



# The Influence of Emotions, Product Type, and Self- Control on Impulse Buying: An Online Shopping Perspective

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## **Abstract**

Impulsive buying, characterized by unplanned and emotionally driven purchasing behavior, is a prevalent phenomenon in online shopping environments. This study explores the independent and combined effects of emotional states (boredom, stress, happiness), product type (hedonic vs. utilitarian), and self-control on impulsive buying tendencies. Using a quantitative approach, data were collected from 242 participants through an online experiment employing a three-way factorial design. Emotional states were induced using a validated memory recall task, and participants evaluated hypothetical shopping scenarios involving hedonic or utilitarian products. The results revealed significant main effects of product type, self-control, and emotional states on impulsive buying. Hedonic products elicited higher impulsive tendencies than utilitarian products, while participants with low self-control exhibited greater impulsivity across all conditions. Among emotional states, boredom was identified as the strongest driver of impulsive buying, followed by stress and happiness. However, no significant interactions were found between the variables, indicating that these factors operate independently. These findings highlight the critical role of boredom as an underexplored emotional driver in consumer behavior. Future research should address limitations, such as the lack of cultural diversity in the sample and the use of hypothetical scenarios, by incorporating real-world shopping environments and cross-cultural comparisons. This study contributes to the theoretical understanding of emotion-driven consumption and provides practical insights for designing ethical and consumer-centered online shopping experiences.

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**Keywords:** Hedonic, Utilitarian, Impulsive Buying, Consumer Behavior, Self-control

## **Resumo**

A compra impulsiva, caracterizada por comportamentos de compra não planejados e motivados emocionalmente, é prevalente em ambientes de compras online. Este estudo investiga os efeitos independentes e combinados dos estados emocionais (tédio, estresse, felicidade), do tipo de produto (hedônico versus utilitário) e do autocontrole nas tendências de compra impulsiva. Dados de 242 participantes foram coletados por meio de um experimento online com um desenho fatorial de três vias. Os estados emocionais foram induzidos com uma tarefa de recordação de memória, e os participantes avaliaram cenários de compra envolvendo produtos hedônicos ou utilitários. Produtos hedônicos suscitaram maiores tendências impulsivas que produtos utilitários, e participantes com baixo autocontrole exibiram maior impulsividade em todas as condições. O tédio foi identificado como o principal motor da compra impulsiva, seguido pelo estresse e pela felicidade. Contudo, não foram encontradas interações significativas entre as variáveis, indicando que esses fatores operam de forma independente. Os resultados destacam o papel crítico do tédio como um motor emocional subexplorado no comportamento do consumidor. Pesquisas futuras devem abordar limitações, como a falta de diversidade cultural na amostra e o uso de cenários hipotéticos, incorporando ambientes reais de compras e comparações transculturais. Este estudo contribui para a compreensão do consumo emocional e fornece insights para o desenvolvimento de práticas éticas e centradas no consumidor no comércio eletrônico.

**Título:** A Influência das Emoções, Tipo de Produto e Autocontrole na Compra Impulsiva: Uma Perspectiva de Compras Online

**Autora:** Silvia Caravaggio

**Palavras-chave:** Hedônico, Utilitário, Compra Impulsiva, Comportamento do Consumidor, Autocontrole

## **Preface**

This thesis is part of the requirements for completing my Master of Science in Management with a specialization in Strategic Marketing at Católica Lisbon School of Business and Economics. The choice of impulsive buying as a topic stems from both personal curiosity and academic relevance. Having often experienced impulsive purchases myself, I wanted to gain a deeper understanding of this phenomenon. From a strategic marketing perspective, understanding consumer behavior, particularly in the context of digital platforms, is a key area of interest and importance for my future professional endeavors.

The process of completing this thesis was both challenging and rewarding. It demanded significant independence, as I had to develop and structure the research from the ground up. Unlike previous academic experiences where guidance was more readily available, this journey required me to step out of my comfort zone and manage the project largely on my own. Balancing academic responsibilities with personal challenges such as time management, stress, and being far from home added to the complexity but also made the learning experience even more meaningful.

I am sincerely grateful to my supervisor, João Pedro Niza Jacinto Braga, for his guidance and patience throughout this process. My deepest thanks go to my parents, who supported me unconditionally despite the distance between Lisbon and Italy. To my sister, I owe immense gratitude not only for her understanding and encouragement but also for being my constant source of inspiration and strength. To my boyfriend, Riccardo, words are not enough to express my appreciation. You were not only my rock throughout this process but also my greatest supporter and motivator. From listening to my frustrations to offering practical help and celebrating small victories, you made the most challenging moments more bearable and the journey itself more meaningful. My heartfelt gratitude extends to my friends, Marie and Lisa, for their moral support and the wonderful memories we created in Lisbon, which lightened this challenging process.

This thesis explores how emotional states, product types, and self-control impact impulsive buying behavior, particularly in the context of online shopping. It aims to contribute to the academic understanding of consumer behavior and to provide practical insights that can inform ethical and consumer-centered marketing strategies.

## Table of Contents

<b>Abstract</b> .....	I
<b>Resumo</b> .....	II
<b>Preface</b> .....	III
<b>List of Tables</b> .....	V
<b>List of Figures</b> .....	VI
<b>1. Introduction</b> .....	1
<b>2 Literature Review</b> .....	4
<b>2.1 Scope of the Literature Review</b> .....	4
<b>2.2 Impulsive Buying</b> .....	5
<b>2.3 Theoretical Framework</b> .....	5
<b>2.4 The Role of Emotions</b> .....	6
<b>2.5 Self-Control</b> .....	7
<b>2.6 Hedonic vs Utilitarian Products</b> .....	8
<b>3 Research Question and Hypotheses</b> .....	9
<b>4. Methodology</b> .....	12
<b>4.1 Sampling Method</b> .....	12
<b>4.2 Respondents Profile</b> .....	13
<b>4.3 Survey Structure</b> .....	13
<b>4.4 Analysis</b> .....	16
<b>5. Results</b> .....	19
<b>5.1 Main Effects</b> .....	19
<b>5.2 Two-Way Interactions</b> .....	21
<b>5.3 Three-Way Interaction</b> .....	21
<b>6 Discussion</b> .....	22
<b>6.1 Critical Appraisal and Relevant Aspects for Future Research</b> .....	25
<b>7. Conclusion</b> .....	28
<b>Reference List</b> .....	30
<b>Appendix</b> .....	35

## List of Tables

<b>Table 1:</b> Summary of Emotional Manipulation Check – one sample t-test.....	16
<b>Table 2:</b> Three-way ANOVA .....	19

## List of Figures

<b>Figure 1:</b> Impact of Product Type, Self-Control, and Emotional States on Impulsive Buying Tendencies .....	20
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## 1. Introduction

The past few decades have witnessed rapid advancements in internet technology, accompanied by the rise of e-commerce and social media platforms, leading to a redefinition of shopping and a transformation in consumer behavior. Individuals are now constantly surrounded by consumption stimuli, often engaging in purchasing behaviors not only to satisfy unmet needs or cope with emotional states but also to derive enjoyment from the shopping experience itself. Beyond its functional purpose, shopping has become a source of fun, relaxation, and excitement (Hirschman and Holbrook, 1982), further fueling the shift in how consumers interact with and respond to online platforms.

The phenomenon of impulsive buying, although increasingly prevalent in the digital age, is not a new concept. Early studies, such as those by West (1951) and Hausman (2000), highlighted its prevalence, suggesting that between 40% and 80% of purchases could be classified as impulsive. Additionally, research by Inman and Winer (1998) and Mattila and Wirtz (2008) indicated that up to 60% of all purchases are unplanned, underscoring the widespread and enduring nature of this behavior. Stern (1962) was one of the first to categorize different types of impulsive purchases, providing a foundational framework for understanding its multifaceted nature. Over time, the scope of impulsive buying research has expanded to include psychological, emotional, and situational factors, as well as the influence of digital technologies (Chan et al., 2017; Iyer et al., 2020).

These platforms provide unparalleled convenience, product variety, and 24/7 accessibility for consumers worldwide. Online platforms, by design, often encourage impulsive buying behavior, leveraging features such as personalized recommendations, live-stream shopping events, and flash sales (Chen, 2024). Moreover, the digital marketplace amplifies these behaviors by creating environments where emotional triggers are seamlessly integrated into the shopping experience. Some examples would be the introduction of new techniques to enhance consumer engagement, notably gamification and algorithmic recommendations, which significantly contribute to impulsive buying behavior. Gamification strategies, such as rewards systems, badges, time-limited discounts, and interactive challenges, tap into consumers' psychological desire for achievement, competition, and instant gratification. According to Hofacker et al. (2016), these elements make the shopping experience more engaging and emotionally stimulating, encouraging unplanned purchases by fostering a sense of urgency and excitement. In addition, algorithmic recommendation systems play a pivotal role in triggering

impulsive buying by leveraging data-driven personalization (Trehan et al., 2024). Platforms utilize machine learning algorithms to analyze consumer behavior, preferences, and past purchases to recommend products that align with individual tastes. While personalized marketing enhances user experience, it raises ethical concerns about exploiting psychological triggers like scarcity and social proof (Lades, 2014), challenging autonomy – consumer's ability to act based on their own values, goals, and preferences, without undue external influence – (Sunstein, 2015), and potentially causing buyer's remorse.

Historically, impulsive buying behavior has been viewed through various theoretical lenses. Rook (1987) described it as arising from sudden, intense urges to make immediate purchases, often accompanied by little to no reflection on potential consequences. Building on these foundational studies, recent research has focused on the interaction of emotional states, individual psychological traits, and contextual triggers in influencing impulsive buying (Amos et al., 2014; Sharma et al., 2010). This evolution highlights a shift from examining impulsive buying solely as a behavioral phenomenon to understanding it as a complex interaction between internal and external factors (Chan et al., 2017).

According to Mandel et al. (2017), purchases often serve psychological functions beyond their utility, helping individuals regulate self-discrepancies, such as aligning their perceived and desired selves, or mitigating feelings of inadequacy, social exclusion, or a lack of control. While impulsive buying behavior has been extensively studied, most research tends to examine general emotional states or broad product categories.

This study addresses these gaps by exploring how the impulse to purchase varies based on three central factors: the type of product (hedonic vs. utilitarian), the level of self-control (low vs. high), and the reported emotional state (boredom, happiness, stress). Interest in these variables stems from the growing consensus in the literature that purchasing behavior is influenced by emotional impulses and individual psychological traits, alongside rational needs (Flight et al., 2012; Mandel et al., 2017; Huang et al., 2024). This gap is especially relevant in the digital age, where e-commerce environments amplify emotional triggers and impulsive tendencies through tailored marketing strategies.

To rigorously investigate the combined effects of these dimensions, this study employs a three-way ANOVA, analyzing both main effects and interactions between factors. This approach allows for an understanding not only of individual influences but also of the synergistic or

antagonistic effects arising from the interaction between variables, such as product type and emotional state.

While the primary focus lies in the interaction among emotions, self-control, and product preferences, the findings also hold broader implications. From an academic perspective, this research enhances theories of impulsive buying and emotion-driven consumption by focusing on specific emotional states and their influence on hedonic versus utilitarian product preferences. It also advances the understanding of how cognitive factors, such as self-control, moderate these behaviors, contributing to the broader discourse on consumer psychology and digital commerce.

For consumers, these insights can help raise awareness of the emotional triggers that influence purchasing behavior. Understanding these patterns equips individuals to reflect on their decisions and adopt more intentional buying habits, reducing financial strain and vulnerability to impulsive tendencies.

For businesses, this study highlights the ethical considerations of leveraging emotional triggers in marketing strategies. It encourages organizations to reflect on their practices and design campaigns that respect consumer autonomy while fostering long-term satisfaction and trust.

This study does not claim to resolve all questions but aspires to contribute meaningfully to the discourse on emotion-driven consumption and impulsive buying. By addressing gaps in the literature and offering practical and ethical insights, it aims to provide value to academics, practitioners, and consumers alike.

## **2 Literature Review**

### **2.1 Scope of the Literature Review**

The literature review for this study was conducted to establish a theoretical foundation for understanding the role of emotional states, self-control, and product types in impulsive buying behavior. To ensure a comprehensive and targeted review, articles were primarily sourced from well-regarded academic platforms, including Google Scholar, APA PsycNet, and journals such as the Journal of Consumer Psychology, Journal of Marketing Research, and SAGE Journals. Additionally, relevant articles cited within these sources were reviewed to expand the scope of the research and incorporate key foundational studies.

The search strategy employed a combination of keywords relevant to the study's objectives, including:

- "impulsive buying"
- "emotions and impulsive buying"
- "self-control and impulsive buying"
- "consumer behavior and impulsive buying"
- "utilitarian and hedonic products"

Boolean operators (e.g., AND, OR) were used to refine the searches, ensuring that the articles retrieved aligned closely with the study's focus. While the primary review window included studies published from 2010 to 2024, earlier seminal works were also incorporated to provide historical and theoretical context. For example, foundational contributions such as Rook's (1987) exploration of impulsive buying and Dhar and Wertenbroch's (2000) work on hedonic and utilitarian products were included.

This systematic approach ensured the inclusion of diverse perspectives, from empirical studies to theoretical discussions. The selected sources were evaluated for relevance and quality, emphasizing those that directly addressed the relationship between impulsive buying, emotional triggers, self-control, and product types. By identifying gaps, such as limited exploration of specific emotional states like boredom, this review highlights areas where the present study contributes to advancing consumer behavior research.

## 2.2 Impulsive Buying

Impulsive buying, characterized by spontaneous and emotionally driven purchasing behavior, has been extensively studied in consumer psychology. Rook (1987) describes it as arising from a sudden and intense urge to make an immediate purchase, often accompanied by internal struggles. Fisher and Rook (1995) further emphasize that impulsive buyers tend to act on these urges without reflection or consideration of potential consequences, driven by the pursuit of immediate gratification.

Impulsive buying is often triggered by external stimuli such as discounts, displays, targeted advertisements, and streamlined digital payment systems (Madhu et al., 2022; Verplanken and Stato, 2011), that are widely recognized as triggers for impulsive buying behavior, as they influence consumers' cognitive and emotional processes (Ampadu et al., 2021; ). Moreover, impulsive buying can be influenced by demographic factors including gender, age, income, and education (Awan & Abbas, 2015; Sun & Wu, 2011). The experience of impulsive buying often fulfils an emotional or psychological need, temporarily enhancing the mood or providing a sense of gratification.

## 2.3 Theoretical Framework

Dual-process theories provide a foundational framework for understanding impulsive buying behavior, focusing on the relationship between intuitive, automatic processes (System 1) and deliberative, reflective processes (System 2). While the Barrouillet (2011) model offers insights into the developmental and contextual challenges of balancing these systems, it is essential to acknowledge its roots in broader discussions within dual-process theory literature. Key contributions include Evans (1984) and Stanovich and West (2000), who formalized the distinction between heuristic and analytical modes of cognition, as well as Kahneman's (2011) *Thinking, Fast and Slow*, which brought widespread attention to the biases and errors associated with fast, intuitive thinking. Petty and Cacioppo's (1986) Elaboration Likelihood Model (ELM) also provides a valuable perspective, highlighting how individuals process persuasive messages through central (effortful) or peripheral (automatic) routes depending on their motivation and ability. These models collectively illuminate how impulsive buying can be driven by emotional triggers and cognitive shortcuts, often bypassing the reflective processes that regulate spending behavior.

In this context, the affect heuristic offers an important lens to analyze impulsive buying. Coined by Slovic et al. (2002), the affect heuristic suggests that emotional responses—such as

excitement or stress—can serve as shortcuts for decision-making, often overriding logical evaluations. This is particularly relevant for impulsive purchases, where high-arousal emotions can amplify reliance on intuitive judgments, favoring hedonic over utilitarian products.

Additionally, self-determination theory (Deci & Ryan, 1985) provides a complementary perspective by emphasizing how autonomy, competence, and relatedness drive motivation and behavior. In the context of impulsive buying, autonomy may be compromised by marketing strategies that exploit emotional vulnerabilities or diminish self-control, challenging consumers' ability to make intentional, goal-aligned decisions. Together, these theoretical frameworks deepen the understanding of how psychological and cognitive factors interact in the context of impulsive purchases, offering nuanced insights into the mechanisms driving consumer behavior.

## **2.4 The Role of Emotions**

Emotions play a significant role in shaping consumer behavior by influencing how individuals perceive, process, and respond to their purchasing environment (Verhagen et al., 2011). Emotions are often categorized along two key dimensions: valence (positive or negative) and arousal (high or low), a framework introduced by Russell's (1980) Circumplex Model of Affect and widely adopted in psychological research. Within this categorization, happiness is typically classified as a positive, high-arousal emotion, associated with energy, excitement, and engagement (Fredrickson, 2001). In contrast, stress is characterized as a negative, high-arousal state, emerging from a perceived imbalance between demands and coping resources (Lazarus & Folkman, 1984). Finally, boredom represents a negative, low-arousal emotion, marked by dissatisfaction and a lack of stimulation, driving individuals to seek novelty or engagement (Eastwood et al., 2012). These classifications help explain how distinct emotional states influence cognitive processes and behaviors, such as impulsive decision-making.

Positive emotions, such as happiness, often lead to increased impulsivity and a heightened desire to indulge in rewarding experiences (Huang et al., 2024) and prolong positive experiences. Research indicates that happiness can amplify consumer enthusiasm and promote behaviors aimed at sustaining this positive state, including impulsive buying (Rook & Gardner, 1993). When consumers feel joy, they are more likely to engage in spontaneous purchases as a means of reinforcing or maintaining their positive mood. According to a study from Park et al., (2006) focusing on the fashion industry, positive emotions and hedonic consumption tendencies play an important role in determining impulse buying.

Conversely, negative emotions can also drive impulsive buying but through different psychological mechanisms. For instance, stress often triggers impulsive behavior as a coping strategy, where consumers seek immediate gratification to mitigate feelings of discomfort or anxiety (Tice, Bratslavsky, & Baumeister, 2001). Also, the extensive variety of products offered on e-commerce platforms increases the likelihood that consumers will engage in impulsive buying as a way to cope with negative emotions (Wang et al., 2022). Similarly, boredom - described as an unsettling and unsatisfying emotion that arises from engaging in repetitive, monotonous, and prolonged activities (Bozaci, 2020) – characterized by a lack of stimulation, prompts individuals to seek excitement or engagement (Bench et al., 2019), which would make impulsive purchases a convenient and appealing way to break monotony and inject novelty into their routine (Das Gupta, 2022).

This copying behavior, known as compensatory consumption (Mandel et al., 2017), serves to momentarily distract from stressors and provide a sense of relief. A review about compensatory consumption pointed out that this behavior occurs when there is self-discrepancy – a mismatch between how a person perceives themselves and their desired being (Higgins, 1987) – that increases people’s impulse for consumption.

While happiness may encourage impulsive buying for pleasure, stress and boredom often trigger such behavior as a form of emotional regulation. These emotional states interact with cognitive processes such as self-control, which is discussed in detail in the next section.

## **2.5 Self-Control**

Self-control refers to the deliberate management of one’s own mental, emotional, and behavioral responses to align with goals, standards, or social expectations (Baumeister, 2002). Research highlights that self-control can fail due to unclear standards (e.g., financial goals or emotional states), poor monitoring (actively tracking one’s actions and their consequences), or limited operational capacity (internal and external factors that allow for effective self-regulation). Emotional distress is particularly detrimental, as it shifts priorities toward immediate gratification at the expense of long-term goals. Research by Baumeister et al. (2001) reveals that emotionally distressed consumers are more likely to make impulsive purchases, particularly when they believe these actions will alleviate their negative feelings. For instance, studies have shown that sad individuals indulge in unhealthy eating or impulsive shopping when they perceive these behaviors as mood-enhancing (Tice, Bratslavsky, & Baumeister, 2001;

Rook & Gardner, 1993). Conversely, when the potential for emotional improvement is removed, the tendency to indulge diminishes.

In this study, self-control is conceptualized as a moderating variable, meaning its role is to influence the strength of the relationship between the type of product (hedonic vs. utilitarian) and impulsive buying behavior. This decision was made because the focus of the research was to examine *when or for whom* this relationship becomes stronger or weaker depending on levels of self-control (low vs. high). This moderating role was analyzed statistically through a three-way ANOVA, which tested the interaction between self-control, product type, and emotional state.

Self-control serves as a critical moderating factor in this dynamic. Individuals with high self-control are less susceptible to emotional influences on impulsive buying, demonstrating better financial management and decision-making by prioritizing long-term value over short-term gratification (Tice et al., 2001). This aligns with the study's objective to understand how self-control, as a moderator, helps buffer impulsive behavior in emotionally charged situations or amplifies it when self-control is low. Understanding this moderating effect is crucial for e-commerce businesses and consumer behavior scholars, as it highlights how emotional and cognitive factors interact to shape online impulsive buying.

## **2.6 Hedonic vs Utilitarian Products**

Hedonic products are those that provide consumers with pleasure, enjoyment, and sensory gratification (Hirshman et al., 1982). They are often associated with emotions, fantasies, and experiential consumption. These products are typically chosen for the enjoyment and emotional satisfaction they offer rather than for their practical utility. Examples include luxury items, entertainment services, gourmet foods, and fashion accessories. The purchase of hedonic products is driven by the pursuit of pleasure and positive emotional experiences.

In contrast, utilitarian products are those that serve a functional purpose, emphasizing practicality and efficiency. These products are bought primarily for their usefulness and the benefits they provide, aligning with the consumer's goal to solve problems or fulfil specific needs (Batra & Ahtola, 1991). Utilitarian products are characterized by their practical nature, often related to daily activities and essential tasks. Examples include household cleaning supplies, office equipment, and basic groceries. In the context of this study, the distinction between hedonic and utilitarian products allows for a deeper exploration of how emotional

states interact with product types to drive impulsive buying behavior; this distinction helps to explain not only *whether* emotional states influence impulsive buying but also *how* these effects vary depending on the product type.

### 3 Research Question and Hypotheses

The role of emotional states in shaping consumer behavior has gathered significant attention in the field of marketing and consumer psychology. Emotions are not only transient experiences but also powerful drivers of decision-making, especially in contexts where spontaneous actions, such as impulsive buying, are prevalent. In online shopping environments, where external stimuli are abundant, the interaction between emotional states, product types, and individual differences, such as self-control, becomes particularly relevant.

The primary objective of this research is to investigate the emotional drivers of impulsive buying behavior within online shopping environments and to understand the moderating role of self-control in these interactions. This study aims to explore how different emotions—happiness, stress, and boredom—impact impulsive buying behavior between two different product types (hedonic and utilitarian) and how self-control influences the strength and direction of these relationships. This study will try to answer the following research question: *How do happiness, stress, and boredom influence impulsive buying behavior in online shopping environments, and how does self-control moderate these effects across hedonic and utilitarian products?*

Building on the theoretical foundations discussed in chapter 2, the study posits the following hypotheses:

*H1:* Hedonic products will induce higher impulsive buying tendencies compared to utilitarian products.

The distinction between hedonic and utilitarian products is a central focus of this research. Hedonic products are associated with pleasure, sensory gratification, and emotional experiences. In contrast, utilitarian products serve practical needs, emphasizing efficiency and functionality over emotional appeal. The importance of this distinction lies in its influence on impulsive buying behavior: hedonic products are more likely to elicit emotional and impulsive responses compared to their utilitarian counterparts (Dhar & Wertenbroch, 2000).

*H2:* Individuals with low self-control will exhibit higher impulsive buying tendencies compared to those with high self-control.

Equally important to this study is the construct of self-control, which refers to an individual's ability to regulate emotions, thoughts, and behaviors in alignment with long-term goals (Baumeister et al., 1994). Research has shown that individuals with low self-control are more susceptible to immediate temptations, such as impulsive purchases, particularly in emotionally charged contexts (Hofmann et al., 2009). Conversely, individuals with high self-control tend to resist impulsive behaviors, prioritizing long-term outcomes over immediate gratification.

*H3:* Among emotional states, happiness will be associated with the highest impulsive buying tendencies, followed by stress and boredom.

Emotional states, such as happiness, stress, and boredom, also play a pivotal role in impulsive buying. Positive emotions like happiness have been linked to increased impulsive tendencies as individuals seek to amplify their emotional state through self-gratification (Gardner & Rook, 1988). Conversely, boredom, often associated with a lack of stimulation, can lead to impulsive actions as a means of coping. Stress occupies a complex role, as it may either suppress impulsive buying due to cognitive overload or enhance it when purchasing is perceived as a way to alleviate negative feelings (Yi & Baumgartner, 2004).

While the primary hypotheses (H1, H2, and H3) focus on the main effects of product type, self-control, and emotional states on impulsive buying behavior, consumer behavior is rarely driven by isolated factors. Instead, interactions between these variables often play a significant role in shaping decision-making processes. This study builds on the premise that the combined influence of emotional states, product types, and self-control can provide deeper insights into the dynamics of impulsive buying. Thus, also the following hypotheses are explored:

*H4:* The effect of product type (hedonic vs. utilitarian) on impulsive buying will be more pronounced in individuals with low self-control.

While hedonic products are generally associated with higher impulsive tendencies, individuals with low self-control may exhibit even stronger preferences for these products due to their reduced ability to resist temptation. Conversely, those with high self-control may demonstrate more consistent behavior across product types, emphasizing rationality over emotional gratification.

*H5:* Emotional states will interact with product type, with stronger effects of happiness and stress observed for hedonic products.

This hypothesis examines how emotions influence the impulsive appeal of hedonic and utilitarian products. For example, happiness, which amplifies the desire for self-gratification, may make hedonic products particularly irresistible, whereas boredom or stress may not exhibit the same magnitude of effect for utilitarian products. Understanding these interactions allows us to identify not only *if* emotions influence impulsive buying but also *how* product type shapes this relationship.

*H6:* Self-control will moderate the influence of emotional states on impulsive buying, with low self-control amplifying this relationship.

Self-control is posited as a key moderator that shapes the strength of the relationship between emotional states and impulsive buying. Emotional states, such as happiness and stress, often drive impulsive behaviors, but the extent to which they do so depends on an individual's ability to regulate their impulses. Hofmann et al. (2009) found that individuals with low self-control are more susceptible to emotional triggers, such as positive emotions or stress, leading to increased impulsive buying tendencies. In contrast, those with higher self-control demonstrate a greater ability to align their behaviors with long-term goals, even in emotionally charged contexts. Similarly, research by Iyer et al. (2020) highlights the mediating and moderating effects of self-control in consumer behavior, suggesting that self-control serves as a critical buffer against the influence of emotions on impulsive purchases. This hypothesis underscores the role of individual differences in regulating emotional influences, emphasizing that self-control determines the extent to which emotions translate into impulsive buying tendencies.

*H7:* A three-way interaction between product type, emotional states, and self-control will further influence impulsive buying tendencies, producing distinct behavioral patterns.

Lastly, the three-way interaction between product type, emotional states, and self-control is examined to determine whether their combined influence produces additional patterns in impulsive buying behavior.

By testing these hypotheses, this research aims to offer a nuanced understanding of how emotional, psychological, and situational factors interact to drive impulsive buying in online contexts.

## **4. Methodology**

This research adopts a quantitative approach to examine how impulsive buying behavior is influenced by product type (hedonic vs. utilitarian), self-control level (low vs. high), and emotional state (boredom, happiness, stress). A multifactorial experimental design (three-way) was implemented to simultaneously test the main effects of each factor and potential interactions between them. This approach allows for a comprehensive analysis of the interplay between psychological and situational variables in shaping consumer behavior. The following sections detail the methodological phases, including sampling procedures, measurement tools, data collection processes, and statistical analysis strategies.

### **4.1 Sampling Method**

An experimental research method, using Qualtrics, was adopted to investigate the impact of emotional states on impulsive buying behavior, moderated by self-control. Eligibility required participants to be over 18 years old and have prior online shopping experience. The survey was translated both in Italian and in English in order to reduce the language gap among participants.

The recruitment process was managed through a combination of convenience sampling and snowball sampling. Using convenience sampling, recruitment primarily took place on social media platforms, including Instagram, Facebook, WhatsApp, and LinkedIn. These platforms were chosen for their wide reach and ease of access to diverse participant groups. To enhance reach, participants were encouraged to share the survey link with others within their personal networks. On Instagram, a collaboration was established with a larger community page to share the survey, thereby increasing visibility and fostering participation from individuals outside the immediate network.

While this approach allowed for a broader reach, it introduced potential biases, such as overrepresentation of certain demographic groups (e.g., social media users or individuals more active on specific platforms). This limitation is acknowledged and considered in the interpretation of the results.

Before starting the survey, participants were provided with an informed consent form outlining the purpose of the study and data confidentiality measures. All responses were anonymized to protect participants' identities and ensure compliance with ethical research standards.

A total of 300 responses were collected. From these 300, 9 were discarded as they declared they were not online shoppers, 45 completed less than 50% of the survey, 10 of which did not even start the survey. A total of 242 participants answered more than 90% of the questions.

To manage missing data, a section-wise approach was applied. Specifically, participants were included in the analysis for each section of the questionnaire only if they provided valid responses to all questions within that section. Participants who skipped questions within a particular section were excluded from that section's analysis. However, only participants who completed at least 60% of the survey were included.

#### **4.2 Respondents Profile**

The mean age of participants was 28.52 (SD=11.96), 66% identified as Female and 29% as Male. The sample included 47% with high school diploma or equivalent, 31% with bachelor's degree, 12% with a master's degree and 3% with a Doctorate. Participants were 56% students, 22% employed full-time, 8% self-employed. 49% of participants reported they shop online 1 to 3 times a month, on average. 52% of respondents reported an average spending ranging from 20€ to 50€ per online shopping session. All the descriptive statistics can be found in Appendix figures 1- 6.

#### **4.3 Survey Structure**

Participants first underwent an emotional manipulation task (Appendix Figures 7-9), utilizing a memory recall technique adapted from Dunn and Schweitzer (2005). This technique, widely employed in psychological research as an effective tool for evoking specific emotional states, asked participants to recall a personal memory associated with one of three emotional states: happiness, stress, or boredom. This approach was chosen because it engages participants in a highly personal and vivid cognitive process, allowing them to re-experience the emotion associated with the recalled memory. Prior research, such as Dunn and Schweitzer (2005), has demonstrated that asking participants to recall specific emotional experiences can reliably elicit targeted emotions in a way that resonates with real-life contexts. Research has demonstrated that memory recall techniques effectively induce authentic emotional states that are both intense and contextually relevant, making them particularly suitable for experiments involving consumer behavior (Dunn & Schweitzer, 2005; Siedlecka & Denson, 2019). By anchoring the manipulation in participants' personal experiences, this study ensured that the emotional states induced were meaningful and impactful, thereby enhancing the robustness of the findings.

Emotional states were assigned randomly using an automated randomization process in Qualtrics, ensuring an unbiased and even distribution across conditions. Participants were provided with clear instructions and examples to guide them in recalling memories that matched the assigned emotional state. To ensure the effectiveness of the emotional manipulation, participants were asked to rate their current emotional state using a self-report measure, on a 7-point Likert scale (where 1=extremely unhappy/stressed/bored and 7=extremely happy/stressed/bored), which verified whether the assigned emotional state (happiness, stress, or boredom) was successfully induced.

Following the emotional manipulation, participants were introduced to a hypothetical shopping scenario featuring a specific product: a pair of wireless headphones (Appendix Figure 10). These headphones were designed to represent two distinct product categories:

- Hedonic Headphones: Marketed as premium, emphasized indulgence, enjoyment, and superior sound quality.
- Utilitarian Headphones: Focused on practicality and functionality.

Specifically, hedonic headphones were presented as follows: *“Imagine that you are browsing Amazon and come across these wireless over-ear headphones. They are designed to deliver a rich and immersive audio experience, with deep bass and crisp highs that make your music come alive. With a stylish design and luxurious cushioning, these headphones offer a perfect blend of comfort and indulgence, making them ideal for unwinding and enjoying your favorite playlists in style.”*

On the other hand, utilitarian headphones were presented as follows: *“Imagine you are browsing Amazon and come across these wireless over-ear headphones. They are designed to be highly functional and reliable, featuring advanced noise cancellation to block distractions and long battery life for all-day use. Lightweight and durable, these headphones are ideal for anyone needing dependable audio for work or study.”*

Participants were randomly assigned to evaluate either the hedonic or utilitarian version of the product, resulting in six experimental conditions combining emotional states and product types: hedonic-happiness, hedonic-stress, hedonic-boredom, utilitarian-happiness, utilitarian-stress, and utilitarian-boredom. For example, participants recalling a happy memory might evaluate their impulsive buying tendencies toward the hedonic headphones, while those recalling a stressful moment might consider purchasing the utilitarian version, and so on.

Participants were then asked to evaluate their likelihood of purchasing the headphones impulsively using a validated Impulsive Buying Scale (adapted from Rook & Fisher, 1995). Questions included items such as, “How likely are you to buy this product right now?” and “How rewarding or satisfying purchasing this product feel to you right now?” Responses were measured on a 7-point Likert scale (1 = Not at all, 7 = Definitely).

To gain a broader understanding of participants' online shopping habits and contextualize their impulsive buying tendencies, a series of questions were included to assess their typical behaviors. These questions were designed to explore shopping patterns, preferences, and tendencies related to impulsive buying in online environments. Participants were asked questions such as:

*“What category of products do you usually shop online?”* (e.g., electronics, clothing, groceries, etc.)

*“On average, how much do you spend per online shopping session?”* Participants selected from predefined ranges

*“How likely are you to buy items online that you don’t truly need, but find interesting or appealing?”*

*“How frequently do you make unplanned or impulsive purchases when shopping online?”*

Also, participants’ self-control was assessed using a scale adapted from Ramadan, Z., Farah, M. F., & Kanhouwa, T. (2021). This scale has been validated in prior research and measures individuals' tendencies to regulate their emotions, thoughts, and behaviors in alignment with long-term goals. Items on the scale included statements such as:

*“I am responsible when it comes to how much I spend”*

*“I am often impulsive in my purchases, especially when I am feeling strong emotions”*

*“I am able to resist temptation in order to achieve my budget goals”*

Participants responded using a 7-point Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). The self-control scores were analyzed to identify how individual differences influenced impulsive buying behavior and moderated the effects of emotional states and product types.

The final section of the survey collected demographic information, including age, gender, and education level. The survey can be seen in detail in Appendix Figure 11.

#### 4.4 Analysis

This chapter presents the analytical methods of the study, starting with the validation of key constructs, including emotional manipulation and participant perceptions of product categories. After this, the hypotheses' testing analysis is presented followed by results.

To ensure the emotional manipulation was effective, a one-sample t-test was conducted for each emotional condition (happiness, stress, boredom). The purpose of these tests was to determine whether participants reported levels of the target emotion significantly higher than the neutral midpoint of the scale (4 on a 1–7 Likert scale). Results (Table 1) indicate that the memory recall task successfully elicited the intended emotional states across all three conditions. Participants' ratings of their target emotion (happiness, stress, or boredom) were significantly above the neutral benchmark, supporting the validity of the emotional manipulation.

**Table 1:** Summary of Emotional Manipulation Check – one sample t-test

Condition	Mean (M)	Standard Deviation (SD)	t	p
Happiness	6.02	1.064	17.43	< 0.001
Stress	5.41	1.326	9.83	< 0.001
Boredom	4.94	1.481	5.94	< 0.001

A one-sample t-test was conducted to determine whether the product manipulation successfully elicited distinct perceptions of hedonic or utilitarian products. The results were not significant, indicating that the manipulation did not achieve the intended differentiation between product types. To address this issue and still capture participants' tendencies to buy different types of products (hedonic vs. utilitarian) under specific emotional states, a self-reported measure was used. After the emotional manipulation, participants answered a question tailored to their assigned emotional state:

Happiness Condition:

*“When I feel happy, I am more likely to buy products that give me pleasure, like fashion, entertainment, or luxury items.”*

Stress Condition:

*“When I feel stressed, I am more likely to buy products that give me pleasure, like fashion, entertainment, or luxury items.”*

Boredom Condition:

*“When I feel bored, I am more likely to buy products that give me pleasure, like fashion, entertainment, or luxury items.”*

Participants' responses to the self-reported question, measured on a 7-point Likert scale (where 1=not at all and 7=definitely), were categorized to identify their likelihood of purchasing either hedonic or utilitarian products in different emotional states. Responses of 4 or greater were interpreted as indicating a preference for hedonic products. Conversely, responses below 4 suggested a tendency toward utilitarian products. This categorization was chosen because a score of 4 or higher implies an inclination toward purchasing hedonic products in the given emotional state, while lower scores reflect a preference for products driven by practicality. By using this self-reported measure, the categorization captures participants' subjective evaluations of their behavior, offering a meaningful representation of their likely choices.

This approach provides a proxy for assessing product preferences under different emotional states, bypassing the limitations of the initial product manipulation. Moreover, it anchors the analysis in participants' own perceptions, which more closely mirrors real-world decision-making processes. This method ensures that the categorization reflects authentic tendencies in how emotions influence purchasing behavior.

The statistical analysis centered on a three-way ANOVA to examine the main effects and interactions of three independent variables on impulsive buying: product type (hedonic vs. utilitarian), self-control level (low vs. high), and reported emotional state (boredom, happiness, stress). The final dataset comprised 242 participants after data cleaning, providing a sufficiently robust sample size for detecting interactions in multifactorial studies, as recommended by Cohen (1988).

The study employed a 2×2×3 factorial design with three independent variables: product type, self-control, and emotional states. This design enabled a comprehensive analysis of how each independent variable influenced impulsive buying behavior and how these variables interacted with one another. For instance, it allowed the exploration of whether happiness, combined with

low self-control, would amplify the impulsive appeal of hedonic products compared to utilitarian ones.

Data preparation was conducted in RStudio and Excel. Missing data were managed as described in the *Sampling Method* section, ensuring that only complete responses were included in the final data set. This step ensured the reliability of the statistical analysis and avoided biases that could arise from incomplete data.

To maintain consistency and transparency, data were checked for outliers and errors prior to analysis. Variables were coded according to the experimental design, with emotional states (happiness, stress, boredom), product types (hedonic vs. utilitarian), and self-control (low vs. high) being clearly defined and categorized for use in the three-way ANOVA.

## 5. Results

This chapter presents the findings from the statistical analysis, structured to address each of the hypotheses. A three-way ANOVA (Table 1) was conducted to examine the main effects and interactions of the independent variables—product type (hedonic vs. utilitarian), self-control level (low vs. high), and emotional state (boredom, happiness, stress)—on impulsive buying tendencies.

### 5.1 Main Effects

#### *Product Type (H1)*

The type of product had a significant effect on impulsive buying behavior ( $p < .001$ ), supporting Hypothesis 1 (H1), which posited that hedonic products would elicit higher impulsive buying tendencies compared to utilitarian products. Participants exhibited higher impulsive buying tendencies when evaluating hedonic products. These findings align with prior research suggesting that hedonic products evoke stronger emotional responses and immediate gratification tendencies (e.g., Dhar & Wertenbroch, 2000; Alba & Williams, 2013).

**Table 2:** Three-way ANOVA

	Df	Sum Sq	Mean Sq	F value	Pr (>F)
emotion	2	20.5	10.24	4.337	0.0142 *
selfcontrol	1	37.3	37.27	15.791	9.57E-05 ***
prod_type	1	300.5	300.55	127.331	<2e-16 **
emotion*selfcontrol	2	7.9	3.96	1.678	0.1892
selfcontrol*prod_type	2	10.2	5.11	2.167	0.117
emotion*prod_type	1	0.2	0.18	0.078	0.7806
emotion*selfcontrol*prod_type	2	0.6	0.32	0.137	0.8722
Residuals	222	524.0	2.36		

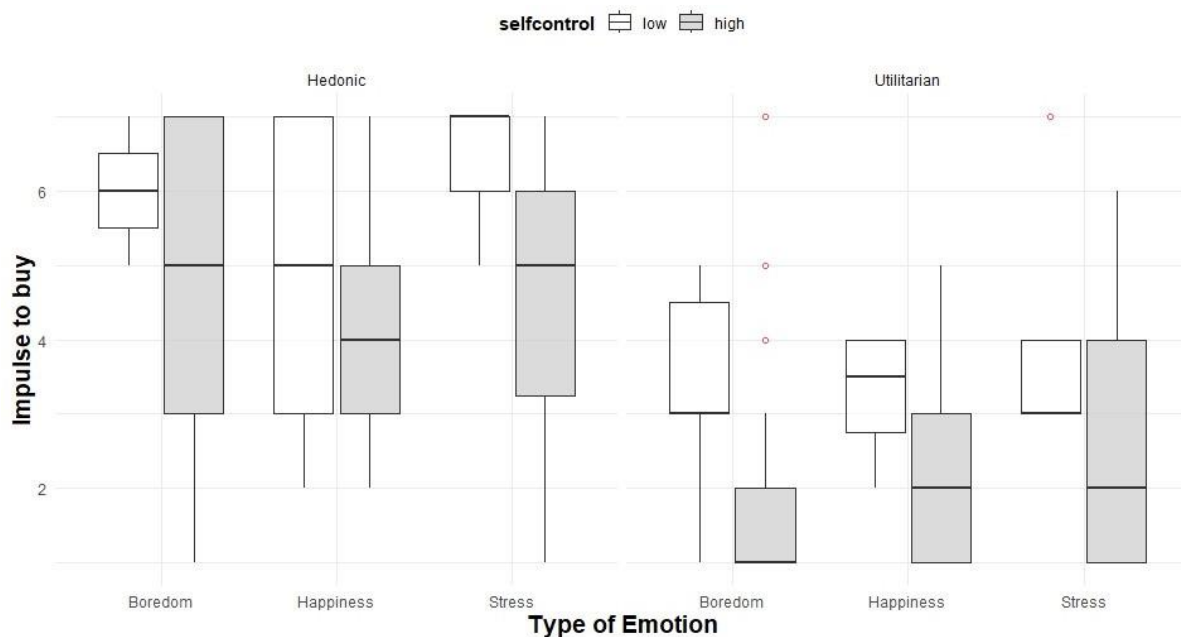
#### *Self-Control (H2)*

Self-control levels significantly influenced impulsive buying behavior ( $p < .001$ ), consistent with Hypothesis 2 (H2), which proposed that individuals with low self-control would demonstrate higher impulsive buying tendencies compared to those with high self-control. Participants with low self-control exhibited markedly higher impulsive buying tendencies, corroborating findings from prior studies on self-control and impulsive decision-making (Baumeister et al., 2001; Hofmann et al., 2009).

### *Emotional States (H3)*

Emotional states had a significant main effect on impulsive buying behavior ( $p = .014$ ), partially supporting Hypothesis 3 (H3). Contrary to the initial hypothesis, boredom elicited the highest impulsive buying tendencies, followed by stress and then happiness. These results suggest that boredom, as a negative low-arousal emotion, prompts individuals to seek novelty and stimulation, leading to impulsive buying. Stress, a negative high-arousal emotion, also significantly influences impulsive buying but to a slightly lesser degree. Happiness, a positive high-arousal emotion, exhibited the lowest impulsive buying tendencies among the three emotional states, contradicting prior findings that linked positive emotions to heightened impulsivity (Gardner & Rook, 1988; Fredrickson, 2001). These trends are clearly illustrated in Figure 1, where the box plot shows higher impulsive buying scores for boredom across both hedonic and utilitarian products.

**Figure 1:** *Impact of Product Type, Self-Control, and Emotional States on Impulsive Buying Tendencies*



## 5.2 Two-Way Interactions

### *Product Type × Emotional State (H5)*

No significant interaction was found between product type and emotional state ( $p = .295$ ), failing to support Hypothesis 5 (H5), which suggested that the effects of happiness and stress on impulsive buying would be stronger for hedonic products. The results indicate that the influence of product type is consistent across different emotional states.

### *Self-Control × Emotional State (H6)*

The interaction between self-control and emotional state was not statistically significant ( $p = .153$ ), providing no support for Hypothesis 6 (H6), which proposed that self-control would moderate the relationship between emotional states and impulsive buying. This suggests that self-control operates independently of emotional states in influencing impulsive buying behavior.

### *Product Type × Self-Control (H4)*

No significant interaction was observed between product type and self-control ( $p = .381$ ), contradicting Hypothesis 4 (H4), which posited that the effect of product type on impulsive buying would be more pronounced for individuals with low self-control. Although both hedonic products and low self-control independently contribute to higher impulsive buying tendencies, their combination does not produce a significant additive or multiplicative effect.

## 5.3 Three-Way Interaction

### *Product Type × Emotional State × Self-Control (H7)*

The three-way interaction among product type, self-control, and emotional state was not significant ( $p = .392$ ), failing to support Hypothesis 7 (H7), which proposed distinct patterns of impulsive buying behavior resulting from the simultaneous influence of these variables. The findings suggest that product type, self-control, and emotional state operate independently without synergistic effects.

## 6 Discussion

The findings of this study contribute to a deeper understanding of the factors influencing impulsive buying behavior in online shopping contexts. By examining the independent effects of product type (hedonic vs. utilitarian), self-control level (low vs. high), and emotional state (boredom, happiness, stress), this research has yielded valuable insights into the mechanisms driving consumer impulsivity. While the results confirm the importance of these variables individually, the lack of significant interactions among them underscores the complexity of impulsive behavior and suggests the need for further theoretical refinement.

The study reinforces the centrality of product type in shaping impulsive buying tendencies. Consistent with prior literature (Dhar & Wertenbroch, 2000; Amos et al., 2014), hedonic products elicited significantly higher levels of impulsive behavior than utilitarian products. This result highlights the distinctive gratifying and emotionally charged nature of hedonic goods, which align closely with the impulsive consumption pattern driven by immediate rewards and sensory appeal. The consistent influence of hedonic products across all emotional states and self-control levels suggests that their impulsive appeal transcends individual psychological and situational factors, making them a key determinant of unplanned purchasing behavior.

Self-control emerged as another pivotal factor influencing impulsive buying. Participants with low self-control consistently displayed higher impulsive tendencies, regardless of product type or emotional state, affirming the role of self-regulation in consumer decision-making (Baumeister et al., 2001). This finding underscores the vulnerability of individuals with diminished regulatory capacity to external stimuli in online shopping environments, where design elements such as flash sales and algorithmic recommendations further exacerbate impulsive tendencies. The independence of self-control from the other variables examined in this study suggests that its role as a moderator of impulsive behavior operates on a stable and intrinsic level, unaffected by situational triggers such as emotional states or product types.

The role of emotional states in impulsive buying was also significant, with results revealing an unexpected hierarchy among the emotions examined. Contrary to earlier assumptions, boredom was found to have the strongest effect on impulsive buying, followed by stress and happiness. This challenges the traditional emphasis on positive high-arousal emotions such as happiness as the primary emotional drivers of impulsivity (Gardner & Rook, 1988). Boredom, characterized as a low-arousal negative emotion, appears to act as a potent trigger for impulsive behavior by fostering a psychological need for novelty and engagement (Bench et al., 2019).

The finding that boredom drives impulsive buying more strongly than happiness suggests that the absence of stimulation, rather than the pursuit of pleasure, may play a more prominent role in certain consumer contexts. Stress, as a high-arousal negative emotion, also contributed to impulsive buying, consistent with its role in compensatory consumption behaviors aimed at mitigating discomfort (Tice et al., 2001). In contrast, happiness, while associated with impulsive tendencies, appeared to exert a relatively weaker influence than anticipated. This result may indicate that the relationship between happiness and impulsivity is mediated by other factors, such as the perceived hedonic value of the product or the consumer's long-term goals.

Notably, the absence of significant interactions among product type, self-control, and emotional state suggests that these factors operate independently in influencing impulsive buying behavior. Instead of synergistically amplifying each other's effects, it appears that product characteristics, individual self-control, and emotional states contribute to impulsivity in distinct and separate ways. This finding may reflect the complexity of consumer decision-making, where different dimensions of behavior are influenced by unique psychological and situational mechanisms.

While existing theoretical frameworks, such as those proposed by Hofmann et al. (2009), emphasize the interplay of emotional, cognitive, and situational factors, the results of this study suggest that the relationship between these variables may not always manifest as direct interactions. Instead, their effects could occur concurrently but independently, shaped by specific contexts or underlying processes. For instance, hedonic products might elicit impulsive tendencies regardless of emotional state, and self-control might remain a consistent moderator across varying conditions.

These findings do not contradict existing theories but instead highlight the need for further exploration to determine under what circumstances interactions might emerge. Future studies could investigate whether the absence of interactions in this research reflects the design and scope of the study, such as the specific emotions examined or the nature of the experimental stimuli, or whether it points to broader trends in consumer behavior.

The practical implications of these results can be further understood through the lens of *nudge theory* (Thaler & Sunstein, 2008). Nudges refer to the concept of subtly altering the environment in which decisions are made, known as "choice architecture," to guide individuals toward specific behaviors in a predictable manner while preserving their freedom of choice. Nudges provide a useful framework for addressing the impulsive behaviors identified in this

study. While nudges are traditionally associated with promoting behaviors that align with individuals' long-term goals (e.g., saving money, improving health), the principles of nudge theory are also used by marketers in ways that exploit consumers' impulsive tendencies. For example, strategies such as scarcity cues ("Only 2 left in stock!"), time-limited offers, and social proof ("This item is trending!") are widely used to create a sense of urgency and encourage unplanned purchases. These applications of nudges capitalize on the very cognitive biases—such as loss aversion and herd mentality—that are central to the theory (Thaler & Sunstein, 2008).

The findings of this study highlight how emotional states like boredom and stress amplify consumers' susceptibility to such marketing nudges. For instance, consumers experiencing boredom may be particularly drawn to gamified shopping experiences or scarcity messages, while those under stress might respond more to practical appeals, such as products marketed for convenience or efficiency. In these contexts, nudges can inadvertently encourage impulsive behavior, leading to outcomes that may conflict with the consumer's long-term well-being, such as financial strain or regret over unnecessary purchases.

From a theoretical perspective, the results highlight the need for further exploration of underrepresented emotional states, such as boredom, in consumer behavior research. The significant impact of boredom on impulsive buying behavior underscores its potential as a critical area of investigation, particularly in the context of digital environments designed to capture and sustain consumer attention. Similarly, the consistent influence of hedonic products and low self-control reinforces their centrality in models of impulsive buying, suggesting that these variables warrant continued focus in both theoretical and applied research.

From a managerial perspective, these findings offer valuable insights into designing consumer-centric strategies that balance engagement with ethical responsibility. The identification of boredom as a significant driver of impulsive behavior highlights an opportunity for e-commerce platforms to create interventions tailored to this emotional state. For example, gamified shopping experiences or interactive features could engage consumers by addressing their need for stimulation. However, it is crucial to ensure that such strategies are implemented responsibly, fostering positive consumer experiences rather than encouraging excessive or regretful purchases.

Ethical considerations are particularly important in the context of consumers with low self-control, who are especially susceptible to impulsive tendencies. To support these consumers,

businesses can incorporate safeguards such as reminders of spending limits, transparent pricing, or flexible return policies. These measures not only mitigate potential negative outcomes, such as buyer's remorse, but also help build trust and long-term loyalty.

Ultimately, while the application of these findings can drive both consumer engagement and business success, it is imperative that marketers consider the broader implications of their practices. Striking a balance between leveraging psychological insights for commercial purposes and protecting consumer well-being will not only enhance the ethical standing of businesses but also contribute to sustainable and mutually beneficial relationships with their customers.

### **6.1 Critical Appraisal and Relevant Aspects for Future Research**

This chapter critically evaluates the methodology and findings of this study, addressing its limitations and proposing directions for future research. While the study contributes significantly to the understanding of the independent effects of product type, self-control, and emotional states on impulsive buying behavior, certain methodological and conceptual challenges remain.

A primary limitation of this research lies in the ineffectiveness of the product manipulation intended to distinguish between hedonic and utilitarian product categories. Despite efforts to design distinct product descriptions, manipulation checks revealed that participants did not significantly perceive the products as differing in their hedonic or utilitarian characteristics. This limitation likely influenced the results and may have diluted the observed effects of product type on impulsive buying tendencies. Future research should consider employing pretested product stimuli to ensure clearer differentiation, or expanding the range of products evaluated to increase the robustness and generalizability of findings.

In contrast, the emotional manipulation was successful in eliciting the targeted emotional states of boredom, stress, and happiness, providing confidence in the validity of these variables. However, the study did not explore how the intensity or duration of these emotional states might impact impulsive behavior, leaving room for future research to investigate the role of emotional gradients in consumer decision-making. For example, a hypothetical research could explore

how prolonged boredom or acute stress affect impulsive buying tendencies differently from milder or transient forms of these emotions.

Another limitation concerns the use of hypothetical shopping scenarios. While these scenarios allowed for experimental control, they may not fully replicate the immersive and dynamic nature of real-world online shopping environments. Digital platforms often utilize features such as gamification, personalized recommendations, and ease of access, which were not directly integrated into the study. Future research could incorporate simulations or field experiments that mimic the complexity of digital shopping environments to capture a more authentic understanding of consumer behavior.

The study's reliance on quantitative methods provided robust statistical evidence but lacked the depth and nuance offered by qualitative approaches. Incorporating qualitative methods, such as interviews or focus groups, could complement the quantitative findings by providing a richer understanding of how consumers interpret emotional triggers and product characteristics. This would be particularly valuable for exploring how individual differences, such as past experiences or shopping habits, influence impulsive tendencies.

Self-control was measured as a general trait, which may have oversimplified its role as a moderating variable. While this approach offered insights into overarching patterns, it did not account for the dynamic nature of self-control in specific emotional or situational contexts. Future studies could adopt state-dependent measures of self-control, examining how factors such as cognitive load, fatigue, or stress influence its effectiveness in moderating impulsive behavior.

Additionally, the lack of cultural diversity in the sample limits the generalizability of the findings. Cultural norms and values play a significant role in shaping emotional expression, self-control, and consumer behavior, potentially altering the relationships observed in this study. For example, research by Tsai (2013) highlights how culture shapes emotional experiences and expressions, emphasizing the importance of cultural values in guiding emotional regulation. Future research should explore cross-cultural comparisons to provide a broader understanding of how these variables interact across diverse populations.

Finally, the study focused on individual emotional states, but future research could investigate interactions between emotions to uncover compounded effects. For instance, how might the simultaneous experience of boredom and stress, or boredom and happiness, influence impulsive behavior? Such studies could offer deeper insights into the complexity of emotion-driven

consumption. Additionally, longitudinal research could examine how shifts in emotional states over time affect impulsive tendencies, providing a more dynamic perspective on consumer behavior.

In conclusion, while this study provides valuable insights into the roles of product type, self-control, and emotional states in impulsive buying behavior, it also underscores the need for further research to address its limitations. By refining product manipulations, incorporating real-world shopping features, and exploring emotional complexity and cultural diversity, future studies can deepen our understanding of impulsive consumption and inform the development of more effective and ethical marketing practices.

## 7. Conclusion

This study provides valuable insights into the interplay between emotional states, self-control, and product type in shaping impulsive buying behavior in online contexts. By exploring these factors independently, it contributes to the growing body of literature on emotion-driven consumption while highlighting gaps in current theoretical frameworks.

One of the most significant contributions is the finding that boredom, often overlooked in consumer research, exerts the strongest influence on impulsive buying compared to stress and happiness. This underscores the critical role of low-arousal negative emotions in driving consumer behavior, particularly in digital environments designed to capture attention and promote engagement. Similarly, the persistent impact of hedonic products and low self-control reinforces their centrality in models of impulsivity, offering practical implications for marketers and platform designers.

The study also raises important questions about the boundaries of existing theoretical frameworks. The absence of significant interactions among emotional states, self-control, and product type suggests that these variables may operate more independently than previously assumed. This insight invites future researchers to reexamine the conditions under which such interactions might emerge and to consider alternative models that account for the complexity and compartmentalization of consumer decision-making.

Beyond its theoretical contributions, this research highlights the ethical responsibility of marketers in leveraging psychological insights. While strategies like gamification and scarcity messages can engage consumers effectively, they must be implemented with care to avoid exploiting emotional vulnerabilities, particularly among individuals with low self-control. Ethical marketing practices, such as promoting transparency and offering safeguards like flexible return policies, can mitigate potential harm while fostering trust and loyalty.

Looking forward, this study opens several avenues for future research. Incorporating real-world digital shopping environments, exploring cultural diversity, and examining interactions between multiple emotions could provide a more nuanced understanding of impulsive buying. Furthermore, longitudinal studies tracking how emotional states evolve and influence behavior over time could offer valuable insights into the dynamics of impulsivity.

In conclusion, this research not only deepens our understanding of the psychological and situational factors driving impulsive buying but also emphasizes the need for responsible

application of these insights. By balancing commercial objectives with consumer well-being, businesses and researchers alike can contribute to more ethical and sustainable digital marketplaces.

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# Appendix

## Appendix Figure 1: Online Shopping Frequency

Q4 - How often do you shop online?	Percentage
Daily	2%
3-5 times a week	3%
1-2 times a week	16%
1-3 times a month	49%
Only on special occasions (Christmas, black friday, birthdays...)	26%
Never	3%

## Appendix Figure 2: Average Online Shopping Spending

Q6 - On average, how much do you spend per online shopping session?	Percentage
Less than €20	10%
€20 - €50	52%
€51 - €100	25%
€101 - €200	9%
More than €200	4%

## Appendix Figure 3: Average Time Spent per Online Shopping Session

Q9 - How much time do you typically spend browsing before making a purchase?	Percentage
Less than 10 minutes	7%
10 - 30 minutes	31%
31 - 60 minutes	34%
Over 60 minutes	28%

### Appendix Figure 4: Budget Limit per Online Shopping Session

Q10 - Do you set a budget for online shopping?	Percentage
Yes always	37%
Yes, sometimes	47%
no, never	16%

Q10b - IF yes, do you respect the limit set?	Percentage
Always	14%
Most of the time	62%
About half the time	13%
Sometimes	8%
Never	2%

### Appendix Figure 5: Participants Gender

Q34 - What gender do you identify with?	Percentage
Male	29%
Female	66%
Non-binary / third gender	3%
Prefer not to say	3%

### Appendix Figure 6: Participants Level of Education

Q35 - What is your level of education?	Percentage
Primary or Middle school	1%
High School Diploma or equivalent	47%
Associate degree	2%
Bachelor's degree	31%
Master's degree	12%
Doctorate	3%
Other	5%

### Appendix Figure 7: Emotional Manipulation - Stress

Please take a moment to picture a recent time when you felt particularly stressed or under pressure (e.g., preparing for a big exam or project deadline, handling financial or academic pressures...). Close your eyes and try to bring yourself back to that moment.

How stressed do you feel thinking about this moment?  
where 1 = Not stressed at all, and 7 = Extremely stressed

Not stressed at all 1 2 3 4 5 6 7 Extremely stressed

I feel



### Appendix Figure 8: Emotional Manipulation - Boredom

Please take a moment to picture a recent time when you felt very bored (e.g., sitting through a long class or lecture, waiting for an appointment, scrolling aimlessly on instagram...). Close your eyes and bring yourself back to that moment.

How bored do you feel thinking about this moment?  
where 1 = Not bored at all, and 7 = Extremely bored

Not bored at all 1 2 3 4 5 6 7 Extremely bored

I feel



### Appendix Figure 9: Emotional Manipulation – Happiness

Picture a recent time when you felt genuinely happy (e.g., achieving a personal goal, spending quality time with friends or family, going on a long-awaited dream trip...). Close your eyes and bring yourself back to that moment.

How happy do you feel when you think about this moment?  
where 1= Not happy at all, and 7= Extremely happy

Not happy at all 1 2 3 4 5 6 7 Extremely happy

I feel



## Appendix Figure 10: Two Product Scenarios (Hedonic – right; Utilitarian – left )

Imagine that you are browsing Amazon and come across these wireless over-ear headphones. They are designed to deliver a rich and immersive audio experience, with deep bass and crisp highs that make your music come alive. With a stylish design and luxurious cushioning, these headphones offer a perfect blend of comfort and indulgence, making them ideal for unwinding and enjoying your favorite playlists in style.

Please answer the following questions:



Imagine you are browsing Amazon and come across these wireless over-ear headphones. They are designed to be highly functional and reliable, featuring advanced noise cancellation to block distractions and long battery life for all-day use. Lightweight and durable, these headphones are ideal for anyone needing dependable audio for work or study.

Please answer the following questions.



## Appendix Figure 11: Questionnaire

Dear Participant,

Thank you for taking the time to participate in this survey. This research is part of my master's thesis, which aims to understand how people respond to various situations when making purchasing decisions.

One participant will be randomly selected to receive a 20€ Amazon voucher after the survey period ends.

Please note that your responses will be kept confidential and used solely for academic purposes. The survey should take approximately 5 minutes to complete.

I sincerely appreciate your participation and support in helping me complete this important part of my academic journey. Thank you again for your time!

Best regards,  
Silvia

English ▾

On average, how often do you shop online?

- Daily
- 3-5 times a week
- 1-2 times a week
- 1-3 times a month
- Only on special occasions (Christmas, black friday, birthdays...)
- Never

Please take a moment to picture a recent time when you felt very bored (e.g., sitting through a long class or lecture, waiting for an appointment, scrolling aimlessly on instagram...). Close your eyes and bring yourself back to that moment.

How bored do you feel thinking about this moment?  
where 1 = Not bored at all, and 7 = Extremely bored

Not bored at all 1 2 3 4 5 6 7 Extremely bored

I feel



Please respond to each statement based on how likely you are to take the described action. Use a 7-point scale where 1 = Not at all and 7 = Definitely

When I feel bored, I am more likely to buy items that I see as practical or necessary, even if I didn't plan to buy them.

Not at all 1 2 3 4 5 6 7 Definitely

likelihood



When I feel bored, I am more likely to buy products that are fun or give me pleasure, like fashion or entertainment items.

Not at all 1 2 3 4 5 6 7 Definitely

likelihood



When I feel bored, I am more likely to make purchases that I might not otherwise consider.

Not at all 1 2 3 4 5 6 7 Definitely

likelihood



For all the following questions keep thinking about the feeling that you experienced recalling your memory.



Imagine you are browsing Amazon and come across these wireless over-ear headphones. They are designed to be highly functional and reliable, featuring advanced noise cancellation to block distractions and long battery life for all-day use. Lightweight and durable, these headphones are ideal for anyone needing dependable audio for work or study.

Please answer the following questions.



To what extent do you perceive this product as practical or functional? (utilitarian).

where 1 = utilitarian and 7 = hedonic

utilitarian 1 2 3 4 5 6 7 hedonic

hedonic/utilitarian



Please answer the following questions using a 7-point scale, where 1 = not at all, and 7 = definitely.

How likely were you to buy this product right now?

Not at all 1 2 3 4 5 6 7 Definitely

likelihood to buy now



How rewarding or satisfying would purchasing this product feel to you right now?"

Not at all 1 2 3 4 5 6 7 Definitely

Feeling of Reward/Satisfaction



Please select the value 4 as the answer to this question to confirm that you are paying attention.

1 2 3 4 5 6 7

select



What category of products do you usually shop online? (select all that apply)

Health and Beauty products

Entertainment services

Groceries

Household items

Electronics

Fashion and Accessories

Other

On average, how much do you spend per online shopping session? (Select the option that best describes your behavior)

Less than €20

€20 - €50

€51 - €100

€101 - €200

More than €200

Please respond to each statement based on how likely you are to take the described action. Use a 7-point scale where 1 = Not at all and 7 = Extremely likely

How likely are you to make unplanned or impulsive purchases when shopping online?

Not at all 1 2 3 4 5 6 7 Extremely likely  
likelihood

How likely are you to buy items online that you don't truly need, but are interesting or appealing?

Not at all 1 2 3 4 5 6 7 Extremely likely  
likelihood

How frequently do you make unplanned or impulsive purchases when shopping online?

Not frequent at all 1 2 3 4 5 6 7 Extremely frequent

frequency



In which of the following situations are you most likely to make an impulsive purchase online? (Select all that apply)

- When I see a discount or promotion
- When I am feeling emotional (e.g., happy, stressed, or bored)
- When I have extra money to spend
- When I am bored and looking for something to do
- When I receive an advertisement or notification about a product
- Other

On average, how much time do you typically spend browsing before making a purchase? (Select the option that best describes your behavior)

- Less than 10 minutes
- 10 - 30 minutes
- 31 - 60 minutes
- Over 60 minutes

Do you set a budget for online shopping? (Select the option that best describes your behavior)

- Yes always
- Yes, sometimes
- no, never

IF yes, do you respect the limit set?

- Always
- Most of the time
- About half the time
- Sometimes
- Never

Please respond based on how much you agree or disagree, using a 7-point scale where 1 = Strongly Disagree and 7 = Strongly Agree.

I am responsible when it comes to how much I spend

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

I closely monitor my spending behaviour

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

I am often impulsive in my purchases, especially when I am feeling strong emotions.

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

I can resist buying things even if I am in a strong emotional state

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

I am able to resist temptation in order to achieve my budget goals

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

I refuse things that are bad for me.

Strongly disagree 1 2 3 4 5 6 Strongly agree 7

I...

Please answer the following questions about yourself.

What is your age?

What gender do you identify with?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

What is your nationality?

What is your level of education?

- Primary or Middle school
- High School Diploma or equivalent
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate
- Other

What is your current occupation?

- Employed full-time
- Employed part-time
- Student
- Self-employed
- Retired
- Unemployed
- Other