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Evaluating customer satisfaction with the quality of online banking services after COVID-19: developing country perspective

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Evaluating customer satisfaction with the quality of online banking services after COVID-19: developing country perspective

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ABSTRACT

This study aimed to assess customer satisfaction levels with the quality of online banking services in the Islamic banking sector of Bangladesh, particularly after the COVID-19 pandemic. Data were collected from 280 online banking customers using a modified questionnaire based on the SERVQUAL model. Structural equation modeling (SEM) was employed to analyze the data, and statistical analysis was performed using SPSS and AMOS. The findings showed that a number of factors, including efficiency, dependability, responsiveness, and security, affect customer satisfaction. Among these dimensions, reliability was identified as the most crucial factor, exerting the greatest impact on customer satisfaction after COVID-19. Given the growing significance of online banking in Bangladesh, effective delivery of these services can enhance customer satisfaction and provide banks with a competitive advantage. The results of this study have practical implications for bankers, investors, bank management, and policymakers in the country's banking sector. They offer valuable insights into the essential factors affecting customer satisfaction with online banking service quality and can inform the development of strategies and policies to improve the overall customer experience in this context.

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SUBJECTS
Behavioral Neuroscience; Cognitive Psychology; Introductory Psychology; Psychological Science; Sociology & Social Policy;

1. Introduction

Technological advances have provided numerous advantages to contemporary society. These advancements are becoming more widespread throughout a variety of industries around the world, including the banking industry (Abdallah, 2021; Khan et al., 2023, 2024; Maminiaina Aimee, 2019). The changing expectations of today's tech-savvy customers, who increasingly expect banks to embrace digitalization, also impact this (Ghouse et al., 2022; Paul et al., 2013; Sreejesh et al., 2016). Particularly, because of the COVID-19 pandemic, the banking industry is changing digitally (Rahi et al., 2023). Banks need to use technology in their everyday work to stay competitive in the digital age. They must also learn new tech skills to serve customers better and make more money (Alharthi et al., 2022; Gazi et al., 2022). New technology is changing how people use banks, and there is a term known as online banking. Online banking is a system that allows people to make financial transactions online. It has many benefits for banks and customers, such as cost savings and efficiency (Alharthi et al., 2022; Gazi et al., 2022; Khan et al., 2024). Understanding customer satisfaction is essential for banks in developing countries to improve service quality, foster trust, and promote financial inclusion. By identifying key satisfaction

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factors, financial institutions can tailor their offerings, contributing to economic growth and enhancing user experiences. This research aims to address a few research gaps in the literature on online banking in these regions, particularly regarding Islamic banking and the modified SERVQUAL model. Despite the swift transition to online services, there is limited understanding of customer satisfaction levels and the specific factors influencing it in the post-pandemic context. Many banks face challenges in meeting evolving customer demands, resulting in potential shortcomings in service quality, security, and overall user experience (Gazi et al., 2023).

Islamic Banks in Bangladesh offer various online services, such as money transfer, bill payment, account management, and more. Customers can access these services 24/7, seven days a week. Online banking allows users to monitor their account balances and perform other transactions at any time (Ghouse et al., 2022; Hossain et al., 2023). Bangladesh had 169.6 million people on 5 July, 2023. Bangladesh is the eighth-most populous nation. Population density is 1265/km2. The median age is 27.6. The 2022 census found 91.04% Muslims and 7.95% Hindus (Al Masud et al., 2023; Gazi et al., 2022; Ghouse et al., 2022; Khan et al., 2024). Various studies indicate that customers in the low-income bracket typically pick Islami banks for religious as well as familial and social reasons. On the other hand, religious beliefs are at the heart of people's aspirations for Islami banking (Alharthi et al., 2022; Gazi et al., 2022). Religion is considered the strictest element of Islam banking in Bangladesh; however, there are many more important factors for customers when choosing a service provider, such as the desire of depositors to achieve maximum returns, convenient financial transaction arrangements, continuity of services, and higher cost-benefit effects (Qasabah & Siddiq, 2021). This study argues that in Islami Banks's religious concepts cannot be its only source of competitiveness. Banks must always enhance service quality to remain competitive and ensure customer satisfaction. That indicates the need for research.

The literature has identified few research gaps in the study of the banking sector's response to COVID-19 in Bangladesh. Firstly, in the context of Asian countries like Bangladesh, this topic is less investigated and less comprehensive. Secondly, prior research has examined the intention to use Islamic banking or other factors (e.g. Paul et al., 2013), but as per our knowledge, there is no research on how the service quality standards of Islamic banks in Bangladesh contribute to customer satisfaction through online banking services in the wake of the COVID-19 pandemic. Thirdly, nonetheless, several studies have demonstrated that the pandemic has negatively impacted Islamic banks' liquidity, consumer satisfaction, and bank strength. Still, there needs to be more research on how COVID-19 affects customer satisfaction with online banking services in developing countries like Bangladesh, unlike in developed countries (Alharthi et al., 2022; Gazi et al., 2022; Khan et al., 2024). Therefore, the purpose of the current study is to determine how online banking services affect consumer satisfaction, particularly during the Covid-19 pandemic. In light of this, we address the subsequent research questions (RQ). RQ1: How can banks use modified SERVQUAL factors to improve customer experience in the age of digital banking? RQ2: How can banks improve their Islamic banking service quality to increase customer satisfaction in online banking following COVID-19?

This study stands out as both unique and significant for several compelling reasons. Firstly, it distinguishes itself by incorporating four pivotal factors from the modified scale of the SERVQUAL model. While prior research has explored the relationship between e-service quality and customer satisfaction in online banking using the conventional SERVQUAL model (George & Kumar, 2014; Khan et al., 2024; Mwiya et al., 2022), the modified SERVQUAL model remains relatively untested in developing countries, notably in the context of Bangladesh. This research addresses this notable gap in contextual knowledge, presenting a pioneering application of the modified SERVQUAL model. Notably, our study introduces eighteen newly established items tailored to the intricacies of Bangladeshi banking services, marking a significant and unprecedented contribution. Secondly, the research advances the understanding of competitiveness in Islamic institutions beyond conventional boundaries. In contrast to the predominant reliance on religious concepts for competitiveness, our findings underscore the necessity for these institutions to prioritize service improvement. This insight holds paramount importance for Islamic banks aiming to not only stay competitive but also ensure customer satisfaction. Thirdly, the study highlights a contemporary trend observed in the banking industry, where institutions are increasingly adapting their service quality measurement methods to cater to the evolving preferences of

customers. This recognition of the need for flexibility in response to shifting customer expectations is indicative of a strategic approach adopted by banks to maintain relevance and competitiveness in a dynamic market.

The novelty of this research is to measure service quality by creating new variables on the model of SERVQUAL model variables. This research has shown the customer satisfaction level by considering the variables of the modified SERVQUAL model, which has not been found in any research in the context of Bangladesh. The newly adopted variables are efficiency and security whose impact is particularly significant for any service provider. The level of service quality and the level of customer satisfaction can be easily understood based on the presence of given variables. Different variables have been used in various studies to measure service quality in the banking sector which is evident from the literature review. The present study uses four very important variables of the modified SERVQUAL model as a measure of service quality, which is different from previous studies, and this is the uniqueness of this study. Inevitability of reality demands the present research to be carried out, researchers have done an unprecedented job in the title given to research adaptations with modified variables. The basic purpose of which is to measure the satisfaction level of customers about the service quality of online banking.

2. Literature review

2.1. Theoretical background

To assess customer satisfaction with online banking after COVID-19, we adapted the SERVQUAL model. Other service quality models exist, such as the Nordic model (Andersen et al., 2007), the Multilevel model (Ghotbabadi et al., 2015; Khan et al., 2024), and the managerial model of service quality (Wu & Cheng, 2013). SERVQUAL is frequently used to evaluate customer satisfaction. SERVQUAL is a popular service quality measurement instrument that assesses five dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). Prior researchers, e.g. George and Kumar (2014) and Mwiya et al. (2022), have utilized the SERVQUAL model to measure the effect of service quality on customer satisfaction in the context of online banking. However, research has yet to be conducted on its application to Bangladeshi banking services.

SERVQUAL is essential for both Islamic banks and their clients. It can assist banks in enhancing their service quality and increasing customer satisfaction (Mwiya et al., 2022). The existing literature adopts SERVQUAL model variables, such as effectiveness, dependability, and security, which can enhance service quality and consumer satisfaction. Using a modified scale of the SERVQUAL model, this study includes new service quality variables. Customer satisfaction in Bangladesh has never been studied. The modified SERVQUAL variables are crucial for any service provider: efficiency, dependability, and security. These variables help explain service quality and customer satisfaction. For example, in the modified SERVQUAL model that we use, security is one of the most important dimensions of the SERVQUAL model for online banking. Customers want to be confident that their personal and financial data is secure when they bank online (Khan et al., 2024; Mwiya et al., 2022; Tarhini et al., 2015). The SERVQUAL approach has yet to be used to study Islamic banks' online banking service quality and customer satisfaction in Bangladesh.

2.2. Online banking and customer satisfaction

Technology has dramatically influenced the banking sector in South Asia. Researchers have studied how website design, customer service, and brand image affect consumers' willingness to use online banking (Khan et al., 2023; Sleimi et al., 2020; Zouari & Abdelhedi, 2021). Internet and online banking are supporting facilities where bank customers receive various online banking transaction services such as bill payment, online transfer, account, data search, financial investment, currency exchange, and easy transaction verification (Al Masud et al., 2023; Gazi et al., 2022; Rahi et al., 2020). Alharthi et al. (2022) explored how the quality of e-banking services correlates with customer happiness and satisfaction, assessing the primary factor influencing customer satisfaction. An investigation into internet banking and customer satisfaction was done by Banu et al. (2019). The findings suggest that researchers continue investigating the role of perceived utility in adopting and using online banking services. This research could help identify other factors that influence perceived utility and, in turn, customer satisfaction. (Appendix 1 includes some previous literature.)

Previous research has shown that effortless communication and immediate responsiveness affect the availability and continuity of services for online banking (Gazi et al., 2022; Ghouse et al., 2022). Online banking is a crucial service enhancing customer satisfaction and giving banks a competitive edge. Emphasizing varying levels of service quality is key to satisfying diverse customer needs in the banking sector. (Gupta et al., 2022; Yusup, 2019). Hossain et al. (2021) found that dependability was the key indicator of client fulfillment in this specific marketplace when using mobile banking. Accessibility is often regarded as among the least crucial quality variables that go into the success of a mobile application (Gupta et al., 2022; Hammoud et al., 2018). Online banking applications are rapidly being regarded as emerging m-commerce applications that have the potential to become better service providers in the banking sector (Ling & Ismail, 2021). Furthermore, technological advancement variables such as efficiency and dependability have a direct impact on the proclivity toward utilizing banking services online (Hussain et al., 2014). Online banking is simpler and more secure. Clients have direct exposure to their wallets using the internet, whenever and from anywhere (Alharthi et al., 2022). Several banks provide office postings to support clients who are unable to use Internet banking. Internet banking is growing in acceptance nowadays (Gazi et al., 2022). By using online banking, customers can pay utility bills, access a checking account, purchase online, and transfer money, among other things (Gazi et al., 2024d; Rahi et al., 2020). Financial transactions are made easier with online banking. Online banking might lead to cost savings, boost client loyalty, and attract fresh customers (Gazi et al., 2022; Han & Baek, 2004). The future growth of banking and finance hinges on technological advancements, with internet banking playing a pivotal role in propelling a nation's economic advancement.

2.3. Service quality dimensions and customer satisfaction

Business growth depends on service quality and customer satisfaction (Edward & Sahadev, 2011; Gazi *et al*., 2023). Good service efficiency improves customer satisfaction, engagement, and relationships (Al Masud et al., 2023; Chang et al., 2017; Khan et al., 2024). González et al. (2007) found that Banking service quality improves consumer satisfaction and corporate competitiveness. Identifying and fixing service quality issues can boost customer loyalty. Analyzing intended and perceived services can also characterize service excellence. Service quality ensures customer satisfaction, which is crucial for any organization. (Fauzi & Suryani, 2019; Khan et al., 2023). It is deeply connected to the quality of the goods and facilities rendered and the satisfaction of the customers. Quality of service is the customer's assessment of the needs of the product or service in light of reality. As a result, the maximum success of a company depends on its high level of service (Qasabah & Siddiq, 2021). This leads to customer satisfaction and loyalty, which in turn increases the growth and profitability of the banking industry (Ahmad & Al-Zu'bi, 2011; Gazi et al., 2024c; Ghouse et al., 2022). With several studies indicating a connection between online financial services and consumer pleasure, the issue becomes: What features or aspects of online banking services impact user satisfaction and how? These qualities, according to our review of the literature, may be characterized as efficiency, reliability, and privacy (Gazi et al., 2022; Ghouse et al., 2022). Customer satisfaction has a considerable positive association with empathy, dependability, assurance, responsiveness, and tangibility as service quality dimensions, according to Zygiaris et al. (2022). Customer satisfaction is closely tied to service quality, making it essential to assess a business's degree of service excellence. Understanding customer satisfaction often revolves around the quality of service provided Ling & Ismail, 2021; Ahmad & Al-Zu'bi, 2011; Khan et al., 2023). Privacy and security in online services involve the consumer's perception of safety, protection of personal information, and freedom from risks and uncertainties, which are important aspects of service quality.

The continuously changing financial environment and maintaining the quality of services have succeeded in attracting the banking business. Banks, especially Islamic banks, are forced to persistently reevaluate and change their service offers in light of changing customer service standards in the increasingly competitive financial market (Ahmad & Al-Zu'bi, 2011; Ghouse et al., 2022). Islami Bank, guided by Shariah law, caters to customers' banking needs while adhering to Islamic values. In contrast to conventional banking, Islamic banking transactions strictly avoid interest, speculation, gambling, and illegal interactions (Khan, 2010; Zouari & Abdelhedi, 2021). Online banking's customer satisfaction relies on factors like dependability, efficiency, and user-friendliness, with awareness, security, privacy, and

reliability being crucial. Implementing online banking effectively enhances customer satisfaction, positioning Islamic banks competitively. Evaluating service quality satisfies most customers in the banking industry (Gazi et al., 2024b; Hammoud et al., 2018; Hossain et al., 2023). A survey was conducted in West Java, Indonesia, to determine how Islamic banking services achieve customer satisfaction. The results of the study show that the quality of service has a significant impact on customer satisfaction, which in turn attracts more consumers to avail banking services (Fauzi & Suryani, 2019; Gazi et al., 2022). The findings demonstrate that the service quality characteristics proxies tangible, dependability, awareness, guarantee, and empathy all have a major influence on the degree of customer satisfaction in Islami banking (Gazi et al., 2022; Yusup, 2019). In Islami banking reliability plays a significant role. Reliability has emerged as a critical factor in client fulfillment with Islami banking services (Qasabah & Siddiq, 2021). Compliance has become a key component of service quality, which has the potential to expand Islami banking by increasing consumer trust (Gazi et al., 2022; Yusup, 2019). Customer satisfaction is primarily driven by the dependability of Indonesian Islami banking, which is supported by empathy, reaction, assurance, tangibles, and compliance (Fauzi & Suryani, 2019) Research indicates that responsiveness, communication, and various online banking aspects significantly impact customer satisfaction. When Islami banks meet or exceed predefined responsiveness standards, it enhances consumer satisfaction.

(Hammoud et al., 2018). Customers who use online banking mostly use it to make banking transactions (Gazi et al., 2024a; Putra et al., 2021). Customers' ability to engage with the Islamic bank over the internet is referred to as ease of use (Al Masud et al., 2021). Islamic banks' customers' ability to discover evidence or complete an operation with the smallest amount of struggle (Hussain et al., 2014). Gryaznova et al. (2020) found that aspects of E-SERVQUAL, including responsiveness, modification, and mobility, have a great influence on satisfaction regarding online banking service quality in the Bangladeshi Islamic banking sector (Hussain et al., 2014; Khan et al., 2023). Bangladeshi anchor Islami banks must enhance their facilities linked to these measures in order to fulfill the desires of their customers about aspects of the SERVQUAL model. ATM services connected to these dimensions require additional improvement in order to satisfy Islami banks' clients (Gazi et al., 2022; Hammoud et al., 2018). Ling and Ismail (2021) revealed that customer satisfaction is significantly improved by the privacy and security of internet banking transactions in Islami banks. One such investigation aims to offer a unique contribution to the body of knowledge by evaluating the influence of online banking fundamentals on customer satisfaction results in Jordan's Islami banking business. This study adds loyalty, increasing customer satisfaction (Ahmad & Al-Zu'bi, 2011; Bekiris, 2022). Many studies have been conducted to measure the service quality of online banking by taking the variables of Efficiency, Reliability, Security, and Responsiveness from the SERVQUAL model in the Islami banking sector (Kashyap et al., 2024; Lotko, 2022; Zavareh et al., 2012; Zemblyte, 2015) and finding a positive and significant impact on customers' satisfaction (Figure 1).

The findings of previous studies have revealed a high positive correlation between online banking service quality and customer satisfaction. The present study is divided into four hypotheses concerning the four independent variables investigated.

Hypothesis 1: *Efficiency has a beneficial effect on customer satisfaction with online banking service quality in Islami banks.*

Hypothesis 2: *Reliability has a beneficial effect on customer satisfaction with the quality of online banking services in Islami banks.*

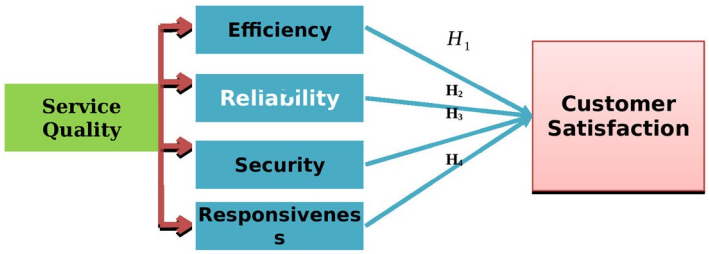

Figure 1. Conceptual framework of the research.

Hypothesis 3: *Security and privacy have a beneficial effect on customer satisfaction with the quality of online banking services in Islami banks.*

Hypothesis 4: *Responsiveness has a beneficial effect on customer satisfaction with the quality of online banking services in Islami banks.*

3. Method and procedures

3.1. Research methods and sample selection

This study employed quantitative descriptive research to examine how the Service Quality (SQ) factors (responsiveness, reliability, efficiency, and security) impacted consumer satisfaction with online banking after COVID-19. We used a judgmental sampling technique to acquire primary data from multiple sources for this study. Judgment sampling, also known as purposive sampling, involves the researcher selecting individuals based on their knowledge of the problem, making it a convenient and cost-effective method (Rahi, 2017).

3.2. Data collection

Data were collected from the Bangladeshi Islamist banking industry using online surveys and a questionnaire. The survey questionnaire was posted online using a Google Form and distributed to blogs, Facebook, Messenger, and other social media platforms. June to December of 2023 have been selected as the period for data collection. Customers of eight Bangladeshi Islami banks in the Dhaka and Barishal divisions received online questionnaires, and information from 280 respondents was successfully collected. The population of Barishal and Dhaka's metropolitan area is the study's focus. The questionnaire was distributed to respondents in this region who had used the Internet banking system of Bangladeshi Islamic institutions and were at least 18 years old. The investigation selected respondents with bank accounts at Islami Bank Bangladesh Limited, Al Arafah Islami Bank, EXIM Bank, Social Islami Bank, and other commercial banks. The survey was administered via Google Forms. The survey was sent to Islami Bank customers via an online data and information platform. Facebook and other social media platforms were used to distribute the questionnaire for the survey. This increased the response rate by allowing more respondents to participate. From the total number of questionnaires sent out for the study, 280 valid questionnaires were ultimately collected, with 20 deemed unsuitable due to incomplete or inaccurate responses. This signifies a response rate of 93.33% based on the final sample size of 280 individuals that have been processed.

3.3. Survey instruments

According to the literature, four significant elements of customer satisfaction with Online Banking service quality are Efficiency, Reliability, Security, and Responsiveness (see Table 1), which are adopted from the SERVQUAL model developed by Parasuraman et al. (1988). Security has become a more critical factor in customer satisfaction in recent years. The security variable is being used for the first time in Bangladesh. As a result, a survey based on aspects of evaluation scales was created to understand the effect of the mentioned areas on customer satisfaction. The initial section of the survey consisted of the indicated scale questions, which examined banking customers' impressions of the factors under consideration. Online customer satisfaction was rated using a Likert scale ranging from 1 to 5, with 1 representing strongly disagreeing and 5 representing strongly agreeing. These factors served as control variables, allowing us to analyze any potential influence on the dependent variable. This enabled for a more diversified group of responders to participate, resulting in a higher participation rate

3.4. Data analysis method

Using SPSS version 26.0, data from 280 customers was gathered and examined in order to prepare the data, analyze the data descriptively, and produce more trustworthy and significant results (Rahman et al., 2022; Hossain et al., 2023). There were no outliers, double entries, missing values, or irrelevant responses. The proposed hypotheses and connections between satisfaction and the quality of online banking

Table 1. Overview of the quality concerns regarding customer satisfaction adopted from SERVQUAL model (Parasuraman et al., 1988).

Sections	Quality concern	Reference	Hints	Focal point
Unit-1	1. Using online banking services saves you time.	SERVQUAL	EFF1	Efficiency
	2. The service provided by Online Banking services is prompt.	SERVQUAL	EFF2	
	3. I am able to accomplish any transaction swiftly using the Online Banking service channels.	SERVQUAL	EFF3	
Unit-2	1. Trust level is high in the safety	SERVQUAL	REL1	Reliability
	2. Online Banking is a trustworthy and reputable service.	SERVQUAL	REL2	
	3. First time provides good service	SERVQUAL	REL3	
	4. Discovered good online service channels.	SERVQUAL	REL4	
Unit-3	1. Online Banking services prevent unauthorized access to my accounts.	SERVQUAL	SE1	Security
	2. My financial transactions are well protected using the Online Banking service.	SERVQUAL	SE2	
	3. Online Banking is safe and secure against fraud and hackers.	SERVQUAL	SE3	
	4. The data that I send is protected by the security devices of the Online Banking services.	SERVQUAL	SE4	
Unit-4	1. Services were accessible for 24 hours.	SERVQUAL	RC1	Responsiveness
	2. Online Banking services reply to client queries as soon as possible.	SERVQUAL	RC2	
	3. If an issue occurs, assistance is accessible right away.	SERVQUAL	RC3	

services have been evaluated using structural equation modeling (SEM). For the statistical analysis of the gathered data based on structural equation modeling, we also utilized AMOS. The SEM method is a more suitable statistical technique because it can minimize structural errors, improve the reliability of the results, and prevent specification errors (Gazi et al., 2024a, 2024b; Sreejesh et al., 2016). This approach is appropriate for analyzing the relationships between the study's hypotheses (Sleimi et al., 2020)

The survey employed a sleek five-point Likert scale (1 to 5), spanning from Strongly Disagree (1) to Strongly Agree (5). Table 1 assigned scores (1 to 5) to each element, reflecting respondents' choices on the refined Likert scale.

3.5. Reliability test

From a statistical perspective, our sample of 280 respondents meets the basic standards. We checked the survey results for reliability using the Cronbach alpha coefficient for all aspects of service quality, including efficiency, reliability, security, and responsiveness. There were five independent factors and one dependent variable in this study: the level of satisfaction customers had with their online banking service. Examination of which shows that his Cronbach's alpha = 0.901, which is considered a very good result (Hair et al., 2011).

On the other hand, the literature proposed four independent variables. Which contained fourteen items of efficiency variables, such that Cronbach's alpha = 0.960. The reliability variable had four items, of which Cronbach's alpha = 0.951. Then there were four items in the Security variable, with Cronbach's alpha = 0.959. Then, for responsiveness, the variable had three items, with Cronbach's alpha = 0.949. Lastly, satisfaction is a dependent variable with a Cronbach's alpha = .882 (see Table 2).

3.6. Inter item correlation matrix

In addition, Table 3 shows the correlation matrix between variables. Result shows that the customer satisfaction has the largest positive link with responsiveness (value of coefficient 0.797), the second efficiency (value of coefficient 0.748), and security (value of coefficient 0.747), (value of coefficient 0.617). Both dependability and customer satisfaction have a moderately favorable relationship (value of coefficient 0.640).

Table 3 also shows that all correlation values between variables are within their critical limits, representing there is no serious concern with multi-collinearity.

4. Analysis and results

4.1. Demographic profiles

Table 4 displays various demographic data. From the survey analyzed, 55.7% of the respondents were female, and 44.3% were male. The majority was from 18–25 years age range (88.7%), preceded by 26–41 years of age (6.3%), 42–57 years of age (2.7%), and more than 57 years (2.3%). The majority' educational qualification was Undergraduate students (69.7%) and most of the respondents were students

Table 2. Reliability test.

	Cronbach's Alpha	Items
Overall model	0.901	18
Efficiency	0.960	3
Reliability	0.951	4
Security	0.959	4
Responsiveness	0.949	3
Satisfaction	0.882	4

Source: Authors calculation.

Table 3. Inter-item correlation matrix.

	Efficiency	Reliability	Security	Responsiveness	Satisfaction
Efficiency	1.000	−.034	.718	.826	.748
Reliability	−.034	1.000	.043	.041	.074
Security	.718	.043	1.000	.894	.617
Responsiveness	.826	.041	.894	1.000	.797
Satisfaction	.748	.640	.617	.797	1.000

Source: Authors calculation.

Table 4. Demographic profiles of the respondents (N = 280).

Variable	Items	Percentage
Gender	Male	44.3%
	Female	55.7%
Age	18–25 years	88.7 %
	26–41 years	6.3 %
	42–57 years	2.7 %
	58–67 years	2.3 %
Educational qualification	Intermediate	4.1%
	Undergraduate	69.7 %
	Graduate	15.6 %
	Master's Degree	7.5%
	PhD	3.2 %
Occupation	Student	88.5 %
	Employee	8.8 %
	Self-employed	1.4 %
	Housewife	1.4 %
Monthly income	Under 5000	72.4 %
	5001–15,000	16.1 %
	15,001–25,000	4.1 %
	25,001–35,000	.2 %
	Above 35,001	7.2 %
Transaction time of m-banking	Every day	15.0%
	Weekly	22.7%
	Monthly	52.2%
	Quarterly	10.1%
Frequently used services of online-banking	Cash in	25.9%
	Cash out	63.0%
	Send money	4.3%
	Buy airtime	6.8%

Source: Authors calculation.

(88.5%). As a counterpoint, 72.4% of respondents reported monthly incomes of BDT 5000 or less. The most common frequency of transactions and services used was monthly (52.2%), followed by cash outs (63%).

4.2. Common method variance (CMV)

The usual common method variance verified this research's data. Several factors may under- or overestimate precedence among explanatory and regressive factors. Podsakoff *et al*. (2003) used Harman's solitary assessment to examine CMV issues. CMV issues may develop if all criteria fall under one structure or if the initial structure describes all information variations. However, the primary component covered 23.31 percent of the variation, and the majority of components had factor loadings greater than one, indicating that there were no significant problems with the data.

Table 5. Descriptive statistics and reliability.

Items	Mean	SD	Skewness	Kurtosis	Min	Max	Overall mean	Overall SD
EFE1	4.10	0.95	−0.66	0.82	1.00	5.00	3.5	.22646
EFE2	3.25	0.88	−0.64	0.55	1.00	5.00		
EFE3	4.56	0.78	−0.55	−1.22	2.00	5.00		
REL1	3.33	0.77	−0.40	0.69	1.00	5.00	3.27	.23885
REL2	3.56	0.75	−0.69	0.77	1.00	5.00		
REL3	4.45	0.68	−0.78	0.56	1.00	5.00		
REL4	3.89	0.92	−1.11	−0.88	2.00	5.00		
SE1	4.44	0.91	−0.77	1.48	1.00	5.00	3.47	.25101
SE2	4.01	0.91	−0.65	1.55	2.00	5.00		
SE3	4.08	1.06	−0.63	0.45	1.00	5.00		
SE4	4.18	0.75	−0.62	0.66	1.00	5.00		
RC1	3.22	0.64	−0.63	0.47	1.00	5.00	3.24	.42293
RC2	3.88	0.88	−0.88	0.42	2.00	5.00		
RC3	4.78	0.93	−1.15	0.85	1.00	5.00		
SA1	3.58	0.93	−0.88	1.24	1.00	5.00	3.2	.43231
SA2	3.47	0.90	−0.77	−1.36	1.00	5.00		
SA3	3.09	0.76	−0.59	0.14	1.00	5.00		
SA4	3.47	1.05	−0.54	0.45	1.00	5.00		

Source: Authors calculation.
Note: EFF: efficiency; REL: reliability; SE: security; RC: responsiveness; SA: satisfaction.

4.3. Descriptive statistics

The component statistics for all five of the used constructs are displayed in Table 5. Each construct's statistics are listed. The table below lists the mean value ranges and corresponding standard deviations for each of the constructs: 3.25 to 4.56; 3.33 to 4.45; 4.01 to 4.44; 3.22 to 4.78; and 3.09 to 3.58, respectively. According to the estimated mean values, the majority of respondents agree with the study's formulated items. The table provides an overview of the overall means for each construct (3.5, 3.27, 3.47, 3.24, and 3.2). Each item's lowest and maximum response levels are displayed in the final result. Skewness and kurtosis were used to check for data normalcy. The values of skewness and kurtosis were used to examine the normalcy of the data collection; values under 2.00 indicate normality (Hair et al., 2011). All results for skewness and kurtosis in the table are within the normal range, demonstrating that the data gathered is normal. The study shows that there is a high level of internal consistency in the responses across all five (5) domains.

Table 5 shows the descriptive statistics for the service quality and customer satisfaction measurement items. Overall, it appears that Bangladeshi Islamic banking clients are disappointed with the facilities offered by their banks (mean = 3.20). Bangladeshi Islami banks are deemed to be the best performers in terms of service quality parameters, with a mean of 3.5. Furthermore, the responsiveness component has the mean (3.24). This suggests that Islami banking clients in Bangladesh have little faith in their institutions' adherence to Islami banking standards.

4.4. The measurement items and model

The measurement model is essential which analyzes the mutual reliability and validity. It explains the interrelationships between the elements of variables and residuals.

Tables 6 and7 show the customer satisfaction indicators. Efficiency, reliability, security and responsiveness have a great impact on customer satisfaction.

Figure 2 presents the measuring model together with the standard factor for your perusal.

The measurement model is accepted because the upshot of the measurement model presented a good level of fit where CMIN/df = 1.589 < 3 (Banerjee & Sah, 2012; Ejigu, 2016; Kant & Jaiswal, 2017), standardized root mean square residual (SRMR) = 0.031 (0.05) and P-close = 0.701 were observed after checking goodness of fit index (GFI) = 0.925, AGFI (adjusted goodness of fit index) = 0.898, NFI = 0.961, CFI = 0.985, RMSEA = 0.0460.08, TLI = 0.982 (Hair et al., 2011). In this case, all fit indices are appropriate and suitable within their expected ranges. The measurement model demonstrated that the summary statistics, which represent the likelihood of influencing variables that impact the quality of online banking services on customer satisfaction, are consistent with one another.

Table 6. Reliability's factors for quality concept regarding customer satisfaction.

Extracted factors	loading	σ^2	CR	Item deleted
Factor 1: Efficiency		24.07	.960	EFF4=.501, EFF5=.605, EFF6=.425, EFF7=.502
EFF1	.964			
EFF2	.920			
EFF3	.949			
Factor 2: Reliability		10.92	.951	
REL1	.935			
REL2	.890			
REL3	.929			
REL4	.903			
Factor 3: Security		22.02	0.959	SE5=.452, SE6=.522 SE7=.250
SE1	.940			
SE2	.917			
SE3	.936			
SE4	.915			
Factor 4: Responsiveness		14.04	0.949	RC4=.205 RC5=.502
RC1	.915			
RC2	.948			
RC3	.932			

Source: Authors calculation.

Table 7. Reliability's factors for quality concept: satisfaction.

Extracted factors	Loading	σ^2	CR	Item deleted
Satisfaction		17.13	.860	SA5 = 501
1. Happy with the Online Banking services transaction process.	.820			
2. Online Banking services is the right option.	.788			
3. Online Banking services is quite pleased.	.768			
4. The quality of the bank's e-services is satisfactory to customers.	.887			

Source: Authors calculation.

4.5. Construct reliability and validity

Table 8 and Figure 2 display a measurement model that was evaluated by evaluating indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. By squaring each outer loading, the indicator's dependability was evaluated, and it has a threshold of at least 0.5 (Banerjee & Sah, 2012). Cronbach's alpha and composite reliability were examined, and the internal consistency reliability was found by achieving the internal consistency threshold value of 0.70 (Hair et al., 2011). Convergent validity can be predicated on constructs having an AVE value of at least 0.50 (Hulland, 1999). The loading, composite reliability, Cronbach's alpha, AVE, and square root of AVE indicators are displayed in Table 8. Indicator loading values, composite reliability, and Cronbach's alpha all exceeded the threshold value of 0.70 as a result. All constructs support reliability, according to the results. Additionally, Table 8 shows the calculated AVE that exceeds the 0.50 threshold value (Ejigu, 2016). Thus, this study meets the requirements for convergent validity.

For all unremoved items above the threshold value of 0.50, standardized weights were observed, and the *p*-values were statistically significant.

Table 9 shows that for each latent variable, AVE'squared root was greater than the estimates of inter-correlations with some other corresponding constructs (Agarwal et al., 2009). No interaction between the constructs was greater than 0.85. (Kant & Jaiswal, 2017). The validity of all constructs is thus confirmed by the fact that all judgments of intercorrelation of all constructs appear to be of strong internal accuracy.

According to Table 10 calibrated cross loading, every outer loading is bigger than its corresponding loading. The estimated square root of AVE, which is shown in Table 9, was larger than the equivalent correlation, confirming the accuracy of the data as a discriminant.

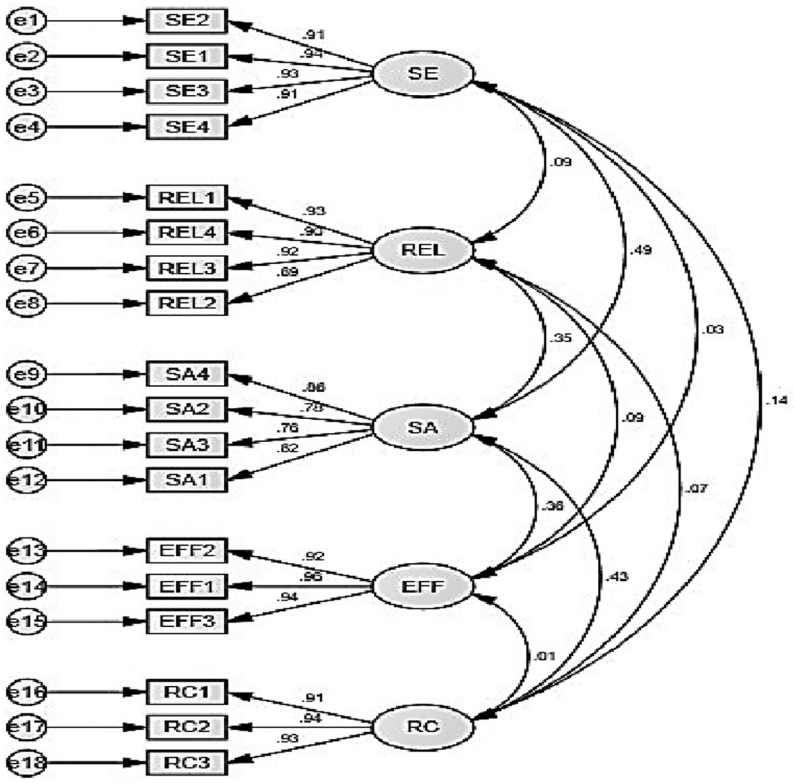

Figure 2. Measurement model.

Table 8. Construct reliability and validity.

Variable	Factor	Loading	AVE	Composite reliability	Square root of AVE"	Cronbach's Alpha
Efficiency	EFE1	0.964	0.889	0.960	0.943	0.960
	EFE2	0.920				
	EFE3	0.949				
Reliability	REL1	0.935	0.829	0.951	.910	0.951
	REL2	0.890				
	REL3	0.929				
	REL4	0.903				
Security	SE1	0.940	0.855	0.959	.925	0.959
	SE2	0.917				
	SE3	0.936				
	SE4	0.915				
Responsiveness	RC1	0.915	0.860	0.949	.927	0.949
	RC2	0.948				
	RC3	0.932				
Customer Satisfaction	SA1	0.820	0.654	0.860	.809	0.882
	SA2	0.788				
	SA3	0.768				
	SA4	0.887				

Source: Authors Calculation.
Note: EFF: efficiency; REL: reliability; SE:security;, RC: responsiveness, and SAS: satisfaction.

4.6 The structural model

It is necessary to analyze the relationship between customer experience features. It will help to understand the customer satisfaction level. Here, the SEM results validated the key hypothesis in this study. The results show that the online banking services quality is linked to the attainment satisfaction of customers about online banking, which further accelerates the banking services.

The standard beta was high and positive, which indicates that increasing the quality of service has resulted in consumer satisfaction in online banking (see Figure 3). That meant the study's central hypothesis was correct. Efficiency, dependability, security, and responsiveness were the four exogenous factors

Table 9. Discriminant validity.

Variable	CR	AVE	MSV	Max	SE	REL	SA	EFF	RC
Security (SE)	0.959	0.855	0.242	0.960	0.924				
Reliability (REL)	0.951	0.829	0.126	0.952	0.093	0.910			
Satisfaction (SA)	0.883	0.654	0.242	0.888	0.492	0.355	0.808		
Efficiency (EFF)	0.960	0.889	0.132	0.964	0.032	0.086	0.364	0.943	
Responsiveness (RC)	0.949	0.860	0.181	0.950	0.145	0.066	0.425	0.013	0.928

Source: Authors calculation.

Table 10. Cross-loading for discriminant validity.

Factor	Efficiency	Reliability	Security	Responsiveness	Customer satisfaction
EFE1	0.8982	0.1840	0.2628	0.3220	0.3695
EFE2	0.7994	0.2325	0.2036	0.2014	0.3036
EFE3	0.1946	0.8189	0.6535	0.5569	0.5714
REL1	0.1946	0.8189	0.6535	0.5806	0.5569
REL2	0.1831	0.7629	0.3849	0.3775	0.3830
REL3	0.2296	0.5230	0.7683	0.4967	0.4453
REL4	0.1946	0.8189	0.6535	0.1946	0.8189
SE1	0.1946	0.8189	0.6535	0.1946	0.8189
SE2	0.1831	0.7629	0.3849	0.1831	0.7629
SE3	0.2296	0.5230	0.7683	0.2296	0.5230
SE4	0.1946	0.8189	0.6535	0.1946	0.8189
RC1	0.1946	0.8189	0.6535	0.1946	0.8189
RC2	0.1946	0.8189	0.6535	0.1831	0.7629
RC3	0.1946	0.8189	0.6535	0.2296	0.5230
SA1	0.1831	0.7629	0.3849	0.7844	0.7629
SA2	0.2296	0.5230	0.7683	0.7884	0.5230
SA3	0.3562	0.4783	0.5059	0.8151	0.8151
SA4	0.3736	0.6828	0.7670	0.7132	1.0000

Source: Authors Calculation.

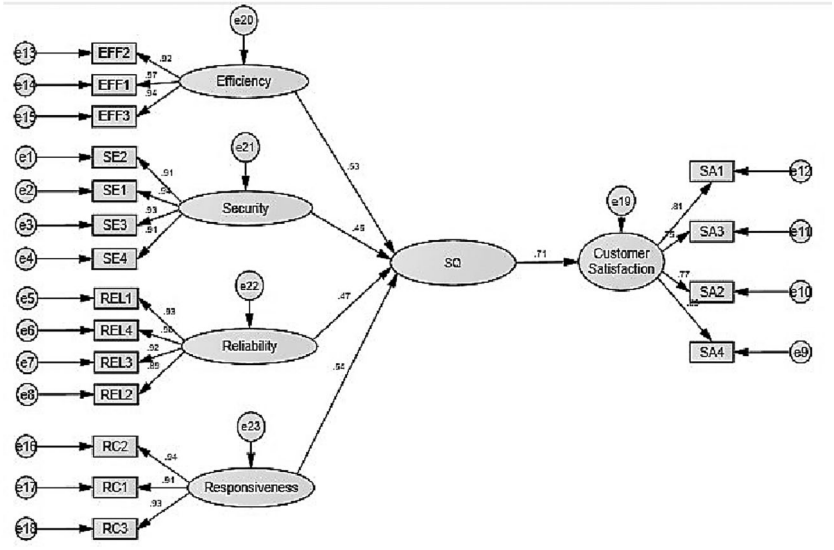

Figure 3. Structural model.

and one endogenous variable in this model (satisfaction). Goodness-of-fit index (GFI) = 0.898, adjusted goodness-of-fit index (AGFI) = 0.897, CFI = 0.984, TLI = 0.982, NFI = 0.93, RMSEA = 0.0460.08, and we looked at standardised root-mean-square residual (SRMR) =0.04 (0.05) (Hair et al., 2011). Each of the fit indices here falls within the accepted range of validity. The end result showed a good degree of match with the measurement model.

4.7. Testing for hypotheses

The AMOS version 24 was used to assess the predicted conceptual model, looking at the connections among all structures (see Figure 4). The analysis findings in relation to the study's hypotheses are

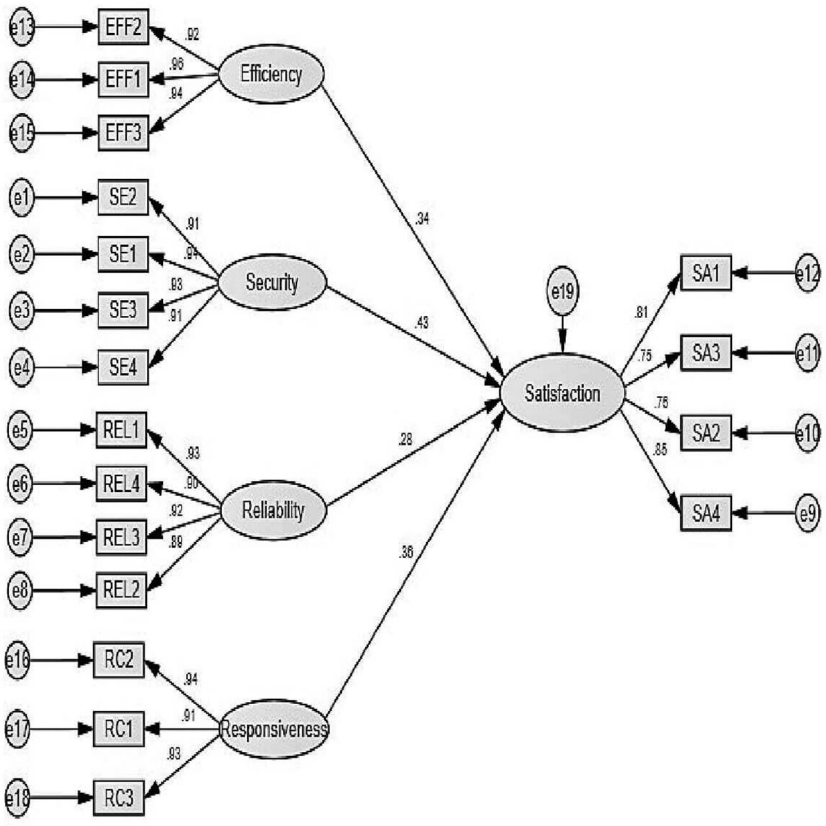

Figure 4. Hypothetical model.

Table 11. Summary of SEM results.

	Variables Path	Estimates	S.E	*t-value*	*P- value*	*Decision*
H1	Customer satisfaction<--- Efficiency	.175	.026	6.695	$p < 0.001$	Accepted
H2	Customer satisfaction<--- Reliability	.162	.029	5.595	$p < 0.001$	Accepted
H3	Customer satisfaction <--- Security	.256	.031	8.230	$p < 0.001$	Accepted
H4	Customer satisfaction <--- Responsiveness	.184	.026	7.095	$p < 0.001$	Accepted

Source: Authors calculation.

presented in Table 11. Figure 4 shows that Standardized path coefficients value 0.34, 0.28, 0.43, and 0.36 for Efficiency, Reliability, Security, and Responsiveness respectively. It suggests that each item of SERVQUAL model possesses enough influence to explain customer satisfaction with online banking services. Lastly, it is revealed because SEM emphasizes the analysis and prediction outcomes that support all hypotheses.

Table 11 illustrates the fallouts of the investigation relating to the hypotheses formulated for the study. The first hypothesis looks at the relationship between efficiency and customer satisfaction. It reveals that efficiency and satisfaction have statistically significant and positive relationships. Efficiency is said to have the following effects on ($\beta = 0.175$; T-Value = 6.6956; p-value <0.001) satisfaction. As a result, there is evidence to support this hypothesis. The relationships between satisfaction and three concepts like reliability, security, and responsiveness are hypothesized in hypotheses 2 to 4. Customer satisfaction is significantly and strongly correlated with reliability ($\beta = 0.162$; T-Value = 5.595; p-value <0.001). Although there is a strong correlation between security and satisfaction, the impact of security on customer satisfaction is only assessed as follows: (β =.256; T-Value = 8.230; p-value <0.001). Responsiveness has a significant relationship with customer satisfaction; the influence that it has on satisfaction is estimated to be (β =.184; T-Value = 7.095; p-value <0.001). The estimated impact of each of the components and their effect on customer satisfaction are shown in Figure 4.

5. Discussion

This study aims to see how efficiency, reliability, security, and responsiveness influence service quality and, finally, satisfy the banking customers of Bangladesh. The value of *p* here is 0.000 (<0.001), which implies that the relationship between efficiency and online banking customer satisfaction is very deep. The outcome is based on Table 11 and Figure 3; it is possible to conclude that efficiency is important. The findings were consistent with earlier studies conducted by other investigators (Kant & Jaiswal, 2017; Pasha & Razashah, 2018; Vetrivel *et al*., 2020). According to the survey results, boosting customer satisfaction is as simple as focusing on these four areas for banks in Bangladesh. They can expand their market share by attracting and keeping additional customers. According to the data, there is a strong correlation between satisfied customers and reliable service (p = 0.000; 0.001). The study found that customers' satisfaction with their online banking experience was significantly correlated with the service's reliability. The results of the study showed a favorable and significant correlation between reliability and online banking customers' overall satisfaction (Tee *et al*., 2023; Vetrivel *et al*., 2020). The results of the study show that there is a security that has a positive relationship between customer satisfaction and security, which is essential in banking business. Here, the *p*-value is 0.000 (<0.001). This outcome was consistent with earlier research (Ahmad & Al-Zu'bi, 2011; Kant & Jaiswal, 2017; Hammoud *et al*., 2018). Finally, the *p*-value for the link between Responsiveness and customer satisfaction is 0.000 (<0.001). Responsiveness has a substantial and positive association with consumer satisfaction in online banking, according to the research. Furthermore, this outcome was consistent with the findings of previous investigations (Hammoud *et al*., 2018; Kashyap *et al*., 2024; Krishnan *et al*., 2023; Salihu & Metin, 2017; Vetrivel *et al*., 2020). Financial institutions may consider the study's conclusions. If financial institutions are serious about raising satisfaction, they must work to strengthen their reliability, security, and responsiveness. To do this, businesses must invest money in technology, train their staff, and establish a service-oriented culture. In this study, Spearman's correlation analysis was used to find the most significant service quality dimensions that impact customer satisfaction in online banking, such as efficiency, reliability, security, and responsiveness. According to Table 3, among the four independent variables in this study, reliability plays a critical role and has the strongest helpful link with customer satisfaction (coefficient value 0.86). In this investigation, the researcher discovered that the independent variable of security requires improvement since the coefficient value is the lowest, at 0.68.

The results show that the quality of service alone is not the main factor that satisfies the customers of the bank. There are many more ingredients that satisfy consumers. The most important feature of service quality is reliability, as confirmed by the foregoing studies (Ejigu, 2016; Kant & Jaiswal, 2017; Zouari & Abdelhedi, 2021). It has been discovered that efficiency, reliability, security, and responsiveness are significant and positive factors in service quality. A study on Lebanese banking found that there are four independent factors associated with the quality of online banking services that are capable of achieving consumer satisfaction. There are four main features that should be considered: speed and ease of use; reliability; privacy and security; and interaction and reaction (Yusup, 2019), which found a clear link between the dimensions of Internet banking service quality and consumer satisfaction with banks. However, while the dimension of security and privacy had a favorable and substantial influence on customer satisfaction, corroborating prior studies (Jun *et al*., 2004; Salihu & Metin, 2017), its impact appears to be less than that of the other service quality factors. Finally, there is a lack of consistency in terms of responsiveness. It was discovered that having a large and favorable influence on client satisfaction is high, as it has been in past research (Gazi *et al*., 2022; Parasuraman *et al*., 1988); Kashyap *et al*., 2024). Effective communication and prompt response times may both be challenging to achieve. Necessary for clients having problems with online banking services and appears to have a substantial influence on client satisfaction.

The quality of service and customer satisfaction has been extensively studied in the literature over the past two decades, with much of the research focused on conventional banking. However, more research on Islamic banks in Bangladesh needs to be conducted, particularly in COVID-19. Customers evaluate the quality of a bank before choosing it, and Islamic bank managers need to understand the criteria that customers use to make these evaluations. This article highlights the importance of determining the quality of services in Bangladeshi Islamic banks and their impact on customer satisfaction.

6. Conclusion

This study was conducted to assist bank managers in determining the quality of bank services by investigating the influence of online banking service quality following COVID-19 on customer satisfaction in the Bangladeshi banking sector. This study demonstrates the significance of quality assessment for a corporation. Similar studies were conducted for other countries and markets, but not much research has been done on the quality of services provided by Islami Bank in the Bangladeshi Islami banking industry. The study took a quantitative approach, with a survey given to bank customers in Bangladeshi Islami banks after COVID-19. As a merge study, this one may be less significant than a chronic one because it examines internet banking users' behavior at a single moment in time. As this study does not include all banks, it might be a second restriction for consumers of Bangladeshi banks. Not everyone in Bangladesh still knows how to use online banking services; it is still very new. Bangladeshi Islami banks need to present their services to consumers. It is therefore essential to evaluate the quality of service provided by the bank. The study highlights how the quality of a bank's service is closely linked to the customer's satisfaction with the bank.

Islamic banking customers are generally satisfied with the services, preferring them over conventional banks. To deepen the relationship, Islamic banks must emphasize Shariah principles, fostering trust and enhancing customer perception. This study highlights the importance of assessing service quality in Islamic banks post-COVID-19 in Bangladesh. The findings indicate that customer satisfaction is determined by efficiency, reliability, responsiveness, and security. Among the four independent variables, the most important dimension is reliability after COVID-19, which has the greatest influence. Reliability plays a critical role and has the strongest link with customer satisfaction. So this is the result of the research advances, knowledge, and important aspects of the service of Islami banks in Bangladesh after COVID-19.

The results of this study could help managers at Bangladeshi Islami banks better understand key psychometric characteristics and how they affect customers' behavioral intentions, which would enable them to develop competitive strategies. Our study will specifically offer praiseworthy insights on how SERVQUAL dimensions relate to achieving customer satisfaction and loyalty, which will strengthen benchmarking alternatives and help businesses, compete more successfully in the online banking sector.

6.1. Implication of this study

This study offers unique theoretical and practical underpinnings since it implements and investigates correlations between constructs in a way that has never been done before in the context of Islamic banking, especially in the context of Bangladesh after the COVID-19 pandemic. This study makes significant theoretical contributions by addressing critical gaps in the literature on banking, particularly in the context of Islamic banking in Bangladesh during the COVID-19 pandemic. First, it enhances the understanding of customer satisfaction in online banking by exploring how the pandemic has reshaped user experiences and expectations. By investigating the unique relationships between various constructs—such as service quality, security, and customer trust—this research adds depth to existing models of customer satisfaction in Islamic banking. Second, it contextualizes the impact of external shocks, like the COVID-19 pandemic, on the banking sector in developing countries, providing a framework for analyzing similar effects in other regions. This research also extends the application of the modified SERVQUAL model within the specific cultural and operational framework of Islamic banking, contributing to both theoretical and practical discussions in financial services research. Ultimately, the findings will serve as a foundation for future studies on customer behaviour and satisfaction in online banking, particularly within Islamic financial institutions in developing contexts.

This research also presents multiple practical consequences for the banking industry, particularly Islamic banking in Bangladesh. Islamic banks have to augment their services by utilizing digital infrastructures like branchless banking and fintech to address contemporary client demands and enhance efficiency. Prioritizing client happiness and loyalty is essential, requiring adherence to Islamic principles and thorough worker training. Furthermore, instituting an Islamic executive development program in partnership with educational institutions will foster proficient executives. Regulatory authorities

can improve oversight procedures through research findings, while bank boards can augment strategic decision-making processes. Investors can benefit from understanding the factors influencing customer happiness, while customers can promote enhanced services. These insights can enhance both Islamic and regular banking, improving service quality and customer happiness within the financial industry. his research presents multiple practical consequences for the banking industry, particularly Islamic banking in Bangladesh. Islamic banks have to augment their services by utilizing digital infrastructures like branchless banking and fintech to address contemporary client demands and enhance efficiency. Prioritizing client happiness and loyalty is essential, requiring adherence to Islamic principles and thorough worker training. Furthermore, instituting an Islamic executive development program in partnership with educational institutions will foster proficient executives. Regulatory authorities can improve oversight procedures through research findings, while bank boards can augment strategic decision-making processes. Investors can benefit from understanding the factors influencing customer happiness, while customers can promote enhanced services. These insights can enhance both Islamic and regular banking, improving service quality and customer happiness within the financial industry.

6.2. Limitations and future research

Since the whole research sample is made up of people who use Islami banks in Barishal and Dhaka divisions in Bangladesh, it is unlikely that the results are authentic for all of Bangladesh. In reality, earlier investigations in several Bangladeshi cities have yielded divergent results. To get more complete results, future studies must use quota sampling to determine how customers in different parts of Bangladesh feel about Islamic banking. Secondly, the Islamic banking sector of Bangladesh is a promising and well-established sector. Thousands of customers are transacting with Islamic banks. But this study used the data and opinions of only 280 customers, which is one of its weaknesses of this study. If we conduct future research with a larger number of samples, the results will be more authentic. Future research may be conducted to measure customer satisfaction with online banking service quality in the Islamic banking sector as well as the traditional banking sector. Above all, if future research is conducted with sophisticated models, more samples, updated questionnaires, modern analysis tools, and more time and money invested, the results will be more acceptable and will benefit the respective fields. And finally, the future study could examine the impact of new technologies, such as artificial intelligence, chatbots, and blockchain, on customer satisfaction with online banking services in developing countries.

Ethical approval

The research adhered to the Declaration of Helsinki and received approval from the Institutional Ethics Committee of the School of Management, Jiujiang University, China, for human studies (SOM/JJU/EA/091/2022): 28 May 2022. Written informed consent was obtained from all participants in the study. Participants in this study were not coerced into answering any questions, and all responses were given voluntarily. Participants were informed of the study's purpose, and that purpose was mentioned explicitly in the questionnaire. Researchers ensured that all personal information about the study participants was kept private and confidential. Each participant expressly authorized the researchers to collect, use, and reuse their data in this study. The researchers thank all those who participated in this study or helped in any way.

Authors' contribution

Conceptualization, Md. Abu Issa Gazi and Abdullah Al Masud; Data curation, Md. Abu Issa Gazi, Md. Alamgir Hossain, Masuk Abdullah, Mohammad Bin Amin; Funding acquisition, Md. Abu Issa Gazi, Masuk Abdullah and Abdul Rahman bin S Senathirajah; Investigation, Md. Alamgir Hossain, Masuk Abdullah and Abdul Rahman bin S Senathirajah; Methodology, Md. Abu Issa Gazi, Abdullah Al Masud and Mohammad Bin Amin; Project administration, Md. Abu Issa Gazi; Resources, Abdullah Al Masud, Md. Alamgir Hossain, Masuk Abdullah, Mohammad Bin Amin; Software, Masuk Abdullah and Mohammad Bin Amin; Validation, Md. Alamgir Hossain and Masuk Abdullah; Visualization, Masuk Abdullah and Mohammad Bin Amin; Writing – original draft, Md. Abu Issa Gazi, Abdullah Al Masud, Masuk Abdullah and Mohammad Bin Amin; Writing – review & editing, Md. Abu Issa Gazi, Abdullah Al Masud, Md. Alamgir Hossain, and Abdul Rahman bin S Senathirajah.

Disclosure statement

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Data availability statement

The data presented in this study are available on request from the corresponding author.

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Appendix

Appendix 1: Previous studies on online banking.

Authors	Objectives	Context	Sample	Main construct	Key findings
Rahi *et al*., 2020	The intention of customers to use online banking was evaluated by website design, customer service, and brand image.	Pakistan	500	website design (Rahi *et al*., 2020), e-customer service (Alnaser and Abed, 2017), and brand image (Rahi & Ghani, 2016)	The main variables influencing users' behavioral intent to use online banking.
Khan *et al*., 2023	Examine the impact of e-service quality on the e-loyalty of online banking customers in Pakistan during the COVID-19 pandemic.	Pakistan	442	E-service quality (Agarwal *et al*., 2009}, E-satisfaction (Rahi *et al*., 2020), e-loyalty (Hammoud *et al*., 2018)	The findings of this study showed that e-service quality had a significant positive effect on e-loyalty.
Bekiris, 2022	Investigate the impact of e-banking services on customer satisfaction in Greece during the COVID-19 pandemic.	Greece	237	Customer satisfaction (Misbach & Hadiwidjojo, 2013), e-banking (Rahi *et al*., 2020),	The technology of e-banking and ease of use were the most important factors to customer satisfaction with e-banking in Greece.
Gupta *et al*., 2022	This research aims to examine recent developments in the rapidly expanding field of digital banking in India.	India	500	Digital channels (Rahi *et al*., 2020), Customer service (Hussain *et al*., 2014)	Digital technology is changing bank operations. Banks can save money and improve customer service.
Hammoud *et al*., 2018	Find out which aspect of the quality of the E-Banking service has the most potential to impact customer satisfaction.	Lebanese	258	Reliability (Liao & Cheung, 2002), Efficiency (Khadem & Mousavi, 2013), Ease of use; Responsiveness andcommunication (Madu & Madu, 2002); and Security and privacy (Agarwal *et al*., 2009)	In this specific market, reliability was indeed the primary indicator of customer satisfaction.
Hussain *et al*., 2014	The creation of high-quality dimensions and metrics that may be used to gauge the usefulness of mobile banking applications.	Malaysia	402	Efficiency, Effectiveness User Satisfaction (Hussain et al., 2014), Trustfulness, Learnability (Seffah *et al*., 2006)	Accessibility aspects and assessment are seen to be crucial success elements for several emerging software products that enable users to carry out basic tasks extremely easily to accomplish the specified objective without any difficulty.
Fauzi & Suryani, 2018	Using a CARTER model, examine the Indonesian Islami banking sector's aspect of service quality.	Indonesia	392	Compliance (Lone *et al*., 2017), Assurance (Agarwal et al., 2009), Reliability (Amin & Isa, 2008), Tangible Empathy (Al-Tamimi & Al-Amiri, 2003), Responsiveness (Misbach & Hadiwidjojo, 2013).	Customers' attitudes regarding Indonesian Islami banking are increasingly influenced by reliability.
Yusup, 2019	To research how customer satisfaction levels in Islami banking are affected by service quality.	Indonesia	156	Tangible, Reliability, Responsiveness, Assurance, Empathy (Parasuraman *et al*., 1988).	Customer satisfaction in Islami Banking is affected by the Service Quality factors associated with tangible dependability, responsiveness, assurance, and empathy at the same time.
Ling & Ismail, 2021	To determine which SQ parameter has the greatest impact on customer satisfaction.	Malaysia	262	Responsiveness (Parasuraman *et al*., 1988), Trust (Grabner & Faullant 2008), Convenience (Massilamany & Nadarajan, 2017), Efficiency (Hammoud *et al*., 2018) Security (Ahmad & Al-Zu'bi, 2011)	While timeliness is the least important factor, it has the strongest and most significant association with customer satisfaction.