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AN ANALYSIS OF INFLUENCE OF DIFFERENT PSYCHOLOGICAL FACTORS OF ONLINE SHOPPING ON COMPULSIVE BUYING BEHAVIOUR IN THE DIGITAL AGE

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Abstract

Purpose: This research focuses on the impact of digital technology in the era of online shopping on compulsive buying behavior, with a focus on psychological factors such as quick satisfaction, societal validation, emotional control, targeted marketing, and integrated purchasing strategies. This analysis aims to understand the underlying reasons and effects of such behaviours. **Methodology:** This was a quantitative research design with a sample size of 298. The random sampling technique was used to get the sample size. Data were analyzed through SPSS software with statistical methodologies such as correlation, regression, ANOVA, and factor analysis to determine the relationships between compulsive buying inclination and online shopping behavior. **Findings:** The research exhibited significant positive relations between compulsive buying behaviour and individual characteristics like impulsivity, anxiety, social influence, self-esteem, and happiness when shopping online. Regression studies portrayed these variables as having a great impact on compulsive buying trends, pointing towards the importance psychological factors in the online shopping scenario. **Conclusion:** The study highlights the role of psychological factors in compulsive buying behaviour in online purchasing. It explores the impacts of immediacy, social proof, emotional management, targeted marketing, and effortless buying strategies. These results are critical for methods to mitigate the negative consequences of compulsive buying in the digital era. **Originality:** This study is unique in that it looks into the interaction of psychological factors in obsessive purchasing habits while online shopping. It offers unique insights into how quick gratification, social variables, and focused marketing influence these behaviors, with important implications for consumers and marketers themselves.

Keywords: Online Shopping, Compulsive Buying Behaviour, Psychological Factors, Quantitative Research, and Statistical Analysis.

1. INTRODUCTION

Online retailing started in the early 1990s as the internet opened opportunities for new forms of commerce; It would take the sale of a Sting CD in 1994, whose purchase was secured via NetMarket, for the electronic commerce era to begin [1]. Amazon and eBay have been pivotal in popularizing online shopping. Founded in 1994 by Jeff Bezos, Amazon initially commenced as an internet bookshop. It turned into a tremendous achievement due to its large catalog, ease of use, and consumer-friendly policies. Over time, Amazon diversified into promoting a huge range of merchandise and turned itself into an international e-commerce powerhouse [2]. Launched in 1995 by Pierre Omidyar, eBay furnished a platform for consumer-to-consumer sales through online sales, wherein a person could buy or sell anything from collectibles to electronics. The fast improvement of secure payment systems, user-friendly interfaces, and global transport skills further encouraged the increase in online purchasing [3]. The sector was further revolutionized by the widespread use of smartphones and mobile apps in the 2010s, which increased the accessibility and convenience of purchasing [4]. Mobile commerce (m-commerce) enabled consumers to keep anywhere and at any time, thereby appreciably growing the volume of online transactions [5]. Social media systems like Facebook, Instagram, and Pinterest also had a significant impact by incorporating shopping features and commercials at

once into their interfaces [6]. The energy of influencer advertising and marketing and social proof in using online sales have become significant, considering customers should without difficulty be influenced by using tips and developments seen on these systems. In the modern, online shopping is a necessary part of the worldwide economy and maintains on evolving with the new technological shifts and changes in client preference. It gives a big style of products and services; as a result, organizations are constantly innovating to improve the consumer shopping experience [7].

The rise of compulsive buying behavior parallels the growth of consumer culture and the accessibility of online shopping. Digital systems, with their regular availability, personalized advertising, and seamless purchasing processes, have amplified impulsive purchasing dispositions [8]. Psychological triggers consisting of immediate gratification, social validation, and stress comfort contribute considerably to this behaviour [9]. The anonymity of online shopping and the impact of social media similarly exacerbate compulsive buying, leading consumers to interact in pointless and immoderate purchases pushed with the aid of emotional and psychological factors. Compulsive buying, also called oniomania or shopping addiction, is characterized by way of an overwhelming urge to purchase items, frequently resulting in excessive spending [10]. Historically related to consumerism and materialism, this behavior has been extensively amplified in the digital age [11]. Online shopping platforms provide instant access to a massive array of merchandise, offering on-the-spot gratification and reinforcing the behavior [12]. Compulsive buying regularly serves as a coping mechanism for negative emotions consisting of pressure, tension, and melancholy, presenting a transient emotional rise. Social media and virtual advertising create urgency and fear of missing out on trends, riding impulsive purchases to hold social relevance [13]. Advanced algorithms supply rather customized commercials and recommendations, growing the likelihood of impulsive buying. Reward systems, discounts, and loyalty packages on many structures create a sense of fulfillment and satisfaction, encouraging repeat purchases. Post-purchase rationalization enables justifying impulsive buys, lowering mental pain [14]. The hedonic version leads to repeated buying to keep preliminary excitement, while restricted-time offers and flash income create a notion of shortage, compelling quick decisions. Compulsive buying has substantial economic and mental outcomes. Excessive spending can result in debt and financial instability, affecting long-term monetary fitness [15]. The guilt and shame associated with compulsive buying can cause mental fitness problems consisting of anxiety and depression. Moreover, compulsive buying can strain relationships due to secrecy, financial pressure, and differing attitudes toward money.

Understanding the psychology that underlies consumer behavior is relevant to consumers, businesses, legislators, and mental health practitioners [16]. Knowledge in this area by consumers would lead to more conscious, less impulsive purchasing decisions, and therefore it would reduce compulsive buying and the costs it entails in terms of financial and emotional costs [17]. The recognition of what causes the triggers, such as instant gratification, social validation, and emotional regulation, helps people to check their impulsive urges and find better ways of coping with issues [18]. This in turn brings better mental health and increased financial stability. Understanding psychological triggers helps businesses develop ethical marketing strategies that respect consumers' needs without exploiting their weaknesses. It leads to long-term trust and brand loyalty. Better matching of products and services with customer needs and expectations could improve customer satisfaction and, at the same time, ensure sustainable growth through responsible, targeted recommendations and advertisements [19]. Legislators can derive principles of public policies by which the vulnerable are not easily exploited by the effects of psychological triggers. This sets guidelines for advertising; more so on digital

platforms and social media, ensuring transparency and fairness in the advertisement [20]. Public educational campaigns can increase awareness about psychological triggers, thus preparing people to make rational decisions. The provision of resources and support systems, such as counseling and financial planning services, will help manage compulsive buying behavior. Mental health professionals could use an understanding of psychological factors in designing targeted interventions and therapeutic strategies. Cognitive-behavioral therapy can deal with the emotional and cognitive triggers of compulsive buying. Comprehensive treatment plans that integrate attention to emotional well-being and financial behavior offer multifaceted support. Ongoing research into consumer psychology could yield new therapy methods and tools, advancing mental health practice and better-supporting clients [21].

In this work, we analyze an influence of online shopping on compulsive shopping for conduct within digital age, which specializes in psychological factors together with instantaneous gratification, social validation, emotional law, personalized marketing, and seamless purchasing strategies.

2. LITERATURE REVIEW

Some of the recent research works related to the Online Shopping on Compulsive Buying Behaviour in the Digital age were reviewed in this section

In 2021, Muller *et al.*, [22] provided context for the discussions surrounding the parallels between problematic online shopping and offline CBSD as well as certain internet-use disorders. According to preliminary studies, problematic online buying and shopping may have many similarities with potential particular internet-use disorders as well as offline CBSD.

Suresh and Biswas [23] explained that the primary goal of this study is to gain insights into this issue from an advertising perspective, as well as to determine whether the millennials' preference to avoid social sensitivity physically but crave it in a virtual space has an impact in 2020.

Conducted over a seven-month period, with data collected and analyzed from 202 respondents in Bangalore, the study discovered that emotions such as loneliness, despair, low vanity, and tension encourage respondents to move forward and maintain relationships in a virtual space rather than engaging in face-to-face interactions. As a result, allowing firms can align their advertising and marketing strategies and so widen products and services, resulting in higher income revenues and repeat purchases.

In 2022, Gori *et al.*, [24] proposed Compulsive Online Shopping Scale (COSS) is being translated and validated for use in Italian contexts. A sample of 397 Italian individuals conducted an online survey that included the Italian COSS, Edwards Compulsive Buying Scale, Internet Addiction Test, Yale-Brown Obsessive Compulsive Scale Second Edition, and Barratt Impulsiveness Scale-11 (mean = 32.54 years, SD = 11.16).

The results also demonstrated high levels of discriminant validity, convergent validity, and internal consistency. As a result, it appears that the Italian COSS is a valid and reliable self-report measure for assessing the possibility of compulsive internet shopping among Italian-speaking persons. This makes it potentially useful for both clinical and scientific contexts.

In 2020, Li *et al.,* [25] devised the distance of information-state transition (DIT) theory in order to measure the "convenience" of using mobile applications to obtain service information. Mobile app usage for e-commerce retailing is regarded as an information operation procedure.

In order to evaluate how user-friendly mobile apps are for e-commerce retailing from the perspective of customer online shopping behavior patterns, a brand-new DIT-based assessment technique is implemented. Additionally, using typical patterns of online purchasing behavior, a quantitative evaluation of the related ease-of-use aspects of three mobile applications is carried out. The results of the study show that there will be substantial consequences for both online buyers and those who create online shopping platforms.

In 2020, Ventre and Kolbe [26] explored online purchase intention in emerging countries with particular attention to the influence of perceived risk, trust, and usefulness of online reviews. 380 internet shoppers in Mexico City completed an online survey to provide the results. According to findings of partial least squares structural equation modeling (PLS-SEM) with SmartPLS, online reviews' perceived usefulness affects consumers' intentions to trust and make purchases online. The perceived risk did not immediately affect the authors' desire to make an online purchase. The findings imply that businesses should work to encourage clients to post favorable reviews online to foster confidence and promote online transactions.

In 2020, Koch *et al.*, [27] examined the rationale for Generation Z and Y's internet purchases in April 2020, amid the COVID-19 outage. Utilizing survey data from 451 German customers, structural equation modeling was used to examine the connections between moral, utilitarian, and hedonistic motives and purchase intentions. The results show that normative variables, such as media coverage of the state of the economy, have a normative influence on customers' purchasing intentions, while tight social networks do not. It was also shown that women, members of Generation Z, and people who practice social distancing have higherlevels of hedonic drive and that hedonic motivation is a stronger indicator of purchase intentions than utilitarian motivations.

Sharif *et al.*, [28] examined in 2022 the link between obsessive internet buying and intense social networking among young adults in Malaysia, as well as the mediating effects of materialism and financial social comparison. 1,109 users of social networking sites between the ages of 16 and 25 (M = 20.57, SD = 1.47) conducted an online survey, with 87.9% of respondents being Malaysian Chinese. Covariance-based structural equation modeling was used to assess the measurement model and the proposed serial mediation model. Additionally, the results showed that the relationship between extensive social networking and compulsive online purchasing was mediated by materialism and financial social comparison.

In 2022, Wang *et al.*, [29] discovered that several hedonic incentives have a role in compulsive internet shopping. This study uses data from 904 shoppers to evaluate gender variations in compulsive online buying & relationship between hedonic shopping incentives & compulsive buying behaviors. The main driving forces behind compulsive internet shoppers are concept shopping and satisfaction seeking (primarily information seekers for men, and gratification seekers for women). On the other hand, value and role-play shopping, which has a greater impact on women, decreases obsessive online purchasing; for men, role-play shopping has no connection to compulsive online buying.

In 2022, Pacheco *et al.*, [30] offered a comprehensive analysis of the psychological elements that affect online impulsive purchase, including stress reaction, materialism, self-esteem, boredom, positive affect, absorption, shopping pleasure, and demand for hedonistic and utilitarian consumption and habit. Draw attention to the relationship between stress reactivity and impulsive purchasing, arguing that cyber-impulsive behavior and low self-esteem are related. Online impulse purchases are motivated by materialism, whereas browsing and purchasing desires are influenced by affective states and boredom. Absorption rates influence

a person's sensitivity to sensory cues, which influences impulsive purchases. Online shopping involves social and concept shopping, and habitual impulsive behaviors are reinforced by repeated exposure.

Aydin *et al.*, [31] examined the connections among impulsivity, biological rhythm, fear of missing out (FoMO), & compulsive buying (CB). Psychological instruments such as the CBS, BIS-11, FoMOs, MEQ, SHI, and DASS-21 were used to analyze data from 493 university students. Individuals with a morning disposition had reduced levels of anxiety, stress, impulsivity, CBS, and FoMOs. Impulsivity, sadness, anxiety, and fear of missing out are all associated with compulsive shopping. Higher degrees of impulsivity, FoMO, and compulsive shopping were seen in evening types. This research provides new understandings of compulsive buying, its correlates, & an influence of circadian rhythm on consumer behavior.

In 2020, Zheng *et al.*, [32] examined the connection between obsessive online shopping and perceived stress, concentrating on the moderating effect of self-esteem and the mediation impact of negative coping. In a sample of 548 female consumers, perceived stress was positively correlated with compulsive online purchasing, with inadequate coping acting as a partly mediating factor. Self-esteem lessened these effects, especially for women with higher self-esteem. It also lessened the link between compulsive online shopping and perceived stress and the mediation role of negative coping. These findings advance our understanding of women's obsessive online purchasing as a stress-related behavior.

In 2021, Lins *et al.*, [33] evaluated gender disparities and confirmed the predictive validity of stress, anxiety, and depression over panic buying. Data from 2297 Brazilians (1777 women, 520 males) showed that women had higher levels of stress, anxiety, and sadness. Gender differences did not significantly differ, while men displayed higher levels of panic buying. Panic buying was predicted by stress and anxiety; in men, mental health characteristics explained a greater portion of the variance. The association between panic buying and mental health was tempered by gender, indicating the need for specific interventions and more studies on the effects of panic buying.

In 2021, Yang *et al.*, [34] investigated the impact of customers' perceived hedonistic and utilitarian values on their impulse buying behavior (IBB). Additionally, assess how interpersonal connection moderates the relationship between the customer's perceived value and their IBB. Data were gathered in China using a survey (n = 199). The results show that consumers' views of hedonistic values have a direct and significant influence on their IBB, and that environmental signals have a significant impact on consumers' perceived values, including their perceived utilitarian and hedonistic values. Furthermore, IBB is highly impacted by the relationship between perceived hedonic worth and interpersonal influence.

In 2021, Ming *et al.*, [35] examined the effects of presence (the social presence of live streaming platforms, viewers, live streamers, and telepresence) on consumer trust and flow state, which can result in impulsive buying and a fictitious sense of control over oneself as a moderator. A study that polled 405 Chinese consumers who were live streaming their purchases employed the S-O-R paradigm. The results demonstrate that social presence and telepresence positively affect consumer trust and flow state, which promotes impulsive buying. Moreover, the association between trust, flow mood, and impulsive purchase is moderated by the consumer's sense of power. This study clarifies how to encourage live streamers and online retailers to make purchases, which has ramifications for the growth of live-streaming commerce worldwide.

3. RESEARCH METHODOLOGY

3.1 Research Design

- **Questionnaire Preparation**

This research comprises 20 questions designed to explore the relationship between four distinct variables. These components include the Dependent Variable, which is specifically compulsive purchase behavior (CPB). Independent variables include impulsivity (Imp), anxiety and stress levels (ASL), social influence (SI), self-esteem and identity (SeI), and pleasure and reward mechanisms (GRM). As such, the dependent variable is a series of five questions, whereas the independent variable is a collection of five variables, each with seven questions.

- **Response Collection**

The survey utilized in this research was transcribed into a Google Form. Therefore, this research entailed a survey for an online customers group from 18 years and above.

- **Statistical Analysis**

The responses gathered from online shoppers were analyzed and examined by using the SPSS tool, which is a popular software package used for statistical analysis. For the purposes of Statistical Analysis, the data collected for this study has been analyzed and evaluated applying various quantitative methods including regression tests, T-tests, descriptive statistics, and correlation analysis. The tools and tests were selected specifically to validate and establish the reliability of the hypothesis under consideration. Such tests allowed us to systematically analyze the associations, trends, and interrelations among the selected variables that are important for our research topic under consideration.

3.2 Online Survey and Sample

This research involved 298 participants who voluntarily provided their thoughts and information through a variety of electronic resources, including social media, emails, and discussion boards. Information related to the dependent variable (CPB), and the independent variables (Imp, ASL, SI, SeI, and GRM) was collected from the respondents through a pre-designed, structured questionnaire. For data confidentiality and security, the survey was run online over a secure web-based survey tool. Before conducting the survey, each participant provided informed consent, and from the Random Sampling Approach, the researcher gathered 298 responses as valid samples and 0 as invalid samples.

3.2.1 Design and Sample

The demographic information of the survey provides some information about the characteristics of the sample population that has been used in the study on the internet shopping effect on compulsive buying behavior in the digital age. Most respondents are situated in the 25-44 age group, with 41.9% and 36.6% for the 25-34 and 35-44 age group categories, respectively. Such statistics demonstrate that the research has been primarily aimed at the category of young people, most prone to making online purchases. The age group of 18-24 constitutes 5.7% of the sample, and that of 45 and above constitutes 15.8%. The sample is 69.1% female and 30.9% male. This indicates a higher female participation rate in the poll, which may reflect women's greater engagement with online purchases. A sizable majority of respondents (45.6%) earn between $20,000 and $40,000, indicating a middle-class demographic. Those earning between $40,000 and $60,000 account for 39.3%, while the lower and higher income groups ($20,000 or less and more than $80,000) are smaller at 4.4% and 4.7%, respectively. The educational levels vary, with 41.3% holding a Bachelor's degree and

41.6% holding a Master's degree, indicating a well-educated population. Doctorates or above account for 11.1%, with only 6% having a high school diploma or less. The vast majority of respondents are single (41.6%) or married (43%), with a smaller proportion divorced (7%) or widowed (8.4%). These demographics suggest that the study's findings may be more applicable to younger, middle-income people with higher education, particularly women, offering a distinct viewpoint on their online purchasing patterns.

The survey's results show remarkable tendencies in respondents' obsessive buying practices. A sizable proportion, 76.5%, agree or strongly agree that they frequently buy items they cannot afford, demonstrating a widespread tendency of financial impulse buying. This indicates that most of the respondents usually spend much more than they are able to. In addition, 78.8% of the respondents buy things without consideration for what exactly is being bought. This behavior indicates a lack of thorough analysis in the purchasing habits, and this lack of thorough analysis might be due to the quick enjoyment that shopping affords. A large segment of the sample, 78.2%, states that they buy things in order to freshen their brains, which means that shopping is viewed as a technique to elevate mood or alleviate stress. Thus, buying for a large part of the population serves as both a financial and an emotional outlet. In addition, 78.5% of the respondents claim that they feel scared or anxious on the days they do not buy anything; thus, shopping is vitally important for their psychological well-being. This data is likely to be in line with the previous feature of shopping serving as a coping strategy in some individuals. Finally, 79.5% of the respondents agree or strongly agree that they often purchase things that they do not use. This behavior presents impulsive shopping decisions, in which the process of purchasing brings satisfaction rather than the usage of the products bought. Generally speaking, the results obtained indicate high compulsive buying inclinations among the respondents, and this is further manifested by the lack of financial sensibility, thoughtfulness of purchase, and an emotional reliance on shopping as a regulator of the mood.

The results of the survey present characteristic traits of participants' compulsive buying habits, specifically related to online shopping. Most participants, 79.5%, agree or strongly agree to the statement that they find it hard to resist buying tempting things that they find online, which suggests that the problem of impulse shopping is prevalent among participants. Similarly, 77.9% admit that they are sometimes unable to resist the temptation to purchase anything online, which proves a major tendency to impulsive shopping behavior. As far as post-purchase regret is concerned, 76.2% of the participants admit feeling guilty sometimes after shopping. Accordingly, the results of the survey highlight the emotional impact of participants' shopping behaviors. The susceptibility to the temptations of sales offers is evident. The overwhelming majority of participants, 78.2%, state that they find it hard to resist buying something online when it goes on sale. This means that promotional offers have a considerable influence on their purchase decisions. Also, 78.2% of the participants tend to make a purchase of something that is new to them and that they have not seen before. This proves a tendency to novelty. About 77.6% of participants find it correct to say that they are a bit careless when shopping online. Also, 77% assert that they tend to buy things online not because they really need them, but out of a willingness to shop. Thus, the combination of these results shows the nature of compulsive buying habit, in which the attractiveness of online shopping in combination with immediate gratification occupies a vital position in participants' purchase decisions.

The results of the survey indicate that online shopping has a significant link with the emotional state of respondents, primarily in terms of coping with anxiety and stress. A high percentage of respondents, 78.5%, agreed or strongly agreed that not being able to buy products online leads to anxiety or stress, indicating that online shopping is a major source of relief in the

context of feelings of this nature. In addition, 78.2% agree or strongly agree that online buying helps them manage worry and tension, suggesting that many people resort to buying on the internet as an emotional regulation strategy. Additionally, 78.4% often purchase online to reduce tension or anxiety and 76.2% reported making online purchases when distressed in order to feel better. This behavior pattern indicates an online purchasing coping response to mental distress. Respondents also indicated that buying through online browsing and purchasing of products relieves stress for 77.5%, while 77% felt that purchases made while feeling nervous or tense were regrettable, presenting a potentially more complicated link between their emotions and shopping patterns. Overall, the data suggests that respondents use internet shopping to treat stress and anxiety, but it also emphasizes potential emotional consequences, like regret from impulsive purchases made while emotionally distressed.

The survey results indicate that social influence impacts the internet shopping operations of the respondents significantly. Almost 78.2% of respondents either agree or strongly agree that they tend to purchase more over the internet when they observe their friends or relatives doing the same thing. Thus, it shows that the respondent's social circles influence their purchasing behavior. Also, 77.8% of respondents agree that social media influencers have a major impact on their online shopping decisions. Thus, the individuals who have major influences in determining online shopping are online personalities. These influences also can be seen in terms of experiencing pressure, with 76.2% agreeing or strongly agreeing that observing others purchasing products over the internet makes them feel pressured to do the same. The necessity to avoid standing out is also seen when a significant majority of 78.2% of respondents say that they shop over the internet frequently to match the purchases of their friends. A large majority of 77.2% of respondents mention that they are influenced by recommendations from friends and relatives. The trends and popularity among peers also influence respondent purchasing decisions, as 77.9% of respondents agree or strongly agree that they would buy an online product that is popular or trending among their friends. Positive responses from the general public influence 76.8% to buy products online. This shows the importance of social influences in purchasing decisions within the online environment. Such buying decisions are thus often taken due to the information present on social impact, be it human contacts or virtual groups.

The findings of the survey have some aspects that make it clear how online purchase impacts the self-esteem and identity of the respondents. The majority, by 75.6%, agree and strongly agree that they purchase product online to raise their self-esteem; this means that online shopping could boost personal confidence. Similarly, 69.8% believe that buying online makes individuals feel more confident in themselves, highlighting the importance of internet purchases on self-perception. Approximately 71.5% utilize online purchasing to express their identity, demonstrating the platform's significance in personal expression. Furthermore, 69.8% of respondents believe that their online purchases frequently reflect who they are or aim to be, demonstrating the link between consumer behavior and self-identity. However, the research reveals some complexities in this relationship, as 69% do not strongly believe that purchasing online improves how others perceive them, and 52.7% believe that owning the most recent items always promotes their self-confidence. This shows that, while internet shopping can boost self-esteem and serve as a form of identity expression, its effects on self-worth are more nuanced and may be influenced by factors other than consumer goods. Overall, these findings indicate that online shopping has a significant impact on self-esteem and identity, meaning that online environments provide platforms for self-expression and personal confidence development, albeit to varying degrees of self-worth.

As the poll results indicate, many people enjoy and feel excited about internet shopping. A substantial percentage of respondents, 79.2%, agree or strongly agree that they feel satisfied immediately after completing an online purchase, which places importance on the enjoyment derived from online shopping experiences.

Similarly, 77.9% feel excited when purchasing items over the internet, which shows that the activity is both utilitarian and emotionally engaging. As far as the emotional utilities of shopping go, 76.1% of the participants agree or strongly agree that buying online gives them a satisfying feeling. This is in line with the result that 77% feel a rush or high after making an online purchase, which means that the act of buying online can be exciting. Additionally, 77.9% agreed or strongly agreed that buying online made them feel comfortable or relieved. The relaxation effect could be one of the reasons people are attracted to shopping online, for 77.6% motivated by the prizes or incentives that the online platforms have to offer.

Receiving shipments or items bought online brings joy to 74.9% of the people surveyed, confirming the emotional fulfillment that is derived from the purchasing experience. Overall, these findings highlight the emotional and psychological effects of internet shopping, emphasizing its significance as a source of fulfillment, pleasure, and relaxation.

3.2.2 Measures

The descriptive statistics summarize the central tendency and variability of the demographic and survey-related variables in the dataset. The mean values for the demographic variables indicate the characteristics of the average participant: age (mean = 2.71), gender (mean = 1.69), income (mean = 2.61), education level (mean = 2.58), and married status (mean = 1.82). The standard deviations for these variables reveal substantial variability, with age having the most variability (Std. Deviation = 0.987), indicating a wide age range among participants. In terms of survey constructions, the variable CPB has a mean of 3.8738, indicating a high average score that reflects participants' online shopping behaviors.

The standard deviation (SD = 0.89649) implies some variation in these behaviors. Other variables such as Imp, ASL, SI, and SeI have reasonably high means (3.8317 to 3.8102), indicating that participants usually agree with statements representing these attitudes and behaviors in the online buying scenario. The standard deviations for these constructs (ranging from 0.83496 to 0.86796) indicate moderate variability, showing that respondents had varying levels of agreement or behavioral tendencies.

GRM has a mean of 3.8322, indicating a favorable response trend toward generic survey statements, and a lower standard deviation (0.76186), implying less variability in replies. Overall, these figures provide a glimpse of the participants' demographics, as well as their activities and opinions regarding online buying, demonstrating overall trends and levels of agreement among respondents.

4. RESULT & DISCUSSION

4.1 Reliability Test

Table 1 shows results of a reliability test using Cronbach's Alpha, which analyses an internal consistency of a group of items. The Cronbach's Alpha rating of 0.974 shows an outstanding level of reliability for the scale's 40 items, implying that they are extremely consistent in measuring the intended construct.

Table 1: Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.974	.974	40

4.2 ANOVA Test

Table 2 shows results of ANOVA test, which measures differences between individuals across many items. Between People's sum of squares is 6782.260, with 297 degrees of freedom, for a mean square of 22.836. Within People, analysis shows strong non-additivity, with a sum of squares of 9.031 and a mean square of 15.074, both statistically significant ($p = 0.000$). F-value for the test is 3.041, and the significance level (Sig) indicates that the differences between items are statistically significant. These findings indicate significant heterogeneity in how participants perceive different things, emphasizing the need to account for individual differences in analysis.

Table 2: ANOVA Test between People

			Sum of Squares	df	Mean Square	F	Sig
Between People			6782.260	297	22.836		
Within People	Between Items		71.134	39	1.824	3.041	.000
	Residual	Non-additivity	9.031[a]	1	9.031	15.074	.000
		Balance	6939.085	11582	.599		
		Total	6948.116	11583	.600		
	Total		7019.250	11622	.604		
Total			13801.510	11919	1.158		

4.3 Hotelling T-Square Test

Table 3 shows the results of Hotelling's T-Square test, which is used to detect whether there are significant differences between group means in a multivariate analysis. The Hotelling's T-squared value is 89.809, with 2.008 degrees of freedom in the numerator and 259 in the denominator. The test is statistically significant, as evidenced by a p-value of 0.001, representing substantial differences between the group means under consideration.

Table 3: Hotelling T-Square Test

Hotelling's T-Squared	F	df1	df2	Sig
89.809	2.008	39	259	.001

4.4 Hypotheses Testing

4.4.1 Hypothesis 1

Hypothesis 1: *Higher levels of impulsivity are associated with increased compulsive buying behavior in online shopping.*

Table 4 displays the Pearson correlation coefficients for Hypothesis 1, which represent the relationship between CPB and Imp. The correlation coefficient is 0.836 for both CPB to Imp and Imp to CPB, indicating a strong positive association between the variables.

Table 4: Correlation for Hypothesis 1

		CPB	Imp
Pearson Correlation	CPB	1.000	.836
	Imp	.836	1.000

Table 5 shows results of regression analysis for Hypothesis 1. R-value of 0.836 shows a good relationship between predictor & outcome variable. R Square value of 0.699 shows that model

accounts for about 69.9% of variance in dependent variable. The F statistic is 686.085, & significance level is 0.000, suggesting that model is statistically significant.

Table 5: Regression for Hypothesis 1

R	R Square	Sum of Squares	df	Mean Square	F	Sig.
.836[a]	.699	166.753	1	166.753	686.085	.000[b]

4.4.2 Hypothesis 2

Hypothesis 2: *Elevated levels of anxiety and stress lead to higher instances of compulsive buying behaviour in online shopping.*

Table 6 reveals that CPB and ASL have a Pearson correlation of 0.856, showing strong positive link between these variables. This shows that when one increases, so does the other, indicating a strong link between CPB and ASL.

Table 6: Correlation for Hypothesis 2

		CPB	ASL
Pearson Correlation	CPB	1.000	.856
	ASL	.856	1.000

The regression analysis for Hypothesis 2 yields an R-value of 0.856 & an R^2 of 0.732, representing that independent variable explains 73.2% of the dependent variable's variance (Table 7). F-value of 810.285 & significance level of 0.000 show a very significant association, demonstrating that changes in independent variable have a considerable influence on dependent variable.

Table 7: Regression for Hypothesis 2

R	R Square	Sum of Squares	df	Mean Square	F	Sig.
.856[a]	.732	174.830	1	174.830	810.285	.000[b]

4.4.3 Hypothesis 3

Hypothesis 3: *Greater social influence and peer pressure increase the likelihood of compulsive buying behaviour in online shopping.*

Table 8 illustrates the Pearson correlation coefficient between CPB and SI, which is 0.849. This strong positive correlation implies that as CPB grows, so does SI, implying a considerable link between these variables.

Table 8: Correlation for Hypothesis 3

		CPB	SI
Pearson Correlation	CPB	1.000	.849
	SI	.849	1.000

Table 9 shows the regression analysis for Hypothesis 3, with R = 0.849, demonstrating a good link between the predictor and dependent variable. R Square value of 0.721 indicates that model accounts for 72.1% of dependent variable's variance. F-value of 764.428 at a significance threshold of 0.000 proposes that model is statistically significant.

Table 9: Regression for Hypothesis 3

R	R Square	Sum of Squares	df	Mean Square	F	Sig.
.849a	.721	172.068	1	172.068	764.428	.000[b]

4.4.4 Hypothesis 4

Hypothesis 4: *Lower self-esteem and a weaker sense of identity contribute to higher levels of compulsive buying behavior in online shopping.*

Table 10 demonstrates the Pearson correlation between CPB and SeI, which has a coefficient of 0.812. This demonstrates a strong positive link between CPB and SeI, implying that as SeI rises, so will CPB.

Table 10: Correlation for Hypothesis 4

		CPB	SeI
Pearson Correlation	CPB	1.000	.812
	SeI	.812	1.000

Table 11 shows the regression analysis findings for Hypothesis 4, with an R-value of 0.812 & an R^2 value of 0.660. This means that CPB accounts for around 66% of the variance in self-esteem indicators. F-statistic of 574.262, with a significance level of 0.000, shows a statistically significant link.

Table 11: Regression for Hypothesis 4

R	R Square	Sum of Squares	df	Mean Square	F	Sig.
.812[a]	.660	157.509	1	157.509	574.262	.000[b]

4.4.5 Hypothesis 5

Hypothesis 5: *Stronger gratification and reward mechanisms are positively correlated with compulsive buying behaviour in online shopping.*

Table 12 shows the association between CPB and GRM. The Pearson correlation coefficient of 0.650 suggests a moderate to strong positive link, implying that as CPB grows, so does the satisfaction obtained from shopping.

Table 12: Correlation for Hypothesis 5

		CPB	GRM
Pearson Correlation	CPB	1.000	.650
	GRM	.650	1.000

Table 13 shows the regression analysis for Hypothesis 5, which investigates the association between CPB and GRM. An R-value of 0.650 indicates a moderate association and a R^2 of 0.423 suggests that changes in buying behaviour explain 42.3% of the variance in pleasure. The F-test result (216.940, $p < 0.001$) supports the model's statistical significance.

Table 13: Regression for Hypothesis 5

R	R Square	Sum of Squares	df	Mean Square	F	Sig.
.650[a]	.423	100.953	1	100.953	216.940	.000[b]

4.5 Factor Analysis

Table 14 shows findings of factor analysis. KMO value of 0.928 shows great sample adequacy. Bartlett's test of sphericity (chi-square = 1874.421, df = 15, $p < 0.001$) confirms data's eligibility for factor analysis.

Table 14: Factor Analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.928
Bartlett's Test of Sphericity	Approx. Chi-Square	1874.421
	df	15
	Sig.	0.000

5. DISCUSSION

Hypothesis 1 posits that higher levels of impulsivity are connected with more compulsive purchasing behavior in online buying. Pearson correlation coefficient among CPB & Imp is 0.836, indicating a significant positive relationship. This is supported by the regression analysis in Table 5, which yields an R-value of 0.836, accounting for 69.9% of the variance in compulsive purchasing behavior. The significant F statistic (686.085) with a p-value of 0.000 shows that impulsivity has a major effect on compulsive purchasing behavior, which supports Hypothesis 1.

Hypothesis 2 posits that elevated levels of ASL contribute to an increase in compulsive purchasing behavior during online shopping. The Pearson correlation coefficient for CPB and ASL is 0.856, indicating a significant positive relationship. The regression analysis reveals an R-value of 0.856 & an R^2 of 0.732, explaining 73.2% of the variance in compulsive buying behavior. The significant F value (810.285) with a p-value of 0.000 shows a highly significant correlation, supporting Hypothesis 2.

Hypothesis 3 suggests that higher social influence and peer pressure enhance the likelihood of obsessive online purchasing behavior. Pearson correlation coefficient among CPB & SI is 0.849, indicating a strong positive relationship. The regression analysis shows an R-value of 0.849 and an R^2 of 0.721, accounting for 72.1% of the variance in compulsive buying behavior. A significant F value of 764.428 with a p-value of 0.000 suggests that social influence has a significant impact on compulsive purchasing behavior, supporting Hypothesis 3.

Hypothesis 4 posits that low self-esteem and a diminished sense of identity are linked to increasing levels of compulsive buying behavior in online shopping. Pearson correlation coefficient among CPB & SeI is 0.812, indicating a strong positive link. The regression analysis shows that self-esteem explains 66% of the variance in compulsive buying behavior (R-value = 0.812, R^2 = 0.660). The F-statistic of 574.262, with a significance level of 0.000, proposes that this relationship is statistically significant, which supports Hypothesis 4.

Hypothesis 5 proposes that stronger satisfaction and reward systems are positively connected with obsessive online purchasing activity. The Pearson correlation coefficient for CPB and GRM is 0.650, indicating a moderately to strongly favorable relationship. The regression analysis shows an R-value of 0.650 & an R^2 of 0.423, which explains 42.3% of the variance in enjoyment induced by purchasing behavior changes. F-statistic of 216.940, with a significance level of 0.000, settles the model's statistical significance, thereby supporting hypothesis 5.

6. CONCLUSION

The research provides an understanding of how multiple psychological factors lead to obsessive buying behavior in the setting of purchasing online. The results indicate that quick pleasure, social validation, and emotional regulation all contribute to compulsive purchase behaviours. The concept of quick pleasure is suggested through fast delivery mechanisms by online shopping service companies, and frequent promotions and offers via personalized marketing also help a great deal in fast gratification. Social validation through social media and the influence of peers on purchasing are very important, as the purchasing behavior of most people changes according to the recommendations and suggestions received from others. Emotional control seems to be very important, as internet shopping is utilized to relieve stress or emotional suffering and, hence, compels individuals to buy in an obsessed manner. Personalized marketing strategies, enabled by data analytics to customize advertisements and recommendations to individual preferences, exacerbate these inclinations by providing a more

relevant, engaging, and addictive purchase environment. Seamless purchase experiences, also enabled by friendly user interfaces and fast checkout processes, break down barriers to purchase and promote obsessive buying behaviors. Overall, this study indicates the importance of understanding such psychological triggers and their impact on compulsive buying behaviors, providing valuable insights for policymakers, marketers, and consumers on how to develop strategies to alleviate the adverse impacts of compulsive buying in the digital era.

7. IMPLICATIONS

The study on the impact of online shopping on compulsive purchasing behavior in the digital age provides a number of important implications. First, for consumers, the knowledge that there are psychological impetuses to compulsive shopping, such as instant gratification and social recognition, may inspire better self-regulation abilities if the triggers can be understood. For the policy level, this brings forward the importance of enacting laws that protect consumers from excessive digital marketing while enforcing advertising transparency, probably through mandatory data consumption notifications and behavioral targeting. For the marketer, the study indicates a personal ethical issue with regard to marketing approaches. Though personalized marketing approaches could enhance a shopping experience, they may also exploit the psychological vulnerabilities of consumers. Hence, marketers ought to strike a balance between effective advertising and consumer welfare in order to avoid implicating their actions as a trigger to compulsive buying habits. Retailers and e-commerce platforms can develop features that make consumers practice conscientious buying, like prompting people to review their purchases or cooling-off time before purchasing huge orders. This study provides information that can be transformed into strategies for diminishing the negative effect of compulsive buying for consumers, firms, and regulators.

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