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What Makes Consumers Impulsive During Online Shopping: Hedonic Vs. Utilitarian Browsing?

Mansura Akter[1]
Md. Abdur Rahman Niloy[2]

ABSTRACT

The rapid expansion of e-commerce in Bangladesh has ushered in a new era of consumer behavior, particularly in impulse purchases made while shopping online. This study explores the impact of hedonic (pleasure-driven) and utilitarian (goal-oriented) browsing on online impulse buying behavior in Bangladesh's rapidly growing e-commerce sector. Using an online survey and binary logistic regression analysis, the research reveals that both browsing types contribute to impulse purchases, but hedonic browsing has a stronger influence—68% of respondents reported making impulse buys during such sessions. Gender plays a significant role: 94% of female participants engaged in impulse buying during hedonic browsing, while 69% of males did so during utilitarian browsing. Key factors positively influencing impulse buying include gender, attractive product displays, peer recommendations, credit card availability, and promotional activities. Interestingly, discount offers were found to negatively affect impulse buying. Product preferences also vary by gender—females tend to impulsively buy clothes, apparel, and cosmetics, whereas males are more likely to purchase electronics and gadgets. The study contributes to consumer behavior theory by highlighting the dual influence of browsing types on impulse buying. Practically, it offers insights for e-commerce platforms to design gender-targeted marketing strategies and personalized offers, leveraging social influence and financial tools to boost sales and customer satisfaction. These findings are particularly relevant for businesses aiming to optimize their digital marketing efforts in Bangladesh's evolving online retail landscape.

KEYWORDS: Hedonic browsing, Utilitarian browsing, Impulse Buying, Online Platform, Binary Logistic Regression

[1] Department of International Business, University of Dhaka, Dhaka-1000, Bangladesh. (CORRESPONDING AUTHOR)
rmansura@du.ac.bd
[2] PRAN_RFL Group, Pragati Swarani, Dhaka-1212, Bangladesh.

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1. Introduction

Impulse buying means the unplanned, spontaneous, and sudden buying that consumers do unintentionally, unreflectively, because of emotional intimacy and physical proximity to the desired product (Stern, 1962; Li, 2015). The modernization and globalization era has diverted consumers' interest in purchasing from physical markets to online platforms. Purchasing online saves time and effort by ensuring that the purchase is made easily and smoothly from the comfort of one's own home. For these reasons, purchasing from online platforms has become more popular nowadays. As consumers get benefits from online shopping, it also encourages them to make unnecessary purchases by seeing appealing product displays, up-sell and cross-sell offers, and discounts and vouchers. After seeing the offers and product presentations online, consumers make instant purchase decisions without any prior analysis. This type of purchase activity is known as "impulse buying." Consumers' interest in shopping on the Internet has increased globally (Floh & Madlberger, 2013). Approximately 80% of consumer retail buying decisions is impulsive (Wu et al., 2016). According to research, consumers who buy things online are more impulsive than those who shop in stores (Mwencha et al., 2014). Hence, merchants and suppliers are focusing on impulsive customers. As a result, marketers must have a well-planned and structured web presence in order to attract more customers and build customer relationships through online marketing (Visnu & Raheem, 2013; Arbaina & Suresh, 2018).

Besides these, impulsive online shopping has become an increasingly common issue, leading to around 40% of all online shopping (Chan et al., 2017). Therefore, customers who make online purchases need to be managed with care. Otherwise, marketing companies will lose their valuable customers. Manipulation or exaggerated presentation of products on an online platform can lead to a negative consumer experience. Due to this negative effect of online shopping, consumers lose trust in the platforms and hesitate to use them in the future. Ultimately, this could lead to decreased customer loyalty and a decrease in sales, resulting in potential losses for the online platform. To counter this potential loss, online platforms must focus on creating a positive consumer shopping experience.

Muruganantham & Bhakat (2013) develop a framework to analyze impulse purchase behavior by incorporating internal and external factors with situational and demographic characteristics; however, this framework is not applicable to online buying behavior. Online impulse purchase is influenced by elements such as consumers' confidence in the e-commerce platform (Visnu & Raheem, 2013) and website stimuli (Lee et al., 2016), in addition to situational, external, and internal factors. Despite the enormous spectrum of research on online impulse buying, this issue has received less attention, particularly in the context of Bangladesh. According to Chan et al. (2017), further future study on this topic is needed in various contextual and cultural settings.

Given the significance of more research on this area to business and society (LaRose & Eastin, 2002), and the e-commerce bubbles in Bangladesh with 17.61% increase on an annual basis (Karim, 2022) during after pandemic time, this study emphasizes the characteristics that encourage Bangladeshi consumers to make online impulse purchases in order to offer an outline for future research in Bangladesh.

1.1 Research Gap

An extensive review of existing literature shows that several factors (e.g., age, gender, income, mood, image, self-image, product, price, promotions, and ease of shopping) influence consumers to be impulsive during online shopping. However, the factors that influence impulsive buying during online shopping have

yet to be explored (Chan et al., 2017). The authors suggest that more future studies are needed on this research area in different contextual and cultural settings. Particularly in Bangladesh, online impulsive buying behavior has yet to be explored. However, e-commerce has experienced significant growth in Bangladesh, with an annual increase of 17.61% (Karim, 2022) during the pandemic. Gulfraz et al. (2022) suggest incorporating online platform design as a variable to investigate how it influences the impulsive behavior of online shoppers. Finding a positive influence of targeted advertisement on online customers' impulsive buying behavior, Nyrhinen et al. (2024) suggest exploring the online impulsive behavior across different age groups and in different countries to make the findings more generalized. Therefore, the primary emphasis of this investigation is on identifying the elements that contribute to online impulse purchasing among consumers in Bangladesh, serving as a foundational basis for subsequent research endeavors in the country.

1.2. Research Aims and Objectives

This study aims to explore online impulse buying and understand the factors that influence consumers' decisions to make such purchases. More specifically, the study sheds light on the following objectives:

i. To explore how Internet browsing (hedonic and utilitarian) influences impulse buying.
ii. To identify the factors that influence consumers to engage in impulse buying.
iii. To identify the nature of products that consumers buy impulsively.

2. Literature Review

Impulse buying is defined as spontaneous, unplanned purchases made without prior thought or preparation to fulfill a specific need or to buy a particular product (Beatty & Ferrell, 998). Block & Morwitz (1999) define an impulse purchase as a buyer acting on an overwhelming, uncontrollable desire and purchasing with little thought. According to Bayley & Nancarrow (1998), impulsive buying is an abrupt, strong, and emotionally charged purchase behavior in which the haste with which a decision is made precludes a thorough assessment of available options and information. Engel & Blackwell (1982) described impulse buying as when a customer purchases without thinking about it beforehand or planning to enter the store. Nevertheless, impulsive purchases are more thrilling and challenging to resist, while unexpected purchases are less deliberate but less considerate than planned ones (Kasen & Lee, 2002).

Researchers identify why people involve in impulse purchase. Existing literature claims that the effect of Internet shopping on beliefs in scenarios where unreasonable choices are made (Verhagen & Dolen, 2011). The study clarifies why people impulsively buy online and how the online store's design and belief systems influence non-logical decision-making. Dawson & Kim (2009) show how often people buy things on impulse when they shop online and how essential impulse purchases are to a store's bottom line. It also gives valuable information about how people act when they buy things on impulse when they shop online. The authors discovered that impulse purchases comprised a large portion of total online spending, and buyers were more inclined to decide impulsively when they had fewer products in their shopping carts. The authors also urge the examination of the extent to which other factors, such as promotions, affect impulse buying behavior.

Table 1: A summary of existing literature on impulse buying (from 2000-2024)

Author	Year	Contribution	Focused Area
Jones et al.	2003	Understanding the impulse buying behavior related to specific products provides a more accurate predictor of impulsive shopping actions.	Specific product identification for the impulse buying trend
Madhavaram & Laverie	2004	Shows that changes in shopping intentions can lead to impulsive spending, which can be attributed to a response to stimuli.	Describes some unresolved issues regarding impulse purchasing behavior
Dawson & Kim	2009	Show how often people buy things on impulse when they shop online and how essential impulse purchases are to a store's bottom line.	Purchase frequency and bottom line products analysis
Verhagen & Dolen	2011	Explore the intricacies of impulsive online purchasing behavior and examine how online stores influence irrational decision-making by shaping beliefs in such situations.	Analyse the online store's impact on impulse buying.
Karbasivar & Yarahmadi	2011	Showed the appearance of merchandise in store windows greatly influences consumers to make impulsive purchases.	Products display an impact on impulse buying.
Muruganantham & Bhakat	2013	Introduces a comprehensive four-dimensional model for analyzing consumer behavior, incorporating external/internal stimuli, situational/product-related factors, and demographic/socio-cultural influences.	Analyse a four-dimensional framework
Vishnu & Raheem	2013	Clarifies that in case of impulse decision making, customers are more sensitive to price reduction and free sampling by the retailers	Consumers' psychology towards free products and price concessions.
Choudhary	2014	Claims that emotion should be taken into account to analyze impulse purchase decisions.	Impact of consumers' emotions on impulse buying
Luniya & Verghese	2015	Provide some determinants of impulse buying, including age, gender, and income, and show some environmental factors, including merchandising, in-store promotions, lighting, music, fragrance, colors, etc.	Analysis of demographic and environmental factors
Lo et al.	2016	Explore how customers make decisions and discover that the design of an online store and promotional strategies can trigger impulsive purchases.	Evaluate the design and promotional strategies of an online store.
Aragoncillo & Orús	2017	Explores the role of impulse purchases in the contemporary economy to enhance comprehension.	Describes some factors of impulsive purchase decisions.
Habib & Qayyum	2017	Offer guidance to managers and web developers on the impact of emotions in driving impulsive actions like web browsing, the desire to make purchases, and impulsive buying behavior.	Impact of web browsing on impulse purchase decision.
Zhang et al.	2018	Explain how utilitarian and hedonistic values perceived by the customers influence browsing behavior.	Analysis of customers' perceptions of utilitarian and hedonistic value
Kathiravan et. al.	2019	Show that consumer expectations regarding the ease of making spontaneous purchases online in conjunction with gender, income, and age positively affect impulsive shopping behavior.	Elaborately describes demographic factors.
Ozdemira, and Akcay	2019	Illustrate the influence of customers' feminine and masculine gender identities on their	Influences of gender on impulse buying

Author	Year	Contribution	Focused Area
		propensity for making impulsive purchases.	
Shekhawat et al.	2020	Found a variety of implications that will be helpful in the future for both businesspeople and their clients, as well as other researchers.	Examine the impact of promotional activities on the purchasing patterns of consumers
Gulfraz et al.	2022	Found that self-control and online shopping experience influence impulse buying behavior.	Examine the impact of the online shopping experience on impulse buying
Nyrhinen et al.	2024	There is a positive correlation between targeted advertisement and online impulse buying.	Investigated the relationship between self-control and targeted advertisement on impulsive buying behavior.
Hsu, Lee & Zheng	2024	This sudy explores the key features of augmented reality (AR): interactivity, authenticity and vividness, can trigger impulsive buying behavour	Use of augmented reality (AR) on consumers' impulsive behavoiur.
Moghddam et al.	2024	This study finds a positive impact of social commerce engagement on impulsive buying behaviour.	Social commerce engagement and impulse buying

Source: *Compiled by authors*

Madhavaram & Laverie (2004) demonstrate that changes in shopping intentions can lead to impulsive spending, which can be attributed to a response to stimuli. Consumers can be influenced by various cues in addition to the product itself, which can subsequently lead to changes in their impulsive purchasing behavior. According to researchers, emotions drive impulsive acts such as web browsing, the desire to buy, and impulsive purchasing behavior (Habib & Qayyum, 2017; Choudhary, 2014; Madhavaram & Laverie, 2004). Positive and negative feelings, along with internet exploration, activate the desire to obtain and engage in online transactions (Habib & Qayyum, 2017). The impact of emotions on online shopping decisions, on the other hand, should be studied in various contexts and scenarios (Habib & Qayyum, 2017). As a result, the author advocates for further research into how retailers can effectively employ promotional methods to influence consumer emotions and increase the likelihood of impulse purchases.

An in-depth comprehension of impulse buying specific to a particular product emerged as a more robust indicator of spontaneous purchase actions compared to a general inclination towards impulse buying decisions (Jones et al., 2003). Karbasivar and Yarahmadi (2011) claim that the appearance of items in store windows prompts consumers to make impulsive purchases. Their research also shows that adopting promotional strategies has a positive impact on impulsive purchasing behavior. The authors emphasize the significance of delving deeper into the influence of in-store fashion presentations on spontaneous clothing purchases, especially considering the influence of online businesses. According to Zhang et al. (2018) research, customers' perceptions of utilitarian and hedonistic value, which are influenced by online reviews, increase browsing behavior. They also argue that individuals with high impulsiveness attach more importance to the pleasure derived from online reviews. In contrast, those with low impulsiveness focus more on the practical benefits of these reviews.

Consumer demographics, including gender, age, and income, influence impulsive shopping behavior (Luniya & Verghese, 2015; Kathiravan et al., 2019). Existing researches claim that age is the most significant predictor of impulsive online shopping, with younger consumers demonstrating significantly more purchasing impulsivity than their older counterparts (Kathiravan et al., 2019). Gender has a small but

noticeable impact on impulsive purchasing behavior (Ozdemira & Akcay, 2019). Besides, consumer expectations in the case of ease of making purchases online positively influence impulse purchase decisions (Kathiravan et al., 2019).

Besides demographic factors, promotional factors influence impulse buying. According to Vishnu & Raheem (2013), customers are more inclined to make impulsive purchases when presented with free products and price concessions by a retailer. The consumer's economic level and the store's visual merchandising strongly influence the consumer's tendency to make impulsive purchases of fast-moving consumer goods (FMCG). In-store shopping, consumers can be enticed to buy a product by attractive window displays, the appropriate placement of products, packaging, and an improved store's overall presentation. Furthermore, the study found that price reductions and free sampling are powerful enticements for customers to make impulse purchases (Vishnu & Raheem, 2013).

The expansion of social media and the Internet can influence impulsive behavior within the contemporary economy (Aragoncillo & Orús, 2017). Shekhawat et al. (2020) posit that consumers exhibit favorable responses to marketing strategies and promotions when salespeople present them. Besides, sales promotion and online store design influence the consumer decision-making process (Lo et al., 2016). Existing literatures categorize these stimuli as "motivation" and "hygiene" regarding online impulsive purchases.

A four-dimensional framework developed by Muruganantham & Bhakat (2013) outlines an approach to examining consumer behavior by incorporating external and internal stimuli along with situational, product-related, and sociocultural variables. However, Muruganantham and Bhakat (2013) emphasize on purchases made in physical stores instead of online shopping.

Although existing literature identifies the factors influencing impulse buying, there is insufficient research on the effect of sales promotion and online store design on consumers' purchasing decisions (Aragoncillo & Orús, 2017). There is a need for a deeper understanding of the effects of virtual window shopping on customers who exhibit low impulsiveness (Zhang et al., 2018). Moreover, existing literature stresses examining how customer mood and affect influence the intention of making impulsive purchases online and how positive pleasure experiences in the past may shape future choices to make such purchases (Madhavaram & Laverie, 2004). Luniya & Verghese (2015) argue that there is a need for comprehensive studies that examine the influence of environmental conditions, individual determinants, and shopping enjoyment on impulse buying simultaneously. Gulfraz et al. (2022) find that self-control and online shopping experience influence impulse buying behavior. Nyrhinen et al. (2024) find a positive influence of targeted advertisement on online customers' impulsive buying behavior.

3. Conceptual framework and hypotheses development

Based on an extensive review of the existing literature, this study develops a conceptual framework (see Figure 1) that illustrates the relationships between independent and dependent variables. The independent variables of this study are gender, credit card facility, attractive display, promotional activities, referrals, and discount offers. This study assumes that these independent variables influence consumers' online impulse buying behavior. Two browsing situations may influence consumers to be

involved in impulse buying. One is hedonic browsing, which refers to the act of consumers engaging in browsing for the purpose of purchasing. Another is utilitarian browsing, when consumers are involved in unnecessary browsing with no prior intention to buy. Still, they have made the purchase.

Hedonic browsing is defined as the intentional pursuit of pleasure through online shopping. 'Hedonic browsing' is the shopping practice to feel joy, though it can be unnecessary browsing (Zheng et al., 2019). Such hedonic browsing could increase their likelihood of making impulse purchases. On the other hand, 'Utilitarian browsing' is when an individual browses online with the intention to buy something. Such browsing often leads to consumers making decisions based on price and convenience as opposed to quality or overall satisfaction (Zheng et al., 2019). Wijayanto et al. (2023) find that hedonic browsing positively and significantly affects impulse buying, whereas utilitarian browsing negatively and insignificantly affects the impulse buying of Generation Z. In many cases, consumers often find themselves viewing products they may not be initially interested in. This is mainly due to the availability of discounts, which cause consumers to make purchase decisions based on price and convenience instead of quality.

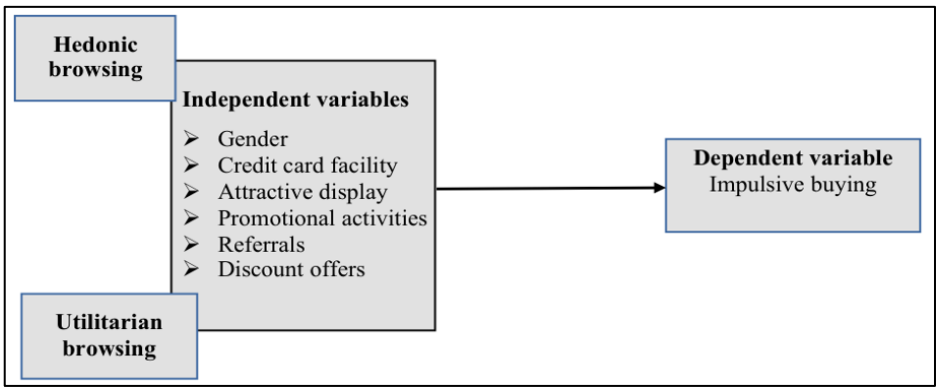

Figure 1: Conceptual Framework (Source: Developed by authors)

Hence, this study assumes that both hedonic browsing and utilitarian browsing, with the availability of independent variables (such as credit card facility, attractive displays, promotional activities, referrals, discount offers), may influence impulse buying decisions. Therefore, this study formulates the following hypothesis:

> **H_1: Hedonic browsing and utilitarian browsing, influenced by the availability of credit card facilities, attractive displays, *promotional activities, referrals, and discount offers, lead to impulse buying*.**

4. Methodology

This study is an exploratory research, which explores the impulse buying tendencies of consumers on an online shopping platform by examining their responses to a survey. This study follows a quantitative research method to determine how hedonic and utilitarian browsing, along with the availability of independent variables (such as credit card facility, attractive displays, promotional activities, referrals, discount offers), lead to impulsive purchases. A structured questionnaire using a five-point Likert scale was developed to conduct a survey. The survey was conducted on an online social media platform such as email, Google Forms, Facebook, Telegram, and WhatsApp. A five-point Likert scale is often preferred

over a seven-point scale due to its simplicity, ease of use, and effectiveness in capturing respondent opinions without overwhelming them. Recent research indicates that a five-point Likert scale effectively reduces cognitive load for respondents while maintaining reliability and validity comparable to scales with more response options (Aybek & Toraman, 2022). Additionally, a five-point scale minimizes extreme response bias and improves response rates by reducing survey fatigue (Revilla et al., 2014). It is particularly beneficial for general populations, as it ensures clarity and accessibility, especially for respondents with varying literacy levels (Dawes, 2008). Furthermore, data collection and analysis are more efficient with fewer response categories, allowing for clearer trends and comparisons across studies (Joshi et al., 2015). Given its widespread use in standardized surveys, the five-point Likert scale remains a practical and effective choice for many research contexts.

Data were collected from January 20, 2023, to March 20, 2023, among potential respondents living in Bangladesh who had a device to connect to the online platform for shopping purposes. Random sampling methods have been used to collect responses. Moreover, participation in this survey was voluntary, and respondents who refused to participate have been excluded from the collected sample. The language of the questionnaire was English.

Finally, a total of 225 respondents participated in the survey. According to recent research, a sample size of 200-300 is often sufficient for studies in consumer behavior, as it strikes a balance between statistical power and practical feasibility (Bennett et al., 2019). This sample size allows for the detection of meaningful relationships between key variables, such as gender, credit card facilities, and promotional activities, while maintaining manageable data collection and analysis efforts. Statistical power analysis prior to data collection indicated that 225 participants would provide sufficient power (0.80) to detect medium to large effects in the data (Cohen, 1992). In consumer behavior studies, especially those focusing on specific markets or demographic groups, smaller, targeted samples are commonly used to obtain accurate insights without the complexities of large-scale surveys (Smith et al., 2021). Furthermore, a sample size of 225 is considered appropriate for employing advanced statistical methods like binary logistic regression, which provides reliable estimates for modeling consumer behavior (Field, 2018).

4.1 Variables of the Study

The dependent variables of the study are “Impulse buying by the consumers”. The related independent variables are “$\beta 1$=gender”, “$\beta 2$=credit card facility”, “$\beta 3$=attractive display”, “$\beta 4$=promotional activities”, “$\beta 5$=referrals”, “$\beta 6$=discount offers”. The study employed Binary Logistic Regression to examine its data, given the presence of a binary dependent/target variable and several independent categorical variables (King, 2008). Table 2 displays the dependent and independent variables utilized in the research.

Table 2: Dependent and Independent Variables

Data	Data Type		Values
	Dependent	Variable	
Impulse buying	No Yes	Binary	0- No 1-Yes
	Independent	Variable	
$\beta 1$ Gender	Independent	Binary	0- Female

Data	Data Type		Values
			1-Male
$\beta 2$ Credit card facility	Independent	Non-binary	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly agree
$\beta 3$ Attractive display	Independent	Non-binary	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly agree
$\beta 4$ Promotional activities	Independent	Non-binary	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly agree
$\beta 5$ Referrals	Independent	Non-binary	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly agree
$\beta 6$ Discount offers	Independent	Non-binary	1- Strongly Disagree 2- Disagree 3- Neutral 4- Agree 5- Strongly agree

This study develops the following logit regression model:

$$p = \frac{e^{(\beta 0+\beta 1x1+\beta 2x2+\beta 3x3+\beta 4x4+\beta 5x5+\beta 6x6)}}{1+e^{(\beta 0+\beta 1x1+\beta 2x2+\beta 3x3+\beta 4x4+\beta 5x5+\beta 6x6)}}$$

4.2 Demographic data of the respondent

Gender, age, and occupation are the demographic variables in this study. Other responses are considered gender-based opinions. This study examines the impact of individuals' gender, age, and occupation on their opinions regarding impulse buying, as well as how these opinions compare to those of others within different demographic groups. The purpose of this study is to see if there are any correlations between demographic variables and attitudes toward impulse buying. This study's demographic dataset table is as follows:

Table 3: Participants' Demographic Data

Category	Type/Group	Female Respondents		Male Respondents	
		Number	Percentage	Number	Percentage
Gender	Female Male	116	52%	109	48%
Age	15-19 20-25 26-30 31-40 40-above	4 18 90 3 1	3% 16% 78% 2.6% 0.9%	0 20 83 5 1	0% 18% 76% 2.6% 0.9%
Occupation	Private sector employees Student	80 8	69% 7%	85 18	78% 17%

Category	Type/Group	Female Respondents		Male Respondents	
		Number	Percentage	Number	Percentage
	Government employee Businessperson Unemployed Retired teacher Freelancer	0 0 27 1 0	0% 0% 23% 0.9% 0%	1 2 2 0 1	0.9% 1.8% 1.8% 0% 0.9%
Purchase frequency	None 1 time per week 2-3 times per week More than 3 times a week	21 71 16 8	18% 61% 14% 6%	22 46 28 13	20% 42% 26% 11%
Feeling like an unnecessary purchase from online	Yes No	94 22	81% 19%	59 50	54% 46%

The study has determined the proportion of females in the dataset by dividing the total number of females in the particular dataset by the total number of people participating, then multiplying the outcome by 100.

5. Analyses and Discussion

5.1 Demography of the Respondents

The demographic dataset for this study includes information on respondents' age, occupation, and gender. A total of 225 participants provided their responses, with 116 (51.6%) identifying as female and the remaining 109 (48.1%) as male. The majority of the respondents (73.3%) were employed in the private sector. In comparison, 26 (11.6%) were students, 1 (0.04%) was a government employee, 2 (0.09%) were businesspeople, and 29 (12.9%) were unemployed. The majority of participants, 173 (76.9%), fell within the age range of 20 to 25. The age range of other respondents was 26–30, with a total of 38 (16.9%); 15–19, 4 (1.8%); 31–40, 8 (3.6%); and above 40, 2 (0.9%).

5.1.1 Demography of Female Respondents

116 (51.6%) of the 225 respondents were female. The majority of the female (94) respondents admitted that they often make unnecessary purchases from online stores. 71 female respondents purchased online 1 time a week. The remaining 16 respondents purchased 2-3 times per week, and 8 respondents purchased more than 3 times per week. Among these female respondents, 21 stated that they had not made any online purchases. The majority of female respondents were 26–30 years old. This can be attributed to the fact that this age range consists of young adults who are more familiar with online shopping and its advantages.

5.1.2 Demography of Male Respondents

109 (48.4%) of the 225 respondents were male. The majority of the male respondents (59) admitted to often making unnecessary purchases from online stores, while the remaining 50 respondents did not buy from online stores. 46 male respondents purchased online once in a week, whereas only 13 respondents said they purchase more than 3 times per week. This finding highlights that males are less likely to engage in impulse buying online. The majority of male respondents were 26–30 years old.

5.2 Nature of browsing and impulse buying

To identify the nature of browsing that leads more to buying impulsively, we asked the respondents whether they browse intentionally for making an online purchase (utilitarian browsing) or they browse just for pleasure or without any purpose (hedonic browsing), and end up making an unplanned purchase (i.e., impulsive buying). The findings show that the majority of the respondents (68%) do hedonic browsing, which leads to impulse buying, while 32% of the respondents browse with an intention to buy their planned products (utilitarian browsing) but end up with unplanned buying/impulse buying. The findings also reveal that female online browsers make more impulse buying through hedonic browsing, for instance, 94 out of 153 respondents who browse hedonically. On the other hand, male online browsers (50 out of 72 respondents who do utilitarian browsing) make more impulse purchases through utilitarian browsing. Based on these findings, we can conclude that female online browsers buy more impulsively than male online browsers.

Table 4: Frequency table of Hedonic & Utilitarian browsing

Nature of browsing	Nature of respondents	Statistics		
		Number	*Total*	*Percentage*
Hedonic browsing	**Male**	59 (39%)	153	68%
	Female	94 (61%)		
Utilitarian browsing	**Male**	50 (69%)	72	32%
	Female	22 (31%)		
		Total	**225**	**100%**

5.3 Analysis of Binary Logistic Regression Results

After completing the survey session and receiving a total of 225 responses, the dependent and independent variables were converted into codes according to the variable table. After transforming to code, the data set has been run through IBM SPSS Statistics 26 software with the binary logistic regression function to find the result for further explanation purposes.

The first section of the binary logistic regression result displays the "classification table" (see Table 5). Table 5 shows the model's accuracy in correctly identifying the appropriate category after the predictors have been integrated into the research. It gives an idea of how well the model predicts the actual results. The figures in the first two rows indicate the Sensitivity and Specificity of the model. The specificity of this model is moderate, at 34.7%. The sensitivity of the model is 86.9%, which is considered good. The model's accuracy was 70.2%, which is considered high, indicating that the model correctly identified the cases.

Table 5: Classification Table

Observed			Predicted Impulse buying		Percentage Correct
			No	Yes	
Step 1	Impulse buying	No	25	47	34.7
		Yes	20	133	86.9
	Overall Percentage				70.2

The logistic regression analysis results in Table 6 provide essential insights into the connection between the independent variables and the role of hedonic browsing in online impulsive purchases. The binary form of the dependent variable indicates whether or not a participant engages in impulse buying. The Exp(B) values, which illustrate how the probabilities of engaging in impulsive purchases alter when the independent variable changes by one unit, are used to indicate the odds ratio.

Table 6: Regression coefficients

								95% C.I. for EXP(B)	
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1	Gender	1.549	.343	20.412	1	<. 001***	.213	.109	.416
	Credit card facility	.267	.161	2.764	1	.096*	1.306	.953	1.790
	Attractive display	.542	.205	6.995	1	.008*	1.719	1.151	2.568
	Promotional activities	.091	.188	.235	1	.628	1.095	.758	1.583
	Referrals	.497	.174	8.188	1	.004**	.608	.433	.855
	Discount offers	-.309	.186	2.774	1	.096*	.734	.510	1.056
	Constant	1.459	1.051	1.928	1	.165	4.302		
Variable(s) entered on step 1: Gender of the participants, Credit card facility, Attractive display, Promotional activities, Referrals, and Discount offers. *** Significant at 1%, ** significant at 5%, *significant at 10%									

The results show that *gender* significantly influences the behavior of impulse purchases [B=-1.549, p=<0.001, Exp(B)=0.213]. This suggests that women are more likely than men to make impulsive online purchases. This result provides compelling evidence that contradicts Ozdemira & Akcay (2019). Gender holds significance in Bangladesh, necessitating consideration when targeting online audiences. At a 10% significance level, the presence of credit cards has a positive impact on impulse buying, being statistically significant [B=0.267, p=0.096, Exp(B)=1.306]. This implies that individuals with credit card access are 1.306 times more inclined to engage in impulsive purchases. Promotional efforts also wield a statistically significant influence at the 10% significance level, with a p-value of 0.628 and a coefficient of 0.091.

The appeal of product displays significantly affects impulsive purchasing [B=0.542, p=0.008, Exp(B)=1.719], indicating that customers are 1.719 times more likely to make impulsive purchases when the display is attractive. Referrals, encompassing reviews and recommendations, play a crucial role and are similarly significant at the 5% level [B=-0.497, p=0.004, Exp(B)=0.608]. Those influenced by referrals are 0.608 times more likely to make impulsive purchases. Additionally, discount offers negatively affect impulse buying, with [Exp(B)=0.734, p=0.096], suggesting that individuals are 0.734 times less likely to make an impulse purchase if offered a discount.

These findings confirm the hypothesis, indicating that gender, credit card facility, attractive display, promotional activities, referrals, and discount offers influence consumers' impulse buying behavior during both hedonic and utilitarian browsing. The findings also demonstrate the importance of attractive displays and referrals in increasing the likelihood of impulse buying during both hedonic and utilitarian browsing.

5.4 Nature of Impulsively Purchased Products

This study also focuses on the products to which online browsers are attracted to buy impulsively (see Table 7). The survey revealed that the most common types of impulse purchases made by female respondents were cosmetics, followed by clothing and apparel, food items, household accessories, electronic devices, and gadgets, with percentages of 66%, 61%, 32%, 22%, 14%, and 0.9%, respectively.

These findings suggest that women are more likely to make spontaneous purchases of clothing and cosmetics, compared to other product categories, with grocery items being an exception. On the other hand, male respondents made impulse purchases of electronic devices and gadgets, followed by clothing and apparel, food items, household accessories, and cosmetics, with 52%, 48%, 46%, 22%, and 17%, respectively. This suggests that male respondents appear to have a greater preference for electronics and gadgets, yet still engage in impulse buying for clothing, food items, household accessories, and cosmetics. The findings also show that male online browsers sometimes buy grocery items impulsively, while female browsers do not make any such purchase in the grocery item category.

Table 7: Product Analysis

Type/Group	Female Respondents		Male Respondents	
	Number	Percentage	Number	Percentage
Clothing and Apparel	71	61%	52	48%
Food items	37	32%	50	46%
Cosmetics	76	66%	19	17%
Household accessories	26	22%	24	22%
Electronic devices and gadgets	16	14%	57	52%
Stationary	1	0.9%	0	0%
Grocery items	0	0%	1	0.9%

In sum, whether hedonic or utilitarian, depending on the form of browsing involved by the consumer, predictors such as gender, credit card facility, attractive display, promotional activities, referrals, and discount offers have a significant impact or a sensitive influence on the consumer's decision to buy impulsively. While consumers are browsing, these predictors influence and manipulate their minds to encourage purchases and prompt them to make impulsive buying decisions. The findings of this research confirm the null hypothesis, which implies that both hedonic and utilitarian browsing, along with the availability of independent variables (such as credit card facilities, attractive displays, promotional activities, referrals, discount offers), lead to impulse purchases. Conversely, the alternative hypothesis is refuted, indicating that there is no impact of the predictor variables on the impulse buying behavior of consumers during hedonic and utilitarian browsing.

6. Conclusion

This study examines the key factors that influence impulsive buying behavior, particularly in the clothing, apparel, and cosmetics categories. Research suggests that impulse buying is more prevalent among female consumers than male consumers, especially in fashion and beauty-related purchases. In contrast, men are more inclined toward electronics, gaming, and technological products (Muruganantham & Bhakat, 2013). Additionally, factors such as credit card facilities and discounts significantly impact impulse buying, as financial flexibility encourages unplanned spending. While promotional activities have a limited effect, other elements—such as prior experiences with a product, perceived value, and the timing of advertisements—also play a role in influencing consumer decisions (Peck & Childers, 2006). In today's digital era, social media and online influencers have become powerful tools in stimulating consumer interest, reinforcing the role of digital marketing in driving impulse purchases (Chen et al., 2017). Furthermore, recommendations from trusted individuals, including family and friends, are strong

motivators for impulsive purchases, highlighting the importance of word-of-mouth marketing and referral strategies (Park & Kim, 2008). These insights offer valuable implications for businesses seeking to optimize their targeting strategies and enhance consumer engagement in both online and offline retail environments.

6.1 Contribution of the study

6.1.1 Theoretical Contribution

This study significantly contributes to the understanding of impulse purchasing behavior in the context of online shopping in Bangladesh by employing a quantitative research approach and using binary logistic regression analysis to examine key influencing factors, including gender, credit card facilities, attractive displays, and social recommendations. The findings align with contemporary consumer behavior theories, including the Stimulus-Organism-Response (S-O-R) model, which explains how environmental stimuli such as discounts and product displays can trigger emotional responses that lead to impulsive actions (Chan et al., 2017). Furthermore, this study builds upon the Theory of Planned Behavior (TPB) by demonstrating how social influence, prior experiences, and perceived behavioral control impact consumers' likelihood of making unplanned purchases (Zhang et al., 2022). Additionally, the research enhances the literature on gender differences in impulse buying, supporting recent findings that women are more prone to impulse purchases in fashion and beauty categories, whereas men show a stronger tendency toward electronics and technology-related products (Dey et al., 2021).

6.1.2 Practical Contribution

From a practical perspective, this study provides valuable insights for businesses, e-commerce platforms, and digital marketers seeking to optimize their sales strategies. The findings highlight the strong influence of word-of-mouth recommendations and social influence on impulse buying behavior, suggesting that peer recommendations, influencer marketing, and referral programs are effective promotional strategies (Husnain et al., 2019). The study also highlights the significance of gender-based consumer preferences, enabling businesses to tailor marketing campaigns and create targeted advertisements for specific demographic segments. Furthermore, the study offers actionable insights into website layout optimization, emphasizing the role of attractive product displays, strategic product placements, and a seamless checkout process in encouraging impulse purchases (Chiu et al., 2021). Finally, the research suggests that promotional activities alone have a limited impact on impulse buying, indicating that businesses should focus on targeted discounts, flexible payment options, and psychological pricing strategies rather than generic promotional campaigns.

6.1.3 Limitations and Future Research Directions

Despite its contributions, this study has several limitations. First, it is limited to online consumers in Bangladesh, restricting the generalizability of findings to other cultural and economic contexts. Future studies could conduct comparative research across different countries to examine how cultural factors and societal norms influence impulse buying behavior (Sun et al., 2022). Second, the study primarily adopts a quantitative approach, which, while useful for identifying statistical patterns, may not fully

capture the emotional and psychological factors driving impulsive purchases. Future research could incorporate qualitative methodologies, such as in-depth interviews and focus group discussions, to explore these dimensions further (Sharma et al., 2023).

Additionally, while this study examines gender-based differences, future research should investigate age-specific and socioeconomic influences on impulse buying behavior in e-commerce settings. Furthermore, as artificial intelligence (AI), machine learning, and personalized recommendations continue to reshape the online shopping landscape, future studies could explore the role of AI-driven marketing strategies and personalized advertising in triggering impulse purchases (Kaur & Kaur, 2023). Examining the psychological impact of AI-driven product suggestions on consumer behavior would provide valuable insights into the next evolution of impulse purchasing dynamics.

Conflicts of Interest

The authors declare no conflict of interest.

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