption include internal factors such as an individuals' disposition and interpersonal attitudes that explain individuals' behaviours, thoughts, and emotions (Kaynak & Ekşi, 2014). Empirical evidence indicates that hedonic characteristics like personal beliefs and lifestyle may trigger consumers' addiction to food. Addiction is defined as the excessive physical or psychological dependence on a substance, brand or activity (Mrad & Cui 2017). Contini et al. (2018) examined the effects of consumer desires and eating behaviours. They revealed that individual characteristics (beliefs and traits) are important determinants of consumption practices (Kaynak & Ekşi, 2014). Likewise, researchers signify that individual personal beliefs and assessments are primary drivers of food consumption and addiction (Zlatevska & Spence, 2016). Such personal opinions and beliefs include taste, convenience (Bianchi & Mortimer, 2015), and other hedonic components (Shahzad et al., 2018). This is due to the fact that addiction is largely linked to individual impulse and affective characteristics especially amongst young consumers (Khalid et al., 2019). Indeed, food addiction is in itself a pathological and compulsive disorder in which consumer experience and strong hedonistic urges and cravings play a major role (Rosenbaum & Wong, 2012). Accordingly, the researchers postulate the following:

*H1. Consumers' opinion regarding fast food is positively related to their addictive consumption behaviour.*

## **2.2 Socio-cultural factors and addiction**

Research signifies that consumers who share similar socio-cultural values and backgrounds also form collective behaviours (Shahzad et al., 2015). Researches have shown that an individual's consumption behaviour is not only affected by his/her own motivations but also by his/her surrounding social situations (Guesalaga, Pierce, & Scaraboto, 2016). Consequently, consumers' likes and dislikes are socio-cultural products formed through social interactions and relationships. Therefore, consumer addictive states are also derived from an individual's social and cultural environment (Chen et al., 2018). For example, a consumer may experience addictive urges and favour fast-food consumption at social gatherings due to the presence of promotional deals (Ehsan, 2012); promotions tend to be a primary motivator of continuous and excessive consumption. In contrast, a consumer might favour anti-consumption when he/she perceives the costs of continued indulgence as unacceptable.

Indeed, a consumer's emotions and cognitive beliefs about a certain product/brand depend largely on his/her cultural values. These values shape individual perceptions and convictions, which consequently affect addictive tendencies towards the given product/brand (Chen et al., 2018). Kashif (2019) state that a consumer's society dictates his/her cultural orientation, which subsequently impacts consumption patterns and behaviours. Moreover, socio-cultural orientations vary across different societies, which lead to diverse consumption attitudes (Gram et al., 2015). In addition, a consumer's attitude towards fast-food consumption is also affected by his/her culture's perceptions of fast food (Islam and Ullah, 2010). For example, western societies tend to be more accepting of fast food, as their culture and lifestyle favors quick and convenient dining options (Frank, 2012). Accordingly, consumption practices within socio-cultural groups drive addictive behaviours, leading the researchers to hypothesize the following:

*H2. Socio-cultural factors regarding fast food are positively associated with addictive consumption behaviour.*

## **2.3 Advertising Practices and addiction**

Advertising is heavily used to stimulate and encourage consumer purchases (Kaur & Hundal, 2017) and tends to catalyse consumer consumption behaviours. Thus, advertising is regularly utilized by brands to encourage purchases and generate brand loyalty (Eshghi Sarkar, & Sarkar,

2017). This breeds consumer familiarity with the given brand, which subsequently incites continuous consumption and addictive tendencies (Shahzad et al., 2018).

Marketers tend to capitalize on the role of advertising in the formation of consumer addiction (Theocharous, 2015). Advertisers use various strategies such as celebrity endorsements to reinforce their message and promote addiction (Chan, Leung, & Luk, 2013;). Fast-food companies also greatly employ advertising channels to induce consumption and build sustainable relationships with consumers. Studies indicate that exposure to advertising is one of the main influencers regarding fast-food consumption, especially in the case of young consumers (Mathur & Patodiya, 2016). Indeed, studies indicate that increased exposure to fast food advertising affects consumer perceptions of the food products and normalizes their consumption (Beaudoin, 2014). Therefore, the researchers propose the following:

*H<sub>3</sub>. Advertising practices in relation to fast food are positively associated with addictive consumption behaviour.*

#### **2.4 Addiction and Anti-consumption Behaviours**

The above-cited literature proposes that: (1) personal factors, (2) socio-cultural factors, and (3) advertising all drive consumer addiction to fast food, which can lead to obesity and other physiological problems (Hassan & Dimassi, 2017). The advent of the modern, fast-paced lifestyle stimulates binge eating of convenient fast-food options, which generates a dependence on and addiction to these foods (Kaynak & Ekşi, 2014). However, consumers who are highly health conscious are more likely to limit their unhealthy food consumption, even if they enjoy such foods, (Tosun & Yanar Gürce, 2018). Anti-consumption behaviours can also be developed from eating unhealthy foods. Research implies that excessive consumption of fast food results in negative emotions, such as anxiety and guilt.

These negative emotions disrupt consumer attitudes and create feelings of disenchantment and disengagement with the given brand/product (Tore & Heinonen, 2013). In fact, studies indicate that the negative emotions a consumer experiences when faced with the risks and disadvantages of his/her addiction leads to feelings of fear and shame (Paloutzian & Park, 2013). This in turn leads the consumer to 'leave the shameful behaviour behind' and disengage from the behaviour, displaying a sense of control and power (Suarez, 2014). Ultimately, the consumer develops a sense of adhesion to the counter-behaviour of anti-consumption (Cova & D'Antone, 2016). As a result, such feelings induce brand avoidance, which subsequently breeds anti-consumption tendencies and behaviours (Jayasimha et al., 2017). The researchers thus stipulate the following:

*H4: Fast-food addiction has a positive effect on anti-consumption behaviour.*

## **2.5 Moderating role of consumer social responsibility**

Food consumption has a substantial effect on both societal sustainability and individual well-being (Manning, 2013). This has become even more evident through the constantly changing dietary patterns worldwide. Moreover, the links between health consciousness and food practices are constantly discussed in the mainstream media channels; this therefore impacts consumer attitudes, individual beliefs, and overall consumption decisions (Enderwick, 2009). Various personal, social, and environmental factors also play an important role in food intake and avoidance (Wang et al., 2018). For example, research has focused on resistance to meat dairy product consumption, which is motivated by factors such as lactose intolerance, allergies, cultural norms, religious connotations, or consumer social responsibility (Allen, Goddard, & Farmer, 2018).

Consumer social responsibility (CSR) refers to an individual's conscious choice to make consumption decisions based on his/her individual moral beliefs. It is also defined as "the application of instrumental, relational, and moral logic by an individual, group, and corporate and institutional agents seeking to influence a broad range of consumer-oriented responsibilities" (Eteokleous, Leonidou, & Katsikeas, 2016). CSR not only focuses on avoiding harm to society, but also on acting proactively for the collective social benefit in all stages and aspects of consumption (Baron, 2013; Nicola et al., 2014). It can also include responsibility toward brand stakeholders, consumers, and the environment as a whole (Bogueva, Marinova, & Raphaely, 2017).

Vlachos (2012) noted that CSR plays a moderating role in the formation of anti-consumption behaviours, especially if a consumer believes his/her actions are harmful in the long run. For example, if a consumer believes that his/her addiction to fast food will lead to harmful health consequences, then he/she is more likely to develop anti-consumption tendencies. Allen, Goddard, and Farmer (2018) also postulate that consumer social beliefs and values can effectively moderate the relationship between consumer behaviour and anti-consumption tendencies. Therefore, the researchers stipulate the following:

*H5: Consumer social responsibility moderates the relationship between fast-food addiction and anti-consumption behaviour.*

## **2.5 Theoretical Model**

The purpose of this study is twofold. First, the manuscript aims to identify the factors affecting food addiction, and second, it seeks to examine the role of CSR on the relationship between fast-food addiction and anti-consumption. It focuses specifically on the case of the Pakistani consumer. Most importantly, this study aims to pave the way for a new theoretical model that explains consumer anti-consumption behaviour. The existing models used in related studies, most prominently the theory of planned behaviour (TPB) and the self-congruity theory, are limited in that they focus solely on personal factors (Kashif, 2019). However, these approaches could limit the understanding of anti-consumption behaviour as the latter can be driven by various factors all playing significant roles in shaping one's overall behaviour. These factors include: (1) personal factors, (2) socio-cultural factors, (3) advertising factors, and (4) consumer social responsibility. Accordingly, this study aims to devise a new theory that incorporates all the latter factors as this would add significant theoretical value to the existing literature in the field. Accordingly, figure 1 provides a conceptual model of the variables and relationships under study. The proposed theory indicates fast-food anti-consumption as the dependent variable and food addiction as the independent variable. Moreover, consumer personal, socio-cultural factors, and advertising practicing are proposed as the predicting variables of addictive behaviour. CSR is proposed as a moderating force in the relationship between addiction and anti-consumption behaviour.

**Insert Figure 1 about here**

### **3. Methodology**

This study applies a quantitative approach in order to assess how fast-food addiction drives anti-consumption. The study's target population is Generation Y individuals; Generation Y is the generation of those born between the years 1977 and 1994, characterized by an increased use of and familiarity with modern technology and media channels when compared to older generations. This generation was chosen as the target group, since they are generally: (1) highly educated and brand conscious, (2) consumption oriented, and (3) highly involved in purchases and concerned with the overall impact of their purchase decisions on both their individual well-being and social welfare (Lazarevic, 2013). The researchers deemed university students to be the most representative and accessible consumer group within this generation cohort. This is because Gen Y university students tend to consume fast food due to (1) its convenience and (2) its cost-effectiveness when compared to other foods (Goyal & Singh, 2007).

### **3.1 Sample selection and size**

Five major cities from Pakistan were selected for the purpose of sample generalizability and representativeness: (1) Islamabad, (2) Rawalpindi, (3) Lahore, (4) Sargodha, and (5) Faisalabad. These cities were chosen as sites housing the majority of the Pakistani urban population. The sample was drawn on the basis of convenience sampling, and it included both undergraduate and graduate students. Convenience sampling was chosen due to time and cost concerns and based on the need to investigate this specific cohort for the purpose of this study. According to Nunnally (1978), the size of a convenience sample should be above or near 300 to prevent biases and errors. Accordingly, a total of 800 questionnaires were distributed across university students within the five afore-mentioned cities.

### **3.2 Instrument and data collection**

An online version of the questionnaire was developed and distributed among the targeted cohort; this particular form was utilized as it allowed for greater reach and because Gen Y consumers demonstrate high acceptability of technology and media (Kotler & Armstrong, 2013). WhatsApp student groups from the main universities in the five cities were identified, and the e-version of the questionnaire was sent to these groups with a request for the students to fill out the questionnaire and share it with other students. This mode of data collection was adopted in line with previous studies that have reported the use of mobile applications to target student groups for data collection in academic studies conducted in China (Xu et al., 2015).

The questionnaire consisted of two sections. The first section included a series of demographic questions: (1) gender, (2) marital status, (3) employment status, (4) age, (5) education level, and (6) city of residence of the respondent. In the second section, respondents were asked to rate the importance of various factors with regard to fast-food addiction using academically validated scales from the extant literature. These scales were adapted to ensure content validity. Before proceeding to the second section, a question asked respondents whether they are reluctant to consume fast food, eliciting a yes or no answer. If respondents answered 'no,' they were thanked for their participation and asked not to complete the questionnaire. The authors wanted to understand the reasons behind consumer reluctance and anti-consumption tendencies, which will not be displayed by regular consumers of fast food.

The remaining questions within this section utilized a seven-point Likert-scale whereby 7 = strongly agree and 1 = strongly disagree. The first question assessed consumer anti-consumption tendencies utilizing a five-item scale adopted from Tosun, Yanar, and Gürce (2018). This scale has previously been utilized to assess consumers' meat anti-consumption

behaviour. It assesses the reasons behind consumers' reluctance to consume fast food in relation to (1) body image, (2) health consciousness, (3) quality, (4) human welfare, and (5) environmental sustainability.

Next, a nine-item scale was applied to measure food addiction based on the work of Gearhardt et al. (2013), whose scale was developed by experts in the addiction and obesity. The scale assessed consumer control, anxiety, physical response, and emotional response to fast-food consumption, which facilitated the measurement of fast-food addiction tendencies.

The following question incorporated a ten-item measure of socio-cultural factors adapted from a scale developed by Shahzad et al. (2015) to measure the degree to which consumer addiction is influenced by socio-cultural factors (Chen et al., 2018). It was used to assess cultural acceptance and encouragement of fast-food consumption, while also questioning levels of consumption by family, friends, and colleagues.

Respondents were then asked to evaluate their agreement with a five-item scale measuring individual motivation factors toward fast-food consumption; the latter scale was based on an original scale developed by Ghoochani et al. (2018). This scale was adapted to measure the degree to which the following individual factors namely (1) accessibility, (2) convenience, (3) satisfaction, (4) attractiveness, and (5) nutritional value of fast food drive addiction.

The subsequent section addressed advertising appeal through the employment of a six-item scale adopted from Cheng et al. (2009). These questions gauge whether consumers perceive fast-food advertising to be accessible, reliable, relevant, and informative.

The final section included a scale assessing consumer social responsibility (CSR) and consumption of products on a nine-item scale adapted from Arli and Tjiptono (2018). The scale measures respondents' satisfaction with the safety, convenience, nutritional value, price, taste, ethics, choices, behaviours, and accessibility of fast food and their respective restaurants.

### **3.3 Sample Demographics**

A quantitative survey methodology was adopted for its generalizability potential (Farah, 2017). A total of 800 questionnaires were distributed across university students, while 617 were returned, of which 539 were complete and fit for analysis. The respondents were 55.8% male and 44.2% female. The majority of respondents were born in the period of 1991-1996 at 57.3%, whereas 32.3% were born in the years 1986-1990, with only 10.4% born in the years 1980-1985. The sample is also representative of all cities, with 17.3% from Islamabad, 14.3% from Rawalpindi, 24.5% from Lahore, 21.5% from Sargodha, and the remaining 22.4% from

Faisalabad. In terms of marital status, 87.6 percent of the survey respondents were unmarried, and only 19.7 percent of them were employed. Finally, the sample showed varied education levels, with 53.1% at the bachelor degree level, 43.4% at the master degree level, and 3.5% at the doctoral level. A detailed summary of the sample demographics is provided in Table I.

**Insert Table I about here**

## **4. Results**

### **4.1 Measurement model**

SPSS 21.0 and AMOS were used for data analysis. The following indices were used, including comparative fit index (CFI), relative  $\chi^2$  (CMIN/df), root mean square residual (RMR), and goodness of fit (GFI). The result of the particular indices (AGFI = 0.894, CFI = 0.94, GFI = 0.92, CMIN/df = 1.431, RMSEA = 0.052, RMR = 0.039 and TLI = 0.932) show data correctness indicating the model fitness. All constructs and variables were tested for both convergent validity and discriminant validity. For reliability purposes, measures of composite reliability (CR) and the average variance extracted (AVE) values were considered. To accept the convergent validity of all variables, the cut-off value of the CR for all variables must be above 0.60, and the average variance extracted (AVE) values above 0.50 (Sekaran & Bougie, 2011, p. 160). The CR and Cronbach's  $\alpha$  reliability values are presented in Table II, with all measures being greater than 0.7 (Bagozzi & Yi, 1988), indicating good internal consistency. Moreover, the AVE of the constructs achieved a cut-off value of 0.5, and all factor loadings for the tested items were found to be significant at  $p = 0.001$ .

Discriminant validity was tested using Fornell and Larcker's (1981) approach. According to Sekaran and Bougie (2011, p. 160), discriminant validity occurs when "two variables are predicted to be uncorrelated, and the scores obtained by measuring them are empirical. According to the results presented in Table III, the constructs had a significantly higher square root of AVE values compared to their correlations with other constructs; hence, the results of the measurement model test fulfilled the required validity and reliability criteria. The constructs and measurement model items of the present study were deemed appropriate to test the developed propositions and structural models.

Confirmatory factor analysis techniques by means of AMOS were used to test the measurement model and to test the reliability of scales, as this method provides strong evidence of model fit and further tests the effect of latent variables (Farah, Hasni, & Abbas, 2018).

**Insert Table II about here**

**Insert Table III about here**

#### **4.2 Structural model and hypothesis testing**

Structural equation modelling (SEM) offered the essential measurement of the anti-consumption tendencies and how relationship addiction leads to anti-consumption behaviour. SEM is a statistical modelling method of analysis that enables the testing of a series of separate yet interrelated constructs and regression equations, allowing for the analysis of multiple relationships at once (Ramadan, Farah, & Kassab, 2019; Farah & Ramadan, 2017; Farah & Ramadan, 2020). The following indices were utilized to evaluate the fit of the model: the CMIN/DF, the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), the comparative fit index (CFI), the Root Mean Square Error of Approximation (RMSEA), as well as the root mean residual (RMR) and the Tucker-Lewis index (TLI). All of these indices and the estimation of the model showed a good fit (Steenkamp & Baumgartner, 2000) with: CMIN/df = 1.812, GFI = 0.84, AGFI = 0.832, CFI = 0.871, RMSEA = 0.054, RMR = 0.041 and TLI = 0.883. Figure 2 reflects the path coefficients of the structural equation model.

The examination of the hypotheses was based on the t-value, with a value greater than 1.96 (Hair et al., 1998) representing a significant path. Results reveal a positive, significant relationship between consumer individual factors and fast-food addiction ( $\beta = 0.189$ ,  $t = 3.954$ ,  $p < 0.001$ ), while a positive link was also found between socio-cultural factors and fast-food addiction ( $\beta = 0.201$ ,  $t = 3.141$ ,  $p < 0.001$ ). Likewise, advertising practices displayed a positive and significant effect on fast-food addiction ( $\beta = 0.192$ ,  $t = 3.870$ ,  $p < 0.001$ ), thereby supporting H<sub>1</sub>, H<sub>2</sub>, and H<sub>3</sub>, respectively. Finally, fast-food addiction showed a significant positive influence on anti-consumption behaviour ( $\beta = 0.276$ ,  $t = 4.321$ ,  $p < 0.001$ ), thus confirming H<sub>4</sub>. The results of the SEM are presented in Table IV.

**Insert Table IV about here**

**Insert Figure 2 about here**

#### **4.3 Testing Moderation effects**

Data was analysed using Hayes' (2017) Process macro, Model 1, in SPSS 21.0. The regression model produced the following statistics:  $R^2=0.14$ ;  $F(2,163)=5.12$ ,  $p=0.001$ . Results revealed a significant FFA\*CSR interaction AC ( $R^2\text{-chnng}=0.01$ ;  $b=0.01$ ,  $F=3.72$ ,  $p=0.05$ ). The values of the moderated indirect and direct effects of consumer social responsibility in influencing anti-consumption (H<sub>5</sub>) are shown in Table V. Low and medium levels of consumer social

responsibility have a significant positive indirect effect (indirect effect (low) = .80, CI.95 = 0.20, 1.39; and indirect effect (medium) = 0.54, CI.95 = 0.14, 0.94). However, for higher values of consumer social responsibility, there is an insignificant relation (indirect effect [high] = 0.29, CI.95 = -0.20, 0.83) for H<sub>5</sub>. The conditional indirect effect is positive, but declines as the consumer social responsibility increases. Figure 3 shows the values of the indirect and direct effect (fast food addiction and anti-consumption) at varying levels of consumer social responsibility with a 95% confidence interval. The result of Figure 3 suggests that the indirect effect between fast food addiction and anti-consumption is conditional upon the level of consumer social responsibility, such that at a certain level of consumer social responsibility, anti-consumption motives decrease. The Johnson–Neyman technique results are shown in Tables VI. Results suggest that the relationship between fast food addiction and anti-consumption are significant only up to a certain level (i.e., 0.46) beyond which this relationship becomes insignificant.

**Insert Table V about here**

**Insert Table VI about here**

**Insert Figure 3 about here**

## **5. Discussion**

This study has investigated the phenomenon of fast-food addiction based on the constructs of consumer individual, social-cultural factors, and advertising practices to better predict consumer addiction behaviour and its validating role in anti-consumption behaviours (Tosun & Yanar Gürce, 2018). The study highlights the fact that both personal and socio-cultural factors affect consumer fast-food addiction. In today's fast-paced society, whereby consumers spend large period of time at work or at school, fast food has become an easy option due to its convenience, accessibility, and affordability (Goyal & Singh, 2007). Many families also prefer quick and easy meals consumed with their nuclear families instead of the traditional elaborate family meals previously prepared with extended family members (Islam & Ullah, 2010). Accordingly, the modern consumer's lifestyle and related societal changes all induce fast-food addiction.

Moreover, the study highlights the positive impact advertising has on fast-food consumption and addiction. In fact, exposure to advertisements and promotions plays a significant role in influencing consumer perception of fast food, whereby frequent exposure to the same enhances consumer inclination to purchase fast food (Mathur & Patodiya, 2016). Furthermore, fast-food companies stimulate addiction through their focus on advertising

activities and promotional appeals, which not only increase purchase intention, but also incite brand loyalty (Srivastava, 2015). In addition, the proliferation of these advertisements across various media channels also creates frequent exposure, thus stimulating familiarity and inducing more purchases.

Nonetheless, this study indicates that fast-food addiction may breed negative emotions and feelings that stimulate anti-consumption tendencies. These findings are in line with the findings by Chao, Yang, and Chiou (2012) that shame and guilt due to obesity and negative body image accelerate anti-consumption tendencies. Yielding to temptation and consuming fast food in an addictive manner can create internal conflict and cognitive dissonance, whereby the sense of pleasure derived by the consumption is quickly replaced by regret and remorse (Hofmann et al. 2013). These negative feelings can also be attributed to increasing health consciousness among modern consumers, especially amongst the younger generation (Luomala et al., 2015).

This study reveals that CSR moderates and reinforces the relationship between fast-food addiction and anti-consumption behaviour (Allen, Goddard, & Farmer, 2018). This is due to the fact that an individual is more likely to favour a product that he/she perceives to be healthy and environmentally friendly (Hartmann, Keller, & Siegrist, 2016). Previous research supports the claim that the rapid growth of consumer sustainability further empowers consumers, as individuals are concerned about the functional aspects of products prior to adoption of the given product (Conner & Godin, 2007). Consumers have thus become active players in choosing to reject a product they like if they perceive it to be harmful for the overall well-being of society as a whole (Lee & Ahn, 2016).

## **6. Conclusion**

Consumers' personal and socio-cultural constructs pave the way for consumer fast-food addiction. The results of our study indicate that advertising practices affect addiction significantly. Nonetheless, fast-food addiction generates negative feelings and emotions that generate anti-consumption behaviours, while CSR moderates these behaviours. Therefore, this study offers a number of theoretical and practical implications. First, this study expands on the existing understanding of the anti-consumption phenomenon in the context of Pakistan to address the factors affecting fast-food addiction. It also serves as a practical guide for advertisers and public policymakers seeking to limit fast-food consumption and decrease unhealthy eating and obesity. This study indicates that social and cultural pressures may play an important role in these factors. In Pakistan, the prevalence of obesity has increased due to

higher fast-food consumption, thus confirming the importance of healthy eating awareness. For instance, fast food chains can offer advertising movements to persuade their customers to engage in physical activity. The stimuli can accordingly be generated by promoting positive body image.

## 7. Limitations and future studies

While this study offers many valuable contributions to the literature, it exhibits some limitations. First, the study utilizes a convenience sampling design, which often limits the generalizability of findings. Second, it is focused on Pakistani Gen Y university students, which confines the findings to young, highly educated people and is not representative of the Pakistani society as a whole. Future studies can adopt a non-convenience sampling technique that includes wider consumer groups of various ages and backgrounds. Moreover, this study was conducted in Pakistan, largely a collectivist society where social group influence plays a significant role in shaping consumption behaviour. Accordingly, future research can be conducted with other types of cultures and societies to offer more generalizable insights. Across-cultural design across various countries would be most insightful. Lastly, future studies could examine other food groups, categories, and brands.

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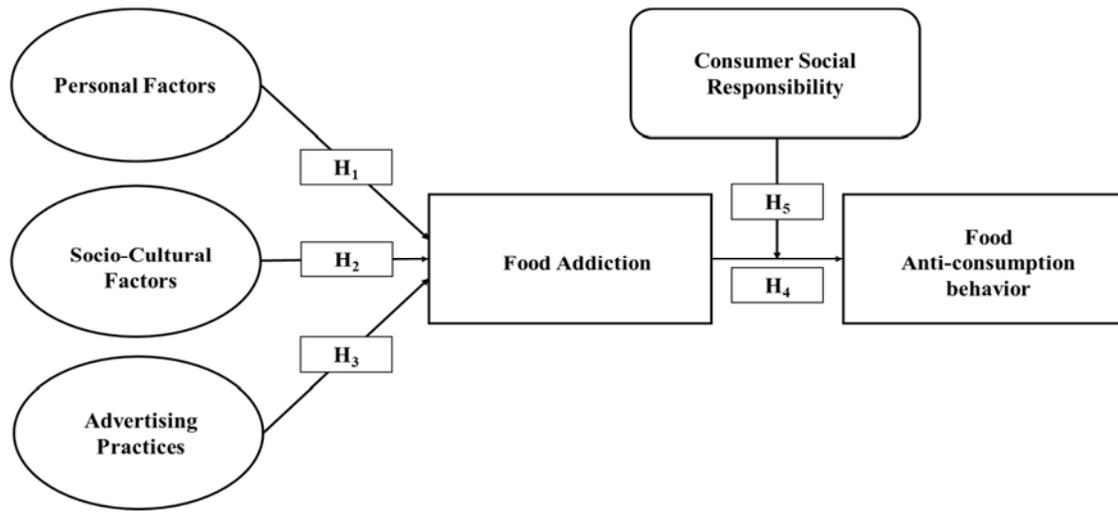
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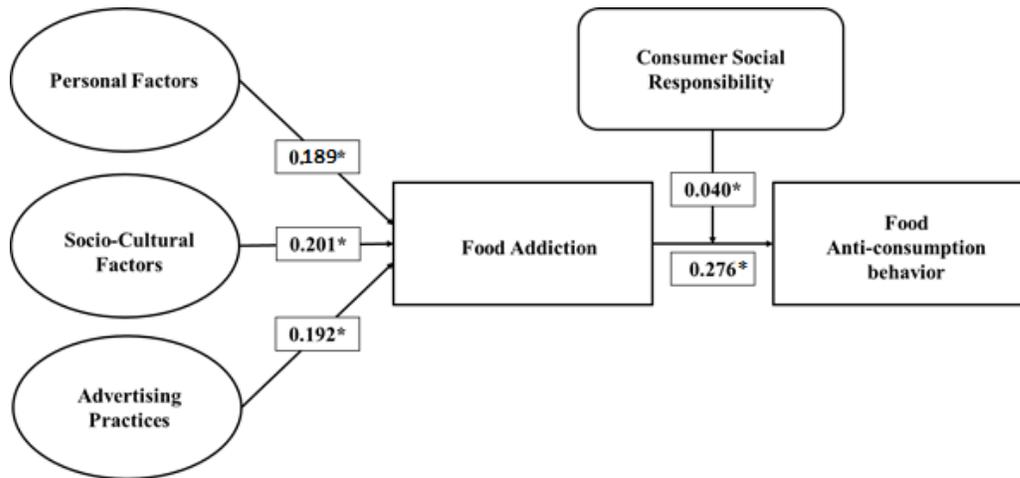
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**Figure 1: Conceptual Model**



**Figure 2:** Structural Equation Model Path Coefficients



**Table I: Respondents' Demographic Characteristics**

<b>VARIABLES</b>	<b>FREQUENCY</b>	<b>PERCENTAGE</b>
<b>GENDER</b>		
Male	301	55.8
Female	238	44.2
<b>MARITAL STATUS</b>		
Married	67	12.4
Unmarried	472	87.6
<b>EMPLOYMENT</b>		
Employed	106	19.7
Unemployed	433	80.3
<b>YEAR OF BIRTH</b>		
1980-1985	56	10.4
1986-1990	174	32.3
1991-1996	309	57.3
<b>EDUCATION</b>		
Undergraduate Degree	286	53.1
Graduate Degree	234	43.4
Doctoral Degree	19	3.5
<b>CITY</b>		
Islamabad	93	17.3
Rawalpindi	77	14.3
Lahore	132	24.5
Sargodha	116	21.5
Faisalabad	121	22.4

**Sample size:** 539 respondents

**Table II: Convergent Validity Results**

<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>ANTI-CONSUMPTION</b>		<b>0.791</b>	<b>0.795</b>	<b>0.603</b>
<i>I am reluctant to eat fast food, ...</i>				
<b>FAC1.</b> because I want be slim and fit, and maintain bodyweight.	0.912			
<b>FAC2.</b> because controlling the quantity of fast food intake and replacing it with fruit and vegetables helps avoid diseases associated with fast food consumption.	0.889			
<b>FAC3.</b> because it is hard to find high-quality fast food.	0.764			
<b>FAC4.</b> for human welfare reasons.	0.886			
<b>FAC5.</b> because it is better for the environment.	0.81			
<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>FAST FOOD-ADDICTION</b>		<b>0.894</b>	<b>0.872</b>	<b>0.701</b>
<b>FFA1</b> I find that when I start eating certain foods, I end up eating much more than I had planned.	0.871			
<b>FFA2.</b> Not eating or cutting down on certain types of food is something I worry about.	0.769			
<b>FFA3.</b> I spend a lot of time feeling sluggish or lazy from overeating.	0.886			
<b>FFA4.</b> There have been times when I consumed certain foods so often or in such large quantities that I spent time dealing with negative feelings from overeating.	0.901			
<b>FFA5.</b> I kept consuming the same types of food or the same amount of food even though I was having emotional and/or physical problems.	0.842			
<b>FFA6.</b> Over time, I have found that I need to eat more and more to get the feeling I want, such as reduced negative emotions or increased pleasure.	0.798			

<b>FFA7.</b> I have had withdrawal symptoms when I cut down or stopped eating certain foods	0.791			
<b>FFA8.</b> My behavior with respect to fast food & eating causes significant distress.	0.881			
<b>FFA9.</b> I experience significant problems in my ability to function effectively (daily routine, job/school, social activities, family activities) because of fast food & eating.	0.861			
<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>Socio-Cultural Factors</b>		<b>0.823</b>	<b>0.834</b>	<b>0.614</b>
<b>SC1.</b> In my culture, it is suitable to eat fast food.	0.782			
<b>SC2.</b> My tradition supports my eating fast food	0.863			
<b>SC3.</b> I eat fast food because my family members do eat.	0.865			
<b>SC4.</b> I eat fast food because my friends do eat.	0.734			
<b>SC5.</b> I eat fast food because my colleagues do eat.	0.773			
<b>SC6.</b> I talked with my peers about the product on Social media.	0.801			
<b>SC7.</b> I talked with my peers about buying the fast food product on the Internet.	0.874			
<b>SC8.</b> I asked my peers for advice about the fast food product.	0.811			
<b>SC9.</b> I obtained the fast food product information from my peers.	0.804			
<b>SC10.</b> My peers encouraged me to buy the fast food product.	0.791			
<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>Individual Factors</b>		<b>0.814</b>	<b>0.834</b>	<b>0.661</b>
<b>IF1.</b> I tend to consume fast food because it is very accessible.	0.812			
<b>IF2.</b> I tend to consume fast food because I can obtain it near my workplace.	0.765			
<b>IF3.</b> Fast food products have the potential for feeling pleasant.	0.785			
<b>IF4.</b> Fast food products are attractive.	0.863			

<b>IF5.</b> The nutritional values of fast food equal that of traditional foods.	0.877			
<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>Advertising</b>		<b>0.704</b>	<b>0.713</b>	<b>0.584</b>
<b>A1.</b> Advertising makes product information immediately accessible.	0.83			
<b>A2.</b> Advertising is a convenient source of product information.	0.81			
<b>A3.</b> Advertising is a good source of up-to-date product information.	0.78			
<b>A4.</b> Advertising supplies relevant product information.	0.74			
<b>A5.</b> Ad informs me of the latest products and information available on the market.	0.81			
<b>A6.</b> Advertising helps me get special product price news.	0.69			
<b>Measures</b>	<b>Factor loading</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite reliability (CR)</b>	<b>AVE</b>
<b>Consumer Social Responsibility</b> In general, I am satisfied...		<b>0.804</b>	<b>0.843</b>	<b>0.664</b>
<b>CSR1.</b> With the safety of fast foods available today.	0.824			
<b>CSR2.</b> With the convenience of fast food available today.	0.881			
<b>CSR3.</b> With the nutritional value of fast foods available today.	0.719			
<b>CSR4.</b> With the prices I have to pay for fast food today.	0.769			
<b>CSR5.</b> With the taste of fast food available today.	0.799			
<b>CSR6.</b> With the ethics of the way in which fast food is produced today.	0.817			
<b>CSR7.</b> With the choice of fast foods available today.	0.763			
<b>CSR8.</b> With the behavior of fast food companies today.	0.766			
<b>CSR9.</b> With where most of the fast food available today comes from.	0.788			

**Table III: Discriminant Validity Results**

<b>Factor</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Socio-cultural factors</b>	1 <b>(0.614)</b>					
<b>Individual factors</b>	0.51	1 <b>(0.661)</b>				
<b>Advertising Practices</b>	0.42	0.46	1 <b>(0.584)</b>			
<b>Fast Food Addiction</b>	0.41	0.44	0.37	1 <b>(0.701)</b>		
<b>Fast Food Anti-consumption</b>	0.51	0.52	0.43	0.41	1 <b>(0.603)</b>	
<b>Consumer Social Responsibility</b>	0.44	0.51	0.52	0.41	0.44	1

All correlations are significant at the  $p=0.01$ , Square-root AVE scores are displayed in parentheses

**Table IV: SEM Estimates**

PATH			
From	To	Hypotheses	Standardized Estimate (CR)
Individual factors	Fast food addiction	H <sub>1</sub>	0.189 (3.954)
Socio-cultural	Fast food addiction	H <sub>2</sub>	0.201 (3.141)
Advertising	Fast food addiction	H <sub>3</sub>	0.192 (3.870)
Fast food addiction	Anti-consumption	H <sub>4</sub>	0.276 (4.321)

CR = 1.96 ( $\alpha = 0.05$  level)

**Table V:** Conditional effect of FFA on AC at different value levels of the moderator (CSR)

<b>Conditional direct effects</b>	<b>W</b>	<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>
<b>Low CSR</b>	2.9012	.80	.28	2.63	.01	.20	1.39
<b>Average CSR</b>	3.3234	.54	.18	2.79	.01	.14	.94
<b>High CSR</b>	3.7559	.29	.26	1.23	.21	-.20	.83

**Notes:** FFA= Fast food addiction, AC= Anti-consumption, CSR= Consumer social responsibility

**Table VI:** Conditional effect for different values of the moderator (CSR) using the Johnson-Neyman technique

<b>CSR</b>	<b>Effect</b>	<b>se</b>	<b>t</b>	<b>p</b>	<b>LLCI</b>	<b>ULCI</b>	
<i>5.41</i>	<i>1.01</i>	<i>.42</i>	<i>2.30</i>	<i>.03</i>	<i>.12</i>	<i>1.90</i>	<i>5.41</i>
<i>5.12</i>	<i>.97</i>	<i>.39</i>	<i>2.37</i>	<i>.03</i>	<i>.14</i>	<i>1.79</i>	<i>5.12</i>
<i>4.77</i>	<i>.91</i>	<i>.35</i>	<i>2.45</i>	<i>.02</i>	<i>.16</i>	<i>1.68</i>	<i>4.77</i>
<i>4.47</i>	<i>.88</i>	<i>.32</i>	<i>2.54</i>	<i>.02</i>	<i>.18</i>	<i>1.58</i>	<i>4.47</i>
<i>4.16</i>	<i>.83</i>	<i>.29</i>	<i>2.63</i>	<i>.02</i>	<i>.19</i>	<i>1.47</i>	<i>4.16</i>
<i>3.85</i>	<i>.79</i>	<i>.27</i>	<i>2.73</i>	<i>.02</i>	<i>.20</i>	<i>1.37</i>	<i>3.85</i>
<i>3.53</i>	<i>.74</i>	<i>.24</i>	<i>2.83</i>	<i>.02</i>	<i>.21</i>	<i>1.28</i>	<i>3.53</i>
<i>3.22</i>	<i>.70</i>	<i>.22</i>	<i>2.92</i>	<i>.01</i>	<i>.21</i>	<i>1.19</i>	<i>3.22</i>
<i>2.91</i>	<i>.65</i>	<i>.20</i>	<i>2.97</i>	<i>.01</i>	<i>.20</i>	<i>1.10</i>	<i>2.91</i>
<i>2.60</i>	<i>.61</i>	<i>.18</i>	<i>2.97</i>	<i>.01</i>	<i>.19</i>	<i>1.03</i>	<i>2.60</i>
<i>2.28</i>	<i>.56</i>	<i>.17</i>	<i>2.88</i>	<i>.01</i>	<i>.16</i>	<i>.96</i>	<i>2.28</i>
<i>1.97</i>	<i>.52</i>	<i>.17</i>	<i>2.71</i>	<i>.01</i>	<i>.12</i>	<i>.91</i>	<i>1.97</i>
<i>1.83</i>	<i>.47</i>	<i>.17</i>	<i>2.44</i>	<i>.02</i>	<i>.07</i>	<i>.88</i>	<i>1.83</i>
<i>1.62</i>	<i>.43</i>	<i>.18</i>	<i>2.11</i>	<i>.04</i>	<i>.00</i>	<i>.85</i>	<i>1.62</i>
<i>1.33</i>	<i>.41</i>	<i>.19</i>	<i>1.95</i>	<i>.05</i>	<i>-.01</i>	<i>.84</i>	<i>1.33</i>
<i>1.03</i>	<i>.38</i>	<i>.20</i>	<i>1.77</i>	<i>.06</i>	<i>-.10</i>	<i>.84</i>	<i>1.03</i>
<i>0.72</i>	<i>.34</i>	<i>.22</i>	<i>1.45</i>	<i>.11</i>	<i>-.18</i>	<i>.83</i>	<i>0.72</i>
<i>0.41</i>	<i>.29</i>	<i>.24</i>	<i>1.16</i>	<i>.21</i>	<i>-.28</i>	<i>.83</i>	<i>0.41</i>
<i>0.10</i>	<i>.25</i>	<i>.27</i>	<i>.90</i>	<i>.32</i>	<i>-.38</i>	<i>.84</i>	<i>0.10</i>
<i>-0.21</i>	<i>.20</i>	<i>.30</i>	<i>.68</i>	<i>.45</i>	<i>-.49</i>	<i>.85</i>	<i>-0.21</i>
<i>-0.52</i>	<i>.16</i>	<i>.33</i>	<i>.50</i>	<i>.57</i>	<i>-.59</i>	<i>.86</i>	<i>-0.52</i>
<i>-0.83</i>	<i>.11</i>	<i>.36</i>	<i>.34</i>	<i>.68</i>	<i>-.61</i>	<i>.88</i>	<i>-.83</i>

**Notes:** To investigate the interaction of Fast food addiction (FFA) and consumer social responsibility (CSR) on Anti-consumption (AC), the PROCESS MACRO incorporating the Johnson-Neyman technique was utilized, using arbitrary points of the moderator (i.e. CSR). The results reveal all ranges of the moderator in which the focal predictor (FFA) is a significant predictor of the outcome (i.e. AC). Highlighted values in italic indicate that the conditional effect was a significant predictor of AC.