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MOBILE PHONE APPS-BASED SHOPPING AND GENERATION Z'S IMPULSIVE FASHION APPAREL BUYING BEHAVIOUR

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ABSTRACT

In contemporary society, individuals have increasingly turned to mobile applications as a means of effectively and conveniently organizing their daily tasks and responsibilities. Mobile applications play a significant role in enhancing the efficiency of consumers' shopping experience throughout the decision-making phase. The purpose of this study is to examine the impact of hedonic motivations, utilitarian factors, and social pressure on consumers' intention to purchase fashion products through mobile applications. Additionally, the study also explores the mediating role of attitude towards using mobile apps in this context. A total of 326 Generation Z customers participated in an online questionnaire, which was subsequently subjected to analysis using structural equation modelling techniques, specifically SmartPLS 4 and PLS-SEM. All hypothesized relationships were found to be statistically significant and positive, with the exception of the association between privacy and security and attitude toward using mobile apps, which exhibited a negative relationship. Further, the findings reveal that hedonic motivation significantly influences users' attitudes towards the utilization of mobile applications. Simultaneously, customers' attitudes act as mediators in the relationship between perceived usefulness, social pressure, hedonic motivation, and impulsive buying behavior. These findings will help online marketers to improve their selling endeavors.

Keywords: Consumer attitudes, Fashion apparel, Generation Z, Impulsive buying behavior, Mobile apps

1. Introduction

The rise of m-commerce and e-commerce directly results from consumers' shift toward online shopping due to widespread internet access. Early in 2021, 59.5% of the world's population was estimated to be regular internet users, with 92.6% being regular mobile phone users (Data Reportal, 2021). This percentage indicates a continued rise in the number of digital participants in the population. The growing popularity of mobile commerce is directly attributable to the increasing amount of time consumers spend on mobile devices. (Zwass, 2003). This means customers' online shopping habits are shifting due to the widespread use of mobile devices such as smartphones (Huang and Korfiatis, 2015; Fang and Fang, 2016). Mobile applications (mobile apps) help companies save time and money by reducing their reliance on human labor by providing a digital interface for

conducting business on the go. At the same time, mobile apps can be used as communication tools that guide customers to purchase online.

Despite this, most existing research is broad in scope, covering mobile apps without specifying the industry. In addition, there has been a lack of focus on the investigation of fashion product purchases made through mobile phone apps in prior research, with the majority of attention instead being paid to mobile satisfaction (m-satisfaction) (Rodrguez-Torrico et al., 2019), mobile engagement (m-engagement) (Parker and Kuo, 2022), users' perceived value (Murillo-Zegarra et al., 2020), and usage intention (Chi, 2018). Similarly, few studies have investigated how consumers' feelings about mobile apps affect their buying tendency (Moon and Domina, 2015). Therefore, the fashion industry and its massive online existence are the primary areas of this analysis. Early in 2021, the fashion industry generated 759.5 billion US dollars in online sales, making it the most productive sector in electronic commerce (Aaron, 2022).

In Sri Lanka, e-commerce has grown significantly with the increased internet use and smart devices. According to the Information and Communication Technology Agency (ICTA) of Sri Lanka, the digital economy of Sri Lanka was 4.37% of GDP in 2022. Nearly 43% of the estimated 11 million internet users have purchased online. The most frequent customers' online products purchased are electronics, fashion apparel, and personal care products. This study focused on fashion apparel purchases through mobile apps in the Sri Lankan context.

However, recent data suggest that impulse purchases are becoming increasingly important in the worldwide retail industry (Tran, 2019; Zhang et al., 2020). From the year 2020, COVID-19 prompted a boost in impulsive buying. Since the start of the pandemic, consumers' monthly impulse spending has increased by 18%, according to recent polls (Redine et al., 2023; Li Cain, 2020). Experts say that 20% of retail sales are attributed to impulse buying, even though COVID-19 negatively impacts the global economy (Repko, 2020). In light of this, numerous types of research have been done on impulse purchases, each employing a unique theoretical framework and set of methods. Although there has been much research on impulse buying, it has not been organized well (Li et al., 2021; Kimiagari and Malafe, 2021). Scholars have conducted research into impulse purchases in a variety of fields, including tourism (Ampadu et al., 2022), management and business (Ahmed et al., 2020), information systems (Zafar et al., 2020; Li et al., 2021), and marketing (Ampadu et al., 2022). However, there is a lack of consensus among the research findings, which makes it impossible to get a complete picture of what influences individuals to make impulsive purchases.

On the other hand, Moon et al. (2017) and Ganesan (1994) emphasized three attributes used in online shopping studies: utilitarian, social, and hedonic. The functional attributes of the apps in mobile phones, which include their ease of use, personalization, convenience, usefulness, and localization, are included in the utilitarian attributes. Previous research has demonstrated that consumers place a high value on practical qualities. Other researchers stress the importance of perceived usefulness in shaping consumer attitudes (Chi, 2018), and Parker and Kuo (2022) note that saving time and convenience is crucial for adopting mobile apps. Moreover, a few researchers also pointed

out perceived usefulness and asserted that it effectively predicts the perceived value of mobile apps for fashion products (Sun and Chi, 2018; Murillo-Zegarra et al., 2020).

Moreover, customers believe privacy and security are critical factors in encouraging them to use smartphone apps. Rodrguez-Torrico et al. (2019) found that a lack of worries about security and privacy increases trust and satisfaction. Indeed, Sun and Chi (2018) also confirmed these results.

Even though previous research has produced conflicting results, such as the effect of social pressure on impulsive buying behaviors, no study has looked into how attitude mediates between attributes of online mobile shopping and impulsive buying behavior. In addition, hedonic characteristics of apps like enjoyment, pleasure, entertainment, fun, and visual attraction were discovered to be significant antecedents of positive attitudes (Chang et al., 2016 and Pop et al., 2023) and intent to utilize a mobile app again (Lee and Kim, 2019). A person's propensity to use and spend money on mobile apps can be affected by the views of others (social pressure), as captured by the "social dimension." The influence of online consumers' opinions has grown due to the rise of e-commerce and other forms of digital transformation. This study aims to address this knowledge gap by investigating how utilitarian, hedonic, and social influences affect consumers' attitudes toward mobile apps usage, how attitudes affect consumers' impulsive purchasing behavior toward mobile apps, and how attitudes function as an intermediate between stimuli and responses when it comes to mobile apps.

The researcher uses the S-O-R model to propose a new research framework for predicting in-app impulse purchases. Mehrabian and Russell (1974) explained consumers' decision-making process could be summarized by the S-O-R model's three parts: stimulus, organism, and response. In the developed model, the utilitarian, social, and hedonic dimensions serve as stimulants, while attitudes towards mobile apps as organisms and impulsive buying behavior serve as responses. The TAM (Technology Acceptance Model) elements are also incorporated into the conceptual model, focusing on how users' perceptions of the technology's usefulness influence their impulsive actions. TAM is a development of the Theory of Reasoned Action (TRA), primarily established by Fishbein and Ajzen in 1975 and later modified by Davis in 1989. TAM is extensively applied to investigate purchase and usage intent via mobile apps (Natarajan et al., 2017; Kang and Namkung 2019). According to the model, perceived usefulness is the most crucial factor in their decision to adopt it. However, TAM was initially developed to clarify the technology adoption process in an organization. The model is beneficial for examining the development of other technologies used in daily life, like mobile apps. This study's originality comes from investigating a previously unexplored research area, namely mobile applications, considering the effects of utilitarian, social pressure, and hedonic on consumers' attitudes and impulsive buying when shopping online for fashion apparel in the Sri Lankan context.

Following this introduction, this paper includes a literature review, the development of hypotheses, the design and analysis of the research, discussions, conclusions, implications, and future directions of the research.

2. Literature Review and Hypotheses Development

2.1. Research framework (S-O-R) model

The Stimulus-Organism-Response (S-O-R) model outlines the buyer's steps before purchasing (Mehrabian and Russell, 1974). The conceptual model includes three variables: an independent stimulus, a mediator organism, and a dependent response (Vieira, 2013). Studies of consumer behavior, particularly as it relates to e-commerce, have made extensive use of the S-O-R conceptual model (Kawaf and Tagg, 2012). This model has been used extensively to conduct studies on the impact of stimuli on consumers' emotional and cognitive states, and this investigation seeks to understand how these factors interact to change consumers' intentions or behavior (Mehrabian & Russell, 1974).

According to the conventional S-O-R model, an individual's mental and emotional reactions to stimuli are shaped by the person's internal state (Nam et al., 2020). The term "organism" describes the internal structures and processes that act as a go-between when a person is exposed to a stimulus and the subsequent behavior. The term "response" refers to the reaction someone has after being exposed to stimuli and considering their emotional state. The conceptual framework of the research is represented by these components, which position the utilitarian, social, and hedonic dimensions as stimulants (Moon et al., 2017; Pop et al., 2023; Akdim et al., 2022), attitude towards mobile apps as an organism (Pop et al., 2023), and impulsive buying behavior (Response) as the outcome (Zhang et al., 2020; Lee et al., 2022).

Additionally, the TAM (Technology Acceptance Model) was implemented in this research. Davis (1989) developed this model, proposing that the perceived usefulness of technology and perceived ease of use are the most important determinants that lead to whether or not customers will adopt and use it. The Theory of Reasoned Action (TRA) was developed by Fishbein and Ajzen (1975), and TAM is one of its more well-known extensions. The model proposes that attitude toward behavior influences intention to behave, influencing actual behavior.

Previous research has shown a correlation between consumers' positive attitudes and perceived usefulness (Kulviwat et al., 2007). In that line, Agrebi and Jallais (2015) highlighted that the perceived usefulness of mobile apps is an essential antecedent to the perceived ease of use during purchasing. The perceived usefulness of mobile apps positively influences perceived value (Ko et al., 2009) and the intent to use mobile apps (Sun and Chi, 2018; Andronie et al., 2021). As a result, it is assumed:
H1: Consumers' attitudes toward mobile applications are positively influenced by perceived usefulness.

In mobile applications, users' perceptions of their control over when, how much, and to whom their data stored in a mobile app is accessed, modified, or disclosed are at the heart of security and privacy concerns (Smith et al., 1996). Their level of security and privacy affects mobile app use and adoption (Fang et al., 2017). Users are more content with their buying decisions (Rodrguez-Torrico et al., 2019) when they feel the higher security of

mobile apps. In addition, trust in fashion mobile commerce increases when Chinese consumers have low security and privacy concerns. (Sun and Chi, 2018; Rodrguez-Torrico et al., 2019). The resulting hypothesis is as follows:
H2: Users' attitudes toward mobile applications are positively influenced by Low security and privacy concerns.

The term "social influence" was coined by Venkatesh et al. (2012) to describe the impact of a third party's opinion on an individual's decision to adopt and use new technology. For instance, a person's decision of whether or not to use and adopt emerging technologies is influenced by the reference group's views. Only a few studies observed that a person's intent to buy is influenced by the opinions of a third party (Tak and Panwar, 2017; Sun and Chi, 2018), whereas Soni et al. (2019) identify no correlation at all. Furthermore, an app's perceived usefulness by an individual is influenced by the opinions of others (Sun and Chi, 2018). Consumers are more likely to trust the advice of friends and acquaintances when making purchase decisions because many of them view shopping as a social activity (Kim et al., 2009). The influence of social pressure leads to the conclusion that:
H3: User attitudes toward mobile applications are positively influenced by social pressure.

Hedonic motivation and utilitarian attributes are essential in an individual's decision-making processes (Dhar and Wertenbroch, 2000). Hedonic factors heavily influence buying decisions online (Kim and Eastin, 2011). However, it has been established in the context of mobile applications that utilitarian attributes significantly impact customers' willingness to purchase over hedonic motivation (Parker and Wang, 2016). Hedonic values are highlighted by Chang et al. (2016) and Moon et al. (2017) as a central factor in shaping consumers' attitudes. Moreover, the need for atmospherics within a mobile app is positively impacted by consumers' hedonic shopping orientation, as was pointed out by Lee and Kim (2019), and this, in turn, significantly affects consumers' intent to reuse mobile apps. So, the following speculation is offered:
H4: Users' attitudes toward mobile apps are positively influenced by hedonic motivation.

Behavior of consumers is a psychological process. Because of that, consumer attitudes toward behavior influence consumer intention to buy (Liu and Fang, 2016). Consumers' attitudes are their learned propensity to act favorably or unfavorably toward the offered products (Huang et al., 2004). Consumers' positive attitudes strongly correlate with their buying intention, which makes attitude a valuable predictor of consumer behavior accurately and reasonably (Ajzen and Fishbein, 1980). Therefore, when a customer has a favorable attitude toward impulse purchases, the customer is more likely to make an impulsive purchase (Ting et al., 2016; Liang et al., 2021). In addition, consumers' optimistic outlook predisposes them to try out and ultimately buy from fashion vendors' mobile applications (Moon and Domina, 2015; Chang et al., 2016; Moon et al., 2017; Chi, 2018). Therefore, it's sound to assume:
H5: The users' positive attitude positively influences users' impulsive buying behavior through mobile applications.

While studying the S-O-R literature, a few shreds of evidence were found in the fashion industry to evaluate the mediating role of customer attitude. Kim et al. (2017) emphasized

in the fashion industry the importance of attitude as a mediator between the perceived usefulness and the intention to buy and between the perceived enjoyment and the purchase intention. However, no studies examine the mediating role of customer attitudes toward impulsive purchases in the fashion industry (Moon et al., 2017). As a result, studies are needed to determine how customer attitudes affect purchases of fashion apparel online. Consequently, the subsequent hypotheses were made:
H6 a, b, c, d: Users' attitudes toward mobile apps mediate the relationship between perceived usefulness (H6a), privacy and security (H6b), social pressure (H6c), hedonic motivation (H6d) and impulsive buying behavior in fashion apparels.

3. Research Design and Analysis

3.1. Variable measurement and questionnaire design

This study used a three-part questionnaire to compile its data. The first section covered questions about generation, gender, education level, and occupation. Part two included a description of the three primary attributes of purchasing online: utilitarian, social pressure, hedonic motivation, and the attitudes to using mobile apps in online purchasing fashion appeal. The third part was about impulsive buying behavior through mobile apps. This study measures six latent variables by mainly relying on findings from previous studies.

Consequently, the survey's questions focused on three primary attributes of purchasing online: utilitarian, social pressure, and hedonic motivation, which originated from the research of Kulviwat et al. (2007), and Agrebi and Jallais (2015) and Pop et al. (2023), the attitudes toward using mobile apps were looked into using a list of questions developed by Pop et al. (2023) and Chang et al. (2016). Elements of impulsive purchasing were investigated via questions generated by Liu et al. (2019) and Verhagen & Van (2011). At least three items per latent variable were included in the questionnaire, with each item being scored on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree" (Liu et al., 2019). Three marketing professionals and three e-commerce professionals were asked to review the questionnaire after it was developed. The three e-commerce experts concentrated on mobile app features, while the marketing experts primarily looked at respondents' attitudes and impulsive purchases. All experts accepted the developed questions. The responses to the question formats, difficulty levels, and wording was all good. As a result, a preliminary survey was conducted and pilot-tested with 42 participants. Pilot results informed revisions to the questionnaire's content, such as incorporating suggestions to increase the font size of the scale level. After making the necessary adjustments, the questionnaire's final version was developed to collect data.

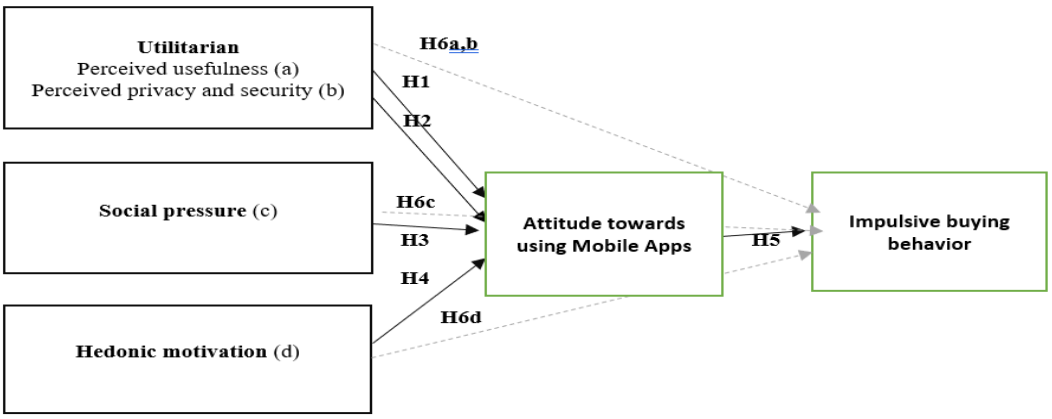

Figure 1. The conceptual model.

4. Data Collection and Analysis

The questionnaires were sent to 400 participants via e-mail and WhatsApp, and 339 responses were received. After discarding invalid or incomplete questionnaires, 326 valid responses were left, and the overall response rate was 84.75%. The sample size for the structural equation model must be greater than 200 (Hoelter, 1983). A total of 326 complete questionnaires were collected for this study based on the requirement. Table 1 shows that females comprised 58% of the sample, while males accounted for 42%. Generation Z (born between 1995 to 2002) is the survey's focus because they are more comfortable making in-app purchases on mobile devices. According to the Pew Research Center (2021) and Vogue Business (2020), these age groups are the most likely to shop for and use fashion products online. The research looks at mobile apps without focusing on a specific one.

Table 1. Demographic characteristics of Generation Z.

Demographics (*N* = 326)		Frequency	Relative frequency %
Gender	Female	189	58%
	Male	137	42%
level of education	School	37	11.3%
	A Basic Degree (Bachelor's)	227	69.6%
	Master's Degree and above/ professional qualification	62	19.0%
Occupation	Student	111	34.0%
	Employee	185	56.6%
	Entrepreneur	23	7.0%
	unemployed	7	2.4%

4.1. Reliability and validity test

The current research used the partial least squares method (PLS) for structural equation modelling and factor analysis. This method is appropriate for complex structural equation models and works well with small sample sizes and data that do not follow the normal distribution (Hair et al., 2016). In this study, statistical processing and analysis were

performed with SPSS 25, and path analysis and hypothesis testing were performed with SmartPLS 4.

Table 2 shows that the observed variables have a standard loading of over 0.7, indicating that they provide a good explanation for the latent variables (Hulland, 1999). The questionnaires' Cronbach's α is relatively high, which suggests the questionnaires' reliability (Bagozzi and Yi, 1988). The results of the Kaiser-Meyer-Olkin (KMO) test indicate that factor analysis can be executed without issues. Composite reliability (CR) and Cronbach's α values in Table II show that all latent variables in the sample have reliability levels above 0.7, which indicates the reliability is acceptable (Bogozzi and Yi (1988).

Table 2. The mean, SD, factor loading, Cronbach's α, CR, and AVE values.

Construct	Item	Mean	SD	Factor loading	Cronbach's α	CR	AVE
Perceived usefulness	PU1	3.591	0.828	0.820	0.853	0.910	0.773
	PU2	3.624	0.811	0.919			
	PU3	3.518	0.777	0.894			
Privacy and security	PS4	3.924	0.809	0.827	0.831	0.898	0.745
	PS5	3.835	0.724	0.888			
	PS6	3.607	0.772	0.873			
Social pressure	SP7	3.637	0.779	0.839	0.732	0.849	0.652
	SP8	3.789	0.805	0.850			
	SP9	3.782	0.835	0.729			
Hedonic motivation	HM10	3.445	0.799	0.826	0.847	0.896	0.683
	HM11	3.556	0.901	0.826			
	HM12	3.786	0.855	0.834			
	HM13	3.841	0.754	0.819			
Attitude toward using Mobile apps	AM14	3.783	0.794	0.856	0.857	0.904	0.704
	AM15	3.518	0.921	0.887			
	AM16	3.925	0.876	0.890			
	AM17	3.65	0.899	0.711			
Impulsive buying behavior	IB18	3.765	0.943	0.818	0.875	0.909	0.668
	IB19	3.076	0.748	0.770			
	IB20	3.69	0.814	0.878			
	IB21	3.603	0.846	0.846			
	IB22	3.712	0.922	0.769			

Convergent validity and discriminant validity are two methods for evaluating validity. (Bagozzi and Yi, 1988). When the values of Average Variance Extraction (AVE) are greater than 0.5, as shown in Table 2, convergent validity has been established. Discriminant validity is indicated by AVE square root values greater than correlations between variables (Table 3) (Fornell and Larcker,1981). The fitness of a good model is supported by a square root mean residual (SRMR) of 0.053, which is less than the 0.08 threshold set as optimal (Hu and Bentler, 1999). With an NFI of 0.898, we are very close to meeting the minimum criterion of 0.9 (Henseler et al., 2016). Overall, privacy and security, perceived usefulness, social pressure, and hedonic motive account for 68.8% of the variation in attitudes about mop applications. More than that, the model's predictive power is

moderate because attitude only accounts for 48.4% of the variation in impulsive purchases (Hair et al., 2018).

Table 3. Discriminant validity analysis.

	Hedonic motivation	Impulsive buying	Perceived usefulness	Privacy security	Social pressure	Attitude mobile apps
Hedonic motivation	0.826					
Impulsive buying	0.628	0.817				
Perceived usefulness	0.612	0.515	0.879			
Privacy & Security	0.384	0.432	0.357	0.863		
Social pressure	0.538	0.499	0.502	0.214	0.808	
Attitude to mobile apps	0.801	0.696	0.625	0.311	0.574	0.839

4.2. Testing the hypotheses

This study used SmartPLS 4 to perform structural equation modelling (SEM), with hypotheses tested via route analysis, path relationships verified via PLS Algorithm, and Bootstrapping used to determine significance levels (Hair et al., 2016). The bootstrap method uses replacements from an initial data file to reach the desired sample size (Chernick, 1999). This technique is well-suited for small samples and provides thorough, comprehensive model evaluations (Streukens and Leroi-Werelds, 2016).

This study used a bootstrap method with 5000 replicates for testing hypotheses. Figure 2 shows the structural equation model. Four hypotheses were confirmed by the t-tests, although one was not supported by the model as a whole. The first hypothesis assumed that consumers' attitudes toward mobile applications are positively influenced by perceived usefulness, as shown in Table 4 (β value = 0.158; t-statistic = 3.536; $p < 0.001$), consumers' attitudes are positively influenced by perceived usefulness during the usage of mobile apps. Based on it, H1 is confirmed. H2 hypothesized that users' attitudes toward mobile applications are positively influenced by Low security and privacy concerns. Since the results indicate (β value = - 0.022; t-statistic = 0.579; p = n.s). Privacy and security have no statistically significant effect on consumers' attitudes. H2 cannot be proved. In terms of social pressure, the findings show (β value = 0.177; t-statistic = 2.994; $p < 0.05$) that consumers' attitudes toward using mobile apps are positively affected by social pressure. This proved that H3 was confirmed. Hedonic motivation significantly affects consumers' attitudes toward mobile app use, as shown by the results (β value = 0.616; t-statistic = 13.119; $p < 0.001$). This means that H4 was also validated. Finally, the results confirm (β value = 0.696; t-statistic = 19.730; $p < 0.001$) the hypothesis that consumers' positive attitude toward mobile app use significantly and positively affects their impulsive purchases of mobile apps; therefore, H5 also was confirmed.

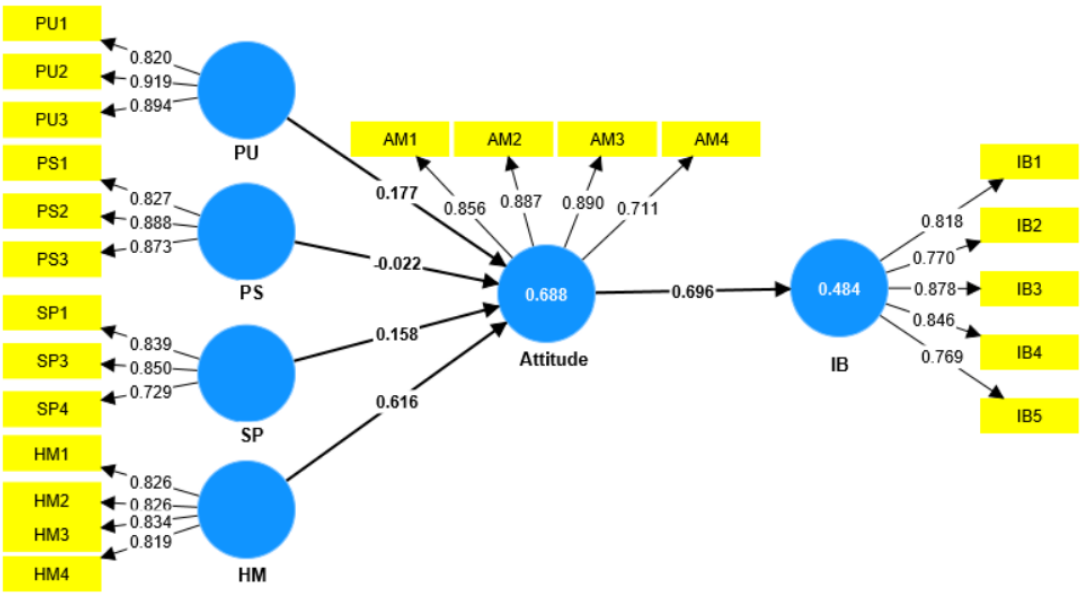

Figure 2. The structural model.

Table 4. Structural equation model's path coefficients.

Paths	Path coefficients	SD	t- statistic	P-Value	Result of hypotheses
PU -> Attitude	0.158	0.05	3.536	0.000**	Supported (H1)
(PS -> Attitude	-0.022	0.038	0.579	0.562n.s	Not supported (H2)
SP -> Attitude	0.177	0.053	2.994	0.003*	Supported (H3)
HM -> Attitude	0.616	0.047	13.119	0.000**	Supported (H4)
Attitude -> IB	0.696	0.035	19.73	0.000**	Supported (H5)

4.3. Analysis of mediation

We first bootstrapped the indirect effects, as instructed by Hair et al. (2017), which "provided higher levels of statistical power compared with the Sobel test." and then analyzed the mediating role of attitude (Hair et al., 2017). The analysis of mediation confirms that PU → IB (β value=0.123; t-statistic = 3.455; $p < 0.05$), SP → IB (β value = 0.110; t-statistic = 2.984; $p < 0.05$), HM → IB (β value = 0.429; t-statistic = 10.38; $p < 0.001$) are all significant indirect relations, while (PS → IB) has insignificant indirect effects.

A direct relationship between PS and IB was examined in the following analysis, but no statistically significant relationship was discovered. (β value= 0.029; t-statistic = 0.479; p = n.s); This led us to conclude that attitude toward using the mobile app fully mediates the PU → IB association. Table 5 shows that the relationship between PS and IB is statistically significant (β value = 0.216; t-statistic = 4.137; p <; 0.001). Therefore, there is no mediation with a direct-only effect. There was an insignificant relationship between SP and IB (β value = 0.129; t-statistic=1.862; p=n.s), meaning consumers' attitudes toward mobile apps fully mediate this relationship with a direct effect. Finally, Table 5 shows no significant relationship between HM and IB (β value = 0.077; t-statistic = 1.039; p =n.s) via direct only effect, suggesting that the attitude about using the mobile app fully mediates the relationship between HM and IB.

Table 5. The structural equation model with mediation analysis.

Paths	Direct effect	Direct effect (95% confidence interval)	t-statistic	P-value	Indirect effect	Indirect effect (95% confidence interval)	t-statistic	P-value	Mediation type
PU -> IB	0.029	-0.088-0.152	0.479	0.632 n.s	0.123	0.055-0.194	3.455	0.001*	Full mediation
PS -> IB	0.216	0.116-0.321	4.137	0.000**	-0.016	-0.064-0.04	0.581	0.562n.s	No mediation
SP -> IB	0.129	-0.005-0.265	1.862	0.063 n.s	0.110	0.043-0.188	2.984	0.003*	Full mediation
HM-> IB	0.077	-0.077-0.214	1.039	0.299 n.s	0.429	0.347-0.509	10.38	0.000**	Full mediation

Note: Perceived usefulness (PU); Privacy and security (PS); Social pressure (SP); Hedonic motivation (HM); Attitude towards mobile app (Attitude); Impulsive behavior(IB); Non-significant (n.s); *p < 0.05. **p < 0.001

The findings confirmed hypotheses H6a,c,d but rejected H6b. It's in line with the findings of Kim et al. (2017), who highlighted the role of attitude in mediating the connection between perceived usefulness and behavioral intention in the fashion industry.

4.4. Discussion

In this study, the S-O-R framework is used to investigate the factors that predict impulsive buying behavior via mobile apps, specifically focusing on the role that attitude toward using mobile apps plays as a mediator between the utilitarian, social pressure, and hedonic dimensions and impulsive buying behavior. Innovative features of this study include its application of the S-O-R model to the study of mobile apps from a marketing perspective; the mediator role of attitude toward mobile app use; and the integration of the utilitarian, social pressure, and hedonic dimensions of fashion apparel in Sri Lankan context.

The findings from this study provide empirical evidence that consumers' attitudes towar d mobile apps are positively influenced by their perceived usefulness. Customers are more willing to use a mobile app to buy fashion apparel if it improves their shopping experience, helps them achieve their shopping targets more effectively, and saves time.

As a result, consumers have more positive attitudes when using a mobile app, they perceive to be useful. These findings are consistent with the findings of Parker and Kuo (2022), who found that efficiency is a critical element in attracting customers to mobile commerce. While Murillo-Zegarra et al. (2020) stress the importance of usefulness as the most important predictor of the perceived value of mobile apps in fashion. Our findings suggest that hedonic motivation strongly influences consumers' attitudes. One possible explanation is that the current study was carried out following the pandemic; thus, the scare of COVID-19 may be consumers' limited options for shopping instead of engaging in activities that used to bring them joy; this view is shared by various authors as well (Koch et al., 2020) (see H1). Positive attitudes among customers are more likely toward app use if they have few security and privacy concerns. Since an app can collect users' private information without their knowledge or consent, users are more at ease when

they know their data is safe and secure. In past studies, researchers noticed low security and privacy concerns have led to customer satisfaction (Rodrguez-Torrico et al., 2019), and regarding fashion, online mobile shopping "trust" is gaining popularity among Chinese consumers (Sun and Chi, 2018; Rodrguez-Torrico et al., 2019); thus, the findings of this study do not develop on these findings (see H2). McCole et al. (2010) pointed out how moderating effects of online security and privacy can influence customers' attitudes about shopping online. One possible explanation is a lack of awareness of privacy and security concerns in the Sri Lankan context, especially among Generation Z.

Perceived usefulness under the utilitarian dimension strongly influenced attitudes toward using an app. Mobile apps improve shopping accessibility from a technological standpoint by simplifying the ordering and payment process, creating wish lists, categorizing products, and improving efficiency, ultimately leading to a more satisfied and repeat customer base. Technologies based on artificial intelligence, like chatbots, can alter customer engagement and experience (Nica et al., 2022; Kliestik et al., 2022). The elements of social pressure greatly influence attitudes toward mobile app use. This may be a result of digitalization. Reference groups and the opinions of others grow in importance in the digital sphere as consumers shift from offline to online modes of doing things like shopping, working, and socializing. Reviews from other customers greatly help shoppers looking for the best price, brand, quality, store, etc. Our findings (see H3) are supported by earlier research, which revealed that social pressure influences consumers' attitudes toward the social presence of shopping websites and the usefulness of the web (Kumar and Benbasat, 2006).

Finally, the hedonic dimension has been indicated to significantly affect consumers' attitudes toward utilizing a mob application, a finding that other authors have confirmed (Agrebi and Jallais, 2015; Murillo-Zegarra et al., 2020). Customers have a favorable attitude toward mobile apps due to their hedonic qualities, like being enjoyable, entertaining, fun, and comfortable. These findings are consistent with those of Liang and Liu (2019), who found that' attitudes and online fashion apparel through mobile devices like mobile apps, are significantly affected by hedonic value (see H4). Consumers' attitudes toward mobile apps significantly impact their purchase intention. As a result, customers are more likely to make purchases of apparel and accessories through mobile apps if they find the app to their desire and find it efficient, pleasant, convenient, or sound.

Similarly, other authors (Ting et al., 2016; Liang et al., 2021) confirmed these findings and emphasized the positive impact of attitudes on impulsive mobile app purchases (see H5). In the current study, attitude is chosen as a mediator; the association between social pressure, perceived usefulness, hedonic motivation, and impulsive behavior was fully mediated by attitude. Thus, the total effect of social pressure, perceived usefulness, and hedonic motivation on impulsive buying are conveyed via attitude. Social pressure, perceived usefulness, and hedonic motivation contribute to a customer's positive attitude, leading to impulsive buying. Attitude acts as a complementary mediator between hedonic motivation and impulsive buying behavior; consumers' positive attitudes toward using mobile apps contribute to an increase in impulsive purchases. In a related study, Chang et al. (2016) proved that attitude was a mediator in a similar research context (see H6).

5. Conclusions and Implications

This research adds to the theory by investigating how consumers' attitudes toward and impulsive buying of mobile apps are influenced by utilitarian, hedonic, and social pressure in direct and indirect ways. This study contributes to the research on the mobile app application by using the S-O-R model to examine the causes of impulsive purchases and by demonstrating how a user's attitudes can mediate between the characteristics of the apps and their propensity to make impulsive buys. From the management perspective, our results are useful for marketers and retailers because they shed light on the antecedents of impulsive purchases via mobile apps. According to the findings, hedonic motivations significantly impact consumers' attitudes toward mob apps; as a result, marketers and fashion retailers should prioritize the hedonic features of an app, like whether or not it is enjoyable to use, fun, pleasant, or entertaining. Customers purchase fashion items for necessity and enjoyment or to keep up with the latest fashion trends. Shopping for fashion apparel is frequently correlated with impulsive purchasing, primarily described by the pursuit of pleasure and enjoyment. In addition to the hedonic qualities, consumers value the utilitarian aspects of apps when purchasing mobile apps.

Marketers must ensure that the application is useful to improve customers' experiences with the apps' decision-making process by increasing the apps' speed, performance, and productivity.

Social pressure is also an essential factor for retailers to consider. The opinions and comments of others can influence customers. As a result, retailers should monitor user-generated content to address customer complaints and questions, thus enhancing the relationship between the company and the customers—the likelihood of consumers sharing their negative than positive experiences with services. Therefore, management should begin by providing a satisfying purchasing experience for customers, paying close attention to both the aspects of the technology of the mobile app (like its usefulness, interactivity, and ease of use) and the experience of the product (like the size, price, or material), thereby reducing the number of dissatisfied customers. In addition, businesses need to use social media actively to increase awareness of their brand and attract the attention of their target customers Gen Z. For example, Shein, a well-known Chinese online fashion retailer, owes much of its success to users making and sharing "hauls" on the video-sharing platform TikTok. According to Retail Dive (2021), Shein is a leading mobile fashion app available on mobile devices. A lack of social influence among young consumers can be attributed to the popularity of social media and mobile trends. There are limitations in this study, including the conceptual model being based solely on an app's most critical utilitarian features.

5.1. Future direction

Future studies could focus on other significant elements, like perceived ease of use, personalization, convenience, and interactivity. Further, larger samples can be collected to generalize the results. The results suggest that societal pressure does not significantly affect customer attitudes, so researchers could change their focus instead of social

influence and use social media in future studies. As previously mentioned, Gen Z and Millennials are the main target customers for fashion retailers because they are most likely to follow the latest online fashion trends. This suggests that social media may be more influential than the opinion of personal relationships, such as friends and family, in shaping users' attitudes.

New trends, like the incorporation of virtual reality and augmented reality into mobile applications, provide a window into the future of research. Adding these features enhances the app's usability. As a result, future studies should take their significance into account. Furthermore, Future research might reveal new moderating factors like Covid-19 and investigate differences in impulsive purchasing behavior in mobile apps.

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