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Research article

Beyond app or food quality: How does online food delivery rider service shape consumer satisfaction and app reuse behaviour?

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ABSTRACT

The primary objectives of this study are to explore the determinants and attributes of perceived service quality among food delivery riders and to examine how their perceived service quality, an assessment tool in interactive marketing, impacts user satisfaction and likelihood of reusing the food delivery app. An exploratory study utilising primary and secondary data was conducted to identify the determinants and attributes of service quality for online food delivery riders in Bangladesh. Using a questionnaire, data were collected from 338 validly sampled food delivery app users and analyzed quantitatively. Findings suggest that interactive marketing impacts online food delivery user satisfaction and app reuse intention. The most significant predictor of food delivery app reuse is satisfaction. Customer satisfaction is significantly impacted by assurance, followed by personal quality and reliability. Reliability is the only factor that directly and indirectly influences food delivery app reuse intention. The remaining two factors are entirely mediated by satisfaction. This study is the first to identify the determinants and attributes of perceived service quality of online food delivery riders. Finally, this study used the S-O-R paradigm to assess how food delivery riders' perceived service quality stimulates user satisfaction, which in turn influences behavioural intentions through the lens of interactive marketing.

KEYWORDS

Interactive marketing; service quality; online food delivery rider; satisfaction; app reuse intention, stimulus-organism-response paradigm

Introduction

The global adoption of new technologies and economic internet access has increased online food delivery (OFD) (Poon & Tung, 2023). Consistent with the perspective of Poon & Tung (2023), the notion of OFD is no longer novel in Bangladesh. Starting with HungryNaki, over a dozen third-party food delivery apps (FDAs) and retailer-based services are providing OFD in Bangladesh. Nonetheless, as time has progressed, certain third-party online food delivery services (OFDSs) such as HungryNaki and Uber Eats have ceased operations. Furthermore, recently, several new third-party OFDS have surfaced, such as Foodi and Khabar Koi. With the emergence of multiple new OFDSs, consumers may switch from their current FDAs despite satisfaction with their expected quality if they are enticed by distinctive features like better deals or delivery services offered by new OFDS providers (Eresia-Eke et al., 2020; Chang et al., 2023). Bitner (1995) states that each interaction can influence a consumer's perception of a company and willingness to do business with it. Although customers have little interaction with online food delivery riders (OFDRs) (Yang et al., 2021), existing studies indicated that their interaction shapes customer satisfaction and loyalty (Koay et al., 2022; Macias et al., 2023). According to prior studies, better employee-customer interaction, or interactive marketing, is crucial for long-term relationships and enhances perceived service quality (PSQ) (Wu et al., 2015). Bowen (2024) noted that despite the market being identical and offering similar products or services, human interaction remains a significant differentiating factor. Given the rising prevalence of OFDS in the

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Open Rubric

Bangladeshi OFD industry and the potential for OFD providers to achieve an edge over rivals through their OFDRs in this competitive market, it is necessary to examine the impact of OFDR interactions on customer satisfaction and FDA reuse intention. Prior studies on OFDSs have primarily examined app usability (Su et al., 2022; Saad, 2021) and food quality (Cheng et al., 2021; Macias et al., 2023) as key factors in consumer satisfaction, and loyalty. However, there is a dearth of scholarship examining the impact of online food delivery rider service (OFDRS) quality. For example, Macias et al. (2023) examined the personal quality (PQ) of OFDR, while Cheng et al. (2021) emphasized functional quality (FQ) in terms of reliability, assurance and traceability. Therefore, academic research within the OFDRS area has been limited to the impacts of PQ or FQ, resulting in a dearth of exploration regarding the underlying combined effect.

Furthermore, prior research concerning OFDRS quality lacks industry-specific insights regarding the determinants and attributes. For example, Cheng et al. (2021) and Macias et al. (2023) overlooked the identification of the determinants of PSQ which are essential for specifying, assessing, managing, and enhancing PSQ (Johnston, 1995). Therefore, this study aims to investigate the determinants and attributes related to the services offered by OFDRs that have not been adequately addressed in earlier research. Technology adoption theories have dominated OFD consumer behaviour research (Shankar et al., 2022). Service sector consumer behaviour is often assessed using the Stimulus-Organism-Response (S-O-R) paradigm (Asyraff et al., 2023; Malik, 2024). However, its application in OFDRS, is underexplored. OFDRS research overlooked how PSQ affects customer satisfaction and behaviour. Delivery rider PSQ's impact on OFD experience in the S-O-R framework can be examined through this gap. Expanding the focus to OFDRS helps us understand how their PSQ (stimulus) affects consumer satisfaction (organism) and FDA reuse (response) with OFD platforms. After the introduction, sections 2 and 3 describe the literature review and exploratory study. Part 4 introduces the research model and hypotheses. Section 6 describes the results and findings, while Section 5 describes the method. The discussion is in section 7, and the research implications are in section 8. Section 9 concludes with the study's limitations and future research.

Literature review

Theoretical underpinnings

S-O-R theory provides a structured way to explore how different aspects (Stimuli) (S) of external environment influence organism (O) and, ultimately, their response (R). The S-O-R paradigm is used in many industries to study how tangible and intangible stimuli affect human behaviour (Chuang et al., 2023) such as understanding reason behind liking branded content (e.g., Cheung & To, 2023), hospitality and tourism (e.g., Asyraff et al., 2023), and online food delivery (e.g., Hoang & Tan, 2023). Kumar et al. (2021) examined OFD through aesthetic formality and attractiveness (S), arousal and pleasure (O), and word-of-mouth and FDA re-enter intention (R). Malik et al. (2024) showed how external and internal factors (S) affect consumer inspiration (O) and satisfaction (R). With this framework, this study defines stimuli (S) as OFDRs' PSQ—personal quality, reliability, and assurance. These factors influence consumer satisfaction (O), which in turn shapes app reuse intention (R).

Interactive marketing and service quality

The services triangle model is a dynamic framework that involves three key roles: the company, service personnel, and customers (Anderson & Smith, 2017; Cheng et al., 2021). All parties collaborate to form three pairs: service personnel and company, customer and company, and customer and service personnel. These pairs collectively enhance service delivery (Anderson & Smith, 2017) and are crucial for establishing and sustaining customer relationships (Bitner, 1995). The "employee-customer" dyad corresponds to interactive marketing (Cheng et al., 2021) and influences customer perceptions of overall service quality (Hartline & Ferrell, 1996). Hsieh (2017) and Cheng et al. (2021) considered PSQ as an assessment tool for interactive marketing.

Determinants of OFDR perceived quality

Rainsbury et al. (2002) assert that frontline personnel (FP) require technical and interpersonal competencies to fulfil customer expectations. Wu et al. (2015) assert that FP competencies encompass professional skills positively correlated with reliability and assurance, alongside interpersonal skills linked to responsiveness, assurance, empathy, and reliability. The above studies did not consider tangibility a factor for FP qualities. Soon after, Alhelalat et al. (2017) categorised FP service quality into two principal domains, PQ and FQ, similar to Berry et al.'s (2006) humanic and functional service clues. FP's PQ includes tangible (cleanliness, appearance), assurance (courtesy), empathy, and nonverbal cues like smiles and facial expressions. FQ includes reliability (service accuracy), responsiveness (prompt responses, proactive support), and assurance. While Alhelalat et al. (2017) classification of FP service quality addresses the gap identified in the

aforementioned studies, its PQ attributes are similar to the OFDR's, but its FQ lacks many attributes of the OFDR's service quality determinants. For instance, personalised attention, menu knowledge are not necessary for OFDR. Table 1 illustrates PQ and FQ determinants and attributes specific to OFDR PSQ.

Exploratory study conduct

To identify perceived service quality determinants and their attributes of food riders, an exploratory study was conducted where open-ended questions and relevant customer reviews were used as an archival technique (Lim, 2024), to modify the existing scales to fit the needs of this research context in Bangladesh, where no OFDRS-related research has been done before. In other words, these techniques were used to identify the determinants and their attributes of OFDRS quality in the Bangladeshi context. As consumers evaluate service encounters differently based on culture (Winsted, 1999), studying consumer perception in a specific geographical region requires adapting existing scales to reduce bias (Kaur et al., 2021). During the period from February-March 2024, data were collected using two open-ended questions from 129 university students who had at least one good or bad OFDRS experience. The analysis included 70 participant scripts. Poor writing and context inapplicability eliminated 59 participant scripts. After removing irrelevant data such as short, vague reviews, 196 Bangladeshi OFD service users' positive OFDRS quality reviews were analysed. To analyse data within the collected scripts, Microsoft Excel was employed. These data were coded and analysed against previous findings of other scholars (Verma et al., 2023; Bonfanti et al., 2023). Then, based on the literature of service quality (Parasuraman et al., 1985; Johnston, 1995; Winsted, 1999; and Farrell, 2001), twelve second-order determinants and their attributes were identified and then organised and aggregated the determinants by theoretical dimensions PQ and FQ after theoretical saturation (Table 2).

Table 1. OFDR's PSQ determinants and attributes from literature review

Dimension	Determinants	Attributes	Authors
PQ	Courtesy	Clean and neat uniform	Elvandari *et al*., 2018; Cheng *et al*., 2021; Macias *et al*., 2023
		Clean physical appearance, friendly facial expressions, courteous, cordial attitude	Macias *et al*., 2023
		Patient, respect	Gupta *et al*., 2023
		Politeness	Elvandari *et al*., 2018; Ghosh, 2020; Cheng *et al*., 2021; Saad, 2021
		Friendliness	Elvandari *et al*., 2018; Macias *et al*., 2023
		Smile	Macias *et al*., 2023
		Cordial attitude	Macias *et al*., 2023
	Empathy	Empathy, kindness	Bonfanti *et al*., 2023
		Cooperativeness	Shah et al., 2023
FQs	Reliability	On-time delivery, order accuracy, order fulfilment, and hygiene practice	Ghosh, 2020; Khuluse & Deen, 2020; Cheng *et al*., 2021; Kang and Namkung, 2022
	Competence	Navigation skills	Chandrasekhar *et al*., 2019; Cheng *et al*., 2021
		Careful food handling	Saad, 2021; Kang and Namkung, 2022; Senetla *et al*., 2024
		Change handling ability	Elvandari et al., 2018
		Training and competence	Cheng *et al*., 2021; Shah et al., 2023
	Communication	Communication skills	Chandrasekhar *et al*., 2019; Cheng *et al*., 2021
	Problem solving	Error correction	Cheng *et al*., 2021
	Credibility	Honest, integrity, adherence to rules	Gupta *et al*., 2023

Table 2. OFDR's PSQ quality determinants and attributes

Variables	Determinants	Attributes
PQ	Appearance	Uniform, branded t-shirt
	Courtesy	Politeness, kindness, cordiality, clean and neat appearance
	Formality	Greetings, form of address, social distance
	Enthusiasm	Friendliness, smile, activeness, happy expression, courteous closing
	Empathy	Flexibility, understanding, patient, considerate behaviour, cooperativeness, helpfulness, dedication
FQ	Responsiveness	Prompt delivery, responding to messages and calls quickly
	Reliability	On-time delivery, arriving exact location, delivering food intact
	Competence	Navigation skills, reliable with change, careful food handling
	Work Ethics	Honest, change refund
	Communication	Timely updates, arrival notification, location confirmation
	Problem Solving	Apologetic, resolving error

Framework and hypotheses development

Personal quality of OFDRS

In this study, PQ involves courtesy, formality, enthusiasm, flexibility, care, and appearance of the OFDR. From the SERVQUAL (Parasuraman et al., 1988) perspective, PQ represents courtesy, a part of assurance, and empathy. Prior research indicates that the personal attributes of OFDRs include demonstrating courtesy and cooperativeness, maintaining a tidy appearance, and showing concern for customers (Farrell et al., 2001; Wu et al., 2015; Shah et al., 2023). When riders excel in these attributes, customers perceive the OFDRS as of higher quality (Farrell et al., 2001; Wu et al., 2015; Koay et al., 2022). Recent studies advocate that the uniform and appearance of OFDRs are pivotal components of PQ (Cheng et al., 2021; Macias et al., 2023). Kneževí et al. (2015) noted that the pleasant appearance of the service personnel and its upkeep are considered indicators of a competitive edge (Nickson et al., 2003). Empathy is associated with care (Parasuraman et al., 1988), and concern for customers (Johnston, 1995; Kuo et al., 2012) is vital in people-oriented industries (Kuo et al., 2012) and has been identified as an essential PQ skill (Wu et al., 2015). Winsted (1999) highlighted that the key elements affecting customer satisfaction with service interaction are

caring and courtesy. Alhelalat et al. (2017) have shown that PQ of restaurant waitstaff impacts consumer satisfaction (SAT). Macias et al. (2023) have shown that PQ of OFDR impacts consumer satisfaction. Accordingly, the following hypothesis is articulated:

H1: PQ has a positive impact on user SAT.

Reliability of OFDRS

In the OFDS settings, reliability (RL) refers to as the capability of OFDR to deliver the promised services accurately and efficiently (Koay et al., 2022). Delivery service is deemed reliable when OFDR delivers the product to the correct individual, at the appropriate location, within the predicted timeframe, at the proper temperature, precisely as ordered, and without damage (Kang & Namkung, 2022). When OFDR provides reliable service, collaborates, and demonstrates a solid grasp of job execution competence, it substantially impacts user satisfaction with the FDA (Shah et al., 2022). Recent studies have confirmed that the reliability of OFDRS is one of the primary determinants of overall OFDS quality and user satisfaction (Cheng et al. 2021; Wu et al., 2024). Hence, the subsequent hypothesis is constructed:

H2: RL has positive influence on user SAT.

Assurance of OFDRS

The ability to earn consumer trust throughout OFDS is referred to as assurance (AS) (Cheng et al. 2021). This study defines assurance as encompassing competencies such as navigation skills and careful food handling, along with effective communication, problem-solving skills, and ethical behaviour of OFDR. Prior studies by Koay et al. (2022) and Wu et al. (2024) revealed that the AS positively impacts OFD user satisfaction. Khan et al., (2021) validated that AS positively impacts the satisfaction of Bangladeshi mobile banking users. As a consequence, the next hypothesis has been created:

H3: AS has a positive influence on user SAT.

Satisfaction and FDA reuse intention

Pizam & Ellis (1999) found that customer satisfaction with hybrid offerings like restaurant service depends on tangible and intangible aspects. A similar concept can also apply to OFDS. The quality of the FDA and food, as well as the service offered by the OFDR, all contribute to the consumer's overall satisfaction. Thus, in the case of OFDS, consumer satisfaction is measured by how positively they perceive their encounter with the FDA, OFDR, and the food they receive. Consumers are more likely to persist in using those apps if they have a positive experience with OFDSs (Wu et al., 2024). Studies show that satisfaction affects FDA reuse usage intentions (Foroughi et al., 2024; Shah et al., 2022; Agarwal & Sahu, 2022). Service encounters with OFDR are isolated in this study, suggesting a distinction between overall consumer satisfaction and satisfaction with specific aspects of a hybrid offering experience like OFD. This study provides a more nuanced understanding of how OFDRS quality—beyond FDA and food quality—affects consumer satisfaction and behaviour. Hence, the next hypothesis is formulated:

H4. Satisfaction with OFDRS has a positive influence on FDA reuse intention.

Role of delivery person's service quality in behavioural intention

Current OFD research focuses on the direct correlation with PSQ factors and customer satisfaction. It then demonstrated how satisfaction affects consumer behavioural intentions. Zhuang et al. (2021) revealed that PSQ influences the satisfaction of customers and the intention to reuse FDA. Given the limited research on this topic, we expect it to be fascinating to investigate the relationship between OFDRS quality and consumer behaviour. We developed the following hypotheses to determine if these PSQ factors for OFDR directly affect app reuse intention (ARI), even when satisfaction is considered.

H5. PQ influences ARI.
H6. RL influences ARI.
H7. AS influences ARI.

Role of satisfaction as a mediator

However, Verma et al. (2023) found that the correlation between FDA user emotions, feelings, and repurchase behaviour is mediated by satisfaction. Wu et al. (2024) validated that SAT mediates the association between AS and ARI, and RL and ARI. This study examines whether satisfaction mediates the

link between quality OFDRS and the likelihood of FDA reuse. Thus, in accordance with Rungtusanatham et al. (2014)'s advice, we develop the following hypotheses using the segmentation approach.

H8. SAT mediates the relationship between PQ and ARI.
H9. SAT mediates the relationship between RL and ARI.
H10. SAT mediates the relationship between AS and ARI.

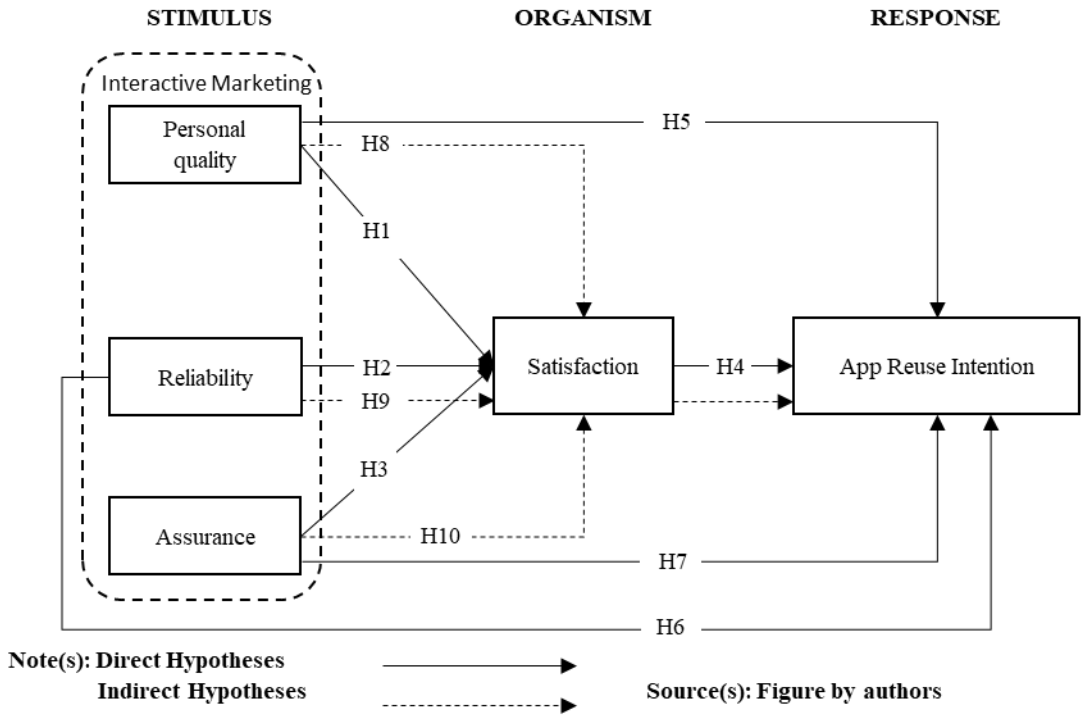

Figure 1. Conceptual framework

Methods

To meet our research goals, the scale was adjusted and modified from previous studies, and the questionnaire indicators were evaluated using a five-point Likert scale, with 1 indicating entirely disagree and 5 indicating entirely agree. Pilot testing was done among 39 Bangladeshi OFD users. Pilot study results enabled us decreases items with similar or overlapping meanings and clarified terminology for precision. Between November 26, 2024, and January 22, 2025, we used online and in-person methods to increase response rates and data collection (Hoang & Tan, 2023). We sent the Google Form questionnaire via email, food-ordering forums, and social media. There was no payment for in-person data collection. All responses were collected anonymously, participation was completely voluntary, and the research goal was explicitly stated. The sampling frame and population size were not available during the research. Therefore, to reduce the likelihood of bias in sampling (Malik, 2024), we used the selective sampling method. This method was used in previous OFD research (Kaur et al., 2021; Malik, 2024). The focus of our study was on FDA users in Bangladesh aged 17 to 44 years. Online food ordering experience, three food orders in the past six months, and primary ordering location in Bangladesh were used to select participants for relevance and contextual alignment. Out of 403 responses, 338 complete responses were selected for analysis. Mean imputation filled five missing values representing less than 5% of indicators (Hair et al., 2021). We utilised G-Power version 3.1.9.7 (Faul et al., 2009) and set a 95% power, necessitating a prerequisite sample size of 129. The participants' ages ranging between 17 and 44 years, with a mean age of 23.32. Table 3 presents additional demographic information regarding the participants.

Table 3. Demographic profile of respondents (N = 338)

Variable	Items	Number	Percentage
Gender	Female	192	56.8
	Male	146	43.2
Education Level	Higher secondary	13	3.85
	Bachelor's	275	81.4
	Master's	42	12.4
	Other	8	2.35
Usage duration	Less than 1 year	36	10.7
	1–3 years	149	44.1

	4 – 6 years	113	33.4
	More than 6 years	40	11.8

All of the p-values for the Shapiro-Wilk test were less than .001 when we performed the normality test (Sainani, 2012). As a consequence of the deviation from the normal distribution, we utilized the partial least squares structural equation modeling (PLS-SEM) technique (Hair et al., 2021). Furthermore, our research centred on model prediction to examine the connection between OFDRS quality and consumer satisfaction, and FDA reuse intention, leading us to determine that PLS-SEM was suitable. To assess the reflective and structural framework, we utilized SmartPLS 4.0 (Ringle et al., 2024).

Results and findings

Common method bias assessment

Common method bias (CMB) may occur when the same scale is used to collect data (Podsakoff et al., 2003; Kaur et al., 2021) or due to the nature of self-reported data (Podsakoff et al., 2012). IBM SPSS 25 was used to test Harman's one-factor test for CMB. The findings revealed that the initial component represented 33.73% of the overall variation, well below the widely recognized criterion of 50% (Podsakoff et al., 2003). Kock (2015) indicates that a variance inflation factor (VIF) over 3.3 may signify issues with collinearity and potential common method bias (CMB) effects. Table 4 indicates that the VIF scores for all items in this research range from 1.781 to 2.517, far below the 3.3 criterion. The data indicate an absence of CMB in this investigation.

Reflective measurement model

All of the indicator loadings in Table 5 were above 0.7 (Hair et al., 2019) except four indicators—PQ1, RL1, AS2, and AS4—have 0.59–0.69 loadings. We kept these values because Hair et al. (2021) recommended keeping them above 0.4 as they did not affect data reliability or convergent validity. The values for Cronbach's alpha, RhoA, and composite reliability (CR) were all above 0.7, representing robust construct internal consistency. All average variance extracted (AVE) surpassed 0.50 (Hair et al., 2019). These results demonstrate our reliability and consistency. Four indicators PQ7, RL6, AS3, and AS7 were excluded due to low reliability or convergent validity. Table 6 shows that all HTMT scores were below 0.90 recommended by Hair et al. (2019). This information reassures us that discriminant validity is not a concern, allowing us to proceed with confidence in our model's findings.

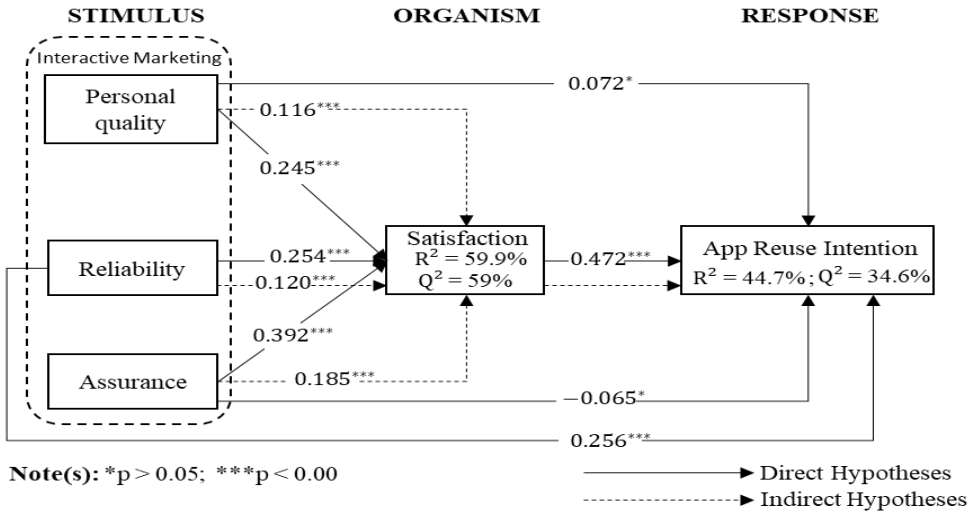

Figure 2. Results of hypotheses testing

The structural model

Table 4 illustrates that the VIF values for all predictor variables (rows) and their endogenous variables (columns) range from 1.781 to 2.517, significantly less than the threshold value of five. This confirms that collinearity had no impact on PLS estimation (Hair et al., 2021). This study employed a bootstrapping approach with a sample size of 5000 to evaluate the proposed hypotheses (Hair et al., 2019). In this study, PQ, RL, and AS predict SAT and ARI, while SAT predicts ARI. In Table 5, path coefficients show that PQ (H1: $\beta = 0.245$, $t = 4.709$, $p = 0.000$), RL (H2: $\beta = 0.254$, $t = 4.522$, $p = 0.000$), and AS (H3: $\beta = 0.392$, $t = 7.590$, $p = 0.000$) significantly impact customer satisfaction. Furthermore, consumer satisfaction

significantly affects ARI (H4: β = 0.472, *t* = 5.893, p = 0.000). PQ (H5: β = 0.072, *t* = 1.142, p = 0.253) and AS (H7: β = -0.065, *t* = 0.982, p = 0.326) exhibit a negative yet statistically insignificant correlation with ARI. Whereas RL (H6: β = 0.256, *t* = 4.238, p = 0.000) indicates a significant positive correlation with ARI. Thus, we confirm hypotheses H1, H2, H3, H4, and H6, whereas H5 and H7 lack support.

Table 4. Measurement of outer model outcomes

Constructs and Items	loadings	VIF	α	Rho_A	CR	AVE
Personal quality (PQ)			0.823	0.833	0.872	0.535
PQ1	0.593	1.369				
PQ2	0.718	1.606				
PQ3	0.832	2.082				
PQ4	0.711	1.657				
PQ5	0.780	1.756				
PQ6	0.732	1.618				
Reliability (RL)			0.792	0.794	0.857	0.547
RL1	0.699	1.425				
RL2	0.708	1.406				
RL3	0.773	1.667				
RL4	0.777	1.678				
RL5	0.736	1.464				
Assurance (AS)			0.769	0.779	0.844	0.520
AS1	0.735	1.475				
AS2	0.666	1.288				
AS4	0.665	1.402				
AS5	0.786	1.602				
AS6	0.747	1.467				
Satisfaction (SAT)			0.835	0.837	0.901	0.752
SAT1	0.878	2.072				
SAT2	0.876	2.185				
SAT3	0.848	1.737				
App Reuse Intention (ARI)			0.793	0.793	0.879	0.708
ARI1	0.829	1.590				
ARI2	0.862	1.882				
ARI3	0.833	1.665				

Note(s): VIF = variance inflation factor; α = Cronbach' alpha; CR = Composite reliability; AVE = Average variance extracted

Table 5. Variance inflator factor

	Variables	1	2	3	4	5
1.	ARI					
2.	AS	2.395				2.007
3.	PQ	1.932				1.781
4.	RL	2.265				2.103
5.	SAT	2.517				

Note(s): PQ = Personal quality; RL = Reliability, AS = Assurance; SAT = Satisfaction; ARI = App Reuse Intention

Table 6. Hypotheses testing

Hypotheses	Relationships	Beta	SD	T values	P values	CI (2.5-97.5%)	f^2	Supported?
Direct effects								
H1	PQ → SAT	0.245***	0.052	4.709	0.000	[0.150, 0.353]	0.085	Yes
H2	RL → SAT	0.254***	0.056	4.522	0.000	[0.141, 0.362]	0.077	Yes
H3	AS → SAT	0.392***	0.052	7.590	0.000	[0.287, 0.489]	0.193	Yes
H4	SAT → ARI	0.472***	0.080	5.893	0.000	[0.304, 0.620]	0.162	Yes
H5	PQ → ARI	0.072*	0.063	1.142	0.253	[-0.043,0.204]	0.005	No
H6	RL → ARI	0.256***	0.060	4.238	0.000	[0.139, 0.376]	0.053	Yes
H7	AS → ARI	-0.065*	0.066	0.982	0.326	[-0.192,0.067]	0.003	No
Indirect effects (Mediation Test)								
H8	PQ → SAT → ARI	0.116***	0.032	3.606	0.000	[0.061, 0.185]	-	Yes
H9	RL → SAT → ARI	0.120***	0.031	3.901	0.000	[0.062, 0.181]	-	Yes
H10	AS → SAT → ARI	0.185***	0.041	4.554	0.000	[0.108, 0.268]	-	Yes

*p > 0.05; ***p < 0.001

Note(s): SD = Standard deviation; CI = Confidence interval; f^2= Effect size

Table 7. **Discriminant validity**

	Variables	1	2	3	4	5
1.	ARI					
2.	AS	0.61				
3.	PQ	0.61	0.74			
4.	RL	0.72	0.85	0.76		
5.	SAT	0.79	0.87	0.76	0.82	

Note(s): PQ = Personal quality; RL = Reliability, AS = Assurance; SAT = Satisfaction; ARI = App Reuse Intention

The adjusted R^2 scores for SAT and ARI were 0.599 and 0.447, respectively. Effect sizes (f^2) for exogenous latent variables were calculated using Cohen's (1988) criteria: 0.35 indicating significant impact, 0.15 indicating modest impact, and 0.02 indicating minor impact. Table 6 shows that AS (f^2=0.193) strongly predicts consumer satisfaction, while PQ (f^2=0.085) and RL (f^2=0.077) have moderate impacts. Consumer satisfaction is the strongest predictor of ARI (f^2=0.162). Only the RL (f^2=0.053) has a moderate direct impact on ARI. The Q^2 values of 0.590 for consumer satisfaction and 0.346 for app reuse intention indicate the model's ability to predict outcomes for inner latent variables (Hair et al., 2019).

Mediation analysing

Table 6 shows PQ (H8: β = 0.116, p < 0.001), and AS (H10: β = 0.185, p < 0.001) have substantial and positive indirect impacts on ARI. This supports the concept of indirect-only mediation (Zhao et al., 2010),

indicating that the relationships between PQ and ARI, along with AS and ARI, are entirely mediated by consumer satisfaction (Hair et al., 2021). ARI is affected by RL (H9: $\beta = 0.120$, $p < 0.001$) in an indirect way, which suggests a complementary mediation. This indicates that consumer satisfaction partially mediates the association between RL and FDA reuse intention (Hair et al., 2021).

Discussion

This study examined how OFDR's PSQ influences user satisfaction and FDA reuse through satisfaction. The findings indicate a positive correlation between PQ, RL and AS and SAT, aligning with the principles of interactive marketing as outlined in the service triangle theory (Cheng et al., 2021). The attributes of FQ encompass both RL and AS, aligning with the conclusions drawn by Alhelalat et al. (2017), which confirmed that the personal and functional service behaviours of restaurant waitstaff positively impact consumer satisfaction. Consistent with previous research, assurance ($f^2 = 0.193$) is the strongest predictor of Bangladeshi customer satisfaction (Cheng et al., 2021; Koay et al., 2022). The rationale could be that the OFD industry dominates in the capital and divisional cities, where roads are often unbalanced, narrow, and congested with heavy traffic. Thus, Bangladeshi customers value the rider's food handling, navigation, and timely updates. Fatima & Yasmin's (2024) research also found that customers prefer cash-on-delivery, with women preferring it more than men. Thus, when rider does not bring changing money it may frustrate customers, especially women. Thus, rider's effective change handling skill is critical. OFDR personal quality ($f^2 = 0.085$) appears to be the second most important predictor for customer satisfaction. This supports prior study findings (Alhelalat et al., 2017; Macias et al., 2023). Winsted (1999) highlighted that the key elements affecting customer satisfaction with service interaction are caring and courtesy. This result implies that OFD service providers must give importance to the personal aspects of their riders, such as cultural norms, forms of addressing customers, understanding customer situations, and adapting service. Reliability ($f^2 = 0.077$) is found to be the third most important predictor for customer satisfaction. This supports prior study findings (Cheng et al., 2021; Koay et al., 2022). Parasuraman et al. (1988) assert reliability is the most important consistent factor for service quality, but our findings show otherwise. Table 3 shows that most participants in this study have long-term relationships with OFDSs, so they may view reliability as a basic service standard rather than a value-added service. Thus, reliability is important but does not guarantee satisfaction unless something goes wrong. User satisfaction is the most critical factor for the app reuse intention, which is consistent with earlier findings (Cheng et al., 2021; Foroughi et al., 2024; Shah et al., 2022;). This suggests that interactive marketing has the likelihood to enhance user satisfaction among FDA users, which in turn influences customers to reuse the existing FDA. This supports Hsieh's (2017) findings that interactive marketing impacts theme park visitor satisfaction and revisit intention. Therefore, OFDS providers must endeavor to uphold the excellence of their interactive marketing initiatives (Hsieh, 2017). Regarding direct impact on FDA reuse intention, assurance exhibited no direct influence, aligning with the findings of Cheng et al. (2021); however, it was completely mediated by satisfaction, consistent with the study findings of Wu et al. (2024). In addition, PQ also showed no direct impact on the intention to reuse the app. Interestingly, reliability has direct impact on FDA reuse intention which is in contrast to finding Cheng et al. (2021) but consistent with Zhuang et al. (2021).

Conclusion

The present research advances present knowledge on OFDSs by analysing and understanding OFDRS quality beyond conventional metrics, such as FDA and food quality. First, we have identified determinants and attributes related to OFDRS by extensive literature reviews and qualitative studies and then empirically proved them. Second, using satisfaction as a mediating variable between OFDRS quality and FDA reuse is a theoretical advance. Third, we developed, evaluated, and analysed hypotheses following the guidelines set forth by Rungtusanatham et al. (2014). Due to the need for clarity and the paucity of previous research in this context, the segmentation mediation technique was employed. Theoretically, we have established that the independent variables (IVs) PQ, RL, and AS have an effect on the mediator (satisfaction), which then impacts the dependent variable (DV) (app reuse intention). Subsequently, we have demonstrated that satisfaction mediates the relationship between IVs and DV. When assessing mediation, Rungtusanatham et al. (2014) also suggested taking into account the direct impact of IV on DV. Thus, we conceptually developed these direct relationships and empirically tested them in H5, H6, and H7, even when satisfaction was included in the model. Finally, this study further broadens the use of the S-O-R model in relation to service interactions in the OFD sector. This investigation underscores the significance of the human factors in the service interaction, emphasizing their impact on consumers' emotional and cognitive responses, in contrast to earlier research that mainly concentrated on technological or food quality factors. By considering the

direct and mediated effects of rider behaviours, this study advances a more holistic understanding of service quality in OFD contexts.

Our findings indicate that PQ and FQ (reliability and assurance) are crucial for effective interactive marketing to drive customer satisfaction and behavioural intention. To guarantee exceptional service delivery and promote better interactive marketing, OFDS providers need to select individuals who possess the necessary competencies such as navigation skills and a genuine passion for customer service (Zeithaml et al., 2010). To achieve this, OFDS providers ought to look beyond traditional qualifications (such as prior delivery experience) and emphasize the evaluation of both technical skills (like navigation abilities, when to communicate, and logistics management) and interpersonal quality attributes (courtesy, empathy, and emotional intelligence). After hiring delivery drivers, HR must teach them soft skills such as customer centric attitude, patience, empathy, cultural norms, and how to communicate with customers such as politeness. OFDS providers should also emphasize interpersonal skills during rider performance evaluations. Our findings also show that assurance and reliability factors are crucial to consumer satisfaction and FDA reuse. It is essential for riders to actively inquire and verify the delivery location immediately after receiving the order, as well as to communicate the delivery status regarding order status, arriving notifications. OFDS providers ought to provide training on effectively using Google Maps or the GPS system to enhance delivery efficiency. OFDS providers must also monitor riders' food handling to prevent damage. The rider must use a thermal bag to maintain food temperature and protect it from intense sunlight and heavy rain. The rider must quickly check that the package is sealed and be careful with sensitive items like liquids or celebration cakes during order collection. Finally, OFD providers should use more streamlined apps and systems with advanced technology to improve riders' skills, such as GPS use. This could allow customers to independently verify and confirm their order details without calling service providers or riders. It may also help track delivery packages.

Although this study offers several insightful findings, it also has several shortcomings that open up new research directions. Firstly, the study's focus on current Bangladeshi users may limit its global applicability. To determine whether these findings hold true for various consumer demographics, we would advise carrying out this study in the case of different cultural or geographical contexts. Second, we were mostly interested in Dhaka the capital of Bangladesh as a location. This could make it harder for our results to be applied to all FDA users in Bangladesh, regardless of their job or location. Future research in Bangladesh can focus on more diverse geographical areas. Then, we didn't use any moderation factors when we evaluated the structural model. Using moderation variables is strongly suggested; it would be interesting to see if there are any differences between how men and women, for example, perceive the quality of OFDRSs. Finally, longitudinal studies that monitor customer behaviour over time would offer a more profound understanding of how OFDRS quality affects customer loyalty and retention over the long run.

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