

The Mediating Role of Emotional Arousal in the Relationship Between in-Store Displays and Impulsive Buying Behavior

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ARTICLE INFO

Received: 01 Nov 2024

Revised: 14 Dec 2024

Accepted: 26 Dec 2024

ABSTRACT

This study investigates how in store displays in Fast Moving Consumer Goods (FMCG) retail settings influence consumers' impulsive buying behavior, with a specific focus on the mediating role of emotional arousal. Drawing on the Stimulus–Organism–Response framework, in store displays are conceptualized as environmental stimuli that shape internal affective states and, in turn, drive spontaneous purchase decisions. Primary data were collected from 400 FMCG consumers in organized retail outlets across four major urban centers of Rajasthan (Jaipur, Jodhpur, Kota, and Udaipur) using a structured, Likert scale questionnaire. Structural Equation Modeling (SEM) was employed to estimate direct, indirect, and total effects among the constructs. The results show that in store displays have a strong, positive, and significant effect on emotional arousal, and that emotional arousal, in turn, has a positive, statistically significant effect on impulsive buying behavior. In store displays also exert a substantial direct effect on impulsive buying, even after accounting for emotional arousal. Mediation analysis reveals that in-store displays have a significant indirect effect on impulsive buying through emotional arousal, along with a significant direct path, confirming partial mediation. This shows that in-store displays affect impulsive buying via two channels. One direct channel enhances the visibility and convenience of the purchase, the other indirect channel increases emotional arousal and hedonic excitement. This study contributes to the consumer behaviour theory by explaining the psychological mechanism through which visual merchandising drives impulse purchases and offers practical implications to FMCG retailers who would like to design their display strategies to harness emotional engagement to boost sales in an effective, but responsible manner

Keywords: in store displays; emotional arousal; impulsive buying behavior; FMCG; visual merchandising; Stimulus–Organism–Response (S–O–R); structural equation modeling; mediation

INTRODUCTION

The present study, “The Mediating Role of Emotional Arousal in the Relationship Between In Store Displays and Impulsive Buying Behavior” is based on the broader literature that conceptualises impulse buying as an affect laden, context dependent response to environmental stimuli. According to Rook (1987), a buying impulse is a sudden and compelling urge to buy something. It is hedonic and emotional, and can override planned decision making. Subsequent research has elaborated this view by showing that impulse buying is shaped not only by individual traits and motives but also by situational cues in the retail environment, such as visual merchandising, point-of-purchase promotions, and sensory atmospherics. Within this Stimulus–Organism–Response framework, in-store displays constitute a critical class of stimuli: they capture attention, organize choice sets, and signal promotional value, thereby creating conditions under which consumers are more susceptible to unplanned purchases. At the same time, research on decision making has increasingly pointed to emotional arousal as a central psychological process linking external stimuli with behavioural outcomes. It has been shown by Peters et al. (2006) and Schwarz and Clore (1988) that affect and arousal act as information and motivation in judgement, biasing choice toward immediately rewarding options even if they are not consistent with one's previous plans. Experimental studies like Ariely and Loewenstein (2006) show how “hot” states—periods of heightened arousal—can dramatically change preferences and risk perceptions compared to “cold”

states such that people make decisions that they would not otherwise endorse. In Indonesia, episodes of impulse buying are characterised by a high level of emotional arousal and hedonistic considerations (Herabadi et al., 2009). The affective dimension of the shopping moment is part and parcel of understanding the occurrence of unplanned purchases, the authors emphasise. Consistent predictors of impulsive buying across settings include emotional and hedonic variables as confirmed by meta analytic evidence from Iyer et al. (2020).

However, the specific role of emotional arousal as a mediating variable between in store displays and impulsive buying behaviour has not been fully articulated, especially in everyday FMCG retail contexts. Much of the existing work has either treated store environment and visual merchandising as direct predictors of impulse buying or focused on trait-level factors without explicitly modeling the internal affective states that intervene between stimulus and response. The present study addresses this gap by positing that in-store displays do not merely exert a direct influence on impulsive buying; rather, they operate primarily by heightening consumers' emotional arousal—feelings of excitement, curiosity, pleasure, or urgency—which then increases the likelihood of spontaneous purchasing decisions. In this view, in-store displays are conceptualized as the **stimulus**, emotional arousal as the **organismic state**, and impulsive buying as the **behavioral response**, consistent with the S–O–R paradigm that underpins much of contemporary retail and consumer-behavior research.

Furthermore, this focus on emotional arousal has important implications for understanding both the effectiveness and the ethics of visual merchandising strategies. On the one hand, if emotional arousal mediates the impact of in-store displays, retailers can enhance the design of product presentations to more effectively evoke positive arousal and thereby increase sales of FMCGs, which are inherently prone to impulse purchases due to their low price and high convenience. On the other hand, the same mechanism may also contribute to outcomes such as post-purchase regret and cognitive dissonance, as consumers later re-evaluate impulsive purchases made in a high-arousal state. The study aims to contribute to a deeper theoretical understanding of how retail stimuli translate into consumer behaviour by explicitly modelling emotional arousal as the intervening variable, and to provide an evidence based foundation for designing in store display strategies that are both effective and mindful of consumer welfare.

REVIEW OF LITERATURE

The research you have selected coherently maps a route from affect and arousal, through impulse buying and social media advertising, to post purchase regret and dissonance, all supported by robust SEM methodology. Rook (1987) provides the basic conceptualisation of the buying impulse as a sudden irresistible urge to buy something immediately. This research underpins the hedonic and affect laden nature of the buying impulse and the internal battle between desire and self control. Rook and Fisher (1995) extend this by showing that whether these urges lead to actual purchases depends on the existence of normative influences and trait impulsiveness, thus highlighting the role of internalised social norms and personal dispositions in the formation of impulsive buying. Building on these conceptual foundations, Hausman (2000) employs a multi method design to demonstrate that impulse purchases are heavily motivated by pleasure seeking, escape and variety motivations along with situational cues like store environment and product displays. Ünsalan's (2016) literature review synthesises this stream, classifying stimulating factors into internal (personality traits, hedonic motives, emotional states) and external (store atmosphere, promotions, social stimuli) and explicitly embedding impulse buying within the Stimulus–Organism–Response framework. This perspective is further consolidated by the meta analytic evidence of Iyer et al. (2020) demonstrating that traits, motives, resources and marketing stimuli all significantly predict impulse buying, with self control and mood acting as important mediators and moderators.

The second thematic strand deals with emotional arousal and affect as mechanisms shaping consumer decision making, including impulsive ones. According to Peters et al. (2006) affect has several roles in decision making, such as providing information, guiding attention, motivating action, and acting as a “common currency”. This shows that emotional states systematically influence judgements, not just pure cognitive evaluations. The ‘feelings as information’ account (Schwarz and Clore, 1988) demonstrates that people often misattribute their current feelings to the object of judgement, which can influence product assessments and purchase intentions. This process is directly relevant when shoppers feel aroused by in store displays or persuasive advertising. Similarly, Storbeck and Clore (2008) point out that affective arousal influences what is learned, remembered and prioritised and thus higher levels of arousal can increase the salience of tempting products and thus lead to impulsive responses. Ariely and Loewenstein (2006) provide experimental evidence that “hot” states such as sexual arousal can have a significant effect on risk and ethical judgements relative to “cold” states, and that the time inconsistent preferences that

are characteristic of impulse buying are a consequence of such hot states. Gorn, Pham, and Sin (2001) add nuance by demonstrating that arousal and valence can be dissociated in advertising evaluation, where arousal alone can drive positive responses even when valence is neutral, thereby justifying the treatment of emotional arousal as a separate construct in structural models of consumer behaviour. Sohn et al. (2015) show that emotional arousal biases inter temporal choices towards immediate rewards, which is very close to the preference for immediate consumption inherent in impulse buying. Szymkowiak et al. (2020) show in the midst of an epidemic that emotions such as fear and anxiety have a profound effect on shopping behaviour. This points to wider emotional climates mixing with micro level stimuli to shape impulsive purchases.

A third set of studies associates impulse buying with post purchase regret, cognitive dissonance and coping. Herabadi, Verplanken and Knippenberg (2009) show that impulsive buying experiences in Indonesia are characterised by high emotional arousal and hedonic considerations at the moment of purchase, but also by guilt and regret afterwards, revealing the ambivalent emotional profile of impulsive consumption. Hausknecht & Soutar, (2000) develop a multidimensional scale of post purchase cognitive dissonance, capturing discomfort, regret and confusion. This provides a measurement framework for modelling dissonance and regret as latent outcomes of impulsive buying. Tsiros and Mittal (2000) present a process model of regret, outlining antecedents such as foregone alternatives and expectation disconfirmation, and consequences like reduced satisfaction and increased switching, thus explaining how impulse purchases can hurt long-term loyalty despite meeting short-term desires. Zeelenberg and Pieters (2007) propose a theory of regret regulation, which argues that consumers use both behavioural strategies (e.g. returns, avoidance) and cognitive strategies (e.g. reframing, justification) to manage regret, and therefore not all regret leads to the same behavioural consequences. More recent domain specific work such as Ayu and Aziz (2024) on beauty products and Kumar et al. (2021) on groceries confirms that online and offline impulse buying are positively associated with post purchase regret, with variation depending on product type and perceived necessity. Drawing on the theory of cognitive dissonance, Lazim et al. (2020) demonstrate that online impulse buying, impacted by sales promotions, card payments and visual merchandising, will be more likely to lead to regret when purchases contradict internal standards and expectations. Ongyono et al. (2024) and Putri and Astuti find that flash sales and e marketing exposure increase impulsive purchases and thus regret, especially for fashion goods and general online shopping. Secapramana et al. (2021) highlight the role of credit card usage in facilitating impulsive buying and generating regret due to financial strain.

Another theme concerns specifically social media and advertising stimuli, as triggers of impulse buying through emotional and social mechanisms. Ashley and Tuten (2015) investigate creative strategies in social media marketing and find that entertaining, interactive and visually rich branded content can produce consumer engagement, which frequently leads to spontaneous unplanned purchases in response to social media stimuli. Social media is becoming increasingly relevant in market research, note Patino, Pitta, and Quinones (2012), as it offers a context where one can observe spontaneous, real-time responses to content, promotions, and peer interactions, thus providing a distinct lens into the dynamics of impulse buying. According to Ertemel and Ammoura (2016), social media advertising influences buying behaviour through informativeness, credibility and entertainment value, which can easily become impulsive responses as ads decrease search costs and increase emotional involvement. Rehman et al. (2014) specifically research Facebook advertising with young consumers and find out that such ads significantly impact the buying behaviour, and gender moderates the strength of these effects. It suggests that demographic variables shape the susceptibility to impulsive responses. Hamouda (2018) studied tourism advertising on Facebook, and demonstrated that exposure to ads on social media produces effects on attitudes and behavioural responses, supporting the notion that social platforms are powerful stimuli for affect-driven choices. Vazquez et al. (2020) then show that narrative involvement and parasocial interaction in second screen social commerce increase impulse buying, suggesting that emotionally engaging narratives and perceived relationships with influencers amplify consumers' tendency to make spontaneous purchases.

Finally, the methodological references provide the backbone for testing the complex pathways implied by these thematic streams. Hooper, Coughlan and Mullen (2008) summarise guidelines for assessing fit of a model in structural equation modelling and discuss indices such as CFI, TLI, RMSEA and suggest good practice thresholds and reporting procedures which are directly relevant to the assessment of models combining stimuli, emotional arousal, impulse buying and regret. Hu and Bentler (1999) offer influential cutoff criteria for fit indices, advocating the use of multiple indices and combinations (for example, high incremental fit with low error) rather than single-index judgments, a standard that has become widely adopted in consumer-behavior SEM studies. Kline (2016) provides comprehensive coverage of SEM principles and practice, including

model specification, identification, estimation, mediation analysis, and common pitfalls, thereby supporting the methodological rigor of studies that examine direct, indirect, and total effects among the constructs emphasized in this body of work. Taken together, these substantive and methodological contributions support a theoretical narrative in which marketing and social-media stimuli act as environmental triggers, emotional arousal and affect serve as central organismic mechanisms, impulse buying emerges as the behavioral response, and post-purchase regret and dissonance appear as downstream outcomes, all of which can be rigorously modeled and tested using SEM. Based upon above literature following hypotheses have been proposed –

- **H1:** In-store displays have a positive and significant effect on emotional arousal.
- **H2:** Emotional arousal has a positive and significant effect on impulsive buying behavior.
- **H3:** In-store displays have a positive and significant direct effect on impulsive buying behavior.
- **H4:** Emotional arousal significantly mediates the relationship between in-store displays and impulsive buying behavior (i.e., the indirect effect of in-store displays on impulsive buying via emotional arousal is positive and significant, indicating partial mediation).

1 Research Objectives

1. To examine the effect of in-store displays on emotional arousal.
2. To assess the effect of emotional arousal on impulsive buying behavior.
3. To determine the direct effect of in-store displays on impulsive buying behavior.
4. To test whether emotional arousal mediates the relationship between in-store displays and impulsive buying behavior (partial mediation).

2 Research Methodology

This study adopts a quantitative, field-based research design to examine the mediating role of emotional arousal in the relationship between in-store displays and impulsive buying behavior in the Fast Moving Consumer Goods (FMCG) sector. Building on the Stimulus–Organism–Response (S–O–R) framework and previous studies on impulse buying and affect (e.g., Rook, 1987, Herabadi et al., 2009, Iyer et al., 2020), in-store displays are considered as environmental stimuli, emotional arousal as the internal organismic state, and impulsive buying as the behavioural response. The study uses consumers purchasing FMCGs from organised retailing outlets like supermarkets and malls where visual merchandising and product displays are consciously employed to impact purchase decisions.

The target population comprises FMCG consumers frequenting high-footfall retail zones and malls in four major urban centers of Rajasthan: Jaipur, Jodhpur, Kota, and Udaipur. These cities collectively represent diverse cultural, economic, and demographic profiles within urban Rajasthan and are characterized by the presence of organized retail formats offering FMCGs through visually rich in-store displays. Because the total number of FMCG consumers in these markets is large and not fully enumerated, Krejcie and Morgan's (1970) sample size determination table was used as a reference point. For a population exceeding 2,000, the table indicates that a minimum sample of approximately 322–335 respondents is statistically adequate at a 95% confidence level with a 5% margin of error. To enhance precision, representation, and the statistical power needed for subgroup analyses across four cities and gender categories, the final sample size was set at 400 respondents.

We used a stratified random sampling technique to systematically represent significant subgroups within the heterogeneous urban consumer population. Stratification was on two dimensions, geography (the four cities) and gender (male and female consumers). First, the entire sample of 400 was spread evenly among the four urban centers, with 100 respondents taken from each city. Further stratification was done by gender in each city to ensure sufficient representation of male and female FMCG consumers. This design was particularly appropriate given the study's interest in gendered dimensions of impulsive buying behavior and the known demographic and socioeconomic differences among Jaipur, Jodhpur, Kota, and Udaipur. The choice of stratified random sampling is justified by the inherent diversity and anonymity of the target population. FMCG consumers in local markets constitute a large, scattered group for which a complete sampling frame is difficult to construct. Simple random sampling in such conditions risks under-representing important subgroups and increasing sampling bias. Stratification by city and gender allows

the researcher to organize heterogeneity systematically, reduce sampling bias, and improve the comparability of strata. It also facilitates robust comparative analysis of impulsive buying behavior across different urban settings and gender groups. In line with best practice for large, unframed populations, stratified sampling provides a defensible basis for making inferences about the broader urban FMCG consumer segment while maintaining representativeness and controlling the margin of error.

Primary quantitative data were collected through structured, face-to-face surveys administered at or near high-footfall retail locations where FMCG purchases are likely to occur. In each of the four cities, respondents were approached in selected outlets and malls and invited to participate after confirming that they were actively engaged in purchasing FMCGs.

This distribution ensured that data were drawn from a mix of large supermarkets, hypermarkets, and mall-based outlets where in-store displays and visual merchandising are prominently used for FMCG categories. Surveys were administered in person using paper-and-pencil questionnaires. The face-to-face mode allowed the researcher to explain the purpose of the study, clarify any ambiguities in items, and ensure that respondents understood the questions before completing the instrument. This personal interaction also helped increase response rates and improve data quality.

3 Results Analysis

Table 1 –Mediation Estimates

Effect	Estimate	SE	Z	p
Indirect	0.0804	0.0269	2.99	0.003
Direct	0.2917	0.0486	6.00	<.001
Total	0.3720	0.0415	8.97	<.001

The results of the mediation analysis clearly demonstrate the mechanism by which in-store displays influence impulse buying, differentiating between indirect, direct and total effects.

The mediating role of emotional arousal between in-store displays and impulse buying is positive and statistically significant ($\beta = 0.0804$, $SE = 0.0269$, $Z = 2.99$, $p = .003$). This indicates an important mediating role of emotional arousal in this relation. In practical terms, the finding implies that part of the effect of in-store displays on consumers' impulse shopping behaviours is mediated by the improvement of their emotional states such as excitement or pleasure while shopping.

When controlling for the mediating effect of emotional arousal, the direct effect remains positive and highly significant ($\beta = 0.2917$, $SE = 0.0486$, $Z = 6.00$, $p < .001$). Therefore, in-store displays can influence impulse buying through other mechanisms than emotional ones, for example product visibility, ease of reach or promotional attractiveness.

The total effect of in store displays on impulse buying was also found to be strong and statistically significant ($\beta = 0.3720$, $SE = 0.0415$, $Z = 8.97$, $p < .001$). This is the combined influence of direct and indirect effects. The indirect effect is about 21.6% of the total effect ($0.0804/0.3720$) and the majority of the rest is the direct effect.

In general, these findings support the presence of partial mediation as both the indirect and direct effect are significant. This indicates emotional arousal is a major but not complete mediator of the relationship between in-store displays and impulse buying. So, besides emotional involvement other direct effects of in-store displays also play a dominant role in shaping consumer impulse purchasing behaviour.

Table 2 - Path Estimates

			Estimate	SE	Z	p
In-Store Displays	→	Emotional Arouse	0.470	0.0368	12.76	<.001
Emotional Arouse	→	Impulse buying	0.171	0.0556	3.07	0.002
In-Store Displays	→	Impulse buying	0.292	0.0486	6.00	<.001

Path analysis shows significant relationships between in-store displays, emotional arousal and impulse buying behaviour that provide strong support for the proposed structural model. The influence of in-store display on emotional arousal is positive and highly significant ($\beta = 0.470$, $SE = 0.0368$, $Z = 12.76$, $p < .001$). This means that good in-store display design and positioning enhance consumers' emotional response significantly. This means that visual merchandising elements such as product placement, signage and promotional cues are effective in generating excitement, curiosity or pleasure among shoppers.

Moreover, emotional arousal has a positive and statistically significant effect on impulse buying ($\beta = 0.171$, $SE = 0.0556$, $Z = 3.07$, $p = .002$). This means that higher levels of emotional arousal lead to an increased propensity for unplanned purchases. The effect is moderate in size but significant, highlighting the psychological mechanism through which consumers' affective states are transformed into spontaneous buying decisions.

Besides the indirect route, the in-store displays also have a direct and significant impact on impulse buying ($\beta = 0.292$, $SE = 0.0486$, $Z = 6.00$, $p < .001$). It implies that in-store displays independently contribute to impulse purchase behaviour above and beyond emotional arousal, perhaps through increasing product visibility, decreasing cognitive effort in the decision process, or through creating a sense of urgency and attractiveness surrounding products.

Together these results confirm that a part of the effect of in-store displays on impulse buying is mediated by emotional arousal. The indirect effect (product of the two relevant path coefficients) is $0.470 \times 0.171 \approx 0.080$, which indicates that a considerable part of the total effect is mediated through emotional arousal, while the direct effect is still stronger. The results indicate that in-store displays have direct and indirect effects on consumer purchase behaviour through emotional engagement, emphasising the strategic importance of in-store displays in retail marketing.

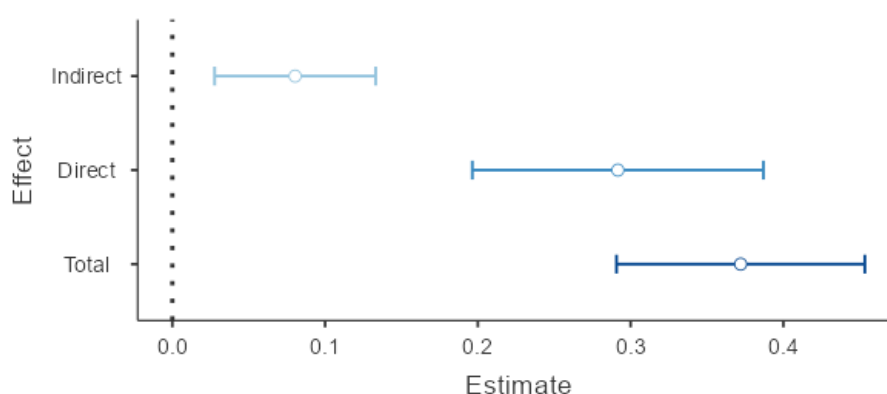


Figure 1 - Estimate Plot

DISCUSSION & CONCLUSION

The findings of this study confirm the direct and indirect impact of in store FMCG displays on impulsive buying behaviour with emotional arousal playing as a mediating role of statistical significance. Consistent with prior conceptualisations of impulse buying as an affect laden response to environmental stimuli (Rook, 1987; Hausman, 2000; Ünsalan, 2016), the findings demonstrate that visually salient, well organised and promotional product displays significantly increases consumers' emotional arousal, which in turn makes unplanned purchases more likely. This is consistent with the Stimulus–Organism–Response perspective, in which in store displays are stimuli, emotional arousal is the organismic state and impulsive buying is the behavioural response. Mediation estimates suggest that a considerable proportion of the total effect of in-store displays on impulse buying is transmitted through emotional arousal, although the direct effect is still relatively stronger. This result is consistent with recent studies indicating that consumer emotions partially mediate the link between visual merchandising and impulse buying in supermarket and fashion contexts.

Mediation of emotional arousal also adds to broader decision making research that recognises the importance of “hot” states in determining consumer decisions. Peters et al. (2006) and Ariely and Loewenstein (2006) suggest that affect and arousal can lead to judgements that favour immediate rewards. In addition, Herabadi et al. (2009) show that episodes of impulse buying are

associated with intense emotional experiences. The present findings extend this logic to everyday FMCG retail environments, suggesting that in-store displays create micro-contexts in which consumers experience heightened excitement, curiosity, and urgency, thereby lowering resistance to unplanned purchases. At the same time, the persistence of a significant direct path from displays to impulse buying indicates that cognitive and utilitarian factors (e.g., perceived convenience, price salience, ease of access) also contribute to impulsive decisions, in line with meta-analytic evidence that both hedonic and utilitarian motives underpin impulse buying. Thus, emotional arousal is necessary but not sufficient to explain the full impact of in-store displays; it operates alongside more deliberate evaluations of product attractiveness and value.

This study concludes that emotional arousal serves as a **partial mediator** between in-store FMCG displays and impulsive buying behavior in urban Rajasthan's organized retail settings. In-store displays significantly enhance emotional arousal, and this elevated arousal, in turn, increases the probability of impulsive purchases, while a strong direct effect of displays on impulse buying remains. The results empirically validate a S-O-R model in which visual merchandising and display strategies act as environmental stimuli that work through internal affective states to produce spontaneous, unplanned buying. By demonstrating that emotional arousal explains a substantial share of the total effect, the study adds psychological depth to the understanding of how visual merchandising translates into consumer behavior, moving beyond purely structural or promotional explanations.

MANAGERIAL AND THEORETICAL IMPLICATIONS

The results suggest that retailers, from a managerial perspective, should consider in-store displays as not only informational and promotional tools but also affect generation devices. Visually appealing, thematically consistent and contextually appropriate displays can deliberately increase positive emotional arousal and thereby increase impulse purchases of FMCGs. Colour, lighting, product grouping, signage and spatial positioning should all be choreographed to create moments of excitement and curiosity, especially in high traffic zones like end caps, entry aisles and promotional islands. But managers must also be aware of consumer welfare. For some consumers, especially those with tight budgets or aspirations for high self control, over reliance on arousal based tactics can lead to post purchase regret and cognitive dissonance (Sweeney et al., 2000; Tsiros & Mittal, 2000). Responsible merchandising would therefore aim to balance arousal-driven prompts with clear information, fair pricing and opportunities for reflection.

Theoretically, the study adds empirical specification of emotional arousal as a mediating mechanism between visual merchandising and impulse buying, consistent with emerging work that models consumer emotions as mediators in S-O-R frameworks. This supports the notion that impulse buying is best conceptualised as a product of dynamic interactions of environmental stimuli and internal states, rather than purely trait driven or purely situational. Our findings also indicate that future conceptual models should take into account multiple organismic variables (e.g., emotional arousal, perceived value, and mood regulation) that operate in sequence or parallel as suggested by recent mediated and moderated mediation frameworks in impulse buying research.

SCOPE FOR FUTURE RESEARCH

This work can be extended in several directions by future studies. Researchers could, first, add other organismic constructs such as perceived value, shopping enjoyment or self control to test sequential mediation models in which in store displays influence emotional arousal, which influences perceived value and ultimately impulse buying. Second, as technology-enabled visual merchandising and digital signage gain importance, future research could compare traditional physical displays with interactive or digital displays to see if the intensity and nature of emotional arousal differ across formats and how this influences impulse buying. Third, cross-cultural and cross-regional research could investigate the mediating role of emotional arousal in other Indian states or international markets, where cultural norms and retail formats may impact emotional reactions and impulsive tendencies. Fourth, longitudinal or diary based designs could be employed to capture how repeated exposures to similar in store displays impact both immediate impulse buying and longer term attitudes, regret or coping mechanisms.

Another promising future direction is to combine online and omnichannel contexts, to investigate whether emotional arousal mediates the effect of visual merchandising on e-commerce and social commerce contexts, as suggested by research on digital marketplaces and social media stimuli. A comparison of offline and online environments may reveal whether the mechanisms identified in brick and mortar FMCG settings generalise to mobile apps and social networks, or whether different types of arousal (e.g. social vs sensory) dominate in digital spaces. Finally, future research could test potential moderators such as income, digital

exposure or materialism on the strength of the mediation path, extending calls for boundary conditions in impulse buying and emotional response models .

LIMITATIONS OF THE STUDY

While the study provides useful insights, certain limitations need to be recognised. First, the study is cross-sectional, in which the emotional arousal and impulsive buying are measured at one point in time. Thus, causal inferences based on theory and SEM cannot be as strong as the inferences derived from experimental or longitudinal designs. Second, the data are based on self-reported measures of emotional arousal and impulsive buying, which may be subject to recall bias, social desirability, or limited introspective access, particularly for affective decisions that occur rapidly. This limitation could be overcome in future studies, with the inclusion of physiological measures of arousal, or real time behavioural tracking. Third, the study is limited to four urban centers in Rajasthan and FMCG products in organised retail. Although the context is rich and diverse, the findings may not be generalisable to rural markets, non-FMCG categories (e.g. durable goods), or purely informal retail settings.

Fourth, the model treats emotional arousal as the main mediator, but leaves out other potentially relevant psychological variables such as perceived value, shopping enjoyment, trait impulsiveness and self control which are known to affect impulse buying in other research. Fifth, the use of stratified sampling by city and gender allows for representativeness within the chosen context, but does not specifically address other demographic categories, such as age categories or income-levels, which could add further nuance to the results. Finally, the study employs a structured questionnaire and SEM with standard fit criteria; although these are robust methodologies, other analytical approaches such as multi group SEM, latent class analysis or experimental manipulations of display characteristics could offer additional depth.

REFERENCES

- [1] Ariely, D., & Loewenstein, G. (2006). The heat of the moment: The effect of sexual arousal on sexual decision making. *Journal of Behavioral Decision Making*, 19(2), 87–98.
- [2] Gorn, G., Tuan Pham, M., & Yatming Sin, L. (2001). When arousal influences ad evaluation and valence do not (and vice versa). *Journal of Consumer Psychology*, 11(1), 43–55.
- [3] Hausman, A. (2000). A multi-method investigation of consumer motivations in impulse buying behavior. *Journal of Consumer Marketing*, 17(5), 403–426.
- [4] Herabadi, A. G., Verplanken, B., & Knippenberg, A. V. (2009). Consumption experience of impulse buying in Indonesia: Emotional arousal and hedonistic considerations. *Asian Journal of Social Psychology*, 12(1), 20–31.
- [5] Iyer, G. R., Blut, M., Xiao, S. H., & Grewal, D. (2020). Impulse buying: A meta-analytic review. *Journal of the Academy of Marketing Science*, 48, 384–404.
- [6] Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14(2), 189–199.
- [7] Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22(3), 305–313.
- [8] Ünsalan, M. (2016). Stimulating factors of impulse buying behavior: A literature review. *Gazi Üniversitesi İİBF Dergisi*, 18(2), 572–593.
- [9] Ashley, C., & Tuten, T. (2015). Creative strategies in social media marketing: An exploratory study of branded social content and consumer engagement. *Psychology & Marketing*, 32(1), 15–27.
- [10] Ertemel, A. V., & Ammoura, A. (2016). The role of social media advertising in consumer buying behavior. *International Journal of Commerce and Finance*, 2(1), 81–90.
- [11] Hamouda, M. (2018). Understanding social media advertising effect on consumers' responses: An empirical investigation of tourism advertising on Facebook. *Journal of Enterprise Information Management*, 31(3), 426–445.
- [12] Patino, A., Pitta, D. A., & Quinones, R. (2012). Social media's emerging importance in market research. *Journal of Consumer Marketing*, 29(3), 233–237.
- [13] Rehman, F. U., Ilyas, M., Nawaz, T., & Hyder, S. (2014). How Facebook advertising affects buying behavior of young consumers: The moderating role of gender. *Academic Research International*, 5(4), 395–404.
- [14] Vazquez, D., Wu, X., Nguyen, B., Kent, A., Gutierrez, A., & Chen, T. (2020). Investigating narrative involvement, parasocial interactions, and impulse buying behaviours within a second screen social commerce context. *International Journal of Information Management*, 53, 102135.

- [15] Ayu, S., & Aziz, A. (2024). The relationship between impulse buying and post-purchase regret online in women users of beauty products. *Journal of Social and Industrial Psychology*, 13(2), 25–31.
- [16] Kumar, A., Chaudhuri, D. S., Bhardwaj, D. A., & Mishra, P. (2021). Impulse buying and post-purchase regret: A study of shopping behavior for the purchase of grocery products. *International Journal of Management*, 11(12), 614–624.
- [17] Lazim, N. A. M., et al. (2020). Measuring post purchase regret and impulse buying in online shopping experience from cognitive dissonance theory perspective. In *6th International Conference on Information Management* (pp. 7–13).
- [18] Ongyono, D. V., et al. (2024). The effect of flash sale on impulse buying of fashion goods which results in post-purchase regret. In *2024 International Conference on Informatics, Multimedia, Cyber and Information System* (pp. 917–922).
- [19] Secapramana, L. V. H., Magdalena, G. J., & Yuwanto, L. (2021). Impulsive buying, post-purchase regret, and credit card. *Advances in Economics, Business and Management Research*, 175, 5–10.
- [20] Sweeney, J. C., Hausknecht, D., & Soutar, G. N. (2000). Cognitive dissonance after purchase: A multidimensional scale. *Psychology & Marketing*, 17(5), 369–385.
- [21] Tsiros, M., & Mittal, V. (2000). Regret: A model of its antecedents and consequences in consumer decision making. *Journal of Consumer Research*, 26(4), 401–417.
- [22] Zeelenberg, M., & Pieters, R. (2007). A theory of regret regulation 1.0. *Journal of Consumer Psychology*, 17(1), 3–18.
- [23] Peters, E., Västfjäll, D., Gärling, T., & Slovic, P. (2006). Affect and decision making: A “hot” topic. *Journal of Behavioral Decision Making*, 19(2), 79–85.
- [24] Schwarz, N., & Clore, G. L. (1988). How do I feel about it? The informative function of affective states. In K. Fiedler & J. Forgas (Eds.), *Affect, Cognition, and Social Behavior* (pp. 44–62). Hogrefe.
- [25] Sohn, J.-H., et al. (2015). Effect of emotional arousal on inter-temporal decision-making: An fMRI study. *Journal of Physiological Anthropology*, 34, 1–8.
- [26] Storbeck, J., & Clore, G. L. (2008). Affective arousal as information: How affective arousal influences judgments, learning, and memory. *Social and Personality Psychology Compass*, 2(5), 1824–1843.
- [27] Szymkowiak, A., et al. (2020). The impact of emotions on shopping behavior during epidemic: What a business can do to protect customers. *Journal of Consumer Behaviour*, 20(1), 48–60.
- [28] Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53–60.
- [29] Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis. *Structural Equation Modeling*, 6(1), 1–55.
- [30] Kline, R. B. (2016). *Principles and Practice of Structural Equation Modeling*. New York: Guilford Press.