

Shop or Stop? Exploring Self-Regulation as a Mediating Variable in the Relationship Between Peer Influence and Impulsive Buying

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Abstract: Peers are influential social agents, particularly among young buyers like college students, who often discuss purchases and shop in groups. This study examined the relationship between peer influence and impulsive buying behaviour, with self-regulation as a potential mediator. It also explored gender differences in impulsive buying, peer influence, and self-regulation. We hypothesised that peer influence positively affects impulsive buying, with self-regulation mediating the relationship, and that these variables differ significantly between males and females. The study employed a correlational design and convenience sampling. Data were collected from 180 Indian college students using an online questionnaire measuring impulsive buying, peer influence, and self-regulation. Peer influence significantly and positively impacted impulsive buying ($\beta = -.220$, $R^2 = 0.049$, $p = .003$). Self-regulation was not a significant predictor, $Z = -1.053$ ($p = .29$), indicating no mediation. Impulsive buying was significantly higher in males than females ($t = -2.206$, $p = .029$), while males also exhibited higher self-regulation ($t = -2.606$, $p = .01$). No gender differences were found in susceptibility to peer influence. This study highlights that peer influence increases impulsive purchases, with notable gender differences, providing insights for both consumers and businesses.

Keywords: impulsive buying, self-regulation, peer influence, consumer behaviour, gender difference

Consumerism is integral to the framework of current societies. Societies today rely on ever-increasing consumption, and this perpetuates a cycle where the more people consume, the more society depends on it. In India, globalization after 1991 ushered in a new phase of consumption culture. Consumer spending in India averaged INR (Indian Rupee) 13,477.17 billion from 2004 until 2023, peaking at 24,787.00 INR billion in the fourth quarter of 2022 (Trading Economics, 2023). India is also expected to become the third largest consumer market by 2030. Segments such as blue-collar workers and skilled professionals, encompass around 130 million individuals earning an average annual income exceeding 3,200 USD (Santander Trade Portal, 2023).

Consumerism develops slowly in the due course of socialization (Lenka & Vandana, 2015), with different social agents playing a role in consumers' tendencies to buy certain products and in different types of buying behaviour. Impulsive buying, characterized by sudden and unplanned purchasing decisions, is a phenomenon with significant implications for consumer behaviour

and economic trends. Previously framed as an individual-trait-driven-behaviour, mostly in the West, it is a result of several factors such as emotional states, especially in collective societies, and of social comparisons (Kacen & Lee, 2002; Miao et al., 2020). Such societies are cohesive with a strong sense of social belongingness, making impulsive buying more likely to be socially driven by peer presence and emotional bonding.

Recent studies reveal that consumers, on average, spend a substantial portion of their annual budget to impulsive purchases. According to Thredup (2019), US shoppers 18–24 years of age make almost half of their purchases (49%) on impulse with similar numbers observed in the UK (KPMG, 2016).

Peers, known as the primary socialization agents, drive social consumption motivations (Shim, 1996). Peer pressure contributes 18.34% of what goes into making shopping decisions. This is due to "Peer Influence", a process where they become a source of affiliation. Individual buyers may see others buying

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impulsively and get accepted among their peers or see shopping related decisions as being a group task (Bandura, 1986; Festinger 1954).

Culture also plays an important role in buying behaviour, as how much people can resist what their peers want them to do is different across cultures, because of a choice between personal freedom and social conformity (Schneider, 2006). This individualist-collectivist dichotomy is broad and oversimplified, yet reveals a recurring pattern, that individualistic cultures may find it easier to resist peer influence than the collectivistic ones (Chen, 2000; Domino, 1992).

This study delves into the relationship between peer influence and impulsive buying, focusing on self-regulation as a mediating variable between the two. While extensive research has investigated impulsive buying and interpersonal influence on consumer choices (Bearden & Etzel, 1982; Muruganantham & Bhakat, 2013; Rook & Fisher, 1995), the role of self-regulation in this phenomenon is under-researched, despite evidence of its impact on impulsive buying tendencies (Adri et al., 2021; Pradipto et al., 2016). Our study addresses this gap, proposing self-regulation as a mediator that determines how resistance to peer influence leads to impulsive buying.

Peer and Other External Influences on Impulsive Buying

Impulsive buying behaviour can be defined as the tendency of a consumer to buy a product without much thought, in a spontaneous manner. It has been explored across different contexts, including age, gender, mood (i.e., consumer characteristics), emotional connect with the product, peer and family influences, web store functionality (in case of online impulsive buying), and so forth (Kumar & Kaur, 2018; Zhang & Hossen, 2019). It arises from an interaction of various internal and external stimuli, personality traits and socio-cultural factors (Muruganantham & Bhakat, 2013). For instance, Asian collectivist consumers exhibit lower impulsive buying than Caucasian individualist consumers (Kacen & Lee, 2002). External influences such as reference groups also shape product and brand

evaluation (Bearden & Etzel, 1982). Store elements, including promotions and employees' behaviour, further influence purchase decisions (Alghzawi et al., 2020).

Bettman's information processing model of consumer choice has highlighted how a consumer has limited information processing capacity and does not properly analyse all the information that they may receive (Payne & Bettman, 2004). The interaction of external stimuli, consumer characteristics, and their decision process is what determines their response and behaviour, as explained by the Black Box Model (Chauhan, 2013). The Latent Trait-State theory also places consumer behaviour as dependent on the individual's traits, the characteristics of the environment (i.e., states), and the interaction between these two sets of characteristics (Wells et al., 2011). These mechanisms could explain the occurrence of impulsive purchases.

It is noteworthy to understand the developmental aspect of consumer behaviour. Children and adolescents undergo a shift from primarily depending on and forming attachments with their parents to integrating a growing reliance on and attachment to their peers (Nickerson & Nagle, 2005). In the context of teen consumers, going out with peers is significantly related to more expenditures and increased frequency of shopping behaviour due to more positive conformity (Adri et al., 2021). In fact, peers display stronger effects on awareness of product and brand information, followed by parents and media (Mishra & Maity, 2021). Previous research has suggested high peer influence among college going young adults in India, especially with products that are branded and belong to categories like technology, entertainment and environmentally friendly apparel (Khare & Sadachar, 2017; Mavale & Soni, 2018). Based on these findings, the first hypothesis was conceptualized as follows:

H₁: The resistance to peer influence will significantly decrease impulse buying behaviour for Indian college students.

Self-regulation and Impulsive Buying

The direct relationship between peer influence and impulse buying overlooks a fundamental psychological mechanism: the ability to self-regulate one's behavior. Self-control, interchangeably used for self-regulation in our study, addresses this gap. Self-regulation can be defined as systematic efforts by which an individual strenuously controls behaviour to reach important objectives (Ghaemi, 2011; Zimmerman, 2000).

Baumeister (2002) and later research on dual-process theories of decision-making (Kahneman, 2011; Strack & Deutsch, 2004) have suggested that consumer decisions are governed by two cognitive systems: System 1, which is fast, emotional, and impulsive, and System 2, which is deliberative, rational, and goal-oriented. These systems work according to relative influence, implying that in situations where peer influence is strong, System 1 dominates, resulting in unplanned purchases driven by social pressures. However, the extent to which these impulsive tendencies are followed upon depends on the strength of one's self-regulatory capacity. Therefore, high self-regulation can resist peer-driven urges, while low self-regulation yields impulse buying. Self-regulation is thus a form of a psychological buffer, determining when peer influence leads to impulsive purchasing behaviour.

It is also a process that keeps control of cognition and emotions experienced by an individual which influence the attainment of goals. Higgins (1997) has discussed the self-regulatory process, using two strategies- promotion-focused and prevention-focused. This is part of his Regulatory Focus Theory, explaining that promotion-focused individuals have the tendency to seek rewards and to get excited, while prevention-focused people are more cautious and self-disciplined. This means that people who know precisely what they want, track expenditures, and restrain their impulses are less vulnerable to external influences.

Self-regulation and impulsive buying have been found to be significantly correlated (Pradipto et al., 2016), with a negative effect of self-control on

impulsive purchases, moderated by peer influence (Efendi et al., 2019; Zahid et al., 2022). According to the Life Span Theory of Control (Heckhausen & Schultz, 1995), younger people relying on primary control are more prone to impulsive buying, while secondary control assists in regulating desires and emotions. Reduced self-regulatory capacity enhances impulsive tendency, and a chronic pattern of impulsivity has been linked to negative outcomes (Adri et al., 2021). Peer rejection can lead to enhanced risk aversion (King et al., 2018), and therefore dynamics between peer influence and self-regulation can be further investigated.

H2: Self-regulation will mediate the relationship between resistance to peer influence and impulse buying behaviour.

Gender Differences in Impulsive Buying: Roles of Self-Regulation and Peer Influence

Gender differences in impulsive buying are well documented, with women more likely to experience an irresistible urge to consistently purchase their preferred items. Similar evidence exists showing that women aged 20-30 show the highest spending trends, while older consumers of both genders show rational spending habits, indicating that age and gender significantly influence purchasing decisions. While men make unplanned, larger purchases, women display "moderate impulsivity" by buying additional items in a controlled manner (Istudor & Pelau, 2013). Studies also show that men exhibit more impulsive behaviour with less emotional involvement than women. Evolutionary theories indicate that women developed greater impulse control due to nurturing roles, while men remain more prone to spontaneous actions (Knežević, 2018). Social psychological theories suggest that females are more influenceable, especially by their friends and close peers (Geven et al., 2017; Han & Li, 2009).

The findings on gender differences have found women to have higher self-regulation in comparison to men (Alhadi et al., 2024; Zahid et al., 2022). However, it is possible that these differences may be confined to

middle adolescence and not extend to young adulthood (Tetering et al., 2020). Thus, we posit 3 hypotheses as follows:

H3: There will be a significant difference in the levels of Impulsive Buying behaviour between males and females.

H4: There will be a significant difference in the levels of Resistance to Peer Influence between males and females.

H5: There will be a significant difference in the levels of Self-regulation between males and females.

Method

Participants

An online Google Form link was circulated through the researchers' contacts, social media platforms, and community groups. Data was collected using convenience sampling because of its convenience, cost-effectiveness, and time-saving nature. Moreover, web links made it easier to spread the form throughout the network by the participants themselves. College-going Indian students in the age range of 17-25 years, proficient in English were invited to complete the questionnaire. The final sample consisted of 180 Indian college students, with participants ranging in age from 17 to 25 years ($M = 19.46$, $SD = 1.388$). Of the total participants, 42.2% identified as male ($n = 76$), 57.2% identified as female ($n = 103$), and 0.6% identified as genderfluid ($n = 1$). The majority of participants were pursuing a Bachelor's Degree, and 53.33% were pursuing Humanities courses such as History, Political Science and so forth. The participants were primarily from metropolitan areas, with 71.66% residing in Delhi-NCR region.

Measures

Buying Impulsiveness

The 9-Item Buying Impulsiveness Scale, developed by Rook and Fisher in 1995 measures impulsive buying

behaviour using a 5-point Likert-type scale. The scale has a mean score of 25.1, a standard deviation of 7.4, and a high level of internal consistency with a Cronbach's alpha of .88. For the present study, Cronbach's alpha was .732. Its validity has been demonstrated by Brockman (2014) through convergent and discriminant validity testing.

Resistance to Peer Influence

The Resistance to Peer Influence (RPI) scale developed by Steinberg and Monahan in 2007, aims to assess an individual's resistance to peer influence in general terms, without specific reference to antisocial peer influence. It comprises 10 pairs of statements, where respondents choose the statement that best describes their behaviour regarding peer influence. For each chosen descriptor, respondents indicate whether it is "Really True" or "Sort of True." The responses are then coded on a 4-point scale and averaged, with higher scores indicating greater resistance to peer influence. It has psychometric properties, including reliable internal consistency (Cronbach's $\alpha > .70$) and criterion validity (Steinberg & Monahan, 2007).

Self-regulation

The 31-item Short Self-Regulation Questionnaire (SSRQ) is a streamlined version of the original SSRQ by Brown, Miller, and Lawendowski (1999), which assessed self-regulation across seven steps. Carey et al. (2004) introduced the concise 31-item version, using Likert type responses from 1 (strongly disagree) to 5 (strongly agree). 13 of the items are reverse scored. This scale showed a unidimensional structure with high reliability ($\alpha = .92$) and strong correlation ($r = .96$) with the original. Neal and Carey (2005) identified two factors: impulse control and goal setting, demonstrating validity. The SSRQ scores ranged from 63 to 154, with a mean of 116.6 and a standard deviation of 15.0.

Results

In this section, the responses of the survey were analysed according to the hypotheses. Descriptive statistics for the key variables (resistance to peer

influence, self-regulation, and impulsive buying behaviour) were computed. Mean scores for resistance to peer influence ($M = 2.813$, $SD = .401$), self-regulation ($M = 1.504$, $SD = 11.398$), and impulsive buying behaviour ($M = 21.922$, $SD = 5.925$) were calculated.

Table 1

Regression Analysis Results of Resistance to Peer Influence on Impulsive Buying

IV	R^2	F	β	t
RPI	.049	9.085**	-.220	-3.014**

** $p < .01$

Resistance to Peer Influence significantly impacted Impulsive Buying Behaviour ($\beta = -.220$, $p = .003$). When resistance to peer influence decreased, i.e., when there was more influence exerted by peers, impulsive buying behaviour significantly increased, and vice versa. The R^2 value was 0.049, indicating that approximately 4.9% of the variability in impulsive buying behaviour can be explained by resistance to peer influence. Therefore, H1 was accepted.

Table 2

Mean, SD and t-test Results of Male and Female Students on the Variables

Variables	Female ($n = 103$)		Male ($n = 76$)		t (df = 177)
	M	SD	M	SD	
Impulsive Buying Behaviour	21.058	5.468	23.013	6.357	-2.206*
Resistance to Peer Influence	2.848	0.394	2.767	0.411	1.326
Self-regulation	1.036	11.852	1.08	10.352	-2.606**

* $p < .05$, ** $p < .01$

To test Hypothesis 3, 4 and 5, which examine the differences in the levels of IBB, RPI and SR across males and females, three independent samples t-tests were performed. Table 2 shows the results of the t-tests. Impulsive Buying, was found to be significantly higher

In order to test the first hypothesis, which stated that the presence of peers will significantly increase impulse buying behaviour for Indian college students, a linear regression analysis was computed using Impulsive Buying Behaviour (IBB) as the dependent variable and Resistance to Peer Influence (RPI) as the independent variable.

H2 stated that self-regulation will mediate the relationship between peer presence and impulse buying behaviour. A mediation analysis using the Sobel test was performed with Impulsive Buying Behaviour (IBB) as the dependent variable (Y), Resistance to Peer Influence (RPI) as the independent variable (X) and Self-regulation (SR) as the mediating variable (M). The results found that self-regulation did not significantly mediate the relationship between resistance to peer influence and impulsive buying behaviour ($Z = -1.053$, $p = .29$). Thus, H2 was not accepted.

in males, ($M = 23.013$, $SD = 6.357$), in comparison to females, ($M = 21.058$, $SD = 5.468$) with $t = -2.206$ ($p = .029$), suggesting a significant gender-based difference in Impulse Buying tendencies. The effect size, as measured by Cohen's d , was $d = 0.33$, indicating

a small effect. Therefore, H3 was accepted. The difference in Resistance to peer influence between males ($M = 2.767$, $SD = .411$), and their female counterparts, ($M = 2.848$, $SD = .394$), was not significant with $t = 1.326$ and $p = .186$; hence H4 was not accepted. Finally, males reported significantly higher self-regulation levels with $t = -2.606$ and $p = .01$; the effect size was $d = 0.004$, demonstrating a very small effect. Therefore, H5 was accepted.

Discussion

The current research studied the relationship between peer influence and impulsive buying behaviour, with the examination of self-regulation as a mediating factor. It also explored gender differences in the levels of Impulsive Buying, Peer Influence, and Self-Regulation.

H1: Impact of Resistance to Peer Influence on Impulsive Buying Behaviour

Hypothesis 1, which asserted that peer influence will have a significant impact on impulsive buying behaviour, was accepted. Humans are social creatures who are highly influenced by people around them (McDonald et al., 2015). The influence is more powerful when its source constitutes peers and especially “significant others” along with spouses and parents who can offer cues to suggest a behaviour as desirable or undesirable (Luo, 2005). These findings point to the role of subjective norms in causing an inclination of buyers to comply and conform. This is in line with the Theory of Reasoned Action and Planned Behaviour (Ajzen & Fishbein, 1980; Ajzen et al., 2000).

Furthermore, psychosocial pressure of fitting in cannot be overlooked. Social learning (Bandura, 1977) increases the susceptibility to get influenced by peers (Bearden & Etzel, 1982), which can be manifested in either positive or negative emotional reactions. Impulsive buying also yields a positive effect on buyers, as their cognitive load reduces and emotions get heightened, instilling excitement and shared enthusiasm among peers (Mittal et al., 2015). Therefore, our research confirms that peer influence

serves as a significant external driver of impulsive buying, shaping purchasing behaviour through both social conformity and shared enthusiasm during group shopping experiences.

H2: Self-regulation as a Mediator Between Resistance to Peer Influence and Impulsive Buying Behaviour

The association between peer influence and impulsive buying behaviour was not found to be mediated by self-regulation, and Hypothesis 2 was rejected. As mentioned before, Self-control, has been used interchangeably with self-regulation in our study (Baumeister et al., 2002). These findings show that although previously self-control was found to be negatively and significantly associated with impulsive buying, it is also context-dependent (Efendi et al., 2019). These contexts range from the type of social settings to the number of peers, as well as the time spent shopping. Self-regulation is less effective when people are promotion focused, i.e., less cautious and more easily swayed by peers (Higgins, 1997).

Resources to maintain self-control can deplete when someone has engaged in self-regulation for a considerable time, or even when the number of peers is higher than usual. (Baumeister et al., 2002; King et al., 2018). People conform to peer-driven behaviour so that they can strengthen their connections to those around them even at the cost of their money. This is because according to Self-Determination Theory (Deci & Ryan, 1985), social belonging (relatedness) may be a higher priority than financial self-control. This could be a result of a shift of focus from long-term financial discipline to immediate gratification. It is referred to as a feedback loop, in Control Theory, in which self-regulation occurs by a modification in behaviour as per the internal goal (Carver and Scheier, 1982). These contexts of impulsive purchases were not assessed or manipulated in the current study.

Finally, the nature of the Short Self-Regulation Questionnaire by Carey et al. (2004) measures general self-regulation, through hypothetical scenarios, like “I usually keep track of my progress toward my goals.”, “I have trouble making up my mind about things.”

This lack of financial or consumer focus may explain why self-regulation did not play any mediating role between peer influence and impulsive buying.

H3: Impulsive Buying between Males and Females

The third hypothesis, which posited that there will be significant differences in Impulsive buying behaviour among males and females, was accepted. Traditional research has found that females tend to buy more impulsively (Coley & Burgess, 2003; Tifferet & Herstein, 2012). However, our findings identified men being more likely to buy impulsively than women. Our research offers new insights on the gendered nature of consumerism and suggests that there are factors other than the gender, which lead to unplanned purchasing. Men have been found to enjoy and prioritise status, independence, enjoyment and self-enhancement more than necessity (Dittmar, 2005). General personality research has also indicated that men tend to display more impulsiveness despite their self-reporting, and lower levels of patience. (Gangai & Agrawal, 2016; Knežević, 2018). Unlike women, men are less likely to engage in planned and cognitive deliberations before making purchases (Coley & Burgess, 2003), potentially leading to more spontaneous buying. Therefore, more internal sources, like social identity and self-satisfaction should be explored in gender-based studies.

H4: Resistance to Peer Influence between Males and Females

No significant differences in the levels of peer influence were found in the context of gender. Hence, Hypothesis 4 was rejected. The results of our study challenged some existing assumptions about gender and peer influence. Previously, it was observed that males possess better resistance to peer influence than females, partly because females tend to make decisions according to group consensus, in line with the social psychological theories that females are more susceptible to their close friends and peers' influence, and also for reasons such as the maintenance of friendship relations (Geven et al., 2017; Han & Li, 2009). However, even in longitudinal studies, peer influence does not vary by gender (Steinberg & Monahan, 2007).

A possible explanation could be the "homophily principle", which suggests that people who share the same location and other demographic characteristics tend to associate with each other (Lazarsfeld & Merton, 1954). Due to changes in societal attitude towards gender appropriate behaviour, male and female experiences may be becoming increasingly similar (McCoy et al., 2017). Therefore, both males and females, when surrounded by similar peers, show similar levels of resistance to peer influence (Allen et al., 2011). This offers the new insight that peer influence might not always be as gendered as we assume it to be.

H5: Self-regulation between Males and Females

In the context of Self-regulation, significant differences were found between males and females. Therefore, Hypothesis 5 was accepted. The present study found that self-regulation was higher among males in comparison to females. There have been consistent findings in past literature on the differences of self-regulation between males and females. In India and China, males have reported higher levels of self-regulation than their female counterparts (Bashir & Bashir, 2016; Wang et al., 2016). This highlights the need for exploration of the intersectionality between culture and perceived self-regulation. While some researches have explored this area, no clear explanation for why males have higher self-regulatory levels, has been found.

Our study found a statistically significant difference between males and females; however, the effect size ($d = 0.004$) indicates that this difference is minimal, suggesting that these differences may stem from other underlying factors like self-efficacy beliefs and coping strategies. Zimmerman (2002) and Veluyatham et al. (2012) emphasize self-efficacy as a key predictor of self-regulation; consequently, lower levels of self-efficacy in females than males could address this disparity (Huang, 2013; Montford & Goldsmith, 2015). Additionally, gender norms and expectations, especially in Indian culture, could act as a strong source of influence in identity formation and may explain the significant gender difference (Bashir & Bashir, 2016).

However, further research is needed to understand the role of coping strategies in self-regulatory behaviours (de la Fuente et al., 2020).

Implications

While impulsive buying is a common behaviour and not inherently negative, it can become problematic when it leads to financial difficulties, emotional distress, or compulsive behaviours. Understanding relevant factors, such as peer influence and marketing strategies, can help mitigate its adverse effects and promote healthier consumption patterns through better consumer protection initiatives, promoting economic literacy programs and interventions, and developing retail strategies in line with concerns about ethical spending and sustainability.

Limitations and Future Directions

This study has a few limitations that should be considered while interpreting the findings. First, the length of the questionnaire may have contributed to respondent fatigue, potentially affecting the quality and accuracy of the responses. Second, the survey method is subject to inherent limitations with self-reported data and biases like social desirability and rationalization of one's actions. In the survey, the use of a general self-regulation measure, i.e., SSRQ, may have restricted its sensitivity to domain-specific behaviour such as purchase decision-making. Additionally, the study utilized a convenience sampling technique, which can lead to a homogenous sample, limiting the generalizability of the findings.

Future research can address the limitations of this study by enhancing questionnaire design and incorporating mixed methods, including interviews, to uncover deeper factors involved in impulsive purchases. Field studies in retail settings can provide insights into actual consumer behaviour influenced by peers, while accounting for contextual variables such as the shopping environment.

Conclusion

The current research explored the relationship between Peer Influence, Impulsive Buying and measured whether Self-regulation plays a mediating role in this relationship. It also studied the gender differences in these variables. Peer influence was found to significantly impact impulsive buying behaviours among college students; however, self-regulation did not mediate this relationship. Further, gender differences revealed that men exhibit more impulsive buying tendencies but demonstrate higher self-regulation levels than females, breaking gender-based stereotypes. These findings underline the need for exploration of cultural, psychological and societal factors that influence consumer behaviours.

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