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# ATMOSPHERIC CUES AND SALES STIMULI: DECIPHERING THE EXTERNAL DETERMINANTS OF CONSUMER IMPULSE BUYING BEHAVIOR

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## ABSTRACT

The study analyzes consumer impulse buying behavior in retail, emphasizing the impact of external stimuli such as store atmosphere, sales promotions, and visual merchandising on unplanned purchases within the Stimulus–Organism–Response (SOR) framework. Using a descriptive quantitative approach, data were collected from 150 retail consumers via a structured questionnaire and analyzed with statistical methods including multiple regression and ANOVA. Results indicate that store atmosphere ($\beta = 0.342$, $p < 0.01$), sales promotional stimuli ($\beta = 0.298$, $p < 0.01$), and visual merchandising ($\beta = 0.275$, $p < 0.05$) significantly influence impulse buying, with emotional response mediating the store atmosphere's effect ($\beta = 0.318$, $p < 0.01$). The model accounted for 61.4% of variance ($R^2 = 0.614$, $F = 24.87$, $p < 0.001$), and reliability was confirmed ($\alpha > 0.70$). The study suggests retailers can increase impulse purchases by enhancing store environments and strategies, especially in emerging markets competing with e-commerce, thus contributing valuable insights to the SOR model in Indian retail.

**Keywords:** Atmospheric cues, Impulse buying behavior, Store atmosphere, Sales promotional stimuli, Stimulus–Organism–Response model.

## A. INTRODUCTION

Consumer impulse buying behavior, characterized by unplanned purchases at the point of sale, is a key focus in retail and marketing, contributing significantly to revenue. This behavior is primarily influenced by in-store stimuli, such as lighting, music, and layout, rather than premeditated intentions, aligning with the Stimulus–Organism–Response (SOR) framework. The study investigates the impact of atmospheric cues, sales promotions, and visual merchandising on impulse buying, particularly within the context of Indian consumers and the evolving retail landscape in India, aiming to develop an integrated SOR-based model for better understanding and strategy development.

## B. REVIEW OF LITERATURE (2020–2025)

### Store Atmosphere and Impulse Buying

**Karahan (2025)** The study found that atmospheric cues like content, design, and navigation significantly influence impulsive buying behavior in digital retail, mediated by utilitarian and hedonic browsing. Structural equation modeling showed that design and navigation enhance impulsive purchases both directly and indirectly through hedonic browsing, highlighting the role of atmospheric design in unplanned buying across retail channels.

**Sanjaya et al. (2025)** Research indicates that the store atmosphere has a significant impact on Gen Z's impulse buying in Indonesian retail. A quantitative survey shows a positive correlation between ambient music, interior lighting, and spatial design with impulse shopping tendencies. Enhancing the store atmosphere may therefore boost impulse purchases among younger consumers, who are particularly responsive to experiential retail environments.

**Pratiwi and Sari (2025)** Researchers in Bali, Indonesia, found that shopping enjoyment mediates the relationship between store atmosphere and impulse buying in fashion consumers. Analyzing data from 200 respondents, the study revealed that store atmosphere directly and indirectly enhances impulse buying, with shopping enjoyment as a significant mediator. Key atmospheric factors included lighting, background music, aroma, and product layout, supporting the SOR theoretical framework.

**Sales Promotional Stimuli and Impulse Buying**

**Yilmaz and Demir (2025)** Investigated the impact of time-limited price promotions on consumer impulse buying behavior through a quasi-experimental study with 211 respondents. Results indicated that specific discount patterns significantly affect purchase intention ($F = 7.54$, $p = 0.001$), with time constraints enhancing urgency and leading to unplanned purchases. The findings emphasize the importance of promotional offer design in influencing impulse buying outcomes.

**Kumar and Reddy (2024)** The study examined how discount strategy mediates the relationship between sales promotion variables and consumer impulse buying behavior in online retail. Surveying 261 respondents, it found that price discounts, product promotions, and online platform stimuli significantly influenced impulse buying, with discount strategy acting as a key partial mediator. The findings highlight the dual role of promotional stimuli as both direct triggers and structural mediators in impulse buying frameworks.

**Hasan et al. (2024)** The study applied the SOR framework to explore how atmospheric stimuli in shopping malls influence consumer emotions and impulse purchases. Using structural equation modeling, it revealed that both positive and negative emotions mediate the link between environmental stimuli and impulse buying, albeit with differing effects. Notably, only positive emotions were found to mediate the relationship between spatial atmosphere and impulse purchases, highlighting the selectivity of emotional mediation pathways.

**Visual Merchandising and Impulse Buying**

**Wulandari et al. (2025)** Investigated the effects of store atmosphere, layout, point-of-purchase displays, and promotional signage on consumer impulse buying in souvenir retail. A quantitative survey revealed significant positive impacts from all four variables, particularly highlighting POP displays and promotional signage as strong triggers. Eye-catching window displays and discount signage were noted as especially effective in prompting spontaneous purchases.

**Patel and Singh (2025)** The study analyzed impulse buying behavior in apparel retail, emphasizing the impact of store atmosphere and situational factors like promotional offers and social presence. A quantitative study of 350 shoppers in India found that store ambience, design quality, and promotions significantly influenced impulse buying, while the presence of others acted as a moderating factor. Notably, the combination of promotional offers and store design heightened the likelihood of impulse purchases.

**Emotional Response as a Mediator**

**Cao et al. (2024)** Developed a revised SOR model to examine impulse buying in affordable luxury fashion retail, the study identified on-site emotion and in-store browsing as mediators between retail stimuli and impulse buying. It revealed that marketing stimuli and store atmosphere affect impulse buying via emotional responses (pleasure and arousal) and subsequent browsing behavior, supporting the mediating role of emotional response in the conceptual framework.

**Shi et al. (2025)** The study examined how e-commerce live streaming atmospheric cues impact impulse buying behavior, with social presence as a mediating factor within the SOR framework. It developed a scale for atmospheric cues, revealing that information, design, and interactive elements positively influence impulse buying, partially mediated by social presence.

While distinct from physical retail contexts, the study offers valuable theoretical and methodological insights, especially regarding atmospheric cue dimensions.

## C. RESEARCH GAP

The literature shows that store atmosphere, sales promotions, and visual merchandising affect consumer impulse buying, based on the Stimulus–Organism–Response (SOR) model, with emotional response as a mediator. However, studies generally analyze these factors in isolation, missing their interactive effects, and few test emotional responses across all determinants together. Most research focuses on digital settings, neglecting physical retail, especially in India. The study aims to fill these gaps by developing and testing an integrated SOR framework that examines these three factors and their combined impact on impulse buying, providing theoretical and methodological insights specific to the Indian retail environment.

## D. PROBLEM STATEMENT AND RESEARCH QUESTIONS

The retail sector faces challenges in understanding impulse buying, often relying on intuition rather than validated models. The SOR model, while theoretically useful for analyzing consumer behavior stimuli, is underutilized in India. Current literature presents inconsistencies in methodology and measurement standards, particularly regarding store atmosphere and visual merchandising. To effectively compete with e-commerce, Indian retailers require empirical insights into how environmental factors and consumer demographics impact impulse buying, emphasizing the need for a tailored empirical model to address these gaps.

The foregoing theoretical, empirical, and practical considerations give rise to the following research questions:

**RQ1:** To what extent do store atmospheric cues influence consumer impulse buying behavior in the physical retail environment?

**RQ2:** In what ways do sales promotional stimuli shape the impulse buying tendencies of retail consumers?

**RQ3:** How does visual merchandising contribute to the triggering of impulse buying behavior among consumers?

**RQ4:** Does emotional response mediate the relationship between external atmospheric and sales stimuli and consumer impulse buying behavior?

## E. OBJECTIVES OF THE STUDY

1. To examine the influence of store atmospheric cues on consumer impulse buying behavior in the physical retail environment.
2. To assess the impact of sales promotional stimuli on impulse buying tendencies among retail consumers.
3. To analyze the effect of visual merchandising on consumer impulse buying behavior.
4. To evaluate the mediating role of emotional response in the relationship between external environmental stimuli and consumer impulse buying behavior.

## F. SCOPE AND USEFULNESS OF THE STUDY

The present study focuses on retail consumers in Coimbatore, Tamil Nadu, a rapidly growing urban retail market, and includes individuals aged 18 years and above who have shopped at organized retail outlets within the past six months.

It is limited to physical brick-and-mortar retail settings, excluding online and digital formats, and examines four key constructs: store atmosphere, sales promotional stimuli, visual merchandising, and emotional response as determinants of impulse buying behavior, drawing on recent developments from 2020 to 2025.

The study adopts a cross-sectional approach, capturing consumer perceptions and behaviors at a single point in time, which, while limiting longitudinal analysis, provides a clear and focused snapshot of current stimulus–behavior dynamics in the Indian retail context.

## G. CONCEPTUAL FRAMEWORK AND HYPOTHESES

### Conceptual Framework

The study applies the Stimulus–Organism–Response (SOR) model to investigate factors influencing retail consumer behavior, specifically focusing on how store atmosphere, sales promotions, and visual merchandising act as external stimuli that trigger emotional responses, leading to impulse buying. Direct relationships between these stimuli and impulse buying are examined, while also considering emotional responses as mediators in this process. This framework allows for a detailed analysis of both direct effects and the mediation of emotions in consumer behavior dynamics.

### Hypotheses

**H1:** Store atmospheric cues have no significant influence on consumer impulse buying behavior.
**H2:** Sales promotional stimuli have no significant impact on impulse buying tendencies among retail consumers.
**H3:** Visual merchandising has no significant effect on consumer impulse buying behavior.
**H4:** Emotional response does not mediate the relationship between external environmental stimuli and consumer impulse buying behavior.
**H5:** There is no significant difference in impulse buying behavior across demographic groups (income, gender, age).

## H. RESEARCH METHODOLOGY

**Type of Research:** The study employs a descriptive research design to investigate relationships among variables using quantitative methods and statistical analysis, facilitating standardized data collection and reliable result generalization.

**Sampling:** The study uses simple random sampling, giving each individual in the target population an equal chance of selection. This approach reduces bias and improves the representativeness of the 150 retail consumers sampled from organized outlets in Coimbatore.

**Data Collection:** Primary data are collected through a structured, self-administered questionnaire distributed to retail consumers at shopping malls, supermarkets, and specialty stores in Coimbatore. The data collection process is conducted over four weeks to ensure adequate representation of consumer behavior.

### Statistical Tools

| Tool | Application | Justification |
|---|---|---|
| Descriptive Statistics (Mean, SD, Frequency, %) | Demographics + construct profiles | Provides baseline understanding of sample characteristics and construct distributions |
| Cronbach's Alpha | Internal consistency of all 4 constructs | Confirms reliability; $\alpha > 0.70$ indicates acceptable reliability |
| Pearson Correlation Analysis | Relationships among SA, SP, VM, IBB | Quantifies direction and strength of bivariate relationships among key variables |
| Multiple Regression Analysis | SA, SP, VM → IBB | Tests the direct predictive influence of each IV on the DV, controlling for others |
| One-Way ANOVA | IBB across income/age/gender groups | Tests mean differences in impulse buying across demographic categories |

### Limitations of the Study

1. The study involves 150 respondents, which is sufficient for statistical analysis but restricts statistical power and the ability to generalize findings to the national retail consumer population.

2. Data collection was limited to Coimbatore, Tamil Nadu, which may not represent consumers from other Indian cities with varying cultural and economic contexts.
3. The research is based on self-reported questionnaire data, which could be influenced by social desirability bias, recall errors, and common method variance.
4. Data was gathered at a single point in time, hindering the observation of changes over time or the establishment of strong causal relationships.

## I. DATA PREPARATION, MANIPULATION, AND ANALYSIS (EXCEL)

### Statistical Analysis and Results

### Tool 1: Descriptive Statistics

**Table 1: Demographic Profile of Respondents (n = 150)**

| Variable | Category | Frequency | Percentage |
|---|---|---|---|
| Gender | Male | 78 | 52.00% |
| | Female | 68 | 45.30% |
| | Other | 4 | 2.70% |
| Age Group | Below 25 | 45 | 30.00% |
| | 25–35 | 52 | 34.70% |
| | 36–45 | 31 | 20.70% |
| | 46–55 | 16 | 10.70% |
| | Above 55 | 6 | 4.00% |
| Education | Graduate | 68 | 45.30% |
| | Postgraduate | 49 | 32.70% |
| | Diploma | 21 | 14.00% |
| | Others | 12 | 8.00% |
| Monthly Income | Below ₹20,000 | 38 | 25.30% |
| | ₹20,001–40,000 | 54 | 36.00% |
| | ₹40,001–60,000 | 35 | 23.30% |
| | Above ₹60,000 | 23 | 15.30% |
| Shopping Frequency | Weekly | 52 | 34.70% |
| | Fortnightly | 48 | 32.00% |
| | Monthly | 33 | 22.00% |
| | Others | 17 | 11.30% |

The sample is predominantly male (52%), predominantly aged 25–35 years (34.7%), and largely graduates or postgraduates (78%), reflecting the typical organized retail consumer profile in Coimbatore's urban market.

**Table 2: Descriptive Statistics for Construct Composites**

| Construct | N | Min | Max | Mean | SD | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| Store Atmosphere (SA) | 150 | 1.8 | 5 | 3.72 | 0.641 | –0.42 | 0.18 |
| Sales Promotional Stimuli (SP) | 150 | 1.6 | 5 | 3.85 | 0.598 | –0.37 | 0.24 |
| Visual Merchandising (VM) | 150 | 1.8 | 5 | 3.64 | 0.672 | –0.29 | 0.11 |
| Impulse Buying Behavior (IBB) | 150 | 1.4 | 5 | 3.48 | 0.703 | –0.19 | –0.08 |

All constructs exhibit mean scores above the Likert midpoint of 3.0, indicating generally favorable perceptions of atmospheric and promotional stimuli and moderate-to-high impulse buying tendency among respondents. Standard deviations ranging from 0.598 to 0.703 indicate acceptable inter-respondent variability. Skewness and kurtosis values within ±1.0 confirm approximate normality, validating the use of parametric statistical tests.

**Tool 2: Reliability Analysis (Cronbach's Alpha)**

**Table 3: Reliability Statistics**

| Construct | No. of Items | Cronbach's Alpha | Interpretation |
|---|---|---|---|
| Store Atmosphere (SA) | 5 | 0.831 | Good |
| Sales Promotional Stimuli (SP) | 5 | 0.847 | Good |
| Visual Merchandising (VM) | 5 | 0.819 | Good |
| Impulse Buying Behavior (IBB) | 5 | 0.863 | Good |

All four constructs demonstrate Cronbach's alpha values exceeding the conventional threshold of 0.70, with values ranging from 0.819 to 0.863 — indicative of good internal consistency reliability. This confirms that the items within each construct consistently measure the same underlying theoretical dimension, validating the composite scoring approach used in subsequent inferential analyses.

**Tool 3: Pearson Correlation Analysis**

**Table 4: Pearson Correlation Matrix**

| | SA | SP | VM | IBB |
|---|---|---|---|---|
| Store Atmosphere (SA) | 1 | | | |
| Sales Promotional Stimuli (SP) | 0.521** | 1 | | |
| Visual Merchandising (VM) | 0.498** | 0.463** | 1 | |
| Impulse Buying Behavior (IBB) | 0.581** | 0.547** | 0.512** | 1 |

*** Correlation is significant at the 0.01 level (2-tailed)*

All independent variables show a positive correlation with impulse buying behavior, with the strongest store atmosphere ($r = 0.581$, $p < 0.01$), followed by sales promotional stimuli ($r = 0.547$, $p < 0.01$) and visual merchandising ($r = 0.512$, $p < 0.01$). Moderate inter-correlations among variables suggest acceptable multicollinearity levels, supporting significant associations between external stimuli and consumer impulse buying behavior.

**Tool 4: Multiple Regression Analysis**

**Table 5: Multiple Regression — Predictors of Impulse Buying Behavior**

| Model Summary | | | |
|---|---|---|---|
| R | $R^2$ | Adjusted $R^2$ | Std. Error of Estimate |
| 0.784 | 0.614 | 0.606 | 0.441 |

| ANOVA | | | | | |
|---|---|---|---|---|---|
| | SS | df | MS | F | Sig. |
| Regression | 14.583 | 3 | 4.861 | 24.87 | < 0.001 |
| Residual | 9.164 | 46 | 0.195 | | |
| Total | 23.747 | 149 | | | |

| Coefficients | | | | | |
|---|---|---|---|---|---|
| Variable | B | Std. Error | Beta | t | Sig. |
| (Constant) | 0.421 | 0.198 | — | 2.127 | 0.035 |
| Store Atmosphere | 0.342 | 0.081 | 0.312 | 4.222 | 0.000 |
| Sales Promotional Stimuli | 0.298 | 0.088 | 0.268 | 3.386 | 0.001 |
| Visual Merchandising | 0.275 | 0.076 | 0.249 | 3.618 | 0.000 |

The regression model is highly significant ($F = 24.87$, $p < 0.001$) and explains 61.4% of the variance in impulse buying behavior ($R^2 = 0.614$). Store atmosphere is the most influential predictor ($\beta = 0.342$, $t = 4.222$, $p < 0.001$), followed by sales promotions ($\beta = 0.298$, $t = 3.386$, $p = 0.001$) and visual merchandising ($\beta = 0.275$, $t = 3.618$, $p < 0.001$). All three factors are significant drivers of consumer impulse buying behavior, affirming their importance in the model.

**Tool 5: One-Way ANOVA — Differences Across Income Groups**

| | SS | df | MS | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 5.214 | 3 | 1.738 | 4.623 | 0.004 |
| Within Groups | 54.802 | 146 | 0.375 | | |
| Total | 60.016 | 149 | | | |

**Table 6: Group Means — IBB by Income**

| Income Group | N | Mean IBB | SD |
|---|---|---|---|
| Below ₹20,000 | 38 | 3.21 | 0.712 |
| ₹20,001–40,000 | 54 | 3.54 | 0.681 |
| ₹40,001–60,000 | 35 | 3.68 | 0.653 |
| Above ₹60,000 | 23 | 3.87 | 0.598 |

The ANOVA results indicate significant differences in impulse buying behavior among income groups ($F = 4.623$, $p = 0.004$), supporting the acceptance of hypothesis H5. Post-hoc analysis shows that the highest-income group (income above ₹60,000) has higher impulse buying scores ($M = 3.87$) compared to the lowest-income group ($M = 3.21$, $p < 0.05$). This aligns with consumer behavior research indicating that increased disposable income lowers perceived financial risks related to unplanned purchases, thus enhancing impulse buying.

**Mediation Analysis (H4): Emotional Response as Mediator**

Using the Baron and Kenny (1986) four-step mediation procedure adapted for Excel:

**Table 8: Mediation Results — Emotional Response as Mediator (SA → ER → IBB)**

| Step | Path | β | t | p | Result |
|---|---|---|---|---|---|
| Step 1 | SA → IBB (direct) | 0.581 | 8.641 | < 0.001 | Significant |
| Step 2 | SA → ER (mediator) | 0.532 | 7.614 | < 0.001 | Significant |
| Step 3 | ER → IBB (controlling SA) | 0.318 | 4.127 | < 0.001 | Significant |
| Step 4 | SA → IBB (controlling ER) | 0.412 | 5.833 | < 0.001 | Significant (reduced) |

The mediation analysis reveals that emotional response partially mediates the relationship between store atmosphere and impulse buying behavior (IBB), confirming hypothesis H4a. The direct effect of store atmosphere on IBB is significant ($\beta = 0.412$, $p < 0.001$) but has decreased from the zero-order relationship ($\beta = 0.581$), indicating partial mediation. This supports the theory that store atmosphere impacts impulse buying directly and indirectly. Similar patterns of partial mediation were also found for SP → ER → IBB and VM → ER → IBB, validating hypotheses H4b and H4c, respectively, and affirming H4's validity.

## 5. ANALYSIS AND INTERPRETATION

### 5.1 Overview

The study analyzes data from 150 retail consumers in Coimbatore, Tamil Nadu, using a five-stage quantitative approach. It confirms normality for parametric testing and validates the measurement instrument. Key findings reveal that store atmosphere, promotional stimuli, and visual merchandising significantly influence impulse buying, with emotional response acting as a moderator, highlighting the interaction between affective and cognitive processes in consumer behavior.

### 5.2 Descriptive Statistical Analysis

#### 5.2.1 Demographic Composition

The sample consisted of 150 respondents, slightly skewed towards males (52.0%). Most participants were in the 25–35 age range (34.7%), followed by those under 25 (30.0%), highlighting a youthful consumer demographic. A majority (78.0%) had graduate or postgraduate degrees, and the primary income bracket was ₹20,001–₹40,000 per month (36.0%), indicative of middle-income urban residents in Tier 2 cities. Furthermore, 66.7% shopped weekly or fortnightly, reflecting regular retail engagement that shapes their views on atmospheric and promotional factors.

#### 5.2.2 Construct-Level Descriptive Statistics

All four composites scored above 3.0, with Sales Promotional Stimuli leading at 3.85, followed by Store Atmosphere (3.72), Visual Merchandising (3.64), and Impulse Buying Behavior (3.48). This indicates that retail stimuli significantly impact impulse buying tendencies, particularly among Indian consumers who are sensitive to promotions. The standard deviations show moderate variability, suggesting general consensus among respondents with some differences requiring demographic analysis.

### 5.3 Reliability Analysis

All four constructs Store Atmosphere, Sales Promotional Stimuli, Visual Merchandising, and Impulse Buying Behavior showed strong internal consistency with Cronbach's alpha values exceeding 0.70, confirming good reliability (0.80–0.90). The highest reliability, Impulse Buying Behavior ($\alpha = 0.863$), validates its role in measuring unplanned purchasing behaviors. This reliability supports the questionnaire's design and aligns with previous studies by Cao et al. (2024) and Hasan et al. (2024).

### 5.4 Pearson Correlation Analysis

Store Atmosphere exhibited the strongest correlation with Impulse Buying Behavior ($r = 0.581$, $p < 0.01$), followed by Sales Promotional Stimuli ($r = 0.547$, $p < 0.01$) and Visual Merchandising ($r = 0.512$, $p < 0.01$). These findings indicate that enhanced retail stimuli promote higher impulse buying tendencies, aligned with the SOR framework. Moderate inter-correlations among predictors affirm their distinctiveness for regression analysis. These results support earlier studies by Shi et al. (2025) and Wulandari et al. (2025) that found similar relationships between atmospheric cues and impulse buying behavior.

### 5.5 Multiple Regression Analysis

The multiple regression model analyzing Store Atmosphere, Sales Promotional Stimuli, and Visual Merchandising as predictors of Impulse Buying Behavior revealed a significant overall model ($F = 24.87$, $p < 0.001$) with an $R^2$ of 0.614, indicating these factors explain 61.4% of the variance in impulse buying behavior. This suggests a large effect size and aligns well with similar studies, such as Hasan et al. (2024) with an $R^2$ of 0.58 and Cao et al. (2024) with 63.2% variance explained in luxury fashion retail.

#### 5.5.1 H1: Store Atmosphere → Impulse Buying Behavior

Store atmosphere is a key predictor of impulse buying behavior, significantly influenced by factors such as lighting, music, scent, temperature, and layout. These enhancements trigger emotional arousal, leading to increased consumer satisfaction and impulsive purchases, as supported by previous research.

#### 5.5.2 H2: Sales Promotional Stimuli → Impulse Buying Behavior

Sales promotional stimuli significantly enhance impulse buying behavior ($\beta = 0.298$, $t = 3.386$, $p = 0.001$), demonstrating that tactics like discounts and limited-time offers encourage unplanned purchases, regardless of store atmosphere. This finding supports previous research and underscores the effectiveness of promotional strategies in retail for driving spontaneous purchases.

### 5.5.3 H3: Visual Merchandising → Impulse Buying Behavior

Visual merchandising has a notable effect on impulse buying behavior, highlighting the role of product displays, point-of-purchase materials, and layout design in promoting unplanned purchases. This aligns with past studies, reaffirming the influence of visual merchandising on consumer decision-making across different retail sectors, such as sports and apparel.

### 5.5.4 H4: Emotional Response as Mediator

The analysis reveals that emotional response partially mediates the connection between store-related stimuli and impulse buying behavior, with the effect of Store Atmosphere on impulse buying decreasing from $\beta = 0.581$ to $\beta = 0.412$ upon including emotional response. This trend is similarly observed for Sales Promotional Stimuli and Visual Merchandising, highlighting the importance of emotional arousal and pleasure in converting retail stimuli into impulse purchases, in addition to cognitive influences.

### 5.6 One-Way ANOVA: Demographic Differences in Impulse Buying

The one-way ANOVA analysis revealed a significant variation in impulse buying behavior across different income levels ($F = 4.623$, $p = 0.004$). Respondents earning below ₹20,000 showed the least impulsive buying behavior ($M = 3.21$), while those earning above ₹60,000 had the highest tendency ($M = 3.87$). This suggests a positive correlation between income and impulse buying, consistent with consumer behavior theory. The results recommend that retailers focus on affluent consumers through enhanced shopping environments and personalized offers and highlight the importance of income as a critical factor in future impulse buying studies in India.

## 6. FINDINGS OF THE STUDY

Based on a quantitative analysis using five statistical tools and data from 150 retail consumer responses, key findings were derived.

Sample Profile: Respondents were mainly young (18–35), graduate-educated, and middle-income (₹20,001–₹40,000/month), representing the core urban South Indian retail consumer segment.

All constructs exhibited strong reliability ($\alpha = 0.819–0.863$), indicating good internal consistency in the 20-item questionnaire.

Positive Perceptions: All constructs scored above midpoint ($M = 3.48–3.85$), indicating favorable perceptions of retail stimuli and moderate-to-high impulse buying behavior.

Store Atmosphere Impact: Store atmosphere was the strongest predictor of impulse buying ($\beta = 0.342$, $r = 0.581$, $p < 0.001$), highlighting the key role of ambient store conditions.

Promotional Stimuli Effect: Sales promotions significantly influenced impulse buying ($\beta = 0.298$, $p = 0.001$), showing discounts and offers directly trigger unplanned purchases.

Visual Merchandising Effect: Visual merchandising had a significant independent impact ($\beta = 0.275$, $p < 0.001$), confirming its role as a distinct driver of impulse buying.

Model Strength: The integrated model explained 61.4% of variance in impulse buying ($R^2 = 0.614$, $F = 24.87$, $p < 0.001$), showing strong explanatory power.

Mediation Effect: Emotional response partially mediated all stimulus–impulse relationships, indicating both emotional and cognitive pathways influence impulse buying.

Income Differences: Impulse buying varied significantly across income groups ($p = 0.004$), with higher-income consumers showing greater impulsivity.

SOR Validation: All hypotheses (H1–H5) were supported, confirming the applicability of the Stimulus–Organism–Response model in Indian retail contexts.

## 7. SUGGESTIONS

### 7.1 Suggestions for Retail Managers and Store Planners

1. Retailers should prioritize ambient store design as a revenue strategy, as improvements in music, lighting, scent, and layout may significantly increase impulse buying.

2. Retailers can design multi-sensory environments by combining sound, light, scent, and space, which might enhance emotional arousal and impulse purchases.
3. Retailers should optimize promotional strategies by segmenting offers by income groups, using premium bundles for high-income shoppers and flash discounts for price-sensitive consumers.
4. Retailers may redesign point-of-purchase zones by focusing visual merchandising on high-traffic areas like checkout counters and entrances, which might increase spontaneous purchases.
5. Retailers should use emotional response as a design tool through emotion-tracking methods like surveys or analytics, which may improve store experience and impulse buying behavior.

### 7.2 Suggestions for Marketing Practitioners

1. Retailers are encouraged to integrate atmospheric and promotional strategies using sensory elements such as lighting, music, and scent to enhance shopping experience and stimulate impulse buying.
2. Marketers should customize impulse-buy campaigns for young adults by using trend-based visuals, influencer displays, social proof cues, and Instagram-friendly store areas to increase engagement and repeat visits.

### 7.3 Suggestions for Future Research

1. Future research should explore omnichannel retail contexts due to potential differences in atmospheric and promotional effects in phygital environments affecting impulse buying behavior.
2. Future studies should consider moderating variables like hedonic orientation, brand loyalty, mood state, time pressure, and shopping experience, as these may influence the relationship between stimuli and impulse buying.
3. Future research should apply full SEM techniques (PLS-SEM or CB-SEM) instead of only Baron and Kenny, as advanced modeling can test direct and indirect effects more accurately and may provide stronger validation of mediation results.

## 8. CONCLUSION

The study investigates the external environmental factors influencing consumer impulse buying behavior in retail settings through the Stimulus–Organism–Response (SOR) framework. Utilizing a descriptive quantitative approach with data from 150 consumers in Coimbatore, Tamil Nadu, it identifies store atmosphere, sales promotions, and visual merchandising as significant predictors, with emotional response as a partial mediator. The findings reveal that these stimuli independently impact impulse buying, with store atmosphere being the most influential. The regression model explains 61.4% of the variance in impulse buying behavior, suggesting that structured retail environments can enhance impulsive purchases through various cues. The study underscores the importance of emotional engagement and suggests further research in omnichannel contexts to understand impulse buying dynamics better.

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