



## **EXPLORING THE IMPACT OF DIGITAL MARKETING STRATEGIES ON IMPULSE BUYING BEHAVIOUR IN E-COMMERCE: INSIGHTS FROM CONSUMER PSYCHOLOGY**

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### **Abstract**

*This study examines the influence of digital marketing strategies on impulse buying within the e-commerce environment, from the perspective of consumer psychology. The proliferation of online retail has led to the widespread use of sophisticated marketing tactics that leverage psychological principles to prompt unplanned purchases. This research identifies and analyses specific strategies—such as personalized recommendations, scarcity messaging, social proof, and limited-time offers—and their effectiveness in triggering impulse buying. Synthesizing existing literature with a proposed empirical framework, the study posits that these digital tactics actively exploit psychological triggers, including a sense of urgency, social validation, and specific cognitive biases. The findings are expected to offer actionable insights for e-commerce marketers to refine their strategies and for consumers to better understand their purchasing motivations. Ultimately, this research contributes to a deeper academic understanding of the psychological mechanisms that drive contemporary consumer behaviour in a digital marketplace.*

**Keywords** - Digital Marketing, Consumer Psychology, Impulse Buying Behaviour, Psychological Marketing Tactics, Mobile Commerce, Emotional Triggers, Personalized Marketing and E-commerce.

### **Introduction**

The rapid rise of e-commerce has reshaped consumer behaviour, making online shopping not only convenient but also psychologically engaging. Digital marketing tools such as personalised recommendations, flash sales, scarcity cues, and social media promotions are designed to capture attention, create urgency, and influence real-time decisions, often resulting in impulsive purchases. What was once considered a spontaneous, emotion-driven act now

occurs within a digitally engineered environment where algorithms and persuasive design interact with consumer psychology.

Although impulse buying has been studied in offline retail, its dynamics in digital commerce remain underexplored. Existing research often isolates marketing effectiveness from psychological factors, leaving limited understanding of how specific tactics align with drivers such as hedonic motives, self-control, or personality traits. This study addresses that gap by examining the influence of digital marketing strategies on impulse buying through a consumer psychology lens. Using a structured survey, it seeks to identify the tactics most associated with impulsive purchases and uncover the underlying psychological mechanisms, offering both theoretical and practical insights.

### **Literature Review**

Research on impulse buying in e-commerce has evolved significantly over the past decade, moving from early work on personalization to more recent studies integrating consumer psychology, marketing strategies, and personality traits.

Grbovic et al. (2016) provided one of the earliest large-scale investigations into personalized recommendation systems, showing that tailored email suggestions significantly improved click-through and conversion rates. This demonstrates how personalization enhances consumer engagement and primes them for unplanned purchases by appealing to self-relevance.

A surge of studies followed in 2020. Abdelsalam (2020) reviewed social commerce and found that peer influence, instant gratification, and interactive features foster online impulsivity. Naeem (2020), studying consumer psychology during the COVID-19 pandemic, highlighted that emotional stress and uncertainty heightened impulsive buying as consumers sought relief from negative emotions. This aligns with the hedonic consumption theory, which suggests that consumers often make purchases for emotional gratification rather than utility.

In 2021, Wang et al. reinforced the personalization perspective, demonstrating that embedding-based recommendation models improved recall and interaction, confirming that consumers respond more strongly to content that affirms their self-identity. This reflects the psychological principle of self-congruence, wherein purchases are influenced by alignment with one's self-image.

Scarcity and urgency were the central themes in 2022. A *Frontiers in Psychology* study (2022a) found that scarcity cues trigger fear of missing out (FOMO), leading to impulsive purchases. A related study on livestreaming commerce (2022b) showed that scarcity, when paired with credible anchors, strengthened consumer involvement, reinforcing impulsive responses.

Similarly, a study published in *Computational Intelligence and Neuroscience* (2022) confirmed that time-limited promotions evoke arousal and pleasure, mediating the effect of urgency on impulsivity. These findings align with hedonistic perspectives, as heightened emotional arousal often overrides rational thought.

Abaza (2023) examined digital marketing techniques and demonstrated that targeted ads, flash promotions, and influencer endorsements significantly promote impulsive purchases. Importantly, influencer-driven content often appeals to narcissistic tendencies as consumers seek aspirational lifestyles and social validation through purchases.

In 2024, several studies expanded the psychological scope of their research. Indiani (2024) showed that impulsive behavior in Indonesian e-commerce is shaped by cultural factors and marketing triggers.

Gong (2024) revealed that creative and visually stimulating content reduces rational decision-making and fosters excitement, echoing the hedonic motivations for spontaneous consumption. Huang (2024) extended this by applying the Big Five personality framework, finding that extraversion and neuroticism predict impulsivity, while time pressure and emotions act as amplifiers. This suggests that consumers high in neuroticism may impulsively purchase as a coping strategy, while extraverts may do so for stimulation and enjoyment.

Kathuria (2024) further emphasizes the psychological basis of marketing strategies, showing that promotions influence purchases only when mediated by inherent impulsive buying tendencies.

Mian (2024) synthesized prior research, pointing to the need for future exploration of personality traits such as narcissism and materialism, which have been linked to stronger responses to social proof and digital promotions. Oberoi (2024) confirmed the persuasive power of flash sales and countdown timers, which heighten urgency and regret aversion, exploiting both hedonic desires and loss-avoidance psychology.

Recent studies have highlighted new digital contexts. Zhao et al. (2025) demonstrated that social proof in short-form video commerce increases impulsive buying by lowering risk perception and fostering herd behavior. This is connected to narcissistic traits, as consumers often purchase products in pursuit of social approval. Faraz (2025) introduced the concept of "Spendception," showing that digital payments minimize the psychological pain of spending, reduce cost salience, and encourage impulsivity. This aligns with cognitive bias theories, which state that frictionless payment mechanisms weaken consumers' self-control.

Overall, the literature demonstrates a progression: early studies emphasized personalization, later research identified scarcity and time pressure as triggers, and more recent studies have incorporated psychological traits such as hedonism, narcissism, extraversion, and neuroticism. Collectively, these insights highlight that impulsive buying in e-commerce is not random but the result of dynamic interactions between consumer psychology and sophisticated digital marketing strategies.

### **Research Gap**

Although impulse purchasing has been thoroughly investigated within conventional retail environments, its occurrence in online commerce remains comparatively less studied. Current research primarily emphasizes either the efficacy of digital marketing approaches or the psychological factors, including hedonic motivations, self-regulation, and individual personality characteristics. Nonetheless, there is a scarcity of research that combines these two viewpoints to elucidate how particular digital marketing strategies engage with consumer psychology to incite impulsive buying behavior. Additionally, the differences in these behaviors across various demographic groups have not been adequately explored, resulting in a deficiency in both theoretical insights and practical implications.

### **Problem Statement**

The increasing occurrence of impulse purchasing in e-commerce underscores a critical necessity to comprehend the interplay between digital marketing strategies and psychological factors affecting consumer behavior. Existing research frequently separates marketing from psychology, neglecting to offer a comprehensive perspective on the issue. In the absence of this integration, companies may depend on persuasive methods without a complete understanding of their psychological effects, which could result in consumer discontent and ethical dilemmas. Therefore, there exists an urgent challenge of inadequate understanding concerning how digital marketing techniques influence impulse buying via psychological processes across various consumer demographics.

### **Objectives of the research**

- To investigate the impact of digital marketing strategies—such as scarcity cues, time-limited offers, personalized recommendations, and social proof—on impulse buying behavior in e-commerce.
- To delve into the psychological factors driving online impulse purchases, including hedonic motives, self-control, and personality traits.

- To assess how demographic differences (age, gender, income, occupation) influence susceptibility to impulse buying in digital contexts.
- To synthesize knowledge from marketing and psychology to create a comprehensive framework that elucidates online impulse buying.
- To provide actionable insights for businesses in crafting ethical and effective digital marketing strategies.

## **Research Methodology**

### **Research Design**

This study will employ a methodological triangulation, combining quantitative analysis of e-commerce transaction data with qualitative insights from consumer surveys and interviews, to provide a comprehensive understanding of the factors influencing online impulse buying.

### **Sampling Technique**

A probability sampling technique, specifically simple random sampling, is used to ensure that every individual within the defined population (i.e., active social media users and digital users) has an equal chance of selection. This enhances the representativeness and generalizability of the findings. The target population includes individuals across diverse age groups, genders, and income levels who actively engage in impulse shopping.

### **Source of Data**

Primary Data: Collected through structured surveys using a comprehensive questionnaire comprising multiple-choice and closed-ended questions.

Secondary Data: Gathered from relevant academic journals, marketing reports, industry publications, and textbooks.

### **Sample Size**

A total of 100 respondents, including both male and female participants, were surveyed

### **Tools Used**

Spearman's rank correlation was used to test the association between social media ad influence and impulse buying tendency and Mann-Whitney U test was used to compare impulse buying distributions between high and low promotion sensitivity groups.

### **Sampling Unit**

The sampling unit for this research is individuals residing in the Mumbai Metro who engage in online and off line shopping.

**Hypothesis**

**Hypothesis 1**

**Null Hypothesis H<sub>0</sub>:** There is no relationship between the perceived influence of social media advertisements and the tendency toward impulse buying.

**Alternative Hypothesis H<sub>1</sub>:** There is a positive relationship between the perceived influence of social media advertisements and the tendency toward impulse buying

**Hypothesis 2**

**Null Hypothesis (H<sub>0</sub>):** There is no difference in impulse buying tendency between people who are more sensitive to discounts/promotions and those who are less sensitive.

**Alternative Hypothesis (H<sub>1</sub>):** People who are more sensitive to discounts/promotions have a higher impulse buying tendency than those who are less sensitive.

**Hypothesis testing and analysis**

Hypothesis	Null (H <sub>0</sub> )	Test	Chi <sup>2</sup>	df	p-value	Decision (alpha = 0.05)	Inference
H1: Social media ads influence is associated with higher impulse buying	No association between social media ad influence and impulse buying	Spearman correlation (reported as Chi <sup>2</sup> = Z <sup>2</sup> )	inf	1	3.75104E-23	Reject H <sub>0</sub>	Stronger social media influence relates to higher impulse tendency
H2: High sensitivity to promotions leads to higher impulse buying	Impulse buying distributions are equal for high vs low promo sensitivity	Mann-Whitney U (reported as Chi <sup>2</sup> = Z <sup>2</sup> )	44.748461	1	2.24044E-11	Reject H <sub>0</sub>	High promo-sensitive group shows higher impulse tendency

## Findings and Analysis

- 37% of respondents are aged 21–30, 19% are 31–40, 20% are 41–50, 14% are above 50, and 10% are under 20. 54% of respondents are female and 46% are male.
- Among 100 respondents, 61% are employed, 18% are self-employed, 19% are students, and 2% fall under other occupations.
- Among 100 respondents, 31% earn ₹50,000–₹1,00,000, 30% earn more than ₹1,00,000, 25% earn ₹20,000–₹50,000, and 14% earn less than ₹20,000 monthly.
- Among 100 respondents, 37% shop online occasionally, 34% frequently, 19% very frequently, and 10% rarely.
- 77% of respondents (Agree + Strongly Agree) often see personalized product recommendations while shopping online, 14% (Disagree + Strongly Disagree) do not, and 9% are neutral.
- 58% of respondents (Agree + Strongly Agree) feel urgency when they see countdown timers or limited-time offers online, while 32% (Disagree + Strongly Disagree) do not, and 10% remain neutral.
- 62% of respondents (Agree + Strongly Agree) are more likely to buy when seeing others' purchases or social proof, while 25% (Disagree + Strongly Disagree) are not, and 13% are neutral.
- 68% of respondents (Agree + Strongly Agree) are influenced to buy by personalized marketing based on their browsing history, 18% (Disagree + Strongly Disagree) are not, and 14% are neutral.
- 69% of respondents (Agree + Strongly Agree) often make unplanned purchases while shopping online, 27% (Disagree + Strongly Disagree) do not, and 4% are neutral.
- 65% of respondents (Agree + Strongly Agree) have bought products impulsively due to sales or discounts, 33% (Disagree + Strongly Disagree) have not, and 2% are neutral.
- 70% of respondents (Agree + Strongly Agree) say the convenience of online shopping increases their likelihood of impulse buying, 25% (Disagree + Strongly Disagree) say it does not, and 5% are neutral.

Figure 1

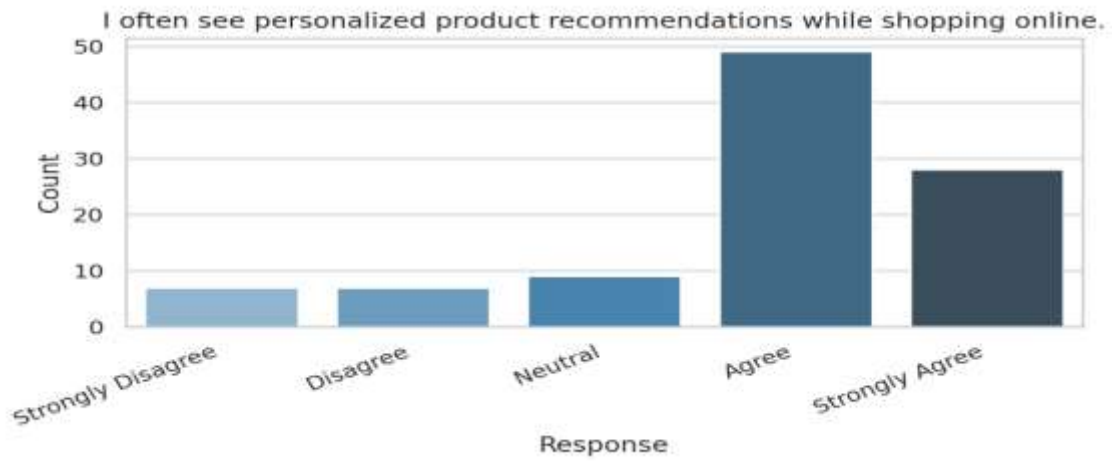


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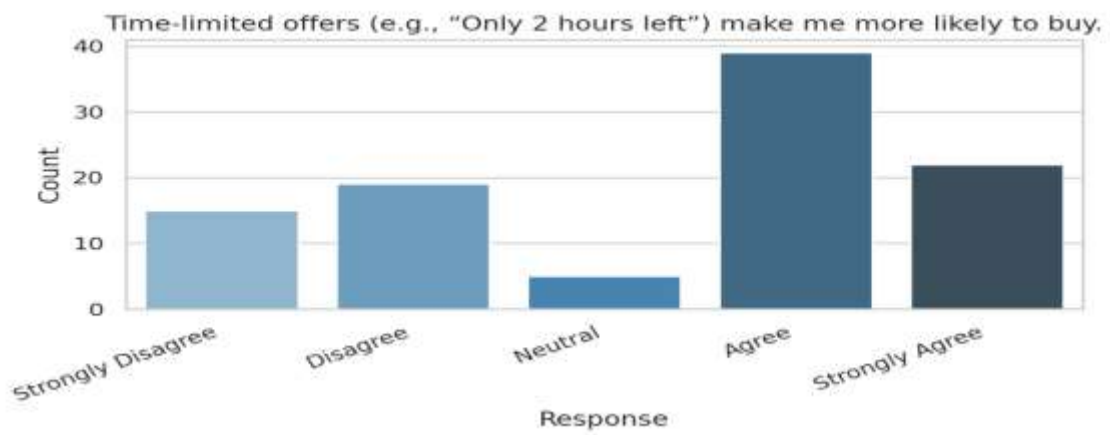


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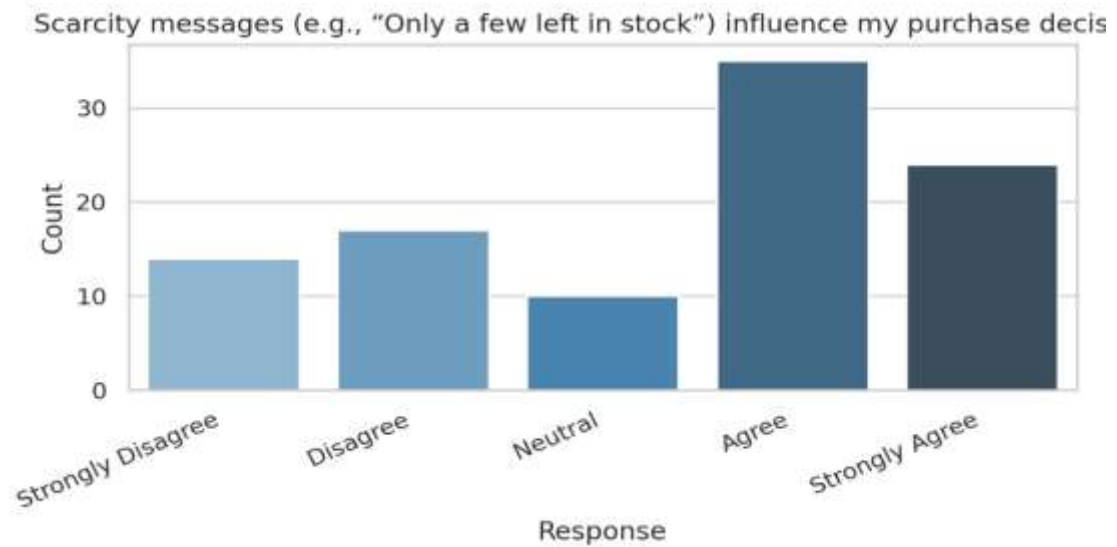


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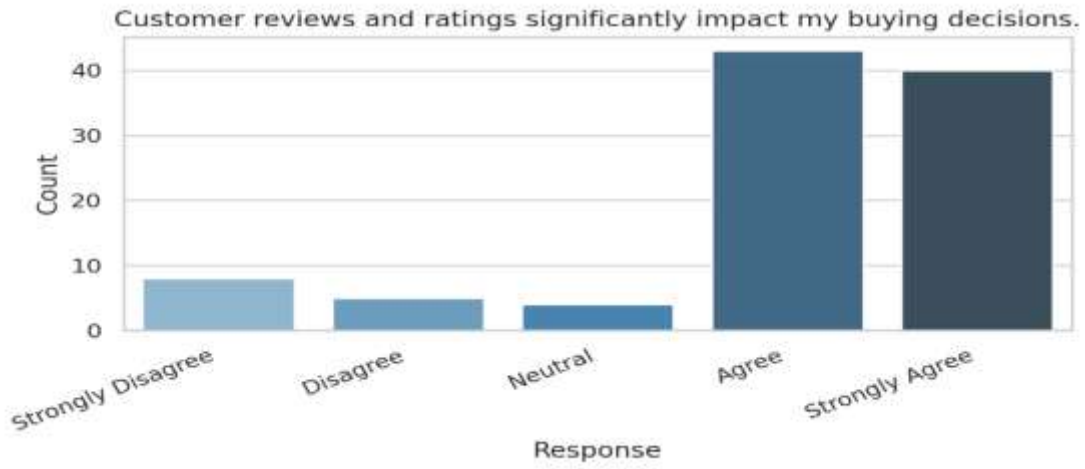


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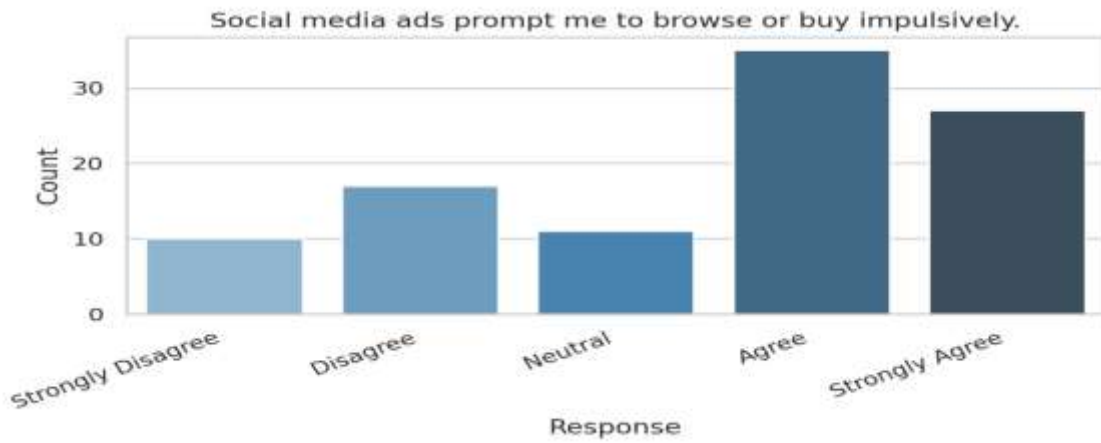
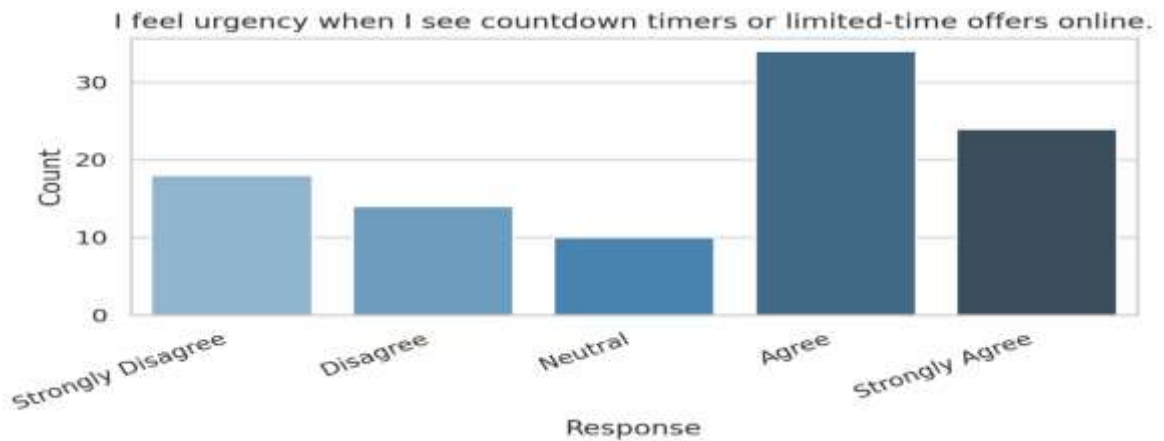
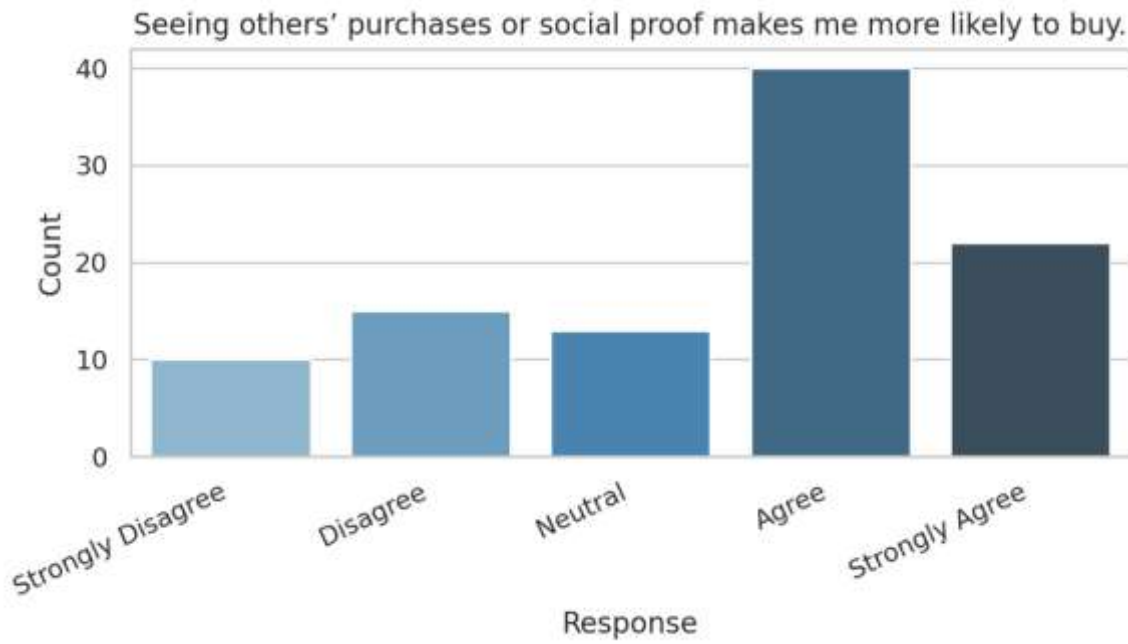


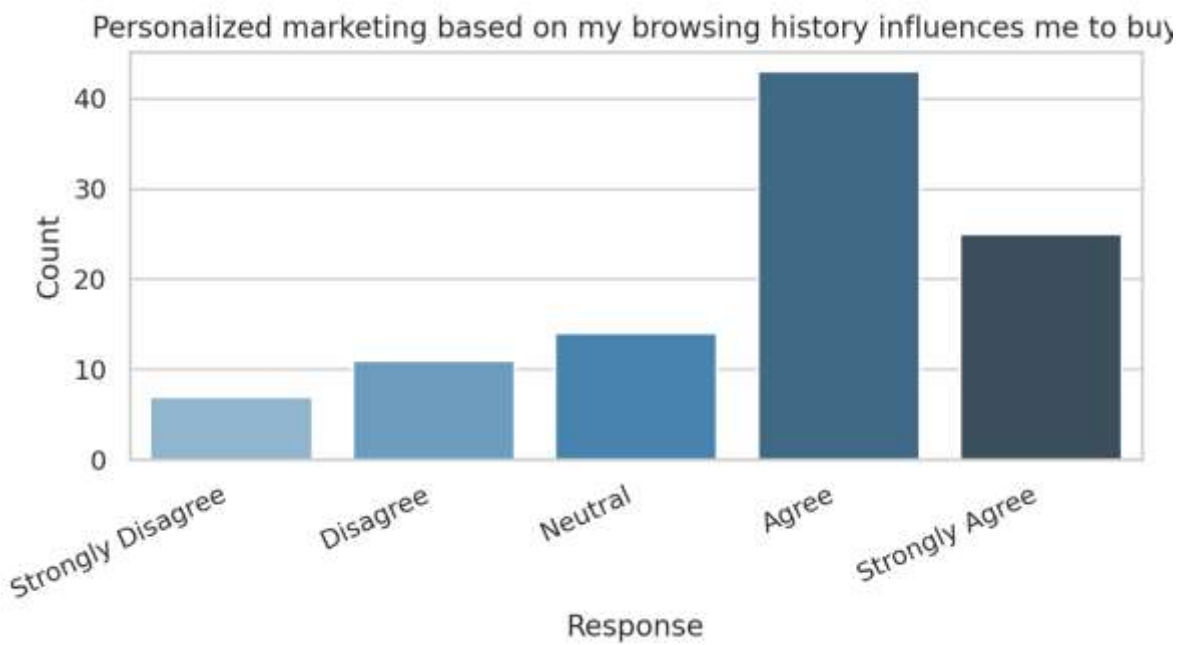
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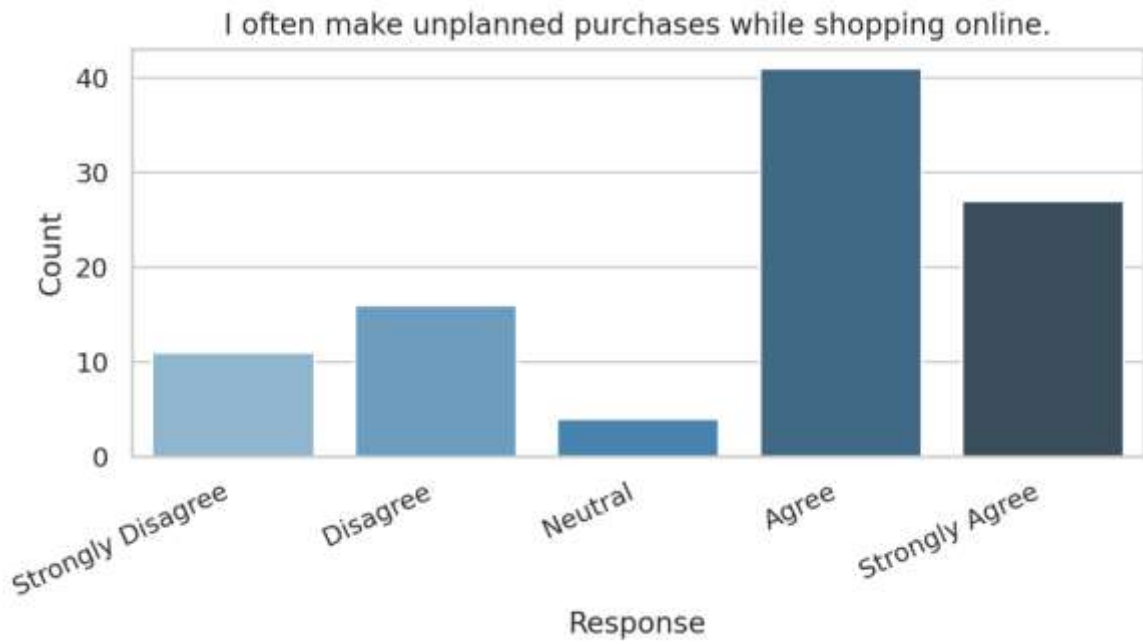
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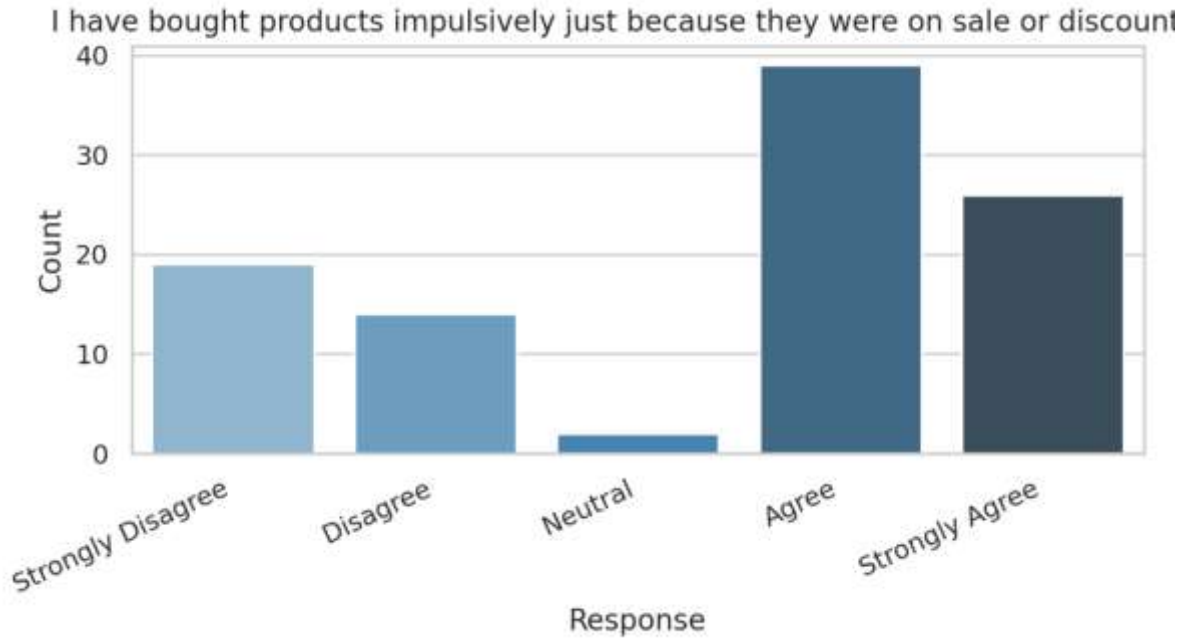
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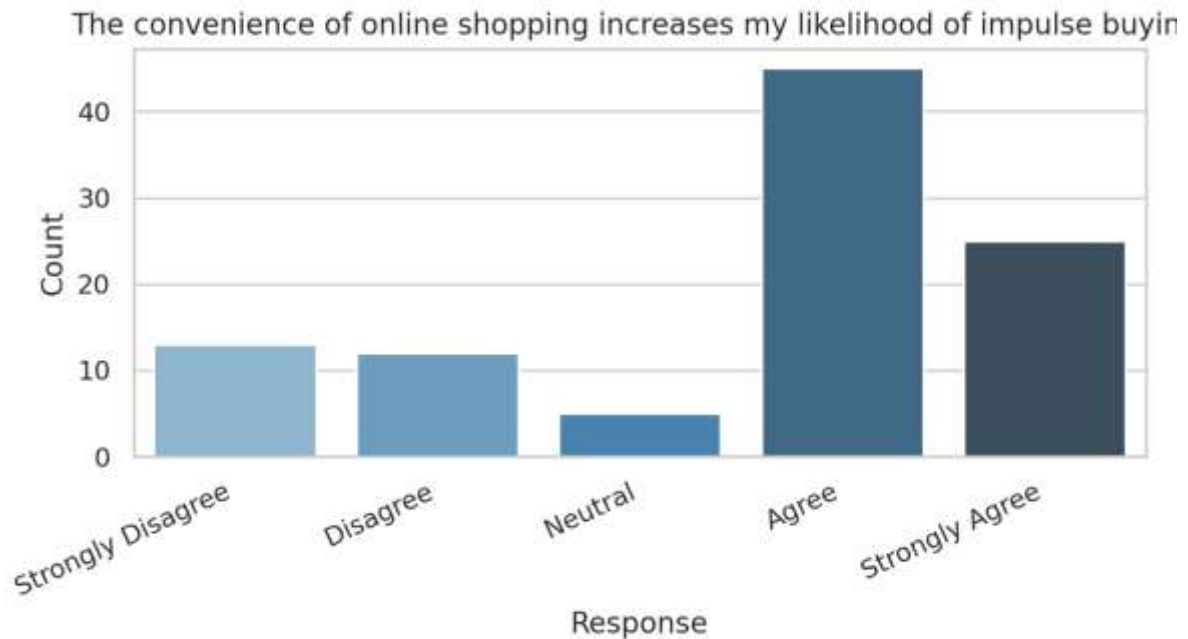


**Figure 9**



**Figure 10**



**Figure 11**

### Conclusion

This study elucidates the significant impact of digital marketing strategies—including personalized recommendations, social proof, scarcity messaging, and ease of online shopping—on impulse buying behavior in e-commerce. Psychological factors such as urgency and social validation are identified as key drivers of unplanned purchases. The research also reveals demographic differences in susceptibility to impulsive buying, underscoring the need for targeted marketing strategies. Moreover, the confirmed relationship between social media advertising and impulse buying highlights ethical considerations in digital marketing practices. These findings contribute to a comprehensive understanding of consumer psychology in digital commerce and provide actionable insights for both marketers and consumers.

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