

# PREDICTORS OF CONSUMERS REPURCHASE INTENTION IN FAST-FOOD RESTAURANTS: THE BIG-FIVE-PERSONALITY TRAITS PERSPECTIVE

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## Abstract

In most economies in Africa, fast-food-restaurants as opposed to traditionally-acceptable food consumption outlets are increasingly gaining prominence and considerable consumers' footfall. Notwithstanding, concerns are also rising among entrepreneurs regarding unending closures of many fast-food restaurants few years post-commencement. This research investigates the relationships between the Big-Five-Personality traits and consumers repurchase intention in fast food restaurants from the prism of a typical developing economy where fast-food restaurant is still evolving. Additionally, mediating effect of willingness-to-pay and moderating effect of gender were examined. Data from 536 fast-food consumers in 18 fast-food restaurants drawn from three states in the South-South Geo-political Zone in Nigeria were obtained using self-administered questionnaire. Structural Equation Modeling with Analysis of Moment Structures (AMOS) version 22, was used in analyzing data. Findings revealed that openness-to-experience ( $\beta = -0.287$ ;  $t = -3.762$ ;  $p < 0.05$ ), and agreeableness ( $\beta = -0.558$ ;  $t = -3.459$ ;  $p < 0.05$ ) have significant negative relationships with re-purchase intentions in fast-food restaurants; conscientiousness ( $\beta = 0.527$ ;  $t = 3.723$ ;  $p < 0.05$ ), and extraversion ( $\beta = 0.316$ ;  $t = 3.829$ ;  $p < 0.05$ ) have significant positive relationship with re-purchase intention; while neuroticism ( $\beta = 0.058$ ;  $t = 1.607$ ;  $p < 0.05$ ) was not significant in the relationship. Willingness-to-pay was a partial mediator, and gender was a strong moderator in the relationship between the Big Five factors and consumers repurchase intentions in fast food restaurants.

**Keywords:** Openness to Experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism, Willingness-to-pay, Gender, Nigeria.

**JEL Classification:** M31; I12; I31

## 1. INTRODUCTION

In Sub-Saharan African (SSA) countries, there is exponential expansion of Western-type of fast-food-restaurants (FFRs) in major cities (Akinoba & Akinbobola, 2020). The proliferation of FFRs intensifies competition among firms in the fast-food industry (Njelita & Anyasor, 2020) and consumers have been observed to show preference for newly-opened FFRs (Salami & Ajobo, 2012). Reducing the switching of vendors by existing

customers facilitates repurchase. It is financially prudent for a firm do this as it is more profitable retaining existing customers than attracting new ones (Kotler & Keller, 2009).

The success of firm strategies is measured from the perspective of consumption behaviour of consumers. While some studies describe consumers' behavioral intention in terms of positive recommendation, frequency of purchase, number of purchases, commitment, willingness-to-pay (WTP), and repurchase intention (Dawi, Jusoh, Streinikis & Mardani, 2018), other researchers limit the dimensions to variables like WTP and repurchase intention (Zhao, Yang, Liu, Yang, Bao & Ren, 2020). Repurchase intention is the likelihood that a visiting customer will buy or use again a product or service from the same vendor (Yu, Lun & Zhu, 2018). Customers who do not rebuy from a FFR may switch to competing food vendors. A switched consumer is a lost revenue. Willingness to pay is a consumer's likelihood to pay for a product instead of switching to competing brand (Homburg, Koschate & Hoyer, 2005). In a price-sensitive market such as the Nigeria food market, price is a strong determinant of consumer purchases and WTP suggests repurchase intention.

Substantial empirical evidence exists in the extant literature concerning fast-food consumption and consumers' behavioral intentions. For instance, research evidence on restaurant attributes (e.g., food quality, physical environment quality) (Perutkova, 2010; Dutta) including effects of physiological factors like perceptions (Salami & Ajobo, 2012 on behavioral intentions at FFRs have been fairly investigated by scholars. However, within fast-food consumption literature, nexus between consumer big-five-personality traits (which represents a critical construct of psychology) and intention to re-engage in patronage of FFRs remains hugely scanty. Though a number of approaches have been adduced in an attempt to understand personality, Big-Five Factor (BFF) is widely accepted among personality psychology researchers as a unifying framework (John, Donahue, & Kentle, 1991; John & Srivastava, 1999). Existing limited research conducted largely in Europe, North America and few African nations such as South Africa on personality in fast food studies centered mostly on personality and food choice (Brummett, Siegler, Day & Costa, 2008; Keller & Siegrist, 2015; Sutin & Terracciano, 2016; Conner, Thompson, Knight, Flett, Richardson & Brookie, 2017; Gustaven & Hegnes, 2020) or personality and eating style/habit (Goldberg & Strycker, 2002; Pfeiler & Egloff, 2020). There is overwhelming paucity of empirical evidence from SSA economy regarding the connection between the BFF and consumers repurchase intention in FFRs. Furthermore, previous studies did not examine the mediation effect of WTP and/or moderation effects of gender on this relationship, whereas the examinations of both mediation and moderation analysis would deepen understanding on relationships among variables and offer robust framework on relations among personality traits and repurchase of FFRs in a typical developing country context.

## 2. LITERATURE REVIEW

Personality has been defined as “the inner psychological characteristics that both determine and reflect how a person responds to his or her environment” (Schiffman and Kanuk (2010, p. 136). It is a psychological characteristic that reflects stable and enduring patterns of behavior (Burger, 2010). There have been different theoretical approaches to the development and structure of personality, however, the approach that is most popular among researchers in personality psychology and in behavioral sciences is the trait theory (Burger, 2010; Larsen, 2021). The multiplicity of personality traits had for decades, been measured through arrays of personality scales (Burger, 2010) due to the absence of a taxonomy of personality traits that had wider or universal acceptance among personality researchers. However, consensus exists among personality psychology researchers that the BFF – which was discovered in the mid-1980s - best represents the different scales and multiplicity of traits which human personality have been described (John, Donahue & Kentle, 1991; McCrae & Costa, 1997; John & Srivastava, 1999; Burger, 2010). The BFF comprises: Openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism (John et al., 1991).

Openness to experience (OE) refers to exhibition of profound open-mindedness, desire for new ideas, experience and thoughts (John et al., 1991; John & Srivastava, 1999). This trait encapsulates curiosity, exploration, and indulgence in fantasy, imagination, variety of experience, unconventionality, and intelligence (John & Srivastava, 1999). In some studies, the relationship between OE and consumption of salty, fatty, sweeten foods (food associated with fast food) were either weak (Mottus, McNeil, Craig, Starr & Deary, 2013; Keller & Siegrist, 2015; Golestanbagh, Miraghajanj, Amani, Symomds, Neamatpour & Hahghizadeh, 2021) or negative (Claudia, Vincenzina, Rodolfo, & Maurizio, 2015; Gustavsen & Hegnes, 2020). Fast-foods are largely considered unhealthy as they have high contents of fat, salt, and low level of fibers and micronutrients (Feeley, Pettifor & Norris, 2009; Olonilebi, 2017). Conversely, researches on personality traits and organic food report strong positive association between OE and consumption/purchase of organic foods (Claudia et al., 2015; Gustavsen & Hegnes, 2020). Foods that are organic are usually not in the menus in FFRs. Moreso, Weston, Edmonds and Hill (2020) finding show a positive association between OE and consumption of non-fast-food related foods and a negative association between OE and consumption of foods associated with fast food (food with high sugar, salt, and fat contents).

Competence, order, dutifulness, self-discipline, and achievement, are the distinctive facets of conscientiousness (John et al., 1991; John & Srivastava, 1999). Individuals who score high on conscientiousness scale are hardworking, organized, and responsible, while those who score low are careless, and prone to impulsive behavior. Most studies on BFF and food consumption behavior report significant positive relationship between conscientiousness and consumption of organic foods, fruits and vegetables, and significant negative relationship between conscientiousness and consumption of fatty, salty, savory and genetically modified (GM) foods – foods in the menu of fast-food

(Goldberg & Strycker, 2002; Sutin & Terracciano, 2016; Conner et al., 2017; Gustavsen & Hegnes, 2020; Golestanbagh et al., 2021). The findings of these studies suggest negative relationship between conscientiousness and fast-food consumption.

Individuals with high extraversion trait are active, excitement-seeking, enthusiastic, talkative, warm, and assertive (John et al., 1991; John & Srivastava, 1999). Those who score low on this trait are shy and reserved. Studies report significant positive relationship between extraversion and preference for food items associated with FFRs (e.g., Goldberg & Strycker, 2002; Brunnett et al., 2008; Keller & Siegrist, 2015; Golestanbagh et al., 2021). These findings are inconsistent with other researchers (e.g., Claudia et al., 2015; Conner, et al., 2017; Gustavsen & Hegnes, 2020) who reported strong positive association between extraversion and consumption of fruits and vegetables - food items scarcely in the menu of FFRs.

Individuals toward the positive end of the agreeableness continuum are loving, friendly, compliance, and socially adaptable (John et al., 1991). Findings on studies between agreeableness and food choices have been mixed. Some studies report strong positive relationship between agreeableness and consumption/purchase of food not associated with FFRs (e.g., fruits, vegetables, and organic foods) – considered healthy food (e.g., Gustavsen & Hegnes, 2020; Pfeiler & Egloff, 2020). The results of other studies on agreeableness and consumption/purchases of foods associated with fast-food were insignificant (e.g., Goldberg & Strycker, 2002; Brunnett et al., 2008; Golestanbagh et al., 2021).

Neuroticism is characterized by emotional instability, odd-temperedness, depression, self-pitying, self-consciousness, impulsiveness, anxiety, and vulnerability (John et al., 1991; John & Srivastava, 1999). Most studies reported significant positive relationship between neuroticism and consumption of soft drinks, savory food, and food that have high salt and fat contents (foods associated with fast-food) (e.g., Goldberg & Strycker, 2002; Sutin & Terracciano, 2016; Golestanbagh et al., 2021). In studies on consumptions of fruits, vegetables, dairy products and other 'heathy' food, neuroticism was either not significant (e.g., Gustavsen & Hegnes, 2020) or significantly negative (e.g., Tiainen et al., 2015; Conner et al., 2017; Pfeiler & Egloff, 2020) suggesting a negative to insignificant relationship with consumption of fast foods.

Willingness-to-pay (WTP), is the highest amount of money a consumer is prepared to pay for the benefit of using a product (Jedidi & Zhang, 2002). The payment of premium price for goods and services has been found to be determined by a host of situational, demographical, and psychographic factors (Chuah, Jitanugoon, Puntha & Aw, 2022). Among the psychographic variables is personality. Studies have examined the relationships between consumers personality traits and WTP for food products (e.g., Claudia, et al., 2015; Baiyegunhi, Mashabane & Sambo, 2018; Gustasen & Hegnes, 2020; Chuah et al., 2022). Inconsistent results have been reported on the relationships between personality traits and consumption of organic food, genetically modified (GM) foods, carbon-labeled food, and foods served in specialized restaurants such as 'robotic

restaurant (restaurants where services are provided by robots). Chuah et al., (2022), for example, reported a significant relationship between personality traits and consumers' WTP at robotic restaurants. Gustavsen and Hegnes (2020) reported significant positive association between OE and WTP for organic food. In the same study, however, association between agreeableness and WTP was insignificant, while those between conscientiousness and WTP, extraversion and WTP, were significantly negative. No significant association was established between neuroticism and WTP. A related work in the US established significant positive relationship between OE, extraversion, and WTP, and significant negative relationship between conscientiousness, agreeableness, and WTP for organic food products (Lin, Ortega, Caputu & Lusk, 2019). No significant relationship was established between neuroticism and WTP in the works of Gustavsen and Hegnes (2020) and Lin et al., (2019).

A study on WTP and purchase intentions for carbon-labelled foods among university students in China reports consumers' willingness to pay price premium within a certain price range (Zhao et al., 2020). This result collaborated similar research conducted among Chilean consumers (Echeverría, Moreira, Sepúlveda & Wittwer, 2014). When food products are organic, research findings reveal significant positive association between WTP and consumers' purchase/repurchase intentions (Claudia et al., 2015; Baiyegunhi et al., 2018). In a study on personality traits and purchase of local and organic food products, (Claudia et al., 2015), WTP as a mediator shows a significant relationship between OE and purchase of organic foods. Similar result was reported with agreeableness. However, WTP did not mediate in the relationship between extraversion and local grown foods. The same study revealed that WTP was not a mediator in the relationship between neuroticism and purchase of locally produced foods, and also not a mediator in the relationship between extraversion and purchase of organic foods.

The moderating effects of gender in studies on personality and food consumption vary (e.g., Brunnett et al., 2008; Sutin & Terracciano, 2016). However, recent studies (e.g., Pfeilor & Egloff, 2020; Schwartz, 2021) report that gender positively moderates influence of personality traits on food consumption. Specifically, the moderating effect of gender was strongest in the relationship between neuroticism and food consumption; it was more significant in female than in male (Brunnett et al., 2008; Sutin & Terracciano, 2016). In the work of Schwartz, 2021), gender moderated the extraversion-food consumption relationship; it was more significant among male (Schwartz, 2021)=

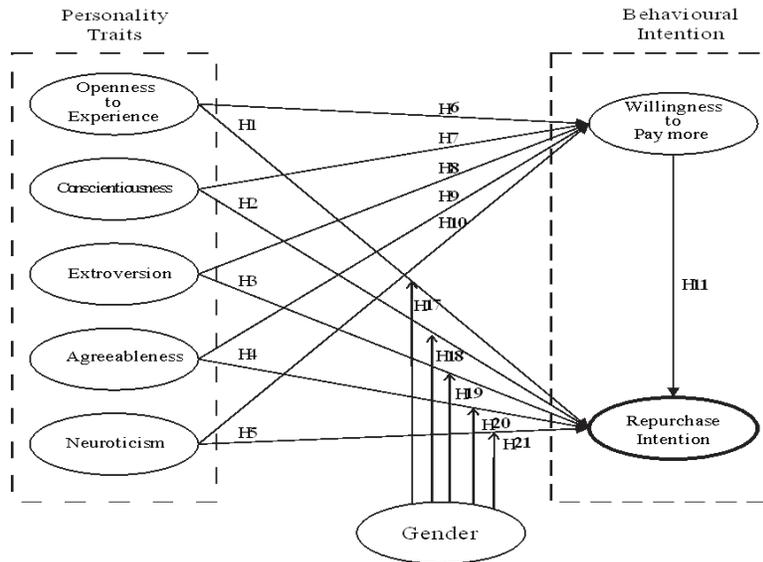
The primary aims of this research were:

- (1) To investigate the direct relationship between the BFF and consumers' willingness-to-pay and its indirect relationship with repurchase intention.
- (2) To examine mediating effects of WTP in the relationship between the BFF and repurchase intention, and,
- (3) To determine the moderating effects of gender in the relationship between the BFF repurchase intention in FFRs.

As a means of accomplishing the aforementioned aims, this research developed the following postulations.

- H1: Openness to experience has significant influence on consumers repurchase intentions in FFRs.
- H2: Conscientiousness has significant influence on consumer repurchase intentions in FFRs.
- H3: Extraversion has significant influence on consumer repurchase intentions in FFRs.
- H4: Agreeableness has significant influence on consumer repurchase intentions in FFRs.
- H5: Neuroticism has significant influence on consumer repurchase intentions in FFRs.
- H6: Openness to experience has significant influence on consumers WTP in FFRs
- H7: Conscientiousness has significant influence on consumers WTP in FFRs
- H8: Extraversion has significant influence on consumers WTP in FFRs
- H9: Agreeableness has significant influence on consumers WTP in FFRs
- H10: Neuroticism has significant influence on consumers WTP in FFRs
- H11: Consumers' WTP has significant influence on repurchase intentions in FFRs
- H12: Consumers' WTP mediates the influence of OE on repurchase intentions in FFRs.
- H13: Consumers' WTP mediates the influence of conscientiousness on repurchase intentions in FFRs.
- H14: Consumer's WTP mediates the influence of extraversion on repurchase intentions in FFRs.
- H15: Consumer's WTP mediates the influence of agreeableness on repurchase intentions in FFRs.
- H16: Consumers' WTP mediates the influence of neuroticism on repurchase intentions in FFRs.
- H17: Gender moderates the influence of OE on consumer repurchase intention towards FFRs.
- H18: Gender moderates the influence of conscientiousness on consumer repurchase intention in FFRs.
- H19: Gender moderates the influence of extraversion on consumer repurchase intention in FFRs
- H20: Gender moderates the influence of agreeableness on consumer repurchase intention in FFRs.

H21: Gender moderates the influence of neuroticism on consumer repurchase intention in FFRs



**Figure 1: Conceptual framework**

### 3. METHOD

This study is interested in FFRs patrons aged 18 years and over who have bought from or dine at FFRs in the South-South Geo-political Zone in Nigeria. Fast-food restaurants refer to those formal and standardized restaurants which are registered with the country's regulatory body, the Association of Fast-Food and Confectionery of Nigeria (AFFCON). A four-stage sampling technique was employed to select 672 participants (the sample size) from 18 FFRs in three states (Akwa-Ibom, Cross River and Delta) out of the six states that make-up South-South Geo-political Zone.

The questionnaire was structured in nature and made up of pre-validated items. It was divided into four sections: A, B, C, and D. Section A, measures participants' socio-demographics. Section B measures the personality traits of the study participants on the Big Five Personality framework. The 44-items Big Five Inventory (BFI) (John et al, 1991) was used in measuring BFF. The choice of the BFI (John et al, 1991) was based on its strong psychometric properties (John & Srivastava, 1999). Section C measures WTP. This construct was measured with four items sourced from past study (Vázquez-Casielles, Suarez-Ivarez & Rio-Lanza, 2009). Section D contains five items on repurchase intention. The first, second, and fourth items were adapted from Vázquez-Casielles et al., (2009), the third and fifth items were sourced from Bae, Slevitch and Tomas (2018). Items in Sections B, C, and D, were based on the Five-point Likert scale - where strongly disagree (SD) denotes 1 point and strongly agree (SA) denote 5 points.

#### 4. RESULTS

Out of the 672 copies of questionnaire distributed, only 536 were valid representing a 79.8% return rate. This response rate of 79.8% exceeds the 70% threshold for survey study (Baruch & Holtom, 2008) and adequate for a Structural Equation Modeling (SEM) analysis (Hair, Black, Rabin & Anderson, 2010).

**Table 1: Respondents' Information (n =536)**

Description	Item	Frequency	Percentage (%)
Gender	Male	221	41
	Female	315	59
Age (years)	18-27	150	28
	28-37	180	34
	38-47	148	27
	48-57	46	9
	58+	12	2
Marital status	Single	248	46
	Married	189	35
	Separated/Divorced	85	16
	Widowed	14	3
Educational status	Primary	38	7
	Secondary	212	40
	Graduate	189	35
	Post-graduate	97	18
Occupation	Student/Apprentice	93	17
	Unemployed	90	17
	Self-employed	135	25
	Civil servant	117	22
	Private sector employee	98	18
	Retiree	3	1
Monthly gross income (Naira)	≤ 29,999	123	23
	30,000-59,999	102	19
	60,000-89,999	95	18
	90,000-119,999	84	16
	120,000-149,999	67	12
	150,000-179,999	29	5
	≥ 180,000	36	7
Companionship when visiting fast-food outlet	Alone	214	39
	With household/family member(s)	99	19
	With friend/colleague	223	42
Frequency of visiting fast-food outlet	Several times a week	120	22
	Once or twice a week	145	27
	Once every two weeks	107	20
	Once a month	74	14
	Less often/occasionally	81	15
	First time	9	2

As shown in Table 1, more female (59%, n = 315) than male (41%, n = 221) participated in the study. The age distribution shows that consumers within the age bracket 28-37

years, constitute the majority (34%, n = 180) of fast-food consumers, while those aged 58 years and above account for only 2% suggesting a decline in fast food consumption with increase in age. On marital status, FFR patrons who are single represents (46%, n = 248), followed by the married ones (35%, n = 189). A majority of the participant had secondary school certification (40%, n = 212). On the occupation of respondents, those who were self-employed made up the majority (25%, n = 135) and retirees recorded only 1% of the respondents. Concerning monthly gross income, most respondents fell in the N29,999 or less category (23%, n = 123). In terms of companionship when visiting FFRs, respondents who visit in company of friends/colleagues constitute the majority (42%, n = 223). On visit frequency, respondents who bought 'once or twice a week,' were the majority (27%, n = 145) while those who were on first visit were the least in number (2%, n = 9).

The seven measurement models comprising OE, conscientiousness, extraversion, agreeableness, neuroticism, WTP, and repurchase intention, were assessed for validity, and reliability. Construct validity, convergent validity, and discriminant validity, were the types of validity assessed in this study. For construct validity to be achieved, the data must fit at least one fitness index from each fitness category (Hair et al, 2010, Zainudin, 2012). The fitness indexes and level of acceptance (in parentheses) are: Root Mean Square of Error Approximation (RMSEA<0.08); Goodness of Fit Index (GFI>0.90), Adjusted Goodness of Fit Index (AGFI>0.90, Normed Fit Index (NFI>0.90), Tucker-Lewis Index (TLI>0.90), Comparative Fit Index (CFI>0.90), Chi Square/Degrees of Freedom (CIMN/DF<5.0) (Zainudin, 2014). To achieve construct validity, five items were deleted from OE and a pair of item (e2 and e3) were correlated due to high Modification Index (MI); three items deleted from conscientiousness, and three pairs of items (e11 and e12, e11 and e19, and e12 and e19) correlated due to high MI; two items deleted from extraversion and two pairs of items (e23 and e27, and e24 and e27) correlated; three items deleted from agreeableness, and two pair of items ( e28 and e31, and e34 and e35) correlated; and, one item was deleted from neuroticism, and one pair of item (e39 and e41) was correlated due to high MI. No item was deleted from WTP, and repurchase constructs. However, in WTP, items e47 and e48 were correlated, and in repurchase intention, two pairs of items (e49 and e52, and e50 and e53) were correlated.

**Table 2: Summary of fitness indexes for the seven measurement models**

	OE	Conscientiousness	Extraversion	Agreeableness	Neuroticism	WTP	RI
CIMN/DF	1.768	2.824	2.918	2.866	4.205	0.261	3.153
GFI	0.995	0.984	0.988	0.987	0.971	1.000	0.993
AGFI	0.980	0.958	0.963	0.962	0.931	0.998	0.965
NFI	0.991	0.976	0.969	0.978	0.938	1.000	0.992
TLI	0.991	0.970	0.955	0.969	0.922	1.006	0.981
CFI	0.996	0.984	0.979	0.986	0.952	1.000	0.994
RMSEA	0.038	0.058	0.060	0.059	0.077	0.000	0.063

Note: OE = Openness to experience, WTP = Willingness-to-pay more, RI. = Repurchase intention

The deletions (Table 3) were due to the low standardized regression weights of the items (Hair et al., 2010). For convergent validity to be achieved, the Average Variance Extracted (AVE) from each factor should not be less than the 0.50 threshold (Hair et al., 2010; Zainudin, 2014). In table 4, the AVE of all the constructs except conscientiousness were above the 0.5 cut-off point. Conscientiousness, with a value of 0.480, was marginally below the threshold.

For discriminant validity to be achieved, "the correlation between exogenous constructs should be less than 0.85" (Zainudin, 2014, p. 48). When CFA was run, the coefficients of correlation of the exogenous constructs ranged from -0.016 to 0.688. (Table 3) which fall below the 0.85 threshold. This implies that the measurement model does not have the problem of multicollinearity, hence, the discriminant validity was achieved for the measurement model.

**Table 3: Discriminant validity (Correlation among the exogenous variables)  
Zainudin's (2014) criterion**

Path of correlation	Estimate
Neuroticism ↔ Openness	0.046
Agreeableness ↔ Openness	0.590
Extraversion ↔ Agreeableness	0.584
Conscientiousness ↔ Openness	0.585
Neuroticism ↔ Conscientiousness	-0.016
Agreeableness ↔ Conscientiousness	0.688
Extraversion ↔ Conscientiousness	0.564
Agreeableness ↔ Extraversion	0.564
Neuroticism ↔ Agreeableness	0.168
Neuroticism ↔ Extraversion	0.068

The reliability of the constructs was assessed using Cronbach's alpha coefficient and composite reliability (CR). For the items to be reliable, the Cronbach' alpha should be 0.7 and above (Hair et al, 2010), and the value of CR should be greater than 0.7 (Hair et al., 2010; Zainudin, 2014). The results of the reliability test in Table 4 shows that coefficient of Cronbach' alpha for all constructs except one (conscientiousness) were above 0.7 threshold value. The value for conscientiousness was just on the threshold (0.7). The CR for the constructs were above the 0.7 cut-off point. Except for conscientiousness which has a value of 0.480, falling marginally low, all the six other constructs had CR above the 0.5 threshold.

**Table 4: Reliability and AVE values for all constructs**

Construct	Code*	Item	Standardized loading	Cronbach's Alpha	CR***	AVE**
Openness to experience	op 1	Item deleted due to low standardized loading	<b>0.703</b>	<b>0.850</b>	<b>0.533</b>	
	op2	I always come up with new idea	0.788			
	op3	I am creative and a deep thinker	0.673			
	op4	I have an active imagination	0.735			
	op5	I am inventive	0.765			
	op6	Item deleted due to low standardized loading				
	op7	Item deleted due to low standardized loading				
	op8	I like to reflect and play with ideas	0.682			
	op9	Item deleted due to low standardized loading				
	op10	Item deleted due to low standardized loading				
Conscientiousness	cn1	I am usually careful	0.834	<b>0.709</b>	<b>0.900</b>	<b>0.480</b>
	cn2	I carry out my job thoroughly	0.475			
	cn3	I am a reliable worker	0.789			
	cn4	Item deleted due to low standardized loading				
	cn5	I am hard working	0.695			
	cn6	I am patient until the task is finished	0.786			
	cn7	I do things effectively	0.820			
	cn8	Item deleted due to low standardized loading				
	cn9	I focused on whatever I am doing	0.810			
Extraversion	ex1	I have many friends and acquaintances	0.850	<b>0.706</b>	<b>0.867</b>	<b>0.524</b>
	ex2	Item deleted due to low standardized loading				
	ex3	I am full of energy	0.655			
	ex4	I am passionate and spirited	0.836			
	ex5	I like to start conversation	0.491			
	ex6	Item deleted due to low factor loading				
	ex7	I am a shy and inhibited person	0.699			
	ex8	I am outgoing and sociable	0.795			
Agreeableness	ag1	I am helpful and unselfish with others	0.776	<b>0.700</b>	<b>0.855</b>	<b>0.505</b>
	ag2	I tend to see good things in others	0.735			
	ag3	Item deleted due to low factor loading				
	ag4	I have a forgiving nature	0.733			

	ag5	Item deleted due to low standardized loading				
	ag6	Item deleted due to low standardized loading				
	ag7	I am considerate and kind to almost everyone	0.426			
	ag8	I am polite to others	0.685			
	ag9	I like to cooperate with others	0.835			
Neuroticism	ne1	Item deleted due to low standardized loading	<b>0.760</b>	<b>0.875</b>	<b>0.509</b>	
	ne2	I am depressed and blue most times	0.693			
	ne3	I can be tense most times	0.867			
	ne4	I worry a lot	0.629			
	ne5	I see myself as someone who is emotionally unstable and easily upset	0.621			
	ne6	I can be moody sometimes	0.772			
	ne7	I am usually disturbed in tense situations	0.688			
	ne8	I get nervous easily	0.666			
WTP	wp1	Even if other fast-food restaurants offer lower prices, I would continue as a customer of this fast-food outlet	0.746	<b>0.772</b>	<b>0.823</b>	<b>0.539</b>
	wp2	I would be prepared to pay more to be able to keep enjoying the services of this fast-food restaurant	0.819			
	wp3	I would not allow slight price difference to make me switch to another fast-food restaurant	0.690			
	wp4	I would accept a reasonable price rise because of the services of this fast-food provider	0.672			
Repurchase intention	rp1	I intend to continue buying from this fast-food restaurant in the future	0.841	<b>0.851</b>	<b>0.868</b>	<b>0.571</b>
	rp2	I hope my relationship with this fast-food restaurant will be long-lasting	0.785			
	rp3	I would frequently visit this fast-food restaurant	0.618			
	rp4	If I had to choose again, I would choose this fast-food restaurant	0.752			
	rp5	I would like to visit this fast-food restaurant in the future	0.764			

\*Code: op = openness to experience; cn = conscientiousness; ex = extraversion; ag = agreeableness; ne = neuroticism; wp = willingness-to-pay more rp = repurchase intention

\*\*AVE = the sum of the square of the factor loading of every item/the number of undeleted items in the model.

\*\*\*CR = square of the sum of the factor loading of undeleted items (square of the sum of the factor loading every undeleted item) + (addition of the error variance).

In order to assess the structural model, CFA was again run using AMOS version-22. The analysis yielded among others, the unstandardized and standardized regression coefficients, the t-statistics (Critical Ratio) and the p-value at 0.05 (5%) significant level, two-tailed. If the t-statistics is larger than 1.96, the path coefficient will be significant (Wong, 2013), and the p value will correspondingly be  $\leq 0.05$  supporting the hypothesis (Hair et al., 2010; Zainudin, 2014). Assessment of path coefficients in Figure 2 and AMOS output revealed the following: OE ( $\beta = -0.287$ ;  $t = -3.762$ ;  $p = < 0.05$ ), conscientiousness ( $\beta = 0.527$ ,  $t = 3.723$ ,  $p < 0.05$ ), extraversion ( $\beta = 0.316$ ,  $t = 3.829$ ,  $p < 0.05$ ), and agreeableness ( $\beta = -0.558$ ,  $t = -3.459$ ;  $p = < 0.05$ ), were statistically significant, therefore, supporting H1, H2, H3, and H4. This implies that

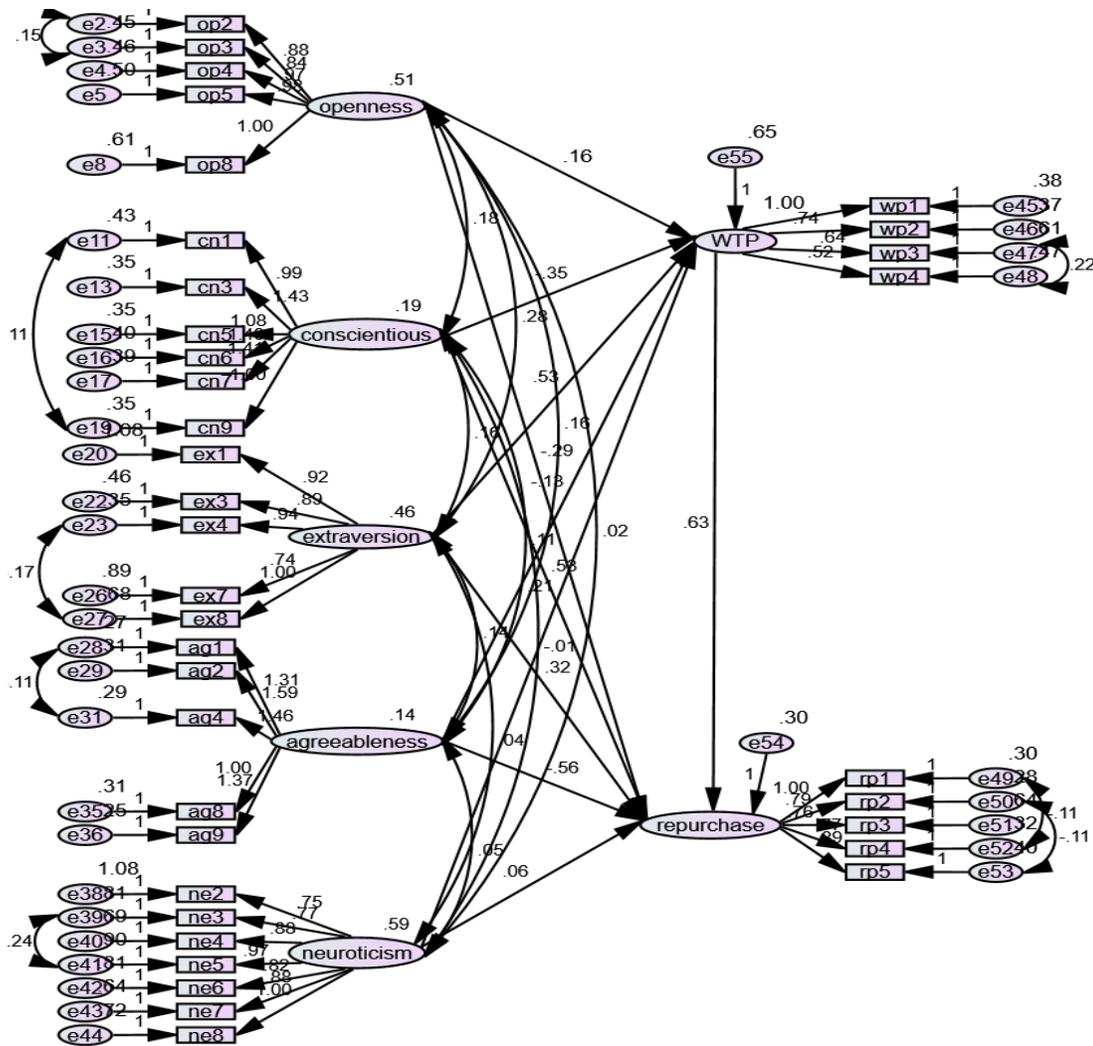


Figure 2: Result of unstandardized regression weights of the analysis of the structural model

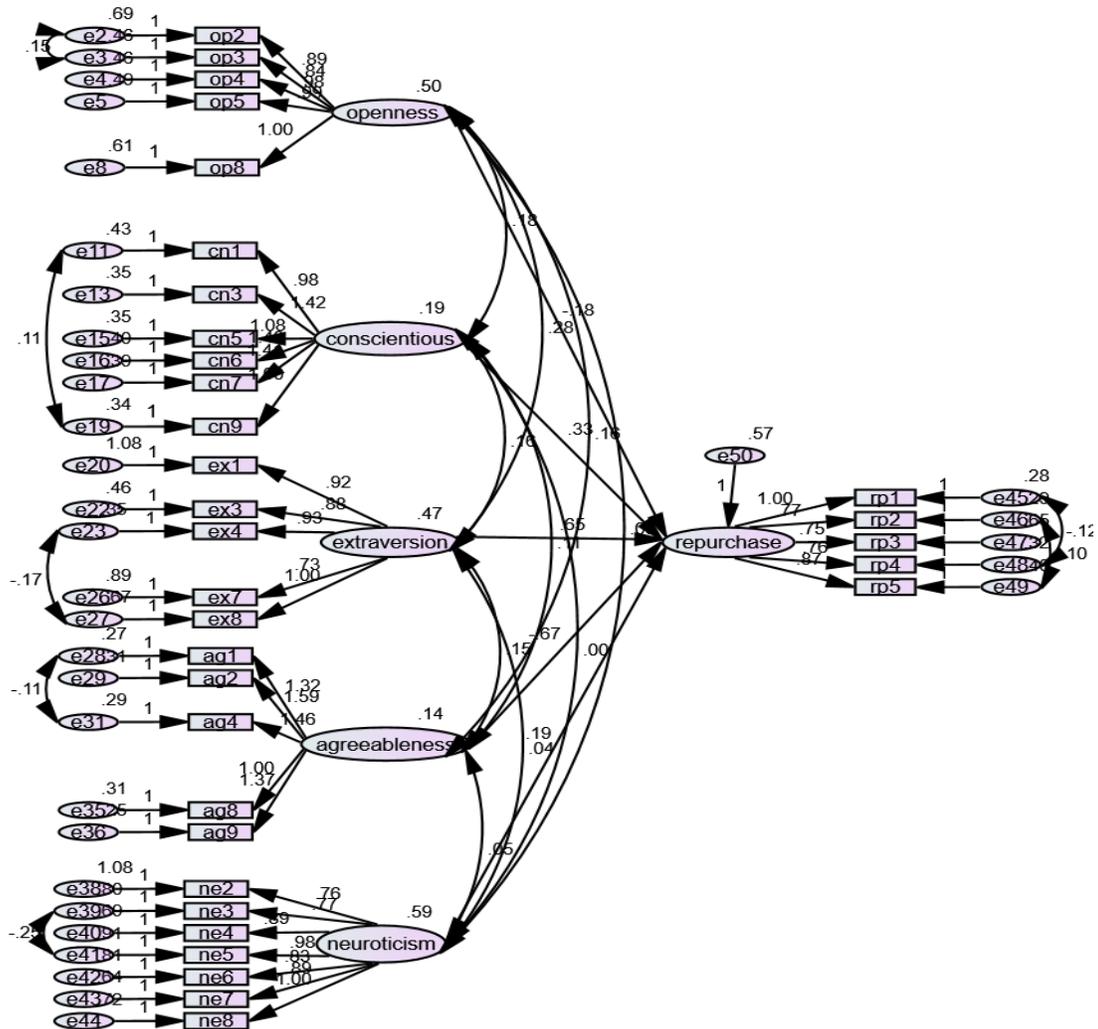
OE, conscientiousness, extraversion, and agreeableness, are predictors of repurchase intention in FFRs. However, while conscientiousness, and extraversion, had significant positive relationships with repurchase intention in FFRs, OE and agreeableness, were negatively significant. The relationship between neuroticism and repurchase intention was not significant ( $\beta = 0.058$ ;  $t = 1.237$ ;  $p = < 0.05$ ). Thus, H5 was not supported implying that neuroticism was not a predictor of repurchase intention in FFRs. When the indirect paths (relationships between BFF and WTP) were examined, only the relationships between extraversion and WTP ( $\beta = 0.532$ ;  $t = 5.009$ ;  $p < 0.05$ ), and neuroticism and WTP ( $\beta = 0.207$ ;  $t = 3.200$ ;  $p < 0.05$ ) were significant, thereby supporting H8 and 10, respectively. The relationships between OE and WTP ( $\beta = 0.160$ ,  $t = 1.607$ ;  $p = < 0.05$ ), conscientiousness and WTP ( $\beta = -0.349$ ;  $t = -1.918$ ;  $p = < 0.05$ ), and agreeableness and WTP ( $\beta = -0.131$ ;  $t = -0.627$ ;  $p < 0.05$ ), were statistically insignificant. Therefore, H6, H7, and H9 were not supported. The result of the test of H11 which hypothesized a significant relationship between WTP and repurchase intention in FFRs was statistically supported ( $\beta = 0.623$ ;  $t = 11.748$ ;  $p < 0.05$ ).

**Table 5: Results of tests of hypotheses 1 to 11**

Hypotheses	Hypothesized paths	Path estimate	t-statistics	Significance	Decision
H1	OE → RI	-0.287	-3.762*	Significant	H <sub>1</sub> Supported
H2	CN → RI	0.527	3.723*	Significant	H <sub>2</sub> Supported
H3	EX → RI	0.316	3.829*	Significant	H <sub>3</sub> Supported
H4	AG → RI	-0.558	-3.459*	Significant	H <sub>4</sub> Supported
H5	NE → RI	0.058	1.237	Not significant	H <sub>5</sub> Not supported
H6	OE → WTP	0.160	1.607	Not significant	H <sub>6</sub> Not supported
H7	CN → WTP	-0.349	-1.918	Not significant	H <sub>7</sub> Not supported
H8	EX → WTP	0.532	5.009*	Significant	H <sub>8</sub> Supported
H9	AG → WTP	-0.131	-0.627	Not significant	H <sub>9</sub> Not supported
H10	NE → WTP	0.207	3.2	Significant	H <sub>10</sub> Supported
H11	WTP → RI	0.623	11.748*	Significant	H <sub>11</sub> Supported

Note: OE = Openness to experience; CN =Conscientiousness; EX = Extraversion; AG = Agreeableness; NE = Neuroticism; RI = Repurchase intention; \*  $p < 0.05$ .

For mediating effect to exists, the direct effect of the exogenous variable (personality traits) on.



**Figure 3: The unstandardized regression weight of the direct effects of personality traits on repurchase intention**

The endogenous variable (repurchase intention) must first exist and also be significant when the mediating variable (WTP) has not yet entered the model. When the mediating variable enters the model, three types of situations can occur: complete mediation, partial mediation, or no mediation

Complete mediation occurs if result of the regression estimates of the path, exogenous construct (BFFs) to endogenous construct (repurchase intention) is no longer significant ( $p < 0.05$ ), while results of regression estimates of the paths linking the exogenous construct to the mediating variable (WTP) and the mediating variable to the endogenous construct, are both significant ( $p < 0.05$ ). Partial mediation occurs if the result of the regression estimates of all the three paths (exogenous construct to endogenous constructs; exogenous construct to mediating variable, and, mediating variable to

endogenous variable) are significant. ( $p < 0.05$ ), and the absolute value of the product of the coefficient of regression coefficient of the paths exogenous construct to mediating variable, and mediating variable to endogenous, is higher than the coefficient of regression of the exogenous construct to the endogenous construct. No mediation occurs if the result of the coefficient of regression of the endogenous construct to the mediating variable is insignificant ( $p < 0.05$ ), or the result of the coefficient of regression of the mediating variable to the endogenous construct is insignificant ( $p < 0.05$ ), or both conditions occur. As shown in Figure 3, and Table 6, the direct effect of four of the BFF (OE, extraversion, agreeableness, and neuroticism) on repurchase intention were significant except conscientiousness.

**Table 6: Direct effect of personality traits on repurchase intention (when the mediator has not yet entered the model)**

Path	Path estimate	t-statistics	Result
Openness to experience → Repurchase intention	-0.184	-2.054*	Significant
Conscientiousness → Repurchase intention	0.330	2.038	Not Significant
Extraversion → Repurchase intention	0.647	6.429*	Significant
Agreeableness → Repurchase intention	-0.671	-3.450*	Significant
Neuroticism → Repurchase intention	0.194	3.433*	Significant

Note: C.R. = critical ratio; \*  $p < 0.05$ .

**Table 7: Summary of results of mediation tests**

Exogenous construct	Endogenous construct	Path	Path estimate	t-statistics	Result on mediation	Type of mediation	Decision
Openness to experience	RI	OE → WTP	0.156	4.156*	Significant	Partial mediation	H12 supported
		WTP → RI	1.305	10.410*	Significant		
		OE → RI	-0.118	-2.195*	Significant		
Conscientious.	The direct effect of conscientiousness on RI was not significant; mediation cannot be tested						H13 not supported
Extraversion	RI	EX → WTP	0.254	6.164*	Significant	Partial Mediation	H14 supported
		WTP → RI	1.150	9.658*	Significant		
		EX → RI	0.179	3.227*	Significant		
Agreeableness	RI	AG → WTP	0.149	3.007*	Significant	Full mediation	H15 supported
		WTP → RI	1.253	10.516*	Significant		
		AG → RI	-0.086	-1.272	Not sign.		
Neuroticism	RI	NE → WTP	0.123	3.669*	Significant	Full mediation	H16 supported
		WTP → RI	1.257	10.287*	Significant		
		NE → RI	0.009	0.187	Not sign.		

Note: OP = Openness to experience; EX = Extraversion; AG = Agreeableness; NE = Neuroticism; RI = Repurchase intention; \*  $p < 0.05$ .

As shown in Table 7, when the mediator (WTP) entered Openness → Repurchase intention Model, the three paths: OE → WTP ( $\beta = 0.156$ ,  $t = 4.015$ ,  $p < 0.05$ ), WTP → repurchase intention ( $\beta = 1.305$ ,  $t = 10.410$ ,  $p < 0.05$ ), and OE → repurchase intention ( $\beta = -0.118$ ,  $t = -2.195$ ,  $p < 0.05$ ), were all significant implying a partial mediation. When the mediator (WTP) entered extraversion > repurchase intention model, all the three paths: extraversion → WTP ( $\beta = 0.254$ ,  $t = 6.164$ ,  $p < 0.05$ ), WTP → repurchase intention

( $\beta = 1.150$ ,  $t = 9.658$ ,  $p < 0.05$ ), and extraversion  $\rightarrow$  repurchase intention ( $\beta = 0.179$ ,  $t = 3.227$ ,  $p < 0.05$ ), were significant implying partial mediation. When WTP entered the agreeableness  $\rightarrow$  repurchase intention Model, the paths agreeableness  $\rightarrow$  WTP ( $\beta = 0.149$ ,  $t = 3.007$ ,  $p < 0.05$ ), and WTP  $\rightarrow$  repurchase intention ( $\beta = 1.253$ ,  $t = 10.516$ ,  $p < 0.05$ ) were both significant, while agreeableness  $\rightarrow$  repurchase intention path ( $\beta = -0.086$ ,  $t = -1.272$ ,  $p < 0.05$ ), became insignificant implying full mediation. Also, when WTP entered neuroticism  $\rightarrow$  repurchase intention Model, paths neuroticism  $\rightarrow$  WTP ( $\beta = 0.123$ ,  $t = 3.669$ ,  $p < 0.05$ ), and WTP  $\rightarrow$  repurchase intention ( $\beta = 1.257$ ,  $t = 10.287$ ,  $p < 0.05$ ), were both significant, while neuroticism  $\rightarrow$  repurchase intention ( $\beta = 0.009$ ,  $t = 0.187$ ,  $p < 0.05$ ), became insignificant implying full mediation.

To test for moderating effects for latent constructs, we use the multi-group CFA approach (Zainudin, 2012). The data was split into two group (male and female). Two models were developed – the constrained model (constraining the path of interests, e.g., OE  $\rightarrow$  repurchase intention, with parameter 1), and the unconstrained model. A data set (e.g., female data set) was used to estimate both the constrained mode and the unconstrained model. If the difference in Chi-Square value between the constrained model and the unconstrained model differs by more than 3.84, then gender has moderating effect on the relationship. Table 7, presents the results of gender as a moderator on the relationships between each of the variables of the Big Five personality traits and repurchase intention of fast-food consumers. OE had a Chi-Square difference of 69.36 [constrained model 158 (32), unconstrained model 89.391 (31)], Extraversion had Chi Square difference of 11.218 [constrained model 238.096 (40), unconstrained model 226.878 (39)], agreeableness had Chi-Square difference of 33.855 [constrained model 212.125 (40), unconstrained model 178.270 (39)], and neuroticism had Chi Square difference of 42.866 [constrained model 270.182 (51), unconstrained model 227.316 (50)]. The Chi-Square differences between the constrained models and the unconstrained model for each of the variables of the big five personality traits when related to repurchase intention exceeded the 3.84 cut-off point, hence are significant. Thus, H17, H19, H20, and H21, are supported. H18 was not supported due to the non-significance of the regression estimate of the direct effect of conscientiousness on repurchase intention ( $\beta = 0.330$ ,  $t = 2.038$ ,  $p < 0.05$ ).

**Table 8: Moderation Results**

Construct	Constrained model (DF)	Unconstrained model (DF)	Chi-Square difference (DF)	Result on moderation	Decision
Openness	158.751 (32)	89.391 (31)	69.36	Significant	H17 Supported
Conscientiousness	The direct effect of conscientiousness on RI was not significant; moderation cannot be tested				H18 not supported
Extraversion	238.096 (40)	226.878 (39)	11.218 (1)	Significant	H19 Supported
Agreeableness	212.125 (40)	178.270 (39)	33.855 (1)	Significant	H20 Supported
Neuroticism	270.182 (51)	227.316 (50)	42.866 (1)	Significant	H21 Supported

Note: DF = Degree of Freedom.

## 5. DISCUSSION

This study examines influence of personality traits on consumers' re-purchase intention towards FFRs; mediating effect/s, if any, of WTP, and moderating effect of gender on the relationships between personality traits and repurchase intentions. Personality traits were conceptualized in terms of BFF, consisting of OE, conscientiousness, extraversion, agreeableness, and neuroticism.

OE shows negative significant correlation with repurchase intention in FFRs. This implies that the more OE a consumer is the less the likelihood of he rebuying from or eating in FFRs. This finding corroborates extant studies which report significant negative relationship between OE and intention to rebuy food items associated with fast-food (Mottus et al., 2013; Keller & Siegrist, 2015; Golestanbagh et al., 2021).

Conscientiousness demonstrates a significant positive relationship in terms of consumers' re-purchase intention in FFRs. This finding differs from research evidence (e.g., Goldberg & Strycker, 2002; Sutin & Terracciano, 2016; Conner et al., 2017; Pfeiler & Egloff, 2020; Golestanbagh et al, 2021) which report significant negative, low-to insignificant relationship between conscientiousness and consumption of food associated with FFRs. This difference in findings could be explained by dissimilarity in study sample as most of the studies in extant literature were conducted in the US and in Europe where consumers are highly informed about negative health implications of fast-food consumption. In Nigeria, fast-food consumption is perceived as a symbol of success, distinctiveness, class, sophistication, and modernization. Thus, consumers in Nigeria regard FFRs partly as socialization venue culminating in increased frequency of patronage of FFRs. On extraversion and repurchase intention towards FFRs, our result was positive and significant. Many past studies (e.g., Goldberg & Strycker, 2002; Brunnett et al., 2008; Keller & Siegrist, 2015; Golestanbagh et al., 2021) also reported significant-positive relationship between extraversion and consumption of foods associated with fast food.

This study establishes significant negative linkage between agreeableness and repurchase intentions in FFRs. This indicates that the more agreeable a consumer is, the less likely he would re-purchase at FFR. This finding supports Gustavsen and Hegnes' (2020) and Pfeiler and Egloff's (2020) works which reported significant negative relationship between agreeableness and consumptions of food items in the category of fast food (food with high salt, fat, and sugar contents) and significant positive association with consumption of foods like fruits and vegetables – foods not in the menu of FFRs. Modesty and compliance are two facets of agreeableness that could possibly account for our finding. The rising cost of living coupled with the ever-increasing inflation rate, have made many consumers in Nigeria to be more budget-conscious. The general perception of many consumers in Nigeria is that fast foods are expensive and are, therefore, meant for the rich. Consequently, the more modest consumers shy away from FFRs.

While many studies (e.g., Goldberg & Strycker, 2002; Sutin & Terracciano, 2016; Conner et al., 2017; Golestanbagh et al., 2021) report significant positive relationship between neuroticism and regular consumption of food items in the menu of FFRs, this study reports an insignificant relationship between neuroticism and re-purchase in FFRs. The difference in findings may be explained by dissimilarity in sampled respondents and context. Also, FFRs are places for social interaction and consumers who are tense, shy, and not self-confident (adjectives descriptive of neuroticism) would be less keen to visit FFRs.

From the angle of indirect relationship between personality traits and re-patronage intention in FFRs, the following findings were established. Correlation between OE and WTP at FFRs was insignificant. This result contrasts with the findings of Gustavsen and Hegnes (2020) and Chuah et al., (2022) who found significant positive relationship between the two constructs. A probable explanation for this discrepancy is that while our study was carried out on consumers of fast-food, Gustavsen & Hegnes' (2020) research was on organic foods, and Chuah's et al., (2022) was on robotic restaurants. This study establishes insignificant relationship between conscientiousness and WTP. This finding did not corroborate Gustavsen and Hegnes' (2020) study which reported significant negative relationship. This discrepancy may be explained by the fact consumers in Nigeria are increasingly being aware of the health implications of fast-food consumption. Self-discipline is a facet of, and 'not careless; and 'not impulsive,' are adjectives that define a conscientious consumer. Consequently, consumers who are high on the conscientious scale, would be unwilling to pay more for food items they do not want or consume less. Statistical support was established regarding relationship between extraversion and WTP. This finding agrees with Lin et al., (2019), but differs from Gustavsen and Hegnes' (2020). The difference between Lin et al. (2019) and Gustavsen and Hegnes (2020) works may be rooted on sample and/or the object of study. While the former study was on genetically modified (GM) food in the US, the latter was on organic food in Norway. This suggests that the sample and object of research can influence the results of research. No statistical support was found between agreeableness and WTP; hence insignificant relationship. This result collaborates previous study (e.g., Lin et al., 2019). On neuroticism and consumers' WTP, the finding was significantly positive. The result of the hypothesized relationship between WTP and repurchase intention yielded a significant-positive relationship. This finding departs from Gustavsen and Hegnes' (2020)' but is consistent with a number of research evidence in the food consumption literature (e.g., Echeverria et al., 2014; Claudio et al., 2015; Baiyegunhi et al., 2018; Zhao et al., 2020).

Potential effect of WTP as a mediator in the relationships between the BFF and consumers repurchase intentions were examined. WTP mediates in the relationships between OE, extraversion, agreeableness, and repurchase intention, but was not a mediator in the relationships between neuroticism, and conscientiousness, and repurchase intention. Full mediations were in the relationships between agreeableness and repurchase intention – agreeing with Claudio's et al., (2015) research on organic foods,

and neuroticism and repurchase intention – conflicting with the result of Claudio et al., (2019) on locally produced food which report no mediation. WTP was a partial mediator in the relationships between OE and repurchase intention – collaborating Claudio's et al., (2019) study on organic foods, and also a partial mediator in the relationship between extraversion and repurchase intention – which did not support Claudio's et al., (2019) research on local-produced foods.

Gender was found to be a strong moderator regarding all Big Five traits and repurchase intention of consumers in FFRs except in the relationship between conscientiousness and repurchase intention. Results of some past studies on the moderating effect of gender on the relationship between personality traits and food consumption were not consistent (e.g., Brunnett et al., 2008; Sutin & Terracciano, 2016; Pfeilor & Egloff, 2020; Schwartz, 2021). In the Nigerian context, though men often pay food bills, women often decide where food should be bought and/or consumed. In a family outing, a wife's opinion often overrides men's choice. Similarly, in youth segment (e.g., undergraduates), men allow female partners to choose restaurant of their choice in order to please them notwithstanding that he will be the one paying the bills.

## 6. CONCLUSIONS

The purpose of the study was to examine the relationships between consumers personality traits in terms of the Big Five Factors – OE, conscientiousness, extraversion, agreeableness, and neuroticism – and intentions to repurchase in FFRs. The study also investigated the mediating effects of WTP, and the moderating effects of gender in the relationships between the BFF and repurchase intention in FFRs. Analysis of date revealed that four of the BFF (i.e., OP, conscientiousness, extraversion, and agreeableness, were statistically significant with consumers repurchase intentions in FFRs. While the relationships between conscientiousness, and extraversion, were significantly negative, those of OP, agreeableness, and repurchase intentions in FFRs were significantly positive. Neuroticism was not statistically significant in the relationship. Willingness to pay fully mediated the relationships between agreeableness and repurchase intention, and the relationship between neuroticism and repurchase intention, but was a partial mediator in both the relationships between, conscientiousness, extraversion, and repurchase intention in FFRs, whereas it was insignificant in the relationship between OP and repurchase in FFRs. Gender moderated in four of the five BFF (i.e., conscientiousness, extraversion, agreeableness, and neuroticism) and repurchase intentions in FFRs. This study shows that the BFF influence consumers repurchase intention in FFRs, WTP mediates in this relationship, and gender has a strong interacting effect in how consumers personality traits relate with intentions to repurchase in FFRs in South-South geopolitical zone of Nigeria.

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