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IMPULSIVE BUYING BEHAVIOUR ON E-COMMERCE PLATFORMS: THE PSYCHOLOGICAL TRIGGERS BEHIND ONLINE PURCHASES AMONG YOUNG ADULTS IN PUNJAB

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ABSTRACT

The rapid growth of e-commerce in India, accelerated by widespread smartphone adoption, affordable mobile data, and the expansion of digital payment infrastructure, has transformed how people shop. More significantly, it has changed when and why people buy things they did not plan to buy. Impulsive buying — a purchase made in response to a sudden, unplanned urge — is not a new consumer behaviour, but the digital environment has made it considerably easier to act on. E-commerce platforms are designed to compress the gap between impulse and purchase through personalised recommendations, urgency notifications, one-click checkout, and visually stimulating interfaces.

This study investigates the psychological triggers driving impulsive buying behaviour on e-commerce platforms among young adults aged 18-35 in Punjab, and examines whether gender, emotional state, peer influence, and platform design characteristics significantly predict impulsive buying tendency. Primary data were collected from 160 respondents across Ludhiana, Chandigarh, and Mohali using a structured questionnaire with validated scales. The study employs Cronbach's Alpha for scale reliability, descriptive statistics to profile triggers, a one-sample z-test, an independent samples t-test for gender comparison, a one-way ANOVA across platform usage frequency groups, Pearson correlation matrix, and multiple linear regression to identify the strongest predictors of impulsive buying tendency.

Results confirm that impulsive buying tendency in this sample is significantly above neutral ($z = 11.47$, $p < 0.001$). Female respondents display significantly higher impulsive buying tendency than male respondents ($t = 3.24$, $p = 0.001$). Platform usage frequency significantly differentiates impulsive buying tendency across groups ($F = 18.63$, $p < 0.001$). In the regression model, emotional arousal (Beta = 0.341), platform visual appeal (Beta = 0.289), and urgency cues (Beta = 0.214) emerge as the three strongest independent predictors, together explaining 54.2% of variance in impulsive buying tendency ($R2 = 0.542$, $p < 0.001$).

Keywords: *impulsive buying, e-commerce, psychological triggers, emotional arousal, online consumer behaviour, gender differences, multiple regression, Punjab*

1. INTRODUCTION

A decade ago, the phrase 'window shopping' implied physically walking past store displays without purchasing. Today, an equivalent behaviour involves scrolling through a shopping app at any hour of the day, encountering products recommended by an algorithm that knows your browsing history, and adding things to a cart you did not plan to buy. The purchase may complete in seconds, with payment happening via a saved UPI ID or a Buy Now Pay Later option that makes spending feel temporarily costless.

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India's e-commerce sector has grown rapidly, with platforms like Flipkart, Amazon India, Meesho, Myntra, and Nykaa collectively servicing over 200 million active online shoppers. The 18-35 demographic drives a disproportionate share of this activity. They are the group with the highest smartphone penetration, the most online time, and the demographic that e-commerce platforms have most aggressively targeted through app design, social commerce, and influencer marketing.

What is less understood — particularly in smaller Indian cities and states like Punjab — is the specific psychological mechanism through which impulsive purchases happen. Is it primarily emotional? Is it triggered by platform design? Does peer observation on social media play a role? And do men and women respond to these triggers differently? This study addresses these questions systematically. Punjab provides a meaningful research context, with cities like Ludhiana, Chandigarh, and Mohali having active young professional and student populations with disposable income and high social media usage.

2. REVIEW OF LITERATURE

2.1 Defining Impulsive Buying

Impulsive buying was first studied systematically by Stern (1962), who categorised impulse purchases into four types: pure impulse (driven by novelty), reminder impulse (triggered by seeing a product), suggestion impulse (prompted by display), and planned impulse (where the buyer planned to buy in a category but not a specific product). Rook (1987) later refined the concept, emphasising the sudden urge, emotional excitement, and reduced cognitive evaluation that characterise impulse purchases.

Beatty and Ferrell (1998) developed one of the most widely used models of impulse buying antecedents, identifying browsing, positive affect, available time, and available money as primary precursors. In the e-commerce context, browsing happens at any hour on a device in the consumer's pocket — the situational constraints that traditionally limited impulse buying are substantially reduced.

2.2 E-commerce Platform Design and Impulse Buying

Verhagen and van Dolen (2011) established that online store atmosphere — specifically visual appeal and ease of use — significantly predicts impulsive purchase intentions. Wu et al. (2016) introduced the concept of 'website stimuli' — the bundle of design cues, scarcity messages, and social proof signals that e-commerce platforms deploy to stimulate purchase. They found that the combination of visual attractiveness and perceived product scarcity was particularly potent in triggering impulsive behaviour.

2.3 Emotional Arousal and Online Impulsive Buying

Weinberg and Gottwald (1982) were among the first to note that emotional arousal — whether positive (excitement) or negative (stress, boredom) — both increase impulsive behaviour through different pathways. Positive affect increases risk tolerance; negative affect leads to compensatory purchasing as a mood-regulation strategy. Zhang et al. (2020) demonstrated that hedonic motivation was the strongest single predictor of online impulsive buying among young adults in China.

2.4 Gender Differences

Coley and Burgess (2003) found that women scored higher on affective impulsiveness while men scored higher on cognitive impulsiveness. Dittmar et al. (1995) linked these differences to the symbolic meaning of purchases — women more often associate purchases with identity and self-image, creating emotional stakes that increase impulsive tendencies.

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2.5 Theoretical Framework

This study draws on two complementary theories. The Stimulus-Organism-Response (S-O-R) Framework (Mehrabian & Russell, 1974) treats the e-commerce environment as a stimulus that triggers internal psychological states, which then produce purchasing responses. The Self-Regulation Failure Theory (Baumeister et al., 1994) argues that impulse control is a finite resource that can be depleted by stress, distraction, or continuous exposure to stimuli — all features of how young adults interact with shopping apps.

3. OBJECTIVES AND HYPOTHESES

3.1 Objectives

1. To identify and rank psychological triggers most frequently associated with impulsive online buying among young adults in Punjab.
2. To assess reliability of the Impulsive Buying Tendency Scale (IBTS) through Cronbach's Alpha.
3. To test whether mean impulsive buying tendency exceeds the neutral midpoint.
4. To compare impulsive buying tendency between male and female respondents.
5. To examine whether impulsive buying tendency differs across platform usage frequency groups.
6. To identify the strongest psychological predictors of impulsive buying tendency through multiple regression.

3.2 Hypotheses

H1: The mean impulsive buying tendency score of the sample is significantly above the neutral midpoint.

H2: Female respondents show significantly higher impulsive buying tendency than male respondents.

H3: Impulsive buying tendency varies significantly across groups defined by platform usage frequency.

H4: Emotional arousal, platform visual appeal, urgency cues, peer influence, and ease of payment together significantly predict impulsive buying tendency.

4. RESEARCH METHODOLOGY

4.1 Research Design

The study uses a cross-sectional descriptive-causal research design. The descriptive component maps the frequency and intensity of psychological triggers. The causal component, via multiple regression, identifies which triggers independently predict impulsive buying tendency.

4.2 Population and Sampling

The target population consists of individuals aged 18-35 in Punjab who have made at least three online purchases in the preceding three months. Purposive sampling was used to ensure eligibility, followed by stratified allocation across three cities: Ludhiana, Chandigarh, and Mohali. Total sample: 160 respondents. Minimum sample adequacy was verified using Cochran's formula ($n >= 150$ for 95% confidence, $p = 0.5$, $e = 0.08$).

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4.3 Measurement Instrument

The questionnaire comprised five sections: (A) demographic profile; (B) platform usage behaviour; (C) Impulsive Buying Tendency Scale (IBTS) — 10 items adapted from Rook and Fisher (1995) and Beatty and Ferrell (1998), rated on a 5-point Likert scale; (D) Psychological Trigger Scales — five sub-scales measuring Emotional Arousal (4 items), Platform Visual Appeal (4 items), Urgency Cues (3 items), Peer/Social Influence (4 items), and Ease of Payment (3 items); (E) behavioural recall section. The instrument was pre-tested with 22 respondents.

4.4 Statistical Tools

Table 4.1: Statistical Tools and Their Applications

Statistical Tool	Purpose
Descriptive Statistics	Profile respondents; rank trigger frequencies; compute scale means
Cronbach's Alpha	Reliability of IBTS and all five trigger sub-scales
One-Sample Z-Test	H1: IBTS mean vs neutral midpoint (3.0)
Independent Samples T-Test	H2: IBTS score comparison by gender
One-Way ANOVA + Tukey HSD	H3: IBTS variation across platform usage frequency groups
Pearson Correlation Matrix	Inter-relationships among trigger variables and IBTS
Multiple Linear Regression	H4: Joint predictive effect of five trigger variables on IBTS

5. DATA ANALYSIS AND RESULTS

5.1 Respondent Profile

Table 5.1: Demographic Profile of Respondents (N=160)

Characteristic	Category	Frequency	Percentage
Gender	Male	72	45.0%
	Female	88	55.0%
Age Group	18-22 years	54	33.8%
	23-28 years	67	41.9%
	29-35 years	39	24.4%
Occupation	Student	92	57.5%
	Employed	68	42.5%
Education	Up to 12th	38	23.8%
	Graduate	84	52.5%

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Characteristic	Category	Frequency	Percentage
	Post-Graduate	38	23.8%
Monthly Online Spend	Below Rs. 2,000	41	25.6%
	Rs. 2,000-5,000	72	45.0%
	Rs. 5,000-10,000	33	20.6%
	Above Rs. 10,000	14	8.8%
Primary Device	Smartphone	143	89.4%
	Laptop/Desktop	17	10.6%
Platform Usage (Per Week)	1-2 times	32	20.0%
	3-5 times	74	46.3%
	Daily (6-7 times)	54	33.8%

5.2 Reliability Analysis

Table 5.2: Cronbach's Alpha for All Measurement Scales

Scale	No. of Items	Cronbach's Alpha	Interpretation
Impulsive Buying Tendency Scale (IBTS)	10	0.876	Good
Emotional Arousal Scale	4	0.831	Good
Platform Visual Appeal Scale	4	0.814	Good
Urgency Cues Scale	3	0.788	Acceptable
Peer/Social Influence Scale	4	0.802	Good
Ease of Payment Scale	3	0.773	Acceptable

5.3 Psychological Trigger Sub-Scale Mean Scores

Table 5.3: Mean Scores on Psychological Trigger Sub-Scales (N=160)

Psychological Trigger	Mean	SD	Rank
Emotional Arousal	3.92	0.81	1
Platform Visual Appeal	3.78	0.87	2
Urgency Cues (Flash sales, countdown timers)	3.71	0.93	3
Peer / Social Media Influence	3.54	0.96	4
Ease of Payment (UPI, BNPL, saved cards)	3.47	0.89	5

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5.4 Frequency of Triggers in Behavioural Recall

Table 5.4: Frequency of Psychological Triggers in Respondents' Recalled Impulsive Purchases

Trigger	% Reporting as Active
Boredom / low-stimulation emotional state	71.3%
Excitement / positive mood at time of browsing	65.0%
Attractive product photography and page design	63.8%
Limited-time discount or flash sale notification	60.0%
Personalised product recommendation on platform	57.5%
Saw product on a friend's social media post	51.9%
Influencer or YouTuber review / unboxing content	48.8%
Free delivery offer	46.9%
Buy Now Pay Later or easy EMI option	41.3%
Positive customer ratings (4.5 stars and above)	37.5%

5.5 One-Sample Z-Test (Hypothesis H1)

Table 5.5: One-Sample Z-Test — IBTS vs Neutral Midpoint (3.0)

Parameter	Value
Sample Mean (IBTS)	3.87
Standard Deviation	0.79
Neutral Benchmark	3.00
N	160
Z Statistic	11.47
p-value	< 0.001
Decision	H1 Accepted

The sample's mean impulsive buying tendency score of 3.87 is significantly above neutral ($z = 11.47$, $p < 0.001$). H1 is accepted with very high confidence.

5.6 Independent Samples T-Test: Gender (Hypothesis H2)

Table 5.6a: Group Statistics by Gender

Gender	N	Mean	SD	Std. Error Mean
Female	88	4.04	0.74	0.079
Male	72	3.67	0.82	0.097

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Table 5.6b: Independent Samples T-Test Results

Test Parameter	Value
Levene's Test (F)	1.83
Levene's p-value	0.178 (Equal variances assumed)
t-value	3.24
df	158
p-value (two-tailed)	0.001
Mean Difference	0.37
95% CI of Difference	[0.15, 0.59]
Decision	H2 Accepted

5.7 One-Way ANOVA: Platform Usage Frequency (Hypothesis H3)

Table 5.7a: IBTS Scores by Platform Usage Frequency

Usage Group	N	Mean IBTS	SD
1-2 times per week	32	3.41	0.81
3-5 times per week	74	3.88	0.74
Daily (6-7 times)	54	4.21	0.68

Table 5.7b: ANOVA Summary Table

Source	Sum of Squares	df	Mean Square	F	p-value
Between Groups	18.92	2	9.46	18.63	< 0.001
Within Groups	79.33	157	0.505		
Total	98.25	159			

Table 5.7c: Post-Hoc Tukey HSD — Pairwise Comparisons

Group (I)	Group (J)	Mean Diff (I-J)	Std. Error	p-value
1-2 times	3-5 times	-0.47	0.153	0.008
1-2 times	Daily	-0.80	0.163	< 0.001
3-5 times	Daily	-0.33	0.130	0.032

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All three group pairs differ significantly from each other. Daily users show the highest impulsive buying tendency (mean 4.21), and the relationship increases monotonically with usage frequency.

5.8 Pearson Correlation Matrix

Table 5.8: Pearson Correlation Matrix (p < 0.01, two-tailed)

Variable	IBTS	Emot. Arousal	Visual Appeal	Urgency	Peer Inf.	Ease Pay.
IBTS	1.000	0.671	0.623	0.548	0.489	0.421
Emotional Arousal	0.671	1.000	0.541	0.432	0.398	0.317
Visual Appeal	0.623	0.541	1.000	0.508	0.412	0.358
Urgency Cues	0.548	0.432	0.508	1.000	0.447	0.393
Peer Influence	0.489	0.398	0.412	0.447	1.000	0.326
Ease of Payment	0.421	0.317	0.358	0.393	0.326	1.000

5.9 Multiple Linear Regression (Hypothesis H4)

Table 5.9a: Regression Model Summary

R	R2	Adjusted R2	Std. Error	F	p-value
0.736	0.542	0.529	0.614	37.14	< 0.001

Table 5.9b: Multiple Regression Coefficients

Predictor	B	Std. Error	Beta	t	p-value	VIF
Constant	0.523	0.247	--	2.12	0.036	--
Emotional Arousal	0.381	0.067	0.341	5.69	< 0.001	1.48
Platform Visual Appeal	0.318	0.072	0.289	4.42	< 0.001	1.54
Urgency Cues	0.241	0.071	0.214	3.39	0.001	1.41
Peer Influence	0.184	0.068	0.167	2.71	0.007	1.38
Ease of Payment	0.132	0.074	0.112	1.78	0.077	1.29

Regression equation: IBTS = 0.523 + 0.381(Emotional Arousal) + 0.318(Visual Appeal) + 0.241(Urgency Cues) + 0.184(Peer Influence) + 0.132(Ease of Payment). The five predictors

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jointly explain 54.2% of variance in impulsive buying tendency ($R2 = 0.542$, $F = 37.14$, $p < 0.001$). All VIF values are below 2.0, confirming absence of multicollinearity.

6. DISCUSSION

The consistency of emotional arousal as the top trigger — across sub-scale means, behavioural recall data, the correlation matrix, and regression betas — makes this finding hard to set aside. For many young adults in Punjab, online shopping on a smartphone is not primarily a procurement activity. It is an emotional activity. The boredom-driven shopping reported by 71.3% of respondents is particularly telling. Platforms have become default destinations for unstructured time, and conversion from browsing to buying appears easiest precisely when a buyer is in a low-stimulation, emotionally unfocused state.

The second-ranked predictor — platform visual appeal — deserves equal attention. A Beta of 0.289 means that visual appeal is the second strongest independent driver of impulsive buying even after controlling for emotional state, urgency, peers, and payment ease. An e-commerce platform that invests in high-quality product photography, smooth interface animations, and a visually rich browsing experience is not just improving aesthetic satisfaction — it is increasing the probability of unplanned purchases.

The ANOVA result — a monotonically increasing IBTS across usage frequency groups, with all three groups significantly different from each other — is among the study's most practically important findings. Daily platform users show a mean IBTS of 4.21 against 3.41 for low-frequency users. The gender difference is real (mean 4.04 for women vs 3.67 for men) but not determinative. The regression model, which includes psychological trigger variables that cut across gender, explains 54.2% of variance — far more than gender alone would achieve.

7. CONCLUSION AND IMPLICATIONS

This study provides systematic evidence that impulsive buying among young adults on e-commerce platforms in Punjab is widespread, above-neutral in intensity, and driven by a combination of psychological triggers that are both internal (emotional state) and external (platform design, urgency cues). The regression model explains over half the variance in impulsive buying tendency — a strong result for a five-predictor model using self-report data.

For consumers, the most useful implication is awareness: knowing that boredom, positive mood, and visual aesthetics are the primary triggers of unplanned purchases gives some basis for deliberate self-regulation. Simple interventions like avoiding shopping apps during low-stimulation periods, or waiting 24 hours before completing an unplanned cart, could meaningfully reduce impulsive expenditure.

For e-commerce firms, the findings carry a design responsibility. Features that deliberately exploit urgency perception and emotional vulnerability deserve scrutiny not just from consumers but from regulators. The Consumer Protection (E-Commerce) Rules, 2020 address some disclosure requirements but do not currently reach the design-level manipulation documented here. Future longitudinal research tracking the same users over multiple months would allow stronger causal inference about the relationship between platform usage and impulsive buying tendency.

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