

Brand loyalty among mobile users

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Abstract

The purpose of this study is to explore the factors that influence brand loyalty among young mobile phone users. The study establishes a conceptual framework and tests hypotheses with a sample of 315 respondents from mobile phone users of various brands to explore the factors influencing brand loyalty. A structured questionnaire is used to gather data, and a descriptive and causal-comparative research design is used to assess the impact of perceived brand quality, customer satisfaction, brand image, brand experience, and social media marketing on brand loyalty. The study reveals statistically significant positive correlations between the study variables and brand loyalty using both descriptive and inferential statistical techniques. Notably, perceived brand quality, customer satisfaction, brand image, brand experience, and social media marketing all have significant positive connections with brand loyalty, showing that improving these factors can lead to higher user loyalty. Regression analysis, on the other hand, shows that only perceived brand quality, customer satisfaction, and brand experience have a significant impact on brand loyalty. This result emphasizes the important roles of quality, customer satisfaction, and brand experience in developing long-term brand loyalty. These findings have implications for users, suppliers, and regulatory agencies, shaping strategies and approaches for developing long-term brand loyalty.

Keywords: Perceived Brand Quality, Image, Experience, Customer Satisfaction, Social Media Marketing

Introduction

With the broad adoption of mobile phone technology in the late 1990s, the mobile phone industry witnessed a rapid shift, marking a pivotal moment in the telecommunications sector. Ordinary consumers held mobile smartphones for the first time, paving the way for these devices to become pervasive and highly portable (Goodwin, 2016). This transition was marked by Arthur (2012), who described the smartphone as a revolutionary and magical invention that appeared to be five years ahead of its time when compared to other mobile phones. In the era of Industry 4.0, the use of smartphones and the incorporation of technological advances are even transforming industrial processes (Rajbhandari et al., 2020). Indeed, smartphones have gone beyond the traditional notion of a phone, incorporating a wide range of multimedia features. These devices not only enabled communication via text messaging and visual voicemail, but they also acted as cameras, portable media players, and Internet clients, with features such as email, online browsing, and Wi-Fi networking (Kuyucu, 2021). Furthermore, modern smartphones have fast processing rates and minimal power consumption, allowing for activities like gaming, web browsing, and even new technologies like virtual reality (Divestopedia & Institute, 2016).

In the field of marketing, the concept of brand loyalty is central. Brands are the symbols and signals that customers identify with certain items or collections, such as the brand name, logo, and other visual features

(Hoyer & Macinnis, 2008). Brand loyalty reflects a consumer's good attitude toward a specific brand, which leads to regular purchases and unwavering support for that company. It denotes a long-term consumer-brand relationship in which loyalty continues even when competitors offer appealing alternatives (Thiele & Bennett, 2001). Hoyer and McInnis (2008) emphasize the relevance of brand loyalty in the consumer decision-making process since it influences purchasing decisions significantly. Brand loyalty is more than just picking a brand once; it is about continuously choosing the same brand over time. Interestingly, even while mobile phones frequently exceed their expectations, mobile users who express high levels of happiness with their mobile devices appear less likely to transform this satisfaction into brand loyalty. This presents a challenge for firms looking to convert users into loyal consumers and social champions.

The mobile phone industry is one of the world's fastest-growing industries, with incredible demand over the years. Even during the COVID-19 pandemic, this market remained unaffected, instead providing technology-driven solutions that helped mitigate the pandemic's negative effects (Karki, 2022). Because of the long-run cointegrating relationship between sectoral demand and the economy (Karki, 2012, 2018), the rise of industry eventually benefited economic growth. Despite this growth, smartphone sales have fluctuated, as indicated by a 6.7% drop in worldwide shipments in the third quarter of 2021 (IDC, 2021). The success of mobile phones is determined by a variety of social dynamics and external factors, including pricing, brand loyalty, warranties, and technological features. Karki (2020) advised caution when making investment decisions and developing pricing strategies in order to lead and maintain the market base. Further, branding plays an important function in this setting, allowing companies to establish meaning and value around their products while also developing customer loyalty. The mobile phone, previously seen to be a luxury item, has now become a daily need, leading manufacturers to obtain a better understanding of client purchase behavior. As such, the purpose of this study is to explore the factors that influence brand loyalty in the ever-changing mobile phone market, where customer expectations and aspirations are constantly changing, pushing the sector toward technological advancements (Kotler & Armstrong, 2010).

This study focuses on smartphone users, in particular, a generation with a strong marketplace and a specific brand perspective. It is crucial to understand that the mobile phone market is dynamic, with ongoing product innovation, technical developments, and constantly changing design trends encouraging consumers to adopt new models on a regular basis (Li et al., 2010). Given this context, an examination of brand loyalty among smartphone users is a worthwhile topic for research. Smartphones have emerged as leading competitors in the mobile phone market, increasing competition among several companies (Tabish et al., 2017). As a consequence of globalization and enhanced ICT infrastructure, the number of e-payment users is increasing globally. Nepal has also witnessed a rapid increase in the number of mobile service consumers (Karki et al., 2021). According to a recent study, multiple key factors affecting mobile phone brand loyalty, including perceived brand quality, brand image, customer satisfaction, brand experience, and the impact of social media marketing, are all important. So, specific objectives have been developed to achieve the core research goal of evaluating the effect of identified key factors on brand loyalty. With this research, this study seeks to provide insight into the multifaceted and ever-changing landscape of brand loyalty among mobile consumers, particularly those who interact with leading smartphone brands. The following sections of this study deal with these objectives and assumptions, giving a thorough analysis of the factors that shape brand loyalty in this dynamic market.

Review of Literature

Brand loyalty has been a focus of marketing researchers, and its importance lies in the financial implications it holds. According to Ganesh et al. (2000), brand-loyal customers are the most valuable segment for a company because they spend more than non-loyal customers. Brand loyalty research is generally based on two key components: attitudinal loyalty and behavioral loyalty (Russell-Bennett et al., 2007). While behavioral loyalty includes variables such as proportional purchasing, purchase sequence, and likelihood of making purchases,

attitudinal loyalty is frequently given more emphasis in studies. According to Dick and Basu (1994), depending exclusively on behavioral loyalty is insufficient for explaining the development and evolution of brand loyalty.

Attitudinal loyalty, described as "the consumer's conscious or unconscious decision, expressed through intention or behavior, to repurchase a brand continually" (Kabiraj & Shanmugan, 2011), provides a wider view of brand loyalty. It includes not only recurring purchases but also the emotional and psychological attachments that consumers build with a brand. Dick and Basu (1994) proposed a model that integrates attitude and behavior loyalty in order to fully understand brand loyalty. According to their conceptual framework, loyalty is the result of a customer's relative attitude toward a brand and their repeat purchasing behavior. Within this concept, there are four types of loyal customers: true loyal, spurious loyal, latent loyal, and non-loyal. True loyal customers have high levels of both attitudinal and behavioral loyalty, whereas spurious loyal customers exhibit high behavioral but low attitudinal loyalty. Latent loyal customers have a high level of attitude loyalty but a low level of behavioral loyalty, whereas non-loyal customers have low levels of both attitude and behavioral loyalty (Dick & Basu, 1994).

The nature of brand loyalty differs significantly between durable and non-durable goods, as well as between consumption goods (Thiele & Bennett, 2001). Consumption goods, which are purchased frequently, contrast with durable goods, which are purchased less frequently. Aaker (1996) relates consumers' emotional ties to a brand's value, which creates trust, corresponds with their beliefs and expectations, and keeps them committed to the brand despite competitive strategies. Bhandari et al. (2021) argued that incorporating new technologies, personalizing the customer experience, and adopting relationship-based pricing are the most effective customer retention strategies for businesses. Many other elements, such as socio-ecological-religious and traditional ones, affect how people use technology to consume goods (Maharjan et al., 2022). Similarly, cognitive characteristics influenced customer purchase decisions but had no direct effect on brand loyalty, according to Khammuang et al. (2019). Further, Surucu et al. (2020) stated that people prefer to buy brands they know and trust, minimizing risks associated with new products. Customers' purchasing decisions for cell phones were heavily influenced by consumer perception.

Perceived Brand Quality: According to Aaker (1991), customers' perceptions of brand quality have a significant impact on brand loyalty and a company's overall performance. This perception builds trust and a warm relationship with customers, enhancing their brand loyalty (Pappu et al., 2006). According to the authors, the quality of durable items is influenced by criteria such as accessibility, serviceability, durability, performance, and exceptional features. According to Zeithaml (1987), perceived quality represents a consumer's assessment of an entity's overall excellence or superiority. It differs from pleasure in that it is concerned with the consumer's perception of performance in comparison to their expectations (Rowley, 1995). According to Gurbuz (2008), when perceived quality is seen as the most essential aspect of the brand, it leads to brand loyalty. Improved perceived brand quality can boost a company's profitability by enhancing brand loyalty and customer happiness (Apéria & Back, 2004). Kan (2002) defined perceived quality as the overall information and experiences used while making a purchase, taking into account factors such as product benefits, durability, reliability, and functionality. Aaker (1996) distinguished between perceived and real quality, stating that negative views of a product can persist even if its quality improves in the future. Consumers' assessments of product quality are frequently impacted by previous experiences, resulting in subjective judgments (Holbrook & Corfman, 1985).

H1: There is a significant relationship between perceived brand quality and brand loyalty.

Brand Image: Brand image is important in brand loyalty because it influences consumers' perceptions and assessments. Keller (1993) defined brand image as "the perceptions of customers reflected by different associations they hold in mind about the brand." These connections are formed by brand-related stimuli and exist in the memory of customers. Coulter and Zaltman (1994) argue that brand image is a critical determinant in the successful launch of products and services. Roth (1992) defined brand image as the meanings that customers connect with products. Brand image influences brand loyalty by improving both attitudes and

behaviors. It shapes clients' entire impression and perception of a brand (Upamannyu and Mathur, 2012). Several aspects influence this impression, including reputation, function, brand name, and overall values, where psychological contract breach negatively impacts professional commitment (Upamannyu & Mathur, 2012; Bhattarai et al., 2020). A favorable brand image fosters favorable thoughts and attitudes toward the brand, which leads to repeat purchases (Lee et al., 2011). The color, packaging, weight, design, or texture uniqueness of a brand contributes to its brand image (Kim & Sullivan, 1998). Positive brand image is associated with brand loyalty, according to Kuusik (2007), who claims that it is the most important characteristic influencing brand loyalty. According to Lazarevic (2011), the most impressive measure for building brand loyalty is the brand image.

H2: There is a significant relationship between brand image and brand loyalty.

Customer Satisfaction: Customer happiness is critical in determining a company's success (Luo and Homburg, 2007). It is defined as "the extent to which a product's perceived performance (whether goods or services) matches a buyer's expectations" (Kotler & Armstrong, 2010). Customer satisfaction is a crucial motivator for future purchases (Mittal & Kamakura, 2001). It represents the totality of client expectations both before and after purchasing a product (Serkan & Gökhan, 2005). Customer satisfaction is linked to increased customer loyalty, positive word-of-mouth, and persistent repurchasing behavior (Chi and Qu, 2008; Faullant et al., 2008). Customer satisfaction, according to Shukla (2004), is the "customer's psychological response to his/her positive evaluation of the consumption outcome concerning his/her expectation." This evaluation takes place after consumption and compares expected and actual performance (Shukla, 2004). Customer expectations drive customer satisfaction, which in turn influences product performance (Churchill & G. A, 1982). A brand's success is determined by client expectations, which include hardware, software, style, and other functionalities (Churchill & G. A, 1982). Customers who are pleased with a product tend to continue with it, fostering brand loyalty. They are more likely to spread favorable word of mouth and purchase things again (Ha & John, 2010). Customer satisfaction, on the other hand, does not ensure loyalty. Customers who are pleased with a product may switch to another (Ha & John, 2010). Satisfied customers who have a positive attitude toward the product are more inclined to repurchase (Ha & John, 2010).

H3: There is a significant relationship between customer satisfaction and brand loyalty.

Brand Experience: Brand experience is a multidimensional notion that includes subjective, internal consumer responses to brand-related stimuli—sensations, thoughts, cognitions, and behavioral responses (Brakus et al., 2009). It is formed as a result of consumers' experiences with tangible or intangible parts of a brand and manifests as emotional and cognitive reactions. According to Brakus et al. (2009), there are four key elements of brand experience: sensory, emotive, cognitive, and behavioral. Brand experience is a major motivator for brand repurchase. Consumers who have a great brand experience are more likely to recognize and remember the brand, which may result in repurchases. It influences the readiness to try additional products within the same brand's line extensions as well as the willingness to repurchase the same brand (Kim & Sullivan, 1998). Positive brand experiences increase client trust and establish warm relationships, resulting in brand loyalty (da Motto Filho, 2012). A pleasant and memorable brand experience leaves a positive impression and contributes to the building of brand loyalty (Hoch and Deighton, 1989).

H4: There is a significant relationship between brand experience and brand loyalty.

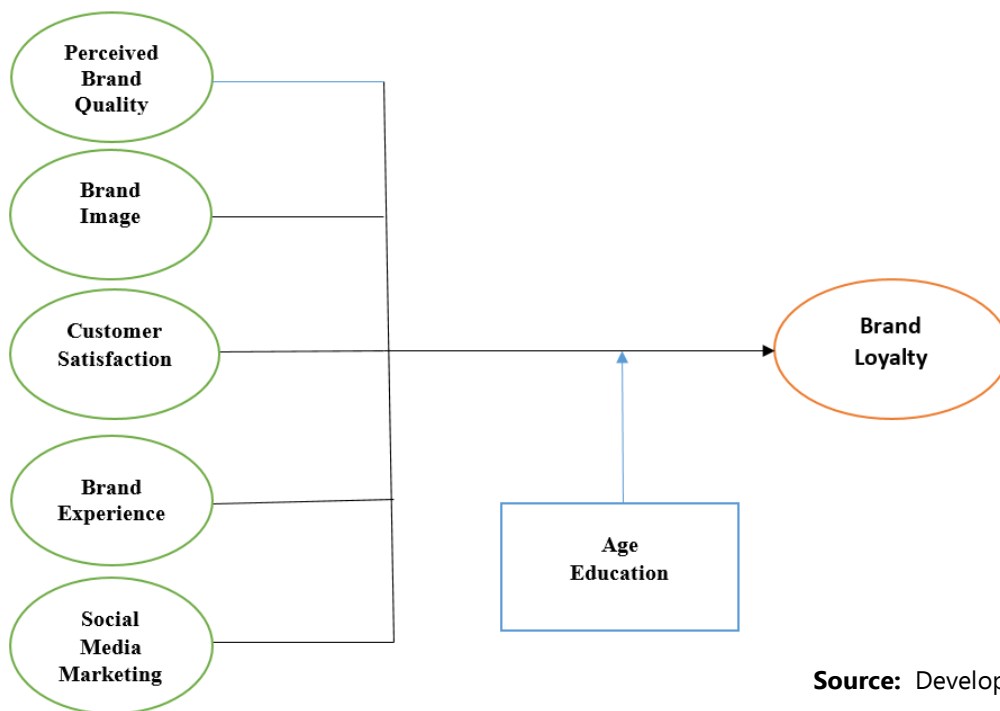
Social Media Marketing: Social media marketing has emerged as a revolutionary force in modern marketing, providing organizations with fresh opportunities to communicate with customers (Tuten & Solomon, 2015). Kaplan and Haenlein (2010) define social media as online applications that facilitate the development and exchange of user-generated content and are anchored in the ideology and technology of Web 2.0. Social media marketing makes use of these platforms to facilitate interactions between consumers and businesses, allowing for cost-effective access to customers at various phases of the purchasing cycle (Tuten & Solomon, 2015). Social media marketing is essential for building and maintaining brand loyalty. It allows businesses to

advertise their brands via social networking sites, blogs, and other platforms, developing consumer loyalty through interactions and information exchange (Zarella, 2010; Kaplan & Haenlein, 2010). Favorable social media interactions can result in favorable word-of-mouth and affect brand loyalty (Mangold & Foulds, 2009). Companies frequently hire social media marketing consultants and professionals to develop compelling content and activities that increase brand loyalty in the online environment. The ability of social media marketing to facilitate brand creation, create brand awareness, recognition, recall, and eventually affect brand loyalty (Gunelius, 2011) is what makes it effective.

H5: There is a significant relationship between social media marketing and brand loyalty.

Understanding the drivers of brand loyalty is crucial in the mobile phone sector, dominated by a young consumer base seeking innovation, prestige, and affordability. There exist additional factors that may trigger users and investors to respond promptly to the market, with investor sentiment being a significant one (Karki, 2017). According to Dahal et al. (2020), the level of technological advancement and innovativeness is a crucial determinant of organizational performance that develops brand loyalty. Empirical studies underscore the interconnectedness of factors like perceived brand quality (PBQ), customer satisfaction (CS), brand image (BI), brand experience (BE), and social media marketing (SMM) in shaping brand loyalty (BL). This complexity, coupled with ever-evolving consumer behavior and mobile technology, presents ongoing challenges and opportunities for marketers and researchers. Based on the literature, the conceptual framework of this study is as illustrated in Figure 1.

Figure 1
Conceptual Framework of the Study



Source: Developed by the authors

Research Method

To explore the potential relationship between various independent and dependent variables, this study used a descriptive and causal-comparative research design. This design aided understanding of the magnitude, direction, and nature of observed relationships. A causal-comparative research approach was used to explore the impact of perceived brand quality, customer satisfaction, brand image, brand experience, and social media marketing on brand loyalty.

A structured questionnaire method was used to obtain primary data. Individuals who currently owned smartphones were the study population. Respondents were divided into three age groups: those under the age

of 25, those between the ages of 25 and 40, and those over the age of 40. Purposive sampling was used in the study, which targeted well-educated individuals who could provide relevant responses. The questionnaires were distributed by email and social media channels such as Facebook, with respondents receiving a link to complete the questionnaire. Data analysis required the use of several statistical techniques such as correlation, regression, mean, and standard deviation, which were carried out in SPSS and Excel as needed.

Validity and Reliability

The strength and accuracy of the data collection methods and analytic procedures used in this study are referred to as validity (Fisher, 2007). The study achieved validity by using a well-designed instrument with measurements that corresponded to the research's conceptual framework. To improve this issue, cross-validation was performed with feedback from colleagues and family members working in the financial sector.

Another critical feature is reliability, which assures consistency in study results when repeated under identical settings and with the same measurements (Fisher, 2021). The primary data in the study was subjected to thorough reliability testing, including the Cronbach's Alpha Test. A Cronbach's alpha threshold value of 0.70 was used, as recommended by Hair et al. (2010), to ensure a robustness test. Table 1 summarizes the reliability test results, which confirm the study's reliability and the validity of responses across all constructs, with each illustrating a Cronbach's Alpha score of more than 0.70. This adds to the credibility of the study's methodology.

Table 1
Reliability Test

Particulars	Cronbach's Alpha ()	No. of Items
Perceived Brand Quality	0.924	6
Brand Image	0.918	6
Customer Satisfaction	0.911	6
Brand Experience	0.909	6
Social Media Marketing	0.912	6
Brand Loyalty	0.917	6

Results and discussion

The proposed statistical tools, such as descriptive analysis, correlation analysis, regression analysis, and hypothesis testing, were systematically used, and the results were presented to gain a better understanding of the issues. The major findings were discussed in order to draw valid and purposeful conclusions.

Descriptive Statistics

From mobile users, 315 valid responses were obtained. Approximately 400 survey questionnaires were distributed online, achieving an outstanding 79% response rate.

Table 2
Demographic Variables

Description	Category	Frequency	Percentage
Gender	Female	162	51.4
	Male	153	48.6
	<i>Total</i>	<i>315</i>	<i>100.0</i>
Age	Below 25 years	116	36.8
	25-40 years	150	47.6
	Above 40 years	49	15.6
	<i>Total</i>	<i>315</i>	<i>100.0</i>
Education	Under Graduate	64	20.3
	Graduate	145	46.0
	Post Graduate	106	33.7
	<i>Total</i>	<i>315</i>	<i>100.0</i>

Description	Category	Frequency	Percentage
Income Level	Below 20000	112	35.6
	21000- 40000	85	27.0
	41000- 60000	114	36.2
	Above 60000	4	1.3
	<i>Total</i>	<i>315</i>	<i>100.0</i>
How long have you used the Smartphone?	1 - 2 years	76	24.1
	3 - 4 years	99	31.4
	Above 4 years	140	44.4
	<i>Total</i>	<i>315</i>	<i>100.0</i>
How often do you change your Smartphone?	1 - 2 years	75	23.8
	3 - 4 years	156	49.5
	Above 4 years	84	26.7
	<i>Total</i>	<i>315</i>	<i>100.0</i>

The research findings, as presented in Table 2, provide useful insights into the survey respondents' characteristics. The majority of poll respondents were female, and a sizable proportion were between the ages of 25 and 40, showing a demographic trend among smartphone users. Furthermore, the respondents were mostly graduate students with earnings ranging from Rs 41,000 to Rs 60,000. This educational and income profile is consistent with previous research suggesting that greater education and income levels can influence brand preferences and loyalty (Smith et al., 2017).

Notably, the majority of respondents reported owning their smartphones for more than four years and upgrading them every three to four years. These findings point to a possible opportunity for smartphone manufacturers to target this specific group of consumers who are more likely to upgrade their devices on a regular basis. These findings are consistent with prior studies demonstrating that device longevity and technical improvements influence customer behavior regarding smartphone upgrades (Kim & Cho, 2019).

Table 3
Descriptive Statistics

Variables	Mean	SD
Perceived Brand Quality	3.89	1.03
Brand Image	4.04	1.05
Customer Satisfaction	3.84	1.10
Brand Experience	3.80	1.10
Social Media Marketing	3.90	1.06
Brand Loyalty	3.80	1.10

The mean and standard deviation (SD) for both independent and dependent variables are shown in Table 3. The mean score for perceived brand quality was 3.89, with a standard deviation of 1.03, indicating that respondents generally had a positive opinion of brand quality. This finding supports the findings of Aaker (1996) and Pappu et al. (2006), who both underlined the importance of perceived quality in increasing brand loyalty. Similarly, brand image had a mean score of 4.04 with a standard deviation of 1.05, indicating that respondents had favorable associations and perceptions of the brands of their smartphones. These findings are consistent with previous studies that demonstrated the importance of brand image in influencing consumer choices and building brand loyalty (Keller, 1993; Roth, 1992). Customer satisfaction had a mean score of 3.84 with a standard deviation of 1.10, indicating that respondents were moderately satisfied. This finding is congruent with the findings of Luo and Homburg (2007), who highlighted the favorable impact of customer satisfaction on brand loyalty and profitability. Brand experience received a mean score of 4.18 with a standard deviation of 1.07, indicating that respondents had a particularly favorable brand experience. This finding supports the notion that pleasant brand experiences greatly contribute to brand loyalty and positive consumer behavior (Brakus et al., 2009). Social media marketing had a mean score of 3.90 with a standard deviation of 1.06, indicating that it has a relatively positive impact on respondents' perceptions of their smartphone brands. These findings support prior studies that highlighted the impact of social media marketing in influencing brand views and customer loyalty (Tuten & Solomon, 2015).

Finally, a weighted mean score of 3.80 and a standard deviation of 1.10 were used to reflect brand loyalty. This shows that respondents had a moderate level of brand loyalty on average. These findings reflect the complexities of brand loyalty, which is influenced by a variety of factors such as perceived brand quality, customer satisfaction, brand image, brand experience, and social media marketing. In the fast-paced smartphone market, these aspects shape consumer choices and loyalty.

Correlation Analysis

Correlation analysis was employed for the evaluation of dynamic relationships between variables. This method reveals the fundamental strengths and potential relationships among the independent variables Perceived Brand Quality (PBQ), Brand Image (BI), Customer Satisfaction (CS), Brand Experience (BE), and Social Media Marketing (SMM) and the dependent variable Brand Loyalty (BL).

Table 4
Correlations Analysis

Variables	PBQ	BI	CS	BE	SMM	BL
PBQ	1					
BI	0.802**	1				
CS	0.840**	0.833**	1			
BE	0.799**	0.736**	0.837**	1		
SMM	0.761**	0.771**	0.820**	0.853**	1	
BL	0.839**	0.740**	0.829**	0.883**	0.801**	1

** Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis results in Table 4 provide valuable insight into the relationships among study variables. First and foremost, the correlation coefficient of 0.839 reveals a strong positive relationship between perceived brand quality and brand loyalty. This suggests that as perceived brand quality increases, brand loyalty increases significantly. This finding is consistent with previous studies by Aaker (1996) and Pappu et al. (2006), which highlighted the central role of perceived quality in promoting brand loyalty. The stronger this positive association, the more important it is for marketers to focus on improving perceived brand quality in order to strengthen brand loyalty in the extremely competitive smartphone market.

Similar to brand loyalty, the brand image demonstrates a significant positive correlation with a correlation coefficient of 0.640. This suggests that brand loyalty tends to increase alongside positive brand image perceptions. These findings are consistent with the research conducted by Keller (1993) and Roth (1992), underscoring the impact of brand image on consumer decisions and brand loyalty. In order to retain and attract loyal customers, smartphone manufacturers must continue to invest in building and sustaining a positive brand image, where financial support plays a crucial role (Karki et al., 2021).

In addition, the correlation analysis reveals a strong positive relationship between customer satisfaction and brand loyalty, with a correlation coefficient of 0.82. This suggests that as customers' levels of pleasure and satisfaction rise, their brand loyalty will likely increase. This finding is consistent with previous research by Luo and Homburg (2007), which highlighted the positive relationship between consumer satisfaction and brand loyalty. This highlights the significance for marketers in providing exceptional customer experiences and ensuring high levels of satisfaction in order to cultivate brand loyalty.

The correlation between brand experience and brand loyalty is remarkably significant, with a correlation coefficient of 0.883. This demonstrates that when consumers have positive brand experiences, their brand loyalty increases substantially. The significance of brand experiences in shaping consumer behavior and nurturing brand loyalty is supported by these findings (Brakus et al., 2009). As indicated by the strength of this relationship, marketers should endeavor to create positive and memorable brand experiences to increase brand loyalty.

With a correlation coefficient of 0.801, the analysis demonstrates a strong positive relationship between social media marketing and brand loyalty. This suggests that brand loyalty among smartphone users is positively influenced by social media marketing strategies. These findings are consistent with those of Tuten and Solomon (2015), who highlighted the influence of social media marketing on brand perceptions and consumer loyalty. Given the significant correlation, marketers should continue to leverage social media platforms as a means of engaging with consumers, shaping brand perceptions, and fostering brand loyalty.

Table 5
Estimated Regression Results of Brand Loyalty on Study Variables

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	VIF
		S.E.				
(Constant)	0.001	0.107		0.009	0.993	
PBQ	0.332	0.050	0.316	6.593	0.000	4.225
BI	-0.024	0.048	-0.023	-0.502	0.616	3.922
CS	0.119	0.057	0.118	2.099	0.037	5.800
BE	0.510	0.052	0.506	9.720	0.000	4.993
SMM	0.053	0.052	0.051	1.022	0.307	4.532

Table 5 depicts the results of the regression analysis. Perceived Brand Quality (PBQ) emerged as the most influential factor affecting brand loyalty (BL) among mobile users, with a substantial beta coefficient of 0.332. This result supports the hypothesis (H1) and aligns with previous research by Tabish et al. (2017), indicating the pivotal role of perceived brand quality in driving brand loyalty. It emphasizes the significance of delivering consistently high-quality products and services in order to increase brand loyalty among mobile consumers. Brand Experience (BE) had the second-highest influence on brand loyalty, with a significant beta coefficient of 0.510. This result validates the study's third hypothesis (H3) and highlights the significance of providing a positive brand experience in order to increase consumer loyalty. This finding is consistent with the larger body of research that emphasizes the influence of brand experiences on consumer behavior. With a beta coefficient of 0.119, Customer Satisfaction (CS) was also found to be a significant predictor of brand loyalty. This result supports the fourth hypothesis (H4) and validates prior research by Singh (2016) and Tabish et al. (2017), which emphasizes the role of consumer satisfaction in fostering brand loyalty. Satisfied customers are more likely to show loyalty by making repeat purchases (Shukla, 2004; Luo & Homburg, 2007).

On the other hand, Brand Image (BI) and Social Media Marketing (SMM) were found to have a negligible impact on brand loyalty among smartphone consumers. These variables yielded statistically insignificant Beta coefficients of -0.024 and 0.053, respectively. This result contradicts the hypotheses (H2 and H5) and suggests that in the context of mobile phones, brand image, and social media marketing may have limited direct influence on brand loyalty. These results are consistent with previous research on the multifaceted character of social media marketing (Tuten & Solomon, 2015) and the varying influence of brand image on consumer behavior (Brakus et al., 2009).

Table 6
Testing Robustness of the Model

Model Summary					
R	R Square	Adjusted R Square	Std. Error of the Estimate	F- value	Durbin-Watson
0.912 ^a	0.832	0.830	0.38181	306.864**	2.141

a. Predictors: (Constant), PBQ, BI, CS, BE, and SMM
Dependent Variable: BL

The statistical measures for the robustness test are shown in Table 6. This model's R Square is 0.832. This suggests that independent variables explain 83.2% of the variation in the dependent variable brand loyalty. The

total correlation between these variables is 0.912 percent, the adjusted R square is 0.830, and the standard error of the estimate is 0.38181. The model's fitness is also supported by an F-value of 306.864 at a 0.00% level of significance. This implies that the research model is a good fit for describing the factors impacting mobile users' brand loyalty. Durbin-Watson (DW) values reveal no autocorrelation, while VIF values (Table 5) demonstrate no multicollinearity. This is consistent with earlier observations of Kumari and Rathihha (2017), which emphasized the need for statistical validation in research attempts.

One-Way ANOVA (Comparison of Brand Loyalty by Age and Education): ANOVA is useful for examining variations in the dependent variable as well as assessing the overall validity of the research model (Paul, 2006). In this study, the Analysis of Variance (ANOVA) was used to investigate the impact of age and education levels on brand loyalty among mobile users. The ANOVA findings are shown in Table 7.

Table 7
ANOVA Tests of Brand Loyalty by Age and Education

		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	17.657	2	8.828	10.971	0.000
	Within Groups	251.060	312	0.805		
	Total	268.717	314			
Education	Between Groups	17.300	2	8.650	10.734	0.000
	Within Groups	251.417	312	0.806		
	Total	268.717	314			

The significance of the p-values shows that there exists significant group differences among the means of age groups and education levels. A post-hoc analysis (Table 8) was performed to identify particular group differences.

Table 8
Post-hoc Analysis: Multiple Comparisons of Brand Loyalty by Age and Education

(I) Age		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below 25 (1)	2	-0.146	0.11091	0.387	-0.4072	0.1152
	25-40 (2)	-.563*	0.14760	0.000	-0.9109	-0.2157
	Above 40 (3)	.709*	0.15284	0.000	0.3493	1.0692
(I) Education						
Undergraduate (1)	2	0.03962	0.13472	0.953	-0.2776	0.3569
	Graduate (2)	-.50709*	0.11471	0.000	-0.7772	-0.2369
	Postgraduate (3)	.46747*	0.14210	0.003	0.1328	0.8021

Surprisingly, there were no significant differences between mobile users under the age of 25 and those between the ages of 25 and 40, as the calculated p-value (0.387) exceeds the significance level of 0.05. This indicates that brand loyalty is very consistent between these two age groups. However, when comparing the age groups below 25 and 25-40, the age group beyond 40 demonstrated substantial disparities in brand loyalty (p-values = 0.000). This finding implies that mobile users over the age of 40 have distinct brand views and degrees of brand loyalty than their younger counterparts. This finding is consistent with previous research that suggests age variations can influence brand perceptions and behavior (Chan & Tse, 2017). It implies that marketers targeting different age groups of mobile users may need to tailor their strategies to account for these distinctions.

According to the post-hoc analysis (Table 8), there were no significant variations in brand loyalty between undergraduate and graduate-level users (p-value = 0.953). This implies that users with undergraduate and graduate-level users have similar levels of brand loyalty. However, postgraduate or higher-level education revealed substantial variations in brand loyalty when compared to both undergraduate (p-value = 0.000) and

graduate-level users (p -value = 0.003). This means that mobile users with postgraduate or advanced degrees perceive brands differently and have different brand loyalty patterns than those with undergraduate or graduate degrees. This finding is consistent with previous research highlighting the impact of education on customer behavior and brand perceptions (Türe, 2015).

Conclusion

This study explores into the dynamics of brand loyalty among mobile phone users, with a specific emphasis on the factors influencing these phenomena. The findings highlighted the importance of perceived brand quality and brand experience in influencing brand loyalty among mobile users. With a beta coefficient of 0.332, perceived brand quality appeared as a strong predictor of brand loyalty, confirming the findings of Tabish, et al. (2017). Brand experience, with a beta coefficient of 0.510, also had a significant impact on brand loyalty. These findings are consistent with the literature's overall consensus on the importance of these criteria. Furthermore, customer satisfaction was found as a strong determinant of brand loyalty, which is similar to the findings of Singh (2016) and Tabish et al. (2017). The study, on the other hand, found a negative association between brand image and brand loyalty (beta coefficient of -0.024). This finding differs from previous research, particularly Singh (2016). It suggests that more research is needed to explore the dynamics of brand image and its impact on brand loyalty in the context of mobile phones. While this study's findings suggest that social media marketing had no direct effect on customer loyalty, its potential influence on brand perceptions and customer involvement should not be ignored. As the mobile phone industry continues to develop and change, future studies could explore these dynamics in depth. ANOVA test suggests that mobile users over the age of 40 and those with postgraduate or higher-level education have different brand perceptions and levels of brand loyalty than their younger counterparts and those with undergraduate or graduate degrees. This finding is consistent with earlier research suggesting that differences in age and qualification can influence brand perceptions and behavior (Chan & Tse, 2017; Türe, 2015). As a result, marketers targeting different kinds of mobile users may need to adjust their strategy to account for these differences. Understanding and responding to the ever-changing nature of users' behavior and technological breakthroughs is required for success in the fast-paced mobile phone market.

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