



CATÓLICA
LISBON
BUSINESS & ECONOMICS

The Effectiveness of FoMO and Scarcity Marketing on Impulsive Buying Tendencies

Leonor Rodrigues

Dissertation written under the supervision of Professor João Niza Braga

Dissertation submitted in partial fulfilment of requirements for the MSc in
Management with Specialization in Strategic Marketing, at the Universidade
Católica Portuguesa, 2025.

ABSTRACT

Title: The effectiveness of FoMO and Scarcity Marketing on Impulsive Buying Tendencies

Author: Leonor Rodrigues

Fear of Missing Out (FoMO) and scarcity are psychological tools that influence consumer behaviour, mainly in current digital contexts, where urgency-driven marketing strategies are prevalent.

This study explores the interplay between FoMO, scarcity, impulsive buying tendencies (IBT) and purchase likelihood, analysing IBT as a behavioural consequence of these emotional triggers. Using a sample of 143 participants, this research assesses how these factors influence decision-making processes. Four distinct stimuli with varying levels of FoMO and scarcity were developed to assess their impact on anxiety, urgency perceptions and impulsive behaviour.

The findings indicate that while FoMO and scarcity increase anxiety and urgency, they do not directly increase the tendency for impulsive buying. Furthermore, these factors presented no significant direct effects on consumer impulsive behaviour, suggesting that their effect is context-dependent and depends on individual characteristics.

These study challenged assumptions about the universal effects of FoMO and scarcity on impulsive purchases (Aggarwal et al., 2011; Good & Hyman, 2020). For businesses, these results highlight the importance of carefully implementing these cues, as excessive use may lead to customer reactance.

Based on this study's limitations, it is recommended for future research to explore cultural and psychological moderators in the relationship between FoMO, scarcity and consumer decision-making.

Keywords: FoMO, Scarcity, Impulsive Buying Tendencies, Anxiety, Urgency, Purchase Likelihood

SUMÁRIO

Título: A eficácia do Marketing de FoMO e Escassez em Tendências de Compra Impulsiva

Autor: Leonor Rodrigues

Fear of Missing Out (FoMO) e a escassez são ferramentas psicológicas que influenciam o comportamento do consumidor, especialmente em contextos digitais atuais, onde estratégias de marketing baseadas na urgência são comuns.

Este estudo investiga a relação entre FoMO, escassez, tendências de compras impulsivas (IBT) e probabilidade de compra, investigando IBT como consequência comportamental destes estímulos emocionais. Com uma amostra de 143 participantes, esta investigação avalia como estes fatores influenciam os processos de tomada de decisão. Foram criados quatro estímulos, com diferentes níveis de FoMO e escassez, para identificar o seu impacto na ansiedade, percepção de urgência, e comportamentos impulsivos.

Os resultados indicam que, embora FoMO e escassez aumentem ansiedade e urgência, estes não intensificam diretamente a tendência para compras impulsivas. Adicionalmente, estes fatores não apresentaram efeitos diretos significativos no comportamento impulsivo do consumidor, sugerindo que o seu efeito depende do contexto e de características individuais.

O estudo desafia pressupostos acerca do efeito universal de FoMO e escassez nas compras impulsivas (Aggarwal et al., 2011; Good & Hyman, 2020). Para empresas, destaca-se a importância de implementar cuidadosamente estas estratégias, pois o seu uso excessivo poderá gerar resistência dos consumidores.

Baseadas nas limitações deste estudo, recomenda-se que futuras investigações explorem moderadores culturais e psicológicos na relação entre FoMO, escassez e tomada de decisão do consumidor.

Palavras-chave: FoMO, Escassez, Tendência para Compras Impulsivas, Ansiedade, Urgência, Probabilidade de Compra

ACKNOWLEDGEMENTS

This dissertation is the result of five fulfilling years filled with challenges, unique experiences and amazing relationships. The immense support, guidance and encouragement I have received from many individuals, to whom I am deeply grateful, have supported me in this research journey.

First and foremost, I want to thank my advisor, João Niza Braga, for your guidance, constructive feedback and support throughout this research journey, which have been crucial in shaping this work.

I also want to express my appreciation to Católica School of Business and Economics for providing the best academic experience, where I was able to learn about the topics I fancied the most, and for providing me with amazing opportunities and experiences. A special thanks to my peers and friends for their encouragement throughout this journey, which has motivated me further to reach my academic objectives.

I am additionally grateful to all survey participants who contributed their time to respond to this study. Without your input, this research would not have been possible.

I would like to express my heartfelt gratitude to my partner, António Xavier, whose unwavering support, encouragement and belief in me have been invaluable throughout this journey. Your ability to motivate me has made all the difference, and, for that, I am truly grateful.

Lastly, to my family, especially my parents, a special thank you for your patience, love and motivation, which have been my pillars of strength not only in this phase but throughout the years. Your belief in my abilities has kept me going through the most challenging moments, and, for that, I am grateful.

This project is dedicated to everyone who has been part of this journey; thank you.

TABLE OF CONTENTS

ABSTRACT.....	ii
SUMÁRIO.....	iii
ACKNOWLEDGEMENTS.....	iv
TABLE OF CONTENTS.....	v
TABLE OF FIGURES.....	vii
TABLE OF TABLES.....	vii
GLOSSARY.....	vii
CHAPTER 1: INTRODUCTION.....	1
1.1. Background and Problem Statement.....	1
1.2. Aim and Scope.....	1
1.3. Research Methods.....	2
1.4. Relevance.....	2
1.5. Dissertation Outline.....	3
CHAPTER 2: LITERATURE REVIEW.....	4
2.1. Introduction.....	4
2.2. Social Media Marketing, FoMO and Scarcity.....	4
2.2.1. <i>Social Media Marketing</i>	4
2.2.2. <i>FoMO in Social Media Marketing</i>	5
2.2.3. <i>Scarcity in Social Media Marketing</i>	6
2.3. Anxiety and Urgency States in Consumer Behaviour.....	7
2.4. Impulse Buying Tendency.....	8
2.5. Purchase Likelihood.....	10
2.6. Conclusion and Hypothesis Developed.....	11
2.7. Conceptual Model.....	12
CHAPTER 3: METHODOLOGY.....	13
3.1. Participants.....	13
3.1.1. <i>Population of interest</i>	13
3.1.2. <i>Sampling strategy</i>	13
3.2. Research design.....	13
3.2.1. <i>Study design</i>	13
3.2.2. <i>Stimuli Development</i>	13
3.3. Research materials.....	15
3.3.1. <i>Independent Variables</i>	15
3.3.2. <i>Dependent Variables</i>	16
3.3.3. <i>Mediators</i>	16
3.3.4. <i>Control Variables</i>	17
3.4. Procedure.....	18
3.4.1. <i>Pre-Test</i>	18

3.4.2. Survey.....	18
3.5. Data Analysis.....	19
CHAPTER 4: RESULTS AND DISCUSSION.....	21
4.1. Data Preparation.....	21
4.2. Multicollinearity.....	21
4.3. Chi-Square Analysis.....	22
4.4. Sample Characterisation.....	22
4.5. Control Variables.....	23
4.6. Manipulation Checks.....	23
4.7. Hypotheses Testing.....	24
4.8. Discussion.....	30
CHAPTER 5: CONCLUSION AND LIMITATIONS.....	33
5.1. Main Findings and Conclusion.....	33
5.2. Academic Contributions.....	35
5.3. Managerial Contributions.....	36
5.4. Limitations and Future Research.....	37
5.4.1. Sample Size and Composition.....	37
5.4.2. Manipulation checks.....	37
5.4.3. External and Internal Factors.....	38
5.4.4. Future Research.....	38
REFERENCES.....	I
APPENDICES.....	VI
Appendix 1: Factor Analysis – Emotions.....	VI
Appendix 2: Factor Analysis – Perceptions.....	VI
Appendix 3: Survey.....	VII
Appendix 4: Chi-Square Analysis.....	XIV
Appendix 5: Linear regression – Control Variables.....	XV
Appendix 6: ANCOVA – Control Variables.....	XVI
Appendix 7: One sample t-tests – Manipulation Checks.....	XVII
Appendix 8: Independent sample t-tests – FoMO and IBT.....	XVIII
Appendix 9: Independent sample t-tests – Scarcity and IBT.....	XVIII
Appendix 10: Two-way ANOVA – FoMO, Scarcity and IBT.....	XVIII
Appendix 11: Two-way ANOVA – FoMO, Scarcity, Anxiety and IBT.....	XX
Appendix 12: Two-way ANOVA – FoMO, Scarcity, Urgency and IBT.....	XXI
Appendix 13: Oneway ANOVA – FoMO, Urgency and Anxiety.....	XXIII
Appendix 14: Oneway ANOVA – Scarcity, Urgency and Anxiety.....	XXIII
Appendix 15: Hayes’ PROCESS macro: Model 4 – FoMO, Scarcity, Urgency, Anxiety and IBT.....	XXIV
Appendix 16: Hayes’ PROCESS macro: Model 4 – FoMO, Scarcity, Urgency, Anxiety and Purchase Likelihood.....	XXVIII

TABLE OF FIGURES

Figure 1: Conceptual Model

Figure 2: FoMO and Scarcity Stimuli

Figure 3: FoMO Stimuli

Figure 4: Scarcity Stimuli

Figure 5: Control Stimuli

Figure 6: Chart of the Effects of FoMO and Scarcity on Urgency and Anxiety Levels

TABLE OF TABLES

Table 1: Total Observations

Table 2: Valid Responses

Table 3: Multicollinearity test (IBT as a dependent variable; ENTER Method)

Table 4: Descriptives from interaction effects - Urgency

Table 5: Descriptives from interaction effects - Anxiety

GLOSSARY

FoMO: Fear of Missing Out

IBT: Impulse Buying Tendency

IBB: Impulse Buying Behaviour

H: Hypothesis

M: Mean

SD: Standard Deviation

EFA: Exploratory Factor Analysis

CHAPTER 1: INTRODUCTION

1.1. Background and Problem Statement

The exponential demand for uniqueness and differentiation in consumption patterns has led individuals to value exclusive opportunities and limited offers, which has resulted in a substantial shift in consumer behaviour in recent years. External cues include the Fear of Missing Out (FoMO), defined by the anxiety associated with missing opportunities, which has grown to be a powerful marketing tool in influencing consumers' urgency, emotional responses and purchase intention. Similarly, scarcity strategies leverage limited product availability to drive consumer urgency and increase perceived exclusivity, therefore influencing purchasing decisions. Although existing studies have looked into these components individually, a knowledge gap remains about how they interact to influence purchasing intentions, emotional responses and impulsive tendencies. In addition, comprehending these interactions is essential for marketers seeking to implement effective strategies that increase consumer engagement and influence purchasing decisions.

Thus, the research questions of this study are the following:

Research Question 1: How do FoMO and scarcity-driven advertisements impact impulse buying tendencies?

Research Question 2: Do urgency and anxiety mediate the relationship between FoMO and scarcity cues and impulsive buying?

Research Question 3: How do FoMO and scarcity-driven advertisements impact purchase likelihood?

1.2. Aim and Scope

This dissertation seeks to explore the individual and interactive effects of FoMO and scarcity on customer emotions and their subsequent impact on purchase behaviour. Additionally, this research aims to study the role of emotions such as anxiety and urgency, in mediating the relationship between psychological triggers, FoMO and scarcity, and consumer behaviour.

The study adopts an experimental research method, including a quantitative analysis composed of an online survey, which was active for two weeks and involved 143 respondents, and employing statistical methods such as ANOVA, linear regressions and t-tests to help understand these relationships.

Although the study's primary focus is on FoMO as a psychological trigger of impulsive buying, scarcity is included due to its conceptual overlap in consumer decision-making. While both

phenomena evoke emotional reactions, they operate through distinct psychological mechanisms, while FoMO arises from the fear of social exclusion, scarcity influences perception of limited availability. By examining these constructs independently, this study aims to determine whether FoMO is more strongly associated with anxiety-driven impulsivity, while scarcity predominantly triggers urgency-based impulsive decision-making. Thus, treating them as distinct variables enables a more nuanced understanding of their respective impacts on consumer behaviour, contributing to a more refined theoretical framework.

1.3. Research Methods

To be able to answer the developed research questions, this study employs a quantitative research approach by collecting and analysing primary data through an online survey questionnaire targeting diverse groups of consumers. The study adopts an experimental approach to examine the differences in consumer responses depending on the effects of FoMO and scarcity conditions on impulsive buying tendencies and purchase likelihood, perceived urgency and anxiety. It uses experimental manipulation by randomly allocating participants to one of four distinct FoMO and scarcity scenarios, illustrated by stimuli featuring a smartwatch. The online survey will be distributed across social media platforms to ensure that participants are regular social media users from diverse generations and cultural backgrounds. It is anticipated that a target sample size of 200 participants will enable a significant statistical analysis. To evaluate the psychological and behavioural impacts of the experimental conditions, validated questions about participants' FoMO levels, IBT and purchase intent will also be asked, following exposure to social media advertisement stimuli.

It is worth noting that although a quantitative method ensures statistically measurable findings, it may present limitations in capturing deeper psychological motivations about consumer behaviour, thus overlooking unexpected behavioural patterns.

1.4. Relevance

This dissertation is particularly relevant to practical settings. While it contributes academically in extending knowledge on FoMO and scarcity's influence on consumer behaviour, the research's practical contribution provides actionable insights for marketers on leveraging psychological triggers, such as FoMO and scarcity, effectively, allowing them to optimise their advertising strategies and increase both consumer engagement and purchase likelihood. On the other hand, it also provides marketers with raised awareness of the psychological implications

of such marketing practices, such as aggravated consumer anxiety, promoting the adoption of more ethical marketing strategies and assisting consumers to make more informed decisions.

1.5. Dissertation Outline

This dissertation is composed of five chapters, each addressing a significant part of the research conducted.

The first chapter introduces the research topic, including the problem statement, research objectives and related questions. The text also discusses the research methodology used and the study's relevance in both academic and practical settings.

The second chapter of the study provides a comprehensive overview of existing research on FoMO, scarcity and consumer behaviour components, such as urgency, anxiety, purchase likelihood and impulsive buying tendencies in the context of social media. This analysis examines theoretical frameworks, prior findings, and existing gaps in the literature, highlighting the significance of this study.

Chapter three describes the methodological approach employed, detailing the population profile and sample size, descriptions of the research design and materials, procedures such as a pre-test and survey, and the data analysis methods applied. Additionally, the limitations of the selected methodology are addressed.

The fourth chapter discusses the study's results, including statistical analyses as ANOVA, t-tests and regression models. The findings are examined in relation to the analysed literature, with a focus on key behavioural patterns and their consequences.

The final chapter concludes this study by summarising the main findings, discussing their theoretical and practical implications, and acknowledging the study's limitations. In addition, recommendations for future research on this topic are provided based on the study's findings.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

Social media has permanently transformed advertising methods, providing brands with innovative tools to help them connect with customers in a personal way. Platforms, such as Instagram, with their engaging features, have promoted highly targeted and personalised advertising strategies that improve brand activation and directly influence consumer decisions. These strategies leverage naturally occurring psychological phenomena, such as fear of missing out (FoMO) and scarcity appeals, to shape consumer behaviour and drive decision-making.

2.2. Social Media Marketing, FoMO and Scarcity

2.2.1. Social Media Marketing

With the rise of social media usage, the impact of online advertising has grown significantly, especially on social networks such as Instagram. These platforms allow brands to connect with consumers through highly targeted advertising that seamlessly reaches social media users, fostering brand engagement and influencing customer purchasing decisions (Dinh et al., 2023; Singh et al., 2023). Advanced algorithms further analyse users' behaviour, allowing brands' sponsored content to reach potential buyers and enhance brand awareness and appeal through visually engaging and interactive advertisements.

In contrast to traditional media, social media platforms offer a seamless path for unplanned purchases due to direct product links and easy navigation, while increasing urgency with exclusive, time-limited offers (Dailey, 2004; Song et al., 2021).

Internal factors drive social media usage, with extensive usage often serving as a coping mechanism for boredom or to avoid unpleasant emotions, as it provides a safe environment for users to alleviate emotional frustrations (Przybylski et al., 2013). The instant gratification offered by social media browsing, because of negative emotions, reinforces impulsive buying tendencies to aid consumers in improving their mood (Verhagen & Dolen, 2011), whereas user-friendly navigation, visually appealing content, and other online purchase features reduce purchase barriers, further increasing the likelihood of impulsive behaviours (Zhao et al., 2022).

While frequent exposure to advertising is thought to heighten levels of FoMO, empirical evidence supporting this claim is limited. Although Neumann (2020) addresses the emotional effects of FoMO on customer behaviour, the study's theoretical nature does not establish a direct causal relationship between advertisement exposure and FoMO-driven buyer decisions. As a

result, the direct relationship between the two factors remains speculative and requires further empirical investigation.

Hussain et al. (2023), however, conducted a correlational study to demonstrate the link between fear of missing out (FoMO) and compulsive buying, which occurs when customers purchase unnecessary items (Granero et al., 2016). The study emphasised that elevated FoMO levels are positively associated with compulsive purchase behaviour. Assessed through measures of emotional responses and buying behaviours following social media exposure, the research's findings indicate that individuals experiencing high levels of FoMO often exhibit heightened emotional distress, including anxiety, which can, subsequently, impact consumer decision-making.

2.2.2. FoMO in Social Media Marketing

Fear of Missing Out (FoMO), particularly in social media advertising, considerably influences consumer behaviour. FoMO is defined by Przybylski et al. (2013) as "*a pervasive apprehension that others might be having rewarding experiences from which one is absent,*" and it is prevalent among younger generations, with men being the most affected (Qutishat & Abu Sharour, 2019).

FoMO cues, characterised by a "call to action" that influences consumers to act immediately so they don't miss out on a perceived opportunity (Hodkinson, 2016), are mainly designed to evoke urgency and anticipatory regret in consumers.

This phenomenon contributes to overall discontent by inducing negative emotional responses, such as anxiety, and, thereby, promoting consumerist behaviours. This statement is based on a study conducted by Hussain et al., (2023), where survey-based findings indicate that heightened levels of FoMO are associated with increased impulsive buying tendencies and compulsive purchasing patterns, mediated by the emotional distress resulting from perceived social exclusion.

Individuals affected by FoMO frequently perceive a great disparity between their current and potential life experiences, resulting in emotional and cognitive dissonance (Neumann, 2020). Neumann's (2020) study highlights, through the use of self-report measures, the emotional components of FoMO, with a focus on anxiety, envy and anticipatory regret, that are primarily driven by perceived social marginalisation. Moreover, FoMO's cognitive elements comprise counterfactual thinking, for example, imagining superior yet seemingly unachievable alternatives. While such emotional distress can encourage buyer compensation behaviours,

such as impulsive purchases, additional empirical research is required to establish a direct causal relationship between FoMO cues and purchase behaviour.

Nevertheless, according to the cognitive appraisal theory (Lazarus, 1991), after stimuli's cognitive evaluations, not only can specific emotions be triggered and impact consumer behaviour, but FoMO may also create expectant reactions pre-purchase, where individuals anticipate potential outcomes before events occur, or become regretful post-purchase, focusing on "*what could have been*" (Hodkinson, 2016). In addition, FoMO, as a source of anxiety (Neumann, 2020), may further contribute to impulsive tendencies, although further investigation is necessary to prove its direct impact on purchase behaviour.

2.2.3. Scarcity in Social Media Marketing

Scarcity, in comparison, aggravates FoMO feelings by emphasising limited availability to amplify urgency. While no direct empirical study confirms this causal relationship, research suggests that scarcity appeals heighten urgency perceptions, which could, theoretically, contribute to FoMO experiences.

Scarcity refers to a situation where something is difficult to find or obtain¹, and can, thus, imply an increase in demand and perceived value (Kowalczyk et al., 2021).

This phenomenon can be categorised into two types, as defined by Song et al. (2021): limited-quantity scarcity and limited-time scarcity. The first occurs when a product is scarce due to a restricted number of available units, enhancing perceived value and exclusivity, thus increasing purchase likelihood. The latter features a specific time frame where the product is available (e.g., flash sale), thereby triggering urgency and encouraging shoppers to immediately purchase products, to avoid missing out on the deal. This study, however, will focus on limited-quantity scarcity, as research suggests it to be more effective in influencing buying decisions and in increasing purchase intention (Aggarwal et al., 2011). Unlike FoMO, which is driven by a psychological fear of exclusion, scarcity operates through perceived limited availability, triggering customers to make urgency-based decisions. Moreover, although limited-time scarcity may apply elements of FoMO to evoke a feeling of loss, it is conceptually distinct as it does not rely on social comparison or peer influence. This study examines FoMO and scarcity as independent variables to evaluate their unique impacts on impulsive purchasing behaviour.

¹ Cambridge University Press. (n.d.). Scarcity. In Cambridge Dictionary. Retrieved February 20, 2025, from <https://dictionary.cambridge.org/dictionary/english/scarcity>.

Customers' reactions to scarcity may provoke negative emotional responses, since perceived choice constraints are found to trigger psychological resistance, heightening urgency and potentially encouraging impulsive behaviours (Brehm, 1966).

Cialdini's (1984) scarcity principle explains how customers' perceived scarcity increases product desirability, reinforcing the role of urgency-driven decision-making. However, despite the extensive research on scarcity's effect on purchase behaviour, most studies have only focused on its individual effect. This study thereby contributes by experimentally testing the combined influence of FoMO and scarcity on buying behaviours.

According to this analysis, the proposed hypotheses were the following:

Hypothesis 1: *“Exposure to FoMO-focused advertisements increases impulse buying tendencies, compared to control ads.”*

Hypothesis 2: *“Exposure to scarcity-driven advertisements increases impulse buying tendencies, compared to control ads.”*

Hypothesis 3: *“The combined effect of FoMO and scarcity cues increases impulsive buying tendencies more than either factor alone.”*

2.3. Anxiety and Urgency States in Consumer Behaviour

Earlier studies defend the role of emotions in shaping customer purchasing decisions and their impact on buyers' perceptions, as these shift throughout the purchasing process (Azizah et al., 2024; Verhagen & Dolen, 2011). Hence, while positive emotions are shown to drive the need for instant gratification, promoting consumers to overspend (Beatty & Ferrell, 1998; Iyer et al., 2020), negative emotions are more likely to encourage shopping as a coping mechanism, intending to alleviate stress and regulate such emotions (Cachón-Rodríguez et al., 2024).

Despite its multidimensional characterisation, FoMO is mainly composed of anxiety, urgency and anticipatory regret stemming from a perceived sense of social exclusion (Neumann, 2020; Przybylski et al., 2013).

Anxiety, often associated with uncertainty, plays a crucial role in impulsive consumer behaviour. This emotion, defined by the excessive worry felt in response to unpredictability (Cachón-Rodríguez et al., 2024), has been shown to heighten impulsive purchasing, to achieve emotional regulation. This conclusion is supported by research indicating that individuals experiencing heightened anxiety are more likely to engage in impulsive shopping to attain immediate relief from stress (Cachón-Rodríguez et al., 2024; Iyer et al., 2020).

Similarly, urgency, defined as the feeling of accomplishing something quickly², is highly associated with impulsive customer behaviour, particularly when marketing tactics leverage scarcity and FoMO cues, like limited-quantity offers and countdown timers (Billieux et al., 2010). Therefore, through experimental testing, urgency is expected to intensify purchase impulsivity by forcing immediate decision-making and reducing the likelihood of rational evaluation.

In the context of social media advertising, both FoMO and scarcity act as psychological triggers that induce both anxiety and urgency, encouraging fast and less deliberate decisions. Prior studies suggest that consumers with high levels of FoMO experience heightened anxiety (Hussain et al., 2023), making them more susceptible to online marketing techniques, specifically designed to amplify perceived urgency.

Since both anxiety and urgency influence impulsive behaviours, these are expected to mediate the relationship between FoMO, scarcity-driven advertising, impulsive consumer behaviour and purchase likelihood. This hypothesis is suggested by previous studies, which have identified a significant correlation between anxiety levels and impulsive buying tendencies, reinforcing its role as a mediator in purchase decisions (Cachón-Rodríguez et al., 2024; Iyer et al., 2020).

Consequently, we proposed the following hypotheses:

Hypothesis 4: *“Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and impulsive buying tendencies.”*

Hypothesis 5: *“Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and purchase likelihood.”*

2.4. Impulse Buying Tendency

Impulse Buying Behaviour (IBB) is a global phenomenon characterised by consumers’ strong and immediate urge to purchase, often driven either by situational factors or the need to achieve emotional regulation (Cachón-Rodríguez et al., 2024). This behaviour arises from spontaneous individual needs, visual stimuli, or a low capacity to critically evaluate purchase benefits (Rodrigues et al., 2021). At the core of IBB is Impulse Buying Tendency (IBT), an individual trait that indicates consumers’ inclination to engage in unplanned, immediate, and thoughtless purchases (Badgaiyan et al., 2016; Beatty & Ferrell, 1998; Rook & Fisher, 1995). Thus, impulse

² Arimetrics. (n.d.). Sense of urgency. In Digital Glossary. Retrieved February 20, 2025, from <https://www.arimetrics.com/en/digital-glossary/sense-of-urgency>

purchasing represents a complex interaction between individual traits, personal motivations, and external marketing cues (Iyer et al., 2020).

Due to its multifaceted nature and reciprocal predictive factors, the relationship between impulsive tendencies and emotional states has been extensively studied. Beatty & Ferrell (1998)'s study distinguishes urges to buy from the act of purchasing, as impulsive desires precede such actions. Nevertheless, this research, although concerning in-store environments, suggests, through interviews conducted, that individuals with higher IBT levels experience stronger buying urges, making them more sensitive to external marketing stimuli that trigger impulsive behaviours. This theory is further supported by Rook (1987)'s definition of impulse buying as a "*sudden, often powerful and persistent urge to buy something immediately,*", highlighting the short time existing between emotional responses and purchasing decisions.

Moreover, impulsive buyers exhibit higher levels of anxiety, depression and overall negative mood (Rodrigues et al., 2021), reinforcing the role of emotional vulnerability in impulsive decision-making. Anxiety, as previously discussed, acts as a self-regulatory trigger for impulse buying by offering temporary emotional relief (Cachón-Rodríguez et al., 2024). Based on these studies, we can speculate that, because of the interplay between anxiety, urgency and impulsive tendencies, individuals with heightened IBT, in response to emotional states, may be more responsive to FoMO and scarcity-driven marketing tactics.

Individuals with greater levels of IBT are also more susceptible to short-sighted purchases that provide instant gratification (Rook, 1987). This behaviour is often linked with marketing stimuli designed specifically to trigger impulsive behaviours (Dawson & Kim, 2009). Moreover, self-control has been shown to play an important role in moderating impulsive tendencies. Badgaiyan et al. (2016)'s study shows that those with strong self-control make more careful decisions and are less vulnerable to short-term temptations. In contrast, a lack of self-regulation heightens the impact of external stimuli on impulsive behaviour (Verplanken & Sato, 2011).

The interplay between internal and external cues is at the core of understanding this phenomenon.

Rook & Fisher (1995) state that external stimuli (e.g., promotional campaigns) play a significant role in triggering impulsive buying. These are specifically designed to attract consumers and elicit their immediate action through promotional offers or exclusive deals (Dailey, 2004; Dawson & Kim, 2009). Furthermore, such stimuli lower consumers' cognitive control and encourage emotionally driven responses (Lo et al., 2016).

Iyer et al. (2020) categorise the drivers of IBB as individual traits, motives, and marketing influences. Psychological factors, such as sensation-seeking, heightened impulsive behaviour tendencies, directly impacting consumer behaviour; Hedonic motivations, mainly focused on seeking pleasure, have a significant role in this context as consumers motivated by hedonic rewards often pursue immediate gratification to reach positive emotional states throughout shopping (Horváth & Adıgüzel, 2018). These motivations have a deep influence on impulsive decisions, as they focus on sensorial factors that reduce cognitive self-control and emphasise affective arousal (Lee et al., 2023); Marketing drivers, which further enhance impulsive tendencies by developing stimuli that appeal to consumers' needs for novelty, variety, and surprise. These marketing strategies are purposefully designed to increase brand engagement and drive unplanned purchases (Dailey, 2004; Iyer et al., 2020).

As for external stimuli, as previously mentioned, since social media networks provide seamless navigation and simplified purchasing processes, these platforms are ideal for amplifying impulsive behaviour (Dailey, 2004; Song et al., 2021). In addition, they also allow consumers to be engaged for long periods due to continuous exposure to content, simplifying decision-making through the lowering of cognitive barriers to purchase, and triggering emotional and cognitive responses (Verhagen & Dolen, 2011).

Nevertheless, it is important to reference the Stimulus-Organism-Response (SOR) framework (Mehrabian & Russell, 1974; Prashar et al., 2017). This establishes a theoretical foundation for understanding consumer behaviour, including IBT, as it explains how external stimuli (e.g., scarcity marketing methods) elicit internal emotional and cognitive responses, consequently influencing customers' purchasing behaviour (Chan et al., 2017).

Lastly, it has been observed that customers' impulsive buying behaviour is influenced by urgency-driven marketing strategies, such as limited-time and limited-quantity offers (Song et al., 2021). Although urgency presents a key role in impulsive behaviours, additional analysis is required to examine how FoMO amplifies this effect.

2.5. Purchase Likelihood

Given the strong connection between emotions and buying behaviours, purchase likelihood is expected to be influenced by FoMO, scarcity, urgency and anxiety.

By measuring how individuals responded to availability cues, Song et al. (2021) exhibited that scarcity cues, limited-quantity offers in particular, increased perceived demand, consequently increasing willingness to purchase. In addition, Good & Hyman (2020), through self-reported

responses, highlight that FoMO, triggered by marketing appeals, is strongly correlated with purchase likelihood.

These studies both present FoMO and scarcity cues in advertising to directly influence purchase likelihood. Furthermore, these findings show that stronger purchase intent raises customers' urgency perceptions and anxiety levels, increasing the probability of engaging in impulsive purchasing.

2.6. Conclusion and Hypothesis Developed

The reviewed literature highlights the extensive role of social media advertising, FoMO, scarcity, and emotional states on impulsive buying tendencies and purchase intent. This analysis shows that not only does social media advertising foster brand engagement and significantly reduce purchase barriers, but it also increases impulsive purchases through visually appealing content, seamless purchase processes, and promotional campaigns (Dawson & Kim, 2009; Zhao et al., 2022). However, empirical evidence of the direct relationship between advertising exposure and FoMO-driven purchasing decisions remains scarce.

FoMO, a psychological phenomenon associated with anxiety, urgency and fears of social exclusion, has been connected to excessive consumerism, amplified anticipatory regret and impulsive consumer behaviour (Hussain et al., 2023; Neumann, 2020). Whereas scarcity heightens these effects by provoking urgency sensations through limited-time and limited-quantity marketing appeals, consequently increasing purchase intentions due to enhanced perceived value (Cialdini, 1984; Kowalczyk et al., 2021; Song et al., 2021). However, despite extensive research on these phenomena individually, limited studies have examined their combined effect, particularly concerning digital advertising settings.

Moreover, research on emotional mediators in consumer behaviour supports the idea that emotions, as anxiety and urgency, drive impulsive buying tendencies (Cachón-Rodríguez et al., 2024; Iyer et al., 2020). Nonetheless, experimental studies testing urgency and anxiety as mediators between FoMO, scarcity, impulsive buying and purchase likelihood remain scarce.

In addition, existing literature primarily relies on survey-based correlational studies, leaving a great methodological gap in experimentally manipulated FoMO and scarcity conditions to assess their causal impact on impulsive buying tendencies.

While previous studies have established correlations among these variables, a lack of experimental validation presents a critical gap in understanding how FoMO and scarcity impact consumer behaviour in real-world decision-making processes. Therefore, this study seeks to

address this by employing an experimental design that manipulates marketing cues to examine their direct and indirect impact on impulsive buying tendencies. This approach will, thus, allow a more thorough and causal understanding of the interaction between these variables, contributing to both academic research and marketing practices.

Built on the identified gaps, this study proposes the following hypothesis:

Hypothesis 1: “Exposure to FoMO-focused advertisements increases impulse buying tendencies, compared to control ads.”

Hypothesis 2: “Exposure to scarcity-driven advertisements increases impulse buying tendencies, compared to control ads.”

Hypothesis 3: “The combined effect of FoMO and scarcity cues increases impulsive buying tendencies more than either factor alone.”

Hypothesis 4: “Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and impulsive buying tendencies.”

Hypothesis 5: “Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and purchase likelihood.”

2.7. Conceptual Model

Thus, the conceptual model is presented as follows:

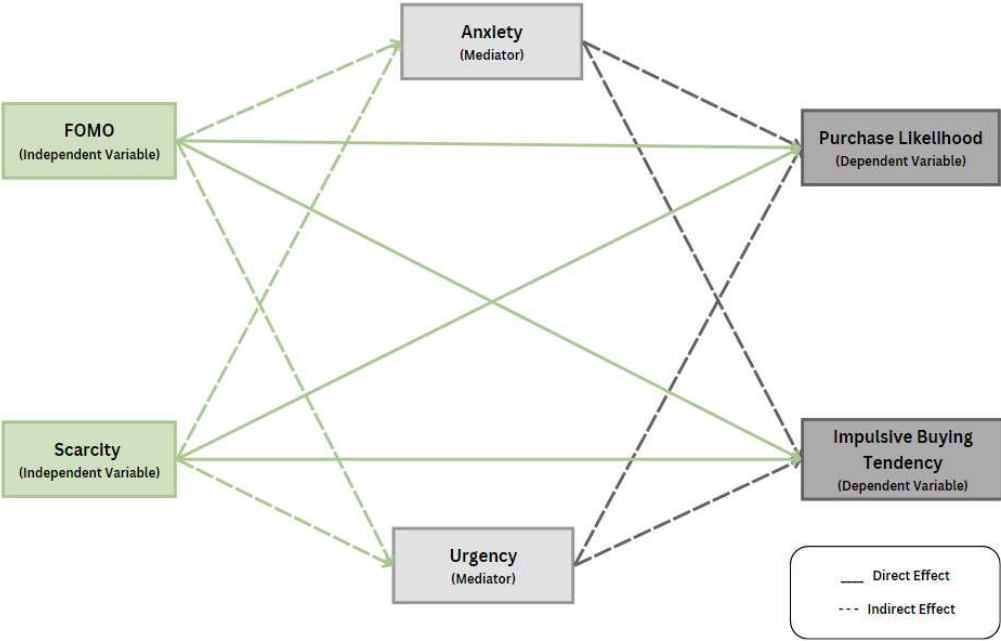


Figure 1: Conceptual Model

CHAPTER 3: METHODOLOGY

3.1. Participants

3.1.1. Population of interest

For this study, the population of interest consists of Portuguese individuals who frequently use social media platforms and are potential targets of marketing stimuli leveraging FoMO and scarcity tactics. Furthermore, the study focuses on young adults, with ages ranging from 18 to mid-30s, who spend a considerable amount of their day on social media, therefore becoming more likely to engage in online shopping and be susceptible to digital advertising.

The sample for this study consists of 143 participants, presenting a diverse universe concerning age, gender and education levels. While age presents a high concentration in older demographics, gender and other demographic factors were considered to ensure such diversity.

3.1.2. Sampling strategy

This research uses a convenience sampling method to recruit participants. The selection process was based on accessibility, allowing efficient data collection through an online survey, which was strategically posted on social media platforms, increasing exposure to regular social media users.

3.2. Research design

3.2.1. Study design

For this study, a quantitative experimental research design was implemented. This allowed the manipulation of independent variables and assessment of their direct and indirect effects on consumer behaviour. For this, an experimental between-subjects design was adopted, to avoid bias after exposure to other stimuli. This included a 2 (FoMO: FoMO message vs. Control message) x 2 (Scarcity: Scarcity message vs. No Scarcity message) model.

3.2.2. Stimuli Development

This study includes four stimuli, randomly assigned to participants, that aim to generate responses in participants' behaviours and perceptions. For this, four Instagram advertisements focused on a made-up smartwatch brand, "*FINDSOM*" (inspired by the word *opfindsom*, pronounced /ɔb'fɛn'sɑm/, meaning inventive in Danish), were developed. These present different messages across conditions, either highlighting popularity and scarcity or presenting a neutral message. The scenarios presented were, therefore, the following:

- High FoMO and Scarcity (Figure 2): “DON’T MISS OUT!; The must have item that everybody is talking about!; Make it yours before it is too late” with “Only 5 units left”
- High FoMO and No Scarcity (Figure 3): “DON’T MISS OUT!; The must have item that everybody is talking about!; Make it yours before it is too late”
- Low FoMO and Scarcity (Figure 4): “Your health, elevated.; Discover the latest in wearable technology” with “Only 5 units left”
- Low FoMO and No Scarcity (Figure 5): “Your health, elevated.; Discover the latest in wearable technology”



Figure 2: FoMO and Scarcity Stimuli

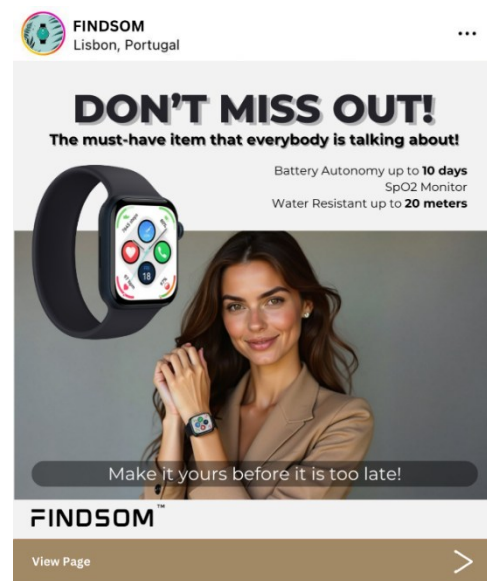


Figure 3: FoMO Stimuli

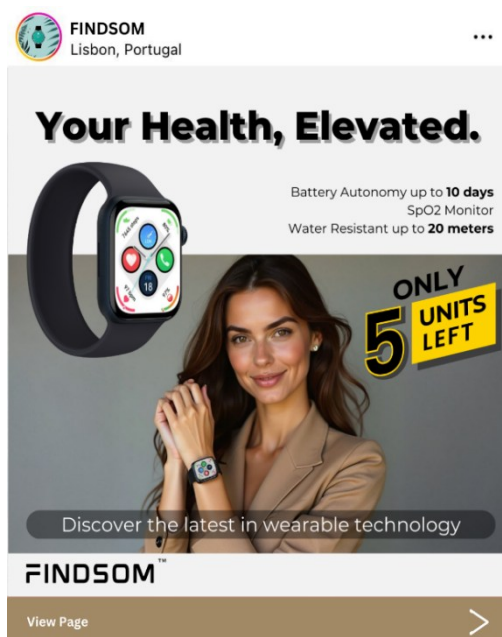


Figure 4: Scarcity Stimuli

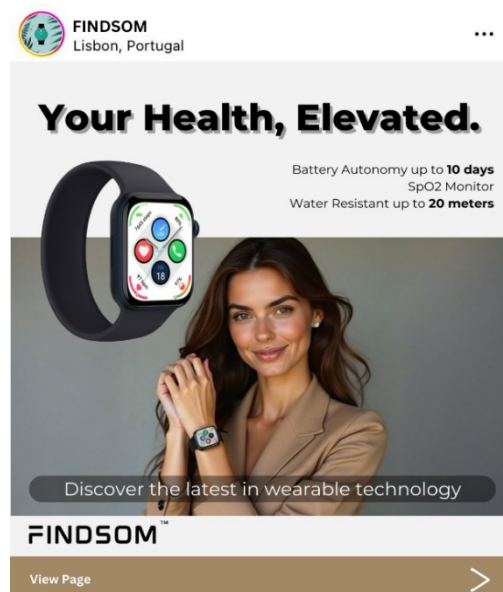


Figure 5: Control Stimuli

These advertisements were then developed using Canva software. Moreover, to achieve homogeneity throughout the stimuli, only the messaging of the post changed, based on the condition; the model, product, and layout remained uniform.

A pre-test to examine participants' reactions to the advertisements was conducted through 5 interviews. These interviews presented relevant feedback to ensure that the stimuli were perceived as reliable, by participants, and evoked the desired emotions.

3.3. Research materials

The survey used itemised rating scales, mainly Likert scales, to measure participants' responses and insights. These ensured consistency in data collection and allowed reliable comparisons across experimental conditions. Additionally, manipulation checks, self-report scales and behavioural measures were used to ensure meaningful result interpretation.

3.3.1. Independent Variables

For this study, two independent variables were manipulated: Fear of Missing Out (FoMO) (High FoMO vs. Low FoMO) and Scarcity (Present Scarcity vs. Absent Scarcity). The FoMO condition was designed to evoke a sense of urgency and social pressure by incorporating persuasive messaging into the advertising stimuli. Participants in the high-FoMO condition were exposed to messages highlighting time-sensitive popularity, such as *“Don't miss out!”*. In contrast, the low FoMO condition presented a neutral tone message, such as *“Your health elevated.”*, lacking urgency cues.

To confirm the effectiveness of this manipulation, a manipulation check was conducted using a five-item scale (1 = Not at all true to 5 = Extremely true), adapted from Zhang et al., (2020). Participants rated their agreement with the following statements: *“I feel regretful when I miss events or opportunities.”*; *I feel anxious when I miss an event because I know something important or fun might happen.”*; *“I feel disappointed when I can't participate in events due to other commitments.”*; *I feel like I don't fit in my social groups when I miss events or opportunities.”*; *“I feel less included in my social groups when I miss opportunities.”*. This scale presented high reliability (Cronbach $\alpha = 0.831$).

The scarcity condition was manipulated by altering product availability cues in the advertisement. The present scarcity condition presented messages indicating limited stock, such as *“Only 5 units left”*, while the absent scarcity condition omitted any mentions of availability.

To verify the effectiveness of this manipulation, a manipulation check was conducted using a five-item scale (1 = Not at all to 5 = Extremely). Participants rated their agreement with the following statements: “*How limited did you perceive the smartwatch availability?*”; “*How much did the limited stock message make you feel the need to act quickly?*”; “*How desirable did you find the smartwatch after seeing that only a few units are left?*”. This scale presented mild reliability (Cronbach $\alpha = 0.479$).

3.3.2. Dependent Variables

This study focused on two dependent variables: Impulsive buying tendency (IBT) and Purchase Likelihood.

The first variable was assessed, to achieve a comprehensive understanding of this consumer behaviour, using a self-report state measure. For this, a scale adapted from Badgaiyan et al. (2016) was used, including five out of the eleven original statements. For this, participants indicated their agreement, on a five-point scale (1 = Strongly disagree to 5 = Strongly agree) with the following statements: “*Most of my purchases are planned in advance.*” (R)³; “*Before I buy something, I carefully consider whether I need it.*” (R)³; “*I often buy without thinking.*”; “*I buy what I like without thinking about consequences.*”; “*I buy products according to how I feel at the moment*”. This scale presented high reliability (Cronbach $\alpha = 0.748$).

In addition, purchase likelihood was measured by asking participants their purchase intention after advertisement exposure, on a five-item scale (1 = Not likely at all to 5 = Extremely likely), asking, “*At this moment, how likely are you to purchase FINDSOM’s smartwatch?*”.

3.3.3. Mediators

Emotional states were assessed as mediators to explore their role in the relationship between the independent and dependent variables. After exposure to the advertising, participants rated their emotional intensity, using a five-point scale (1 = Not at all to 5 = Very much) across the following emotions: *Happiness, Surprise, Sadness, Anger, Embarrassment, Guilt, Anxiety and Fear*. This scale was adapted from the Differential Emotions Scale (Izard & Carol E., 1982), providing a detailed framework for analysing positive and negative emotional responses.

To further establish the emotional dimensions, an exploratory factor analysis (EFA) was conducted (*Appendix 1*). This analysis revealed three clusters that explained the most variance

³ (R): Reverse-Coded Items

in the collected data. The aggregated emotions were Cluster 1 – Anxiety Emotions (Anxiety, Guilt and Fear), (*Cronbach α = 0.692*); Cluster 2 – Negative Emotions (Anger and Sadness), (*Cronbach α = 0.665*); Cluster 3 – Social Oriented Emotions (Surprise and Embarrassment), (*Cronbach α = 0.279*).

Due to its poor scale reliability, Cluster 3 was removed from the analysis. The first two clusters were kept to explore their impact on impulsive buying tendencies, mainly Cluster 1 - Anxiety Emotions to be explored as a main driver. In addition, due to the use of standardized factor scores in the EFA, some results presented negative means, indicating below-average results in comparison to the sample mean.

In addition, urgency was assessed as a potential mediator linking FoMO and scarcity to IBT. Participants rated, on a five-point scale (1 = Not at all to 5 = Very much), their perceptions of the advertisement's attributes, including *Attractiveness, Engagement, Memorability, Urgency, Trustworthiness and Exclusivity*. An exploratory factor analysis (EFA) (*Appendix 2*) revealed, unexpectedly, that all attributes loaded onto a single factor, suggesting high intercorrelation among different constructs and, therefore, that there was no need to treat them as separate variables. This result raised concerns about whether participants were differentiating between characteristics or if they were rating them similarly. Furthermore, the scale exhibited high internal consistency (*Cronbach α = 0.828*), which, rather than indicating reliability, indicates that the variables are not measuring distinct psychological constructs, as initially intended. The result suggests a potential response bias, where participants might have provided similar ratings across attributes, instead of distinguishing characteristics.

3.3.4. Control Variables

To account for external factors influencing consumer behaviour, we collected data on social media usage and self-control traits' data. Social media usage was measured through self-reported daily usage, on a scale with hourly intervals from "0 to 1 hour" to "More than 7 hours".

Self-control traits were assessed using an adaptation of the Self-Control Scales (Pechorro et al., 2021; Tangney et al., 2004). Participants rated their agreement with the following statements: "I often act without thinking through the consequences." (R)*⁴; "I keep everything neat."; "I have trouble saying no." (R)*⁴; "I spend too much money." (R)*⁴, on a five-point scale (1 =

⁴ (R): Reverse-Coded Items

Strongly Disagree to 5 = Strongly Agree). However, this scale exhibited medium reliability (*Cronbach α = 0.441*), which could be explained by the statements' selection from the original scales.

Demographic variables were also analysed to examine if specific subgroups showed higher susceptibility to FoMO and scarcity cues, as well as to confirm previous research suggesting that FoMO is more prevalent among younger individuals, mainly males (Qutishat & Abu Sharour, 2019). Accordingly, participant data on age, gender, education level and occupation were included in the analysis.

3.4. Procedure

3.4.1. Pre-Test

To check consistency throughout the study and to assist the development of the survey, short interviews were conducted with four individuals to better understand consumers' perceptions of FoMO and Scarcity, as well as to gather feedback on the stimuli presented in the study. For this, a within-subjects design was adopted, exposing interviewees to the four stimuli. The process resulted in valuable insights related to how the participants rated advertisements based on their layout or colours, sometimes not even paying attention to the message. Furthermore, due to the within-subjects model, some limitations were unveiled, as it led participants to compare advertisements, disregarding the aim of the interview.

3.4.2. Survey

An online survey was developed in Qualtrics XM (*Appendix 3*), a data-collecting software and distributed on online platforms, such as Instagram and LinkedIn. Before launching, a pilot test, including five participants, was conducted to ensure the satisfactory performance of the questionnaire.

Participants were randomly assigned to one of four conditions, presenting either *High FoMO* or *Low FoMO*; and *Scarcity* or *No Scarcity*. The assignment of conditions to participants was developed using Qualtrics XM's Randomizer tool, which provided individuals with the same probability of being assigned to each condition.

To ensure demographic diversification, the survey presented an English and Portuguese version, manually translated to ensure homogeneous comprehension and survey validity.

The survey introduced the study, ensuring anonymity and voluntary participation, while highlighting that the responses would be analysed for academic purposes concerning consumer behaviour to social media advertising, improving the likelihood of participants providing answers as truthful as possible, reducing response bias. Moreover, the duration of the questionnaire, of 5 to 6 minutes, was disclosed before participation.

Participants were then exposed, as previously mentioned, to one of four potential Instagram advertisements, varying on the condition assigned.

Participants were then asked to evaluate the advertisement's attractiveness, engagement, memorability, urgency, trustworthiness, and exclusiveness.

Afterwards, participants were asked to imagine themselves in a situation of indifference towards the smartwatch as a product, to reduce bias provoked by personal interests, while picturing they encountered the ad on their social media feeds. At the same time, they were asked if they would buy the showcased product at that moment, and their satisfaction level if they purchased it.

We then asked participants to rate the intensity of specific emotions felt by them after exposure to the stimulus. Afterwards, participants were asked to rate their individual tendencies to engage in impulsive purchases.

Lastly, questions concerning demographics, average social media usage and self-control traits were presented.

3.5. Data Analysis

Before analysing the results, the gathered data will be prepared. Consequently, the dataset will be checked for missing data or preview responses, corresponding to test responses before the survey was launched. To proceed with the data analysis, we will use the statistical software IBM SPSS Statistics (Version 30.0.0.0).

For this data analysis, we will first perform linear regressions to assess the direct effects of self-control and social media usage on IBT. Then an ANCOVA analysis to examine whether the control variables moderate the effects of FoMO and scarcity conditions, by treating them as covariates.

Afterwards, an ANOVA analysis will be conducted to explore the effects of FoMO and scarcity conditions on IBT and purchase likelihood. A two-way ANOVA will also be used to assess both

the individual and interaction effects between conditions. Additionally, partial eta-squared results will also be examined to measure effect sizes.

Furthermore, independent samples t-tests will be used to compare IBT scores between high and low FoMO conditions, and between scarcity and no scarcity conditions. These will assist in evaluating if individuals exposed to scarcity and FoMO-driven advertisements exhibit significantly different levels of IBT.

Lastly, to conclude the analyses, Hayes' PROCESS macro (model 4) will be used to test mediation effects of emotions between FoMO and scarcity effect on IBT and on purchase likelihood.

CHAPTER 4: RESULTS AND DISCUSSION

4.1. Data Preparation

At the survey's closing, we presented 159 responses. However, before proceeding with statistical analyses, the dataset was carefully processed to ensure its integrity and suitability for testing the proposed research hypothesis.

Responses were first reviewed for completeness. Participants with significant portions of missing data were immediately excluded to maintain the reliability of the dataset.

Additionally, responses flagged as previews were identified and excluded from the dataset to ensure that only participants' responses were retained, as these corresponded to a pre-test to ensure the smooth working of the survey.

Initial Responses	159
Preview	6
Not Started	4
Total Responses	149

Table 1: Total Observations

Participants were randomly assigned to the different experimental conditions, including High FoMO*Present Scarcity (FoMO*Scarcity), FoMO*Absent Scarcity (FoMO), Low FoMO*Present Scarcity (Scarcity) and Low FoMO*Absent Scarcity (Control). This assignment process was verified to ensure an even and unbiased distribution across conditions. Lastly, incomplete responses were removed, particularly responses that lacked answers to key variables, FoMO, scarcity and IBT.

After filtering out non-valid entries, the final dataset consisted of 143 valid responses, which were used for the statistical analysis.

	Conditions				Total
	FoMO * Scarcity	FoMO	Scarcity	Control	
Total Responses	37	37	33	42	149
Incomplete Responses	3	0	2	1	6
Valid Responses	34	37	31	41	143

Table 2: Valid Responses

4.2. Multicollinearity

To ensure the independence of predictor variables, multicollinearity was studied in the regression models. Overall, the Variance Inflation Factor (VIF) and Tolerance values presented

are below concern, with VIF and Tolerance values close to 1.000, suggesting no significant multicollinearity among predictors.

Additionally, the Condition Index (CI) was reviewed as a supplementary measure. These values all presented to be lower than 3.050, falling below the threshold for collinearity concern ($CI > 30$).

Lastly, Eigenvalues presented low values, indicating weak unique variance in those dimensions. However, due to no variables with high variance proportions (> 0.50) in the same dimension, we can conclude that there is no multicollinearity in these models.

	FoMO_SCALE	SCAR_SCALE	ANXIETY_EMOTIONS
VIF	1.000	1.000	1.000
Eugen	0.086	0.057	1.000
Tolerance	1.000	1.000	1.000
CI	4.723	5.843	1.000

Table 3: Multicollinearity test (IBT as a dependent variable; ENTER Method)

4.3. Chi-Square Analysis

To analyse the relationships between categorical variables, a Chi-Square test of independence was conducted to examine if FoMo and scarcity conditions were evenly distributed among participants (*Appendix 4*).

For this, a randomisation check was conducted between FoMo and scarcity conditions to verify if these were evenly distributed among participants. This revealed non-significant results ($p > 0.05$), confirming that the random assignment of conditions was successful, ensuring that outcomes are not due to pre-existing differences across groups.

4.4. Sample Characterisation

Concerning the sample's characterisation, participants presented an average age of 41 years old ($SD = 16.51$), and the sample was mainly composed of female individuals (66.4%), with 5 respondents preferring not to answer when asked about their gender. As for occupation, more than half of the participants were employed full-time (57.3%), followed by students (19.6%), working students (7%), other (5.6%), retired (4.9%), unemployed (3.5%) and, lastly, employed part-time (2.1%). For education, the majority presented a bachelor's degree (55.9%). Additionally, 82.5% chose to answer the survey in Portuguese.

Furthermore, crosstabs and chi-square tests were conducted between demographic variables age and gender and IBT. This presented no statistically significant associations between IBT and the demographic variables of age, Cramer's $V = 0.661$, and gender, Cramer's $V = 0.735$. These results contrasted with Qutishat & Abu Sharour (2019)'s findings, stating that IBT was mainly felt among males in younger generations.

4.5. Control Variables

A multiple linear regression analysis (*Appendix 5*) was conducted to determine the independent effects of social media usage and self-control, along with FoMO and scarcity conditions, on impulse buying tendencies (IBT). This analysis intended to assess whether the control variables directly influenced IBT.

The model was statistically significant, $F(4,138) = 13.650$, $p < 0.001$, and accounted for 28.3% of IBT's variance ($R^2 = 0.283$), indicating a moderate explanatory power. Among the predictors, self-control showcased a strong and statistically significant predictive relationship to IBT ($\beta = -0.500$, $p < 0.001$). The negative coefficient ($r = -0.527$) suggests that individuals with higher self-control levels exhibit lower impulsive buying tendencies, complementing previous research theories (Tangney et al., 2004). On the other hand, social media usage did not significantly predict IBT ($\beta = 0.061$, $p > 0.05$), meaning that, although social media has been linked to consumer behaviour in prior research, it did not show a direct influence on impulsive buying tendencies in this study.

Afterwards, to test if the control variables moderated the effects of the independent variables, an ANCOVA analysis was conducted (*Appendix 6*), treating self-control and social media usage as covariates. The model was statistically significant, $F(6, 136) = 9.247$, $p < 0.001$, explaining 29% of IBT's variance ($R^2 = 0.290$). However, the interaction effects did not present significant results, with every interaction presenting p-values superior to 0.05.

These results suggest that neither self-control nor social media usage moderates the effects of FoMO and scarcity on IBT. While self-control remains a key predictor of IBT at an individual level, its effect does not significantly vary across FoMO and scarcity conditions. Similarly, social media usage does not significantly interact with the conditions or influence IBT levels.

4.6. Manipulation Checks

Manipulation checks were conducted to validate the effectiveness of the experimental stimuli. One-sample t-tests (*Appendix 7*) were performed to compare participants' scores against the midpoint of the scale of three, corresponding to the neutral perception of the stimuli. In these,

the scarcity manipulation showed that participants scored values significantly below the midpoint, ($M=2.15$, $SD=0.76$, $t(63) = -8.96$, $p < 0.001$, Cohen's $d = -1.12$), suggesting that the manipulation of these variables was not successful. Similarly, FoMO manipulation showed that participants also perceived lower levels of FoMO ($M=1.65$, $SD=0.52$, $t(70) = -21.67$, $p < 0.001$, Cohen's $d = -2.57$). These results translate into the poor performance of the designed stimuli, which did not effectively lead to the intended psychological responses of participants.

4.7. Hypotheses Testing

H1: "Exposure to FoMO-focused advertisements leads to higher impulse buying tendencies, compared to control ads."

$$H_0: \mu_{IBT, Low\ FoMO, No\ Scarcity} = \mu_{IBT, High\ FoMO, No\ Scarcity}$$

To compare IBT scores between high and low FoMO conditions, an independent samples t-test was conducted (*Appendix 8*). Levene's test for equality of variances presented non-significant results, $p = 0.690$, indicating variances homogeneity. The results from the t-test indicated no significant difference in IBT scores between the control condition (*Low FoMO, Absent Scarcity*) ($M=2.22$, $SD=0.80$) and the High FoMO condition (*High FoMO, Absent Scarcity*) ($M=2.28$, $SD=0.77$), $t(76) = -0.315$, $p = 0.753$. These results indicate that exposure to FoMO advertisements does not significantly impact IBT. The effect size (Cohen's $d = -0.072$) suggests that any potential effect is likely insignificant.

Thus, we are unable to support the first hypothesis.

H2: "Exposure to scarcity-driven advertisements increases impulse buying tendencies, compared to control ads."

$$H_0: \mu_{IBT, Low\ FoMO, No\ Scarcity} = \mu_{IBT, Low\ FoMO, Scarcity}$$

The comparison of IBT scores between scarcity and no scarcity conditions was made using an independent samples t-test (*Appendix 9*). Levene's test for equality of variances presented non-significant results, $p=0.058$, indicating variances homogeneity. The t-test indicated no significant difference in IBT scores between the control condition (*Low FoMO, Absent Scarcity*) ($M=2.22$, $SD=0.80$) and the present scarcity condition (*Low FoMO, Present Scarcity*) ($M=2.12$, $SD=0.68$), $t(70)=0.542$, $p=0.589$.

It is worth mentioning that while scarcity did not significantly increase IBT ($p = 0.058$), the result was marginally above the significance threshold (p -value = 0.05). However, the small effect size (Cohen's $d = 0.129$) suggests that any potential impact of scarcity on IBT is minimal. With this, we do not have sufficient evidence to support this hypothesis.

H3: “The combined effect of FoMO and scarcity cues increases impulsive buying tendencies than either factor alone.”

$$\mathbf{H_0: } \mu_{\text{IBT, FoMO}} = \mu_{\text{IBT, Scarcity}} = \mu_{\text{IBT, FoMO+Scarcity}}$$

To analyse whether FoMO and scarcity cues influenced impulsive buying tendencies, a two-way ANOVA (*Appendix 10*) was conducted with FoMO conditions (*Low vs. High*) and scarcity conditions (*Absent vs. Present*) as independent factors. The assumption of this analysis was verified through Levene’s test of homogeneity of variances, indicating no significant violation of homogeneity, $F(3,139) = 1.236, p = 0.299$.

Descriptive statistics presented varied results across conditions, with high FoMO and scarcity present ($M=2.33, SD=0.82$) presenting the highest observed IBT mean, compared to high FoMO and scarcity absent ($M=2.28, SD=0.77$), low FoMO and scarcity present ($M=2.12, SD=0.68$) and low FoMO and scarcity absent ($M=2.22, SD=0.80$).

Despite these results, the statistical between-subjects effects did not reveal significant differences among conditions. This analysis presented no substantial main effect of FoMO on IBT, $F(1,139) = 1.024, p = 0.313, \text{Partial Eta-Squared} = 0.007$; as well as scarcity on IBT, $F(1,139) < 1, \text{Partial Eta-Squared} = 0$.

Furthermore, the interaction between FoMO and scarcity conditions was also not statistically significant, $F(1,139) < 1, \text{Partial Eta-Squared} = 0.002$. These results indicate that, although the descriptive statistics of the combined conditions present higher impulsive buying tendencies, the observed difference could not be statistically confirmed as higher than either factor alone.

Therefore, we reject the third hypothesis.

H4: “Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and impulsive buying tendencies.”

$$\mathbf{H_0: } \mu_{\text{Urgency, Control}} = \mu_{\text{Urgency, FoMO}} = \mu_{\text{Urgency, Scarcity}} = \mu_{\text{Urgency, FoMO+Scarcity}}$$

$$\mathbf{H_0: } \mu_{\text{Anxiety, Control}} = \mu_{\text{Anxiety, FoMO}} = \mu_{\text{Anxiety, Scarcity}} = \mu_{\text{Anxiety, FoMO+Scarcity}}$$

$$\beta_{\text{Urgency} \rightarrow \text{IBT}} = 0; \beta_{\text{Anxiety} \rightarrow \text{IBT}} = 0$$

A Two-way ANOVA was conducted to assess the effect of FoMO and scarcity conditions on anxiety and urgency levels, considering the hypothesised mediating effect. This analysis considered the variables ANXIETY (*Appendix 11*), a cluster defined by the EFA conducted; and URGENCY (*Appendix 12*), a measure of advertisement perception.

As previously mentioned, since standardised factor scores were used in the EFA, mean values should be interpreted relatively to the sample mean, where negative means indicate lower-than-average results, whereas positive means indicate higher-than-average results.

A one-way ANOVA was conducted to examine the main effects of FoMO (*Appendix 13*). Levene’s test for equality of variances presented significant results for both variables ($p < 0.05$), indicating a violation of variances homogeneity. Given this, Welch’s and Brown-Forsythe robust tests of equality of means were conducted, presenting the following results: $F(1,135) = 8.918, p = 0.003$, for urgency levels; and $F(1,116) = 5.794, p = 0.018$, for anxiety levels. These results indicate that high FoMO advertising heightens both urgency ($M=2.47, SD=1.35$) and anxiety levels ($M=0.20, SD=1.19$), in comparison to low FoMO advertising’s urgency ($M=1.85, SD=1.11$) and anxiety ($M=-0.20, SD=0.73$).

A one-way ANOVA was conducted to examine the main effects of scarcity (*Appendix 14*). While Levene’s test for equality of variances presented variance homogeneity for anxiety, it showed significant results for urgency ($p < 0.05$), indicating a violation of variance homogeneity. Thus, Welch’s and Brown-Forsythe robust tests of equality of means were also conducted, presenting the following results: $F(1, 115) = 49.89, p < 0.001$, for urgency levels. The main effects of scarcity on anxiety, however, were not significant, $F(1,139) = 1.16, p = 0.284, \text{Partial Eta Squared} = 0.008$. Levene’s test for equality of variances confirmed variance homogeneity, $F(1,142) = 3.227, p > 0.05$; and Robust tests for unequal variances did not show significant differences among conditions (Welch’s $F(1,116) = 1.311, p > 0.05$). These results indicate that while scarcity-present advertising increases urgency levels ($M=2.88, SD=1.26$), in comparison to scarcity-absent advertising ($M=1.55, SD=0.92$), they do not influence anxiety levels in either present ($M=0.11, SD=1.15$) or absent conditions ($M=-0.90, SD=0.86$).

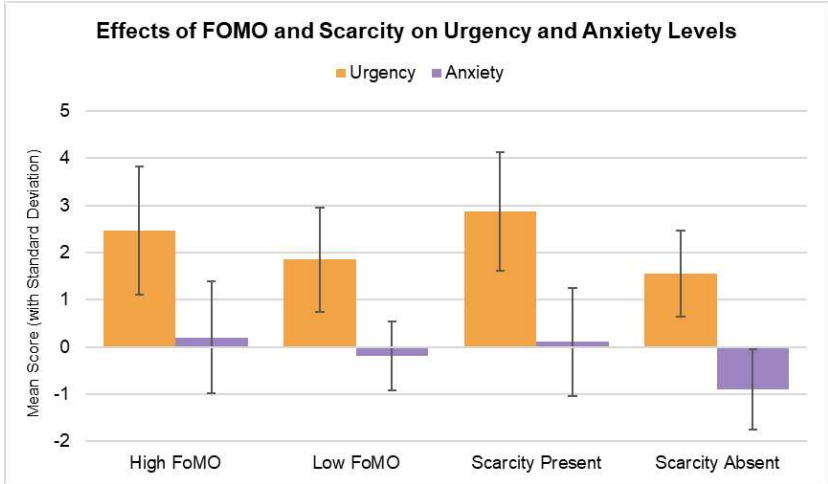


Figure 6: Chart of the Effects of FoMO and Scarcity on Urgency and Anxiety Levels

As for the interaction effects between FoMO and scarcity conditions, this presented to be significant for urgency ($F(1,139) = 7.133, p = 0.008, \text{Partial Eta Squared} = 0.049$), suggesting that individuals exposed to both FoMO and scarcity cues reported significantly higher urgency levels, than those in either condition alone; However, this presented non-significant results for anxiety ($F(1,139) < 1, \text{Partial Eta Squared} = 0.003$), indicating that, while the combined effect of FoMO and scarcity at different levels does not influence anxiety levels felt, as presented in the table below:

		Scarcity Present		Scarcity Absent	
		Mean	SD	Mean	SD
Urgency	High FoMO	3.382	0.888	1.622	1.139
	Low FoMO	2.323	1.376	1.488	0.675

Table 4: Descriptives from interaction effects - Urgency

		Scarcity Present		Scarcity Absent	
		Mean	SD	Mean	SD
Anxiety	High FoMO	0.35	1.348	0.062	1.02
	Low FoMO	-0.158	0.815	-0.227	0.659

Table 5: Descriptives from interaction effects - Anxiety

These results suggest that both FoMO and scarcity conditions significantly influence urgency perception, as individuals exposed to high FoMO and scarcity conditions experience the highest urgency perception, compared to those in the individual conditions.

Additionally, the results confirm that while participants exposed to high FoMO present higher anxiety levels, participants in the scarcity condition are not directly affected. This suggests that scarcity-driven urgency may arise from a cognitive appraisal of limited availability rather than from an emotional experience. Thereby, the mediation effect of anxiety on scarcity was not assessed.

Given these results, a mediation analysis, using Hayes' PROCESS macro (Model 4) was conducted (*Appendix 15*) to examine whether urgency (M_1) and anxiety (M_2) mediated the relationship between FoMO (X_1), scarcity (X_2) and IBT (Y). All CIs were based on 5000 bootstrap samples and set at 95% confidence levels.

Concerning the analysis of whether urgency mediates the relationship between FoMO and IBT, FoMO significantly predicted urgency perceptions, $\beta = 0.49, SE = 0.21, t(141) = 2.99, p < 0.05$,

95% [0.21, 1.03]. Moreover, FoMO explained 5.96% of the variance in urgency ($R^2 = 0.0596$, $F(1,141) = 8.94$, $p = 0.003$), suggesting a moderate association between FoMO and urgency.

Urgency, however, did not significantly predict IBT, $\beta = -0.057$, $SE = 0.052$, $t(139) = -0.658$, $p > 0.05$, 95% CI [-0.14, 0.07], indicating that urgency does not contribute to impulsive buying tendencies.

Additionally, the mediation effect of FoMO on IBT through urgency was also non-significant, $B = -0.021$, $BootSE = 0.035$, 95% CI [-0.095, 0.043], as it contained zero, confirming that urgency does not mediate the relationship between FoMO and IBT, meaning that the assumed mediating effect was not supported.

As for anxiety, the FoMO condition significantly predicted anxiety levels $\beta = 0.40$, $SE = 0.16$, $t(141) = 2.41$, $p < 0.05$, 95% CI [0.07, 0.72]. Additionally, it explained 3.97% of the variance of the anxiety variable ($R^2 = 0.0397$), indicating a moderate association between FoMO and anxiety.

Additionally, anxiety significantly predicted IBT, $\beta = 0.22$, $SE = 0.07$, $t(139) = 2.58$, $p < 0.05$, 95% CI [0.04, 0.30]. Furthermore, this model explained 5.25% of IBT's variance ($F(3,139) = 2.569$, $p = 0.057$, $R^2 = 0.0525$), suggesting that anxiety plays a role in impulsive buying tendencies.

Furthermore, the mediation effect of FoMO on IBT through anxiety was not significant, $\beta=0.09$, $BootSE=0.06$, 95% CI [-0.005, 0.23], as the confidence interval included zero.

Lastly, both the total effect ($B = 0.12$, $SE = 0.13$, $t(141) = 0.96$, $p > 0.05$, 95% CI [-0.13, 0.38]) and the direct effect ($B = 0.08$, $SE = 0.13$, $t(140) = 0.59$, $p > 0.05$, 95% CI [-0.18, 0.34]) were non-significant, meaning that FoMO does not independently influence IBT.

Concerning the mediation analysis of urgency between scarcity and IBT, scarcity significantly predicted urgency perceptions, $\beta = 1.05$, $SE = 0.18$, $t(141) = 7.27$, $p < 0.001$, 95% [0.97, 1.69]. Scarcity explained 27.25% of urgency's variance ($R^2 = 0.2725$, $F(1,141) = 52.82$, $p < 0.001$), demonstrating a strong positive association between scarcity and urgency perceptions.

However, as previously mentioned, urgency did not significantly predict IBT, $\beta = -0.04$, $SE = 0.06$, $t(139) = 0.03$, $p > 0.05$, 95% CI [-0.14, 0.09], indicating that urgency does not play a significant role in shaping impulsive buying tendencies.

Furthermore, the mediation effect of scarcity on IBT through urgency was also non-significant, $\beta = -0.041$, $BootSE = 0.12$, 95% CI [-0.24, 0.21], as it contained zero.

Lastly, both the total effect ($B = -0.015$, $SE = 0.13$, $t(141) = -0.119$, $p > 0.05$, 95% CI [-0.27, 0.24]) and the direct effect ($B = -0.018$, $SE = 0.15$, $t(140) = -0.122$, $p > 0.05$, 95% CI [-0.32, 0.28]) were non-significant, indicating that scarcity alone does not influence IBT.

Thus, we reject the fourth hypothesis.

H5: “Urgency and anxiety mediate the relationship between FoMO and scarcity-driven advertising and purchase likelihood.”

$$\mathbf{H_0: } \mu_{\text{Urgency, Control}} = \mu_{\text{Urgency, FoMO}} = \mu_{\text{Urgency, Scarcity}} = \mu_{\text{Urgency, FoMO+Scarcity}}$$

$$\mathbf{H_0: } \mu_{\text{Anxiety, Control}} = \mu_{\text{Anxiety, FoMO}} = \mu_{\text{Anxiety, Scarcity}} = \mu_{\text{Anxiety, FoMO+Scarcity}}$$

$$\beta_{\text{Urgency} \rightarrow \text{Purchase Likelihood}} = 0; \beta_{\text{Anxiety} \rightarrow \text{Purchase Likelihood}} = 0$$

As examined in the previous hypothesis testing, individuals in the high FoMO condition reported significantly higher levels of both urgency and anxiety, compared to those in the low FoMO condition, and the scarcity condition significantly increased urgency perception, despite not significantly influencing anxiety levels. Additionally, it was found that while the combined effect of FoMO and scarcity further amplifies urgency perception, it does not influence anxiety levels.

Given this analysis, Hayes’ PROCESS macro (Model 4) was used (*Appendix 16*) to test the mediation effects of urgency (M_1) and anxiety (M_2) between FoMO (X_1) and scarcity (X_2) conditions on purchase likelihood (Y). All CIs were based on 5000 bootstrap samples and set at 95% confidence levels.

However, due to the non-significant results between scarcity and anxiety levels, the mediation effect of these and purchase likelihood was not assessed.

Concerning the effect of the scarcity condition on purchase likelihood, the regression analysis indicated that scarcity significantly predicted urgency, $\beta = 1.04$, $SE = 0.18$, $t(141) = 7.27$, $p < 0.001$, 95% CI [0.97, 1.69]. In this model, scarcity explained 27.25% of the variance in urgency ($R^2 = 0.273$, $F(1,141) = 52.82$, $p < 0.001$), suggesting a strong association between scarcity and urgency perceptions.

The effect of urgency on purchase likelihood was significant, $\beta = 0.21$, $SE = 0.09$, $t(140) = 2.19$, $p < 0.05$, 95% CI [0.02, 0.36], indicating that urgency positively influences purchase likelihood.

The mediation effect of scarcity on purchase likelihood through urgency was significant, $\beta = 0.22$, $BootSE = 0.10$, 95% CI [0.02, 0.40].

Additionally, while the total effect ($B = -0.24$, $SE = 0.19$, $t(141) = -1.26$, $p > 0.05$, 95% CI [-0.62, 0.14]) was not statistically significant, the direct effect ($B = -0.49$, $SE = 0.22$, $t(141) = -2.24$, $p < 0.05$, 95% CI [-0.93, 0.06]) was significant, indicating that although scarcity alone does not influence purchase likelihood, when controlling for urgency, the marketing tactic decreases purchase likelihood.

These findings support the mediation role of urgency in the relationship between scarcity and purchase likelihood, presenting a negative effect between variables.

As for the mediation analysis of urgency on the relationship between FoMO and purchase likelihood, it was shown that FoMO significantly predicted urgency, $\beta = 0.49$, $SE = 0.21$, $t(141) = 2.99$, $p < 0.05$, 95% CI [0.21, 1.03]. However, unlike the previous mediation model, urgency did not significantly predict purchase likelihood, $\beta = 0.13$, $SE = 0.08$, $t(139) = 1.45$, $p > 0.05$, 95% CI [-0.04, 0.27].

The mediation effect of FoMO on purchase likelihood through urgency was not significant, $\beta = 0.06$, $BootSE = 0.05$, 95% CI [-0.02, 0.19]. The results indicated that urgency does not mediate the relationship between FoMO and purchase likelihood.

As for anxiety's mediating role, as previously analysed, FoMO significantly predicted this variable, suggesting that individuals with higher FoMO levels experience greater anxiety.

As for the prediction effect of anxiety on purchase likelihood, the relationship was non-significant, $\beta = -0.05$, $SE = 0.10$, $t(139) = -0.58$, $p > 0.05$, 95% CI [-0.25, 0.14].

Lastly, both the total ($B = -0.12$, $SE = 0.19$, $t(140) = -0.64$, $p > 0.05$, 95% CI [-0.50, 0.26]) and the direct effect ($B = -0.17$, $SE = 0.2$, $t(140) = -0.85$, $p > 0.05$, 95% CI [-0.56, 0.23]) of FoMO on purchase likelihood were non-significant, indicating that neither anxiety nor urgency mediates the relationship between FoMO and purchase likelihood.

Therefore, we reject our final hypothesis.

4.8. Discussion

While this study's findings diverge from the expectations set by previous research, it also provides valuable insights into the interplay between FoMO, scarcity, and consumer behaviour.

Research Question 1: How do FoMO and scarcity-driven advertisements impact impulse buying tendencies?

To answer the first research question, independent t-tests were conducted to check the differences between FoMO and scarcity's impact on IBT levels.

These findings challenge previously developed assumptions (Hussain et al., 2023) concerning the effect of social media FoMO stimulus in increasing impulsive behaviours, including impulsive buying tendencies. Contrary to prior research, t-test analyses revealed no significant variations in IBT scores between high and low FoMO conditions; and present and absent scarcity, suggesting that exposure to FoMO and scarcity-driven marketing cues does not inevitably lead to customer impulsive buying tendencies. This evidence indicates that personal characteristics, such as self-control, may have a stronger influence on impulsive purchasing than environmental cues. This effect is further demonstrated by the strong correlation between self-control and IBT, which has come to become essential in restricting impulsive purchases, surpassing the effects of FoMO and scarcity cues.

Although it was indicated, by descriptive data, differences in IBT levels among conditions, these were not statistically significant to suggest that their interaction effect is more efficient than their independent effect, highlighting the lack of significant interaction effects between FoMO and scarcity cues.

Due to these contrasting findings, it is relevant for future research on this topic to explore potential moderators, such as consumer scepticism, or comparisons among different product types, to understand how FoMO and scarcity affect purchasing decisions in different buying contexts.

It is also important to mention that the effectiveness of this study might have been compromised by methodological limitations associated with the manipulation checks of the defined conditions, since neither FoMO nor scarcity conditions successfully induced the intended psychological states in participants. This limitation raises great concern about whether the observed results truly reflect the role of the proposed marketing strategies or if the study failed to generate the desired psychological reactions in participants. Additional research should, therefore, address this limitation by employing more effective experimental manipulations, conducting pre-tests and using validated measurement scales for both FoMO and scarcity.

Research Question 2: How do urgency and anxiety mediate the relationship between FoMO and scarcity cues and impulsive buying?

To answer this research question, one-way and two-way ANOVA analyses were conducted, followed by using Hayes' PROCESS macro (model 4). Results contrasted with previous theories suggesting that such emotional states influenced impulsive decision-making (Billieux et al., 2010; Cachón-Rodríguez et al., 2024a; Rodrigues et al., 2021).

In this analysis, it was found that the results of mediation effects were contrasting between urgency and anxiety levels. FoMO significantly influenced the urgency perceived by participants, as the ones assigned to the high FoMO condition presented higher levels of urgency. Similarly, scarcity was found to significantly increase urgency levels felt by participants, despite urgency itself not predicting impulsive buying tendencies, which, in turn, contradicts existing theories that urgency drives impulsive behaviour (Billieux et al., 2010). These outcomes indicate that, while consumers may experience increased urgency in response to both FoMO and scarcity, this perception does not always translate into impulsive purchasing decisions.

Whereas FoMO significantly enhanced individuals' anxiety levels, neither FoMO nor anxiety predicted impulsive buying behaviour individually. In contrast, scarcity did not present a significant relationship with anxiety levels, despite presenting a strong connection with urgency perception. Anxiety, however, was found to be positively correlated with IBT, suggesting that higher anxiety levels translate into heightened impulsive buying tendencies, despite such emotional state not mediating the relationship between marketing cues and IBT. This contradicts prior research suggesting that FoMO-induced anxiety levels drive impulsive purchases (Hussain et al., 2023), further highlighting the necessity for exploring additional mediators for this relationship.

The insights into emotions' role in consumer behaviour emphasise the complexity of emotional decision-making processes, implying that factors such as brand trust or resistance to FoMO and scarcity cues may better explain how urgency and anxiety affect buyers in marketing contexts. Nonetheless, the mediation analysis did not identify urgency or anxiety as explanatory variables linking FoMO and scarcity to impulsive buying tendencies. Since this doesn't support previous research, suggesting that urgency and anxiety drive impulsive behaviours, future research should investigate alternative mediator variables, such as perceived brand exclusivity, brand trust and consumer resistance to marketing cues, to gain a more profound understanding of these interactions.

Research Question 3: How do FoMO and scarcity-driven advertisements impact purchase likelihood?

To answer this question, two-way ANOVA tests were conducted, as well as Hayes' PROCESS macro (model 4) to test the relationship between FoMO and scarcity cues and purchase likelihood, mediated by urgency and anxiety.

This study revealed that, while scarcity increased urgency, it unexpectedly showed a negative direct effect on purchase likelihood, translating into lower purchase intent when scarcity cues are present. This suggests that scarcity cues in marketing strategies could backfire, as excessive pressure can lead to hesitation, likely due to consumer reactance or scepticism towards perceived marketing manipulation and restricted consumer choice, as proven by prior research (Brehm, 1966).

The mediation analysis further revealed that while FoMO increased anxiety, anxiety itself did not predict purchase likelihood, going against Billieux et al. (2010)'s findings that FoMO heightens the urgency felt by consumers, and that the FoMO cues, in turn, increase purchase behaviour (Good & Hyman, 2020). FoMO, on the other hand, did not significantly influence purchase likelihood, neither directly nor indirectly through urgency. These results suggest that, whereas marketing cues heighten emotional states, they have little to no impact on purchase likelihood.

To summarise, these findings show that, although FoMO and scarcity-driven strategies may influence consumer emotional states, they do not always translate into heightened purchase intention. Instead of creating urgency that drives immediate purchase intent, scarcity cues may sometimes overwhelm consumers, causing reluctance to commit to a purchase. Furthermore, some consumers may even question scarcity's authenticity as a sales tactic, leading to decreased trust in the brand.

These findings emphasise the complexity of these psychological traits and argue that marketing methods relying on urgency-inducing cues may be less effective than previously anticipated.

CHAPTER 5: CONCLUSION AND LIMITATIONS

5.1. Main Findings and Conclusion

This study investigated the impact of fear of missing out (FoMO) and scarcity-driven social media advertisements on impulsive buying tendencies and purchase likelihood, and the mediating roles of urgency and anxiety. While its results contradict traditional assumptions about the effectiveness of such marketing strategies in driving impulsive purchases, this study also provides important insights into the psychological mechanisms causing impulse buying, mainly in response to FoMO and scarcity-driven marketing cues in a social media advertising context.

Firstly, demographic results did not go along with Qutishat & Abu Sharour (2019)'s discovery that IBT was particularly felt among younger male generations, which could be due to an older study sample.

In addition, contrary to Hussain et al. (2023)'s correlation between both variables, exposure to FoMO-driven advertisements did not significantly alter consumers' impulsive buying tendencies. The lack of significant findings could be attributed to the fact that manipulation checks were not successful, meaning that the experimental conditions did not efficiently induce desired psychological states.

Moreover, our findings challenge previous assumptions by showing that neither urgency nor anxiety significantly influenced the relationship between FoMO, scarcity and IBT, implying that emotional arousal does not always translate into action. While FoMO was found to increase anxiety levels, the emotional state did not predict IBT levels, implying that, while FoMO is effective at triggering emotional distress in customers, it does not always lead to impulsive purchasing. In turn, although scarcity did considerably increase urgency, as expected, urgency did not predict IBT, suggesting that customers' heightened urgency, caused by scarcity cues, does not directly lead to impulsive buying. These results go against previous theories that proposed them as key psychological drivers of impulsive purchases (Billieux et al., 2010; Song et al., 2021).

Instead, other factors, such as individual self-control traits, emerged as a significant factor in directly regulating impulsive behaviour, suggesting that individual differences in consumer behaviour surpass external marketing cues in shaping impulsive buying tendencies and behaviours. Yet this variable did not significantly interact with either FoMO or scarcity cues, further implying that impulsive behaviour might be primarily driven by personal traits than by external tactics.

Scarcity's impact on purchase likelihood through urgency, however, was significant but negative, indicating that excessive pressure felt by the presence of scarcity cues reduces the likelihood of engaging in a purchase. Instead of increasing sales, this outcome results in psychological reactance, leading to purchase hesitation. This aligns with existing theories on customer resistance (Brehm, 1966), suggesting that marketing strategies that limit freedom of choice can reduce purchase intention, due to perceived manipulation. In addition, scepticism towards the brand's authenticity in response to scarcity cues may further reduce customers' trust in the brand, leading to reluctance to purchase. These findings highlight that the effectiveness of such strategies mainly depends on customers' perceptions and responses to these cues.

Similarly, while FoMO significantly triggered anxiety in consumers, this variable did not increase IBT levels nor purchase likelihood, as previously suggested by Hussain et al. (2023), that this phenomenon is a key motivator for impulsive behaviour in social media contexts. Instead, these outcomes indicate that the relationship between FoMO and consumer behaviour is more complex than initially hypothesised and may be influenced by additional moderating factors, such as personality traits (e.g., impulsivity) or contextual factors (e.g., product category and brand trust).

In addition, our study confirms that, while both concepts are often associated with impulsive consumption, they operate through distinct psychological processes. FoMO is primarily driven by social and emotional factors, whereas scarcity functions a cognitive trigger for urgency through perceptions of limited availability. Since FoMO mainly induces anxiety, while scarcity mainly enhances urgency, we can conclude that these phenomena do not have uniform effects on impulsive consumer behaviour. Instead, their impact is likely moderated by individual differences, such as self-control and impulsivity traits.

Moreover, social media usage did not impact impulsive tendencies, further emphasising the dominant role of personal traits in shaping buyers' behaviour.

Overall, this study outlines the existing undervaluation of the complexity of impulsive buying tendencies and its interaction with marketing tactics leveraging FoMO and scarcity cues. It further suggests exclusivity- and urgency-based marketing methods individually may not be sufficient to drive impulsive behaviours.

5.2. Academic Contributions

This study contributes to academic fields of consumer behaviour, marketing psychology and decision-making research by challenging the assumed universality of widely accepted theories about FoMO and scarcity-driven marketing strategies. While prior studies have positioned FoMO and scarcity as direct drivers of impulsive purchases, this research illustrates their effects as highly context-dependent and moderated by individual differences. By demonstrating that scarcity-based marketing did not result in impulsive buying tendencies, and, in some circumstances, even lowered purchase likelihood, this study supports the psychological reactance theory (Brehm, 1966), which suggests that perceived pressure may induce resistance, rather than compliance. Furthermore, the findings that scarcity cues may backfire due to consumer scepticism towards perceived brand authenticity challenges traditional views that scarcity generally increases purchase urgency and desirability.

Furthermore, this research assesses the important role of self-control traits in regulating impulsive behaviours, revealing that individual differences may outweigh external marketing influences in the shaping of consumer behaviour. This contributes to existing literature by shifting the focus from marketing cues to consumer traits as primary drivers of impulsive decision-making. Moreover, current assumptions regarding digital marketing and impulsive consumption (Verhagen & Dolen, 2011) are questioned due to the discovery that social media usage does not influence IBT levels. This suggests that other moderating factors, such as cognitive control and self-regulatory capacities, must be considered when assessing the effectiveness of urgency-based marketing tactics.

By integrating these insights, this study improves theoretical models of impulsive consumption, emphasising that FoMO and scarcity are not universal triggers but rather interact with psychological traits in complex ways. Thus, this research contributes to marketing psychology by offering a more nuanced perspective on how urgency-inducing tactics influence consumer behaviour. It encourages further academic exploration into the psychological factors that mediate the impact of FoMO and scarcity, refining theoretical models to account for the varying consumer decision-making in such marketing strategies.

5.3. Managerial Contributions

As for practical contributions, results suggest that marketers should be cautious when employing FoMO and scarcity cues in advertising, as means to drive impulsive purchasing. Even though these approaches can elicit heightened emotional arousal, their effectiveness in triggering unplanned purchases remains questionable. Marketers should, hence, incorporate urgency and exclusivity cues alongside other persuasive components, such as trustful and value-driven messaging, to improve the success of their marketing efforts.

Nonetheless, the identified adverse effects of scarcity on purchase likelihood emphasise the risks of customer reactance to excessive scarcity marketing tactics. Consequently, to mitigate this effect, marketers must carefully proceed in employing such cues, favouring more subtle strategies (e.g., “*Limited Availability*” instead of “*Only 5 Units Left*”) and avoiding additional pressure that can lead to consumer scepticism or poor brand trust. In contrast, for FoMO-based marketing strategies, our results suggest that simply inducing this factor is not enough to increase impulsive purchases. Instead, brands should explore how FoMO interacts with other psychological drivers (e.g., influencer endorsements) and marketing tactics (e.g., partnerships).

5.4. Limitations and Future Research

While this study provides valuable insights into the relationship between fear of missing out (FoMO), scarcity, urgency, anxiety, impulsive buying tendencies (IBT) and purchase likelihood, the limitations must be acknowledged. These mainly focus on methodological constraints, sample size and composition, and the effectiveness of experimental manipulations.

By recognising these factors, the study recommends how future research should be conducted, to improve experimental designs and deepen the understanding of how psychological traits interact with marketing strategies, to influence consumer impulsivity.

5.4.1. Sample Size and Composition

This study focused on 143 participants, which, although it presents a sufficient sample size for detecting differentiating effects, the observed small effect sizes suggest otherwise, hinting that a larger sample size could have detected subtle effects that were not captured in the current research. It is important to note that, although statistically significant, the observed effects were minor, implying that even if a large sample size demonstrated statistical significance, they may not translate to real-world settings. As a result, future research should investigate increasing sample size to improve statistical power and effect sizes in real-world applications.

Moreover, the sample analysed was significantly concentrated in Portuguese participants and older demographics, which may have reduced the validity of the findings in other populations. The significant percentage of individuals aged 50 to 59 years old may have also influenced the results, as research suggests that younger individuals are more susceptible to impulsive purchasing (Qutishat & Abu Sharour, 2019).

These limitations highlight the importance of incorporating a more diverse sample in future studies to better understand how different populations respond to FoMO and scarcity marketing. To explore potential cross-cultural and generational differences, future research should aim for a more balanced and representative sample across various age groups and cultural backgrounds.

5.4.2. Manipulation checks

The primary limitation of this study was the inability to induce the desired psychological responses in participants, based on the designed stimuli. Manipulation checks revealed that both FoMO and scarcity conditions failed to generate the expected states, which could explain why expected effects in IBT were not observed. This suggests that the study's experimental design might not have simulated well real-world scarcity and FoMO experiences, indicating that

further research should employ pre-testing and pilot experiments to refine the stimuli developed and, thus, ensure the activation of the expected psychological conditions.

Another key factor is how FoMO and scarcity were implemented in this study. Differences in how these variables were presented could have influenced participants' responses, potentially contributing to the lack of expected effects on IBT. Furthermore, the effectiveness of the experimental manipulations requires further investigation, as the stimuli presentation or contextual framing may have influenced observed outcomes. Thus, future research should focus on developing manipulation tactics that better capture the psychological states associated with FoMO and scarcity, ensuring that experimental conditions represent real-world consumer experiences.

5.4.3. External and Internal Factors

It is important to note that the results of advertisement perceptions loading into a single factor show great concern, since they indicate that participants were unable to distinguish between advertising perceptions. Furthermore, these constructs showed a high correlation level, indicating that they did not measure diverse characteristics due to participants rating attributes similarly to each other.

We also must recognise the potential influence of other factors not analysed in this study. For example, individual differences, such as shopping habits and personality traits, could make them less susceptible to the studied marketing tactics and moderate the effect of FoMO and scarcity on IBT. In addition, contextual factors, mostly the type of product presented, could have an effect, as feedback from the pre-tests was mostly about how individuals and the smartwatch showcased didn't match up. Following studies should, thereby, test this model across various product categories (e.g., fast-moving consumer goods, low-cost or high-turnover goods) that might trigger impulsive purchases more effectively.

5.4.4. Future Research

Considering these limitations, future research should prioritise the development of more effective experimental manipulations, such as interactive advertisements, to enhance psychological activation. Additionally, pilot testing must be conducted to ensure that the defined conditions, FoMO and scarcity, effectively trigger the desired emotional and cognitive responses. While this study found that FoMO primarily increases anxiety and scarcity mainly influences urgency, future research should investigate whether these factors represent distinct psychological mechanisms that independently contribute to impulsive buying tendencies.

Furthermore, since urgency and anxiety do not act as mediators, future studies should consider alternative mediators of impulsive consumer behaviour. Based on the findings of this study, the recommended mediators are Perceived Brand Trust, which is the extent to which consumers perceive the presented brand as trustworthy, making consumers more likely to engage in impulsive behaviour; and Scepticism, which is the extent to which a consumer is resistant to persuasive marketing techniques, as such individuals may be more resistant to impulsive behaviours regardless of the advertising messaging. These mediators are based not only on the findings presented but also on feedback received in pre-tests related to the perceived advertisements' reliability. Moreover, the role of individual differences in moderating the effects of FoMO and scarcity, mainly related to self-control and impulsivity traits, should be further explored, as these presented stronger influences on impulsive tendencies than previously expected.

Furthermore, additional research should investigate how differences between various product categories impact FoMO and scarcity strategies' effectiveness, as well as cross-cultural differences in marketing receptiveness, since certain cultures might respond differently to exclusivity and urgency-inducing marketing tactics. Following this logic, future studies should follow a more context-dependent approach, as results exposed that previously defined theories are not universal and might depend on psychological traits as drivers for impulsive purchases.

In conclusion, subsequent research on this topic should explore alternative mediators, enhance experimental methods, and further evaluate the impacts of exposure to scarcity and FoMO marketing strategies, focusing on cultural differences. By considering individual customer characteristics, psychological resistance, and contextual elements, researchers and marketers will be able to develop better-performing, more ethical and consumer-centric marketing strategies.

REFERENCES

- Aggarwal, P., Jun, S. Y., & Huh, J. H. (2011). Scarcity Messages. *Journal of Advertising*, 40(3), 19–30. <https://doi.org/10.2753/JOA0091-3367400302>
- Azizah, A., Batoteng, H., Hariyadi, S., Barus, F., & Gunawan, F. (2024). Customer Emotion and Impulse Buying: The Variables that Influence Repurchase Intention. *MANAGEMENT AND ACCOUNTING REVIEW*, 23.
- Badgaiyan, A. J., Verma, A., & Dixit, S. (2016). Impulsive buying tendency: Measuring important relationships with a new perspective and an indigenous scale. *IIMB Management Review*, 28(4), 186–199. <https://doi.org/10.1016/j.iimb.2016.08.009>
- Beatty, S. E., & Ferrell, M. E. (1998). *Impulse Buying: Modeling Its Precursors*.
- Billieux, J., Gay, P., Rochat, L., & Van der Linden, M. (2010). The role of urgency and its underlying psychological mechanisms in problematic behaviours. *Behaviour Research and Therapy*, 48(11), 1085–1096. <https://doi.org/10.1016/j.brat.2010.07.008>
- Brehm, J. W. (1966). *A theory of psychological reactance* (pp. x, 135). Academic Press.
- Cachón-Rodríguez, G., Blanco-González, A., Prado-Román, C., & Fernández-Portillo, A. (2024b). How compulsive and impulsive buying affect consumer emotional regulation. Is anxiety a differential element? *European Journal of Management and Business Economics*. <https://doi.org/10.1108/EJMBE-06-2023-0172>
- Chan, T. K. H., Cheung, C. M. K., & Lee, Z. W. Y. (2017). The state of online impulse-buying research: A literature analysis. *Information & Management*, 54(2), 204–217. <https://doi.org/10.1016/j.im.2016.06.001>
- Cialdini, R. B. (1984). *The Psychology of Persuasion*.
- Dailey, L. (2004). Navigational web atmospherics: Explaining the influence of restrictive navigation cues. *Journal of Business Research*, 57(7), 795–803. [https://doi.org/10.1016/S0148-2963\(02\)00364-8](https://doi.org/10.1016/S0148-2963(02)00364-8)

- Dawson, S., & Kim, M. (2009). External and internal trigger cues of impulse buying online. *Direct Marketing*, 3(1), 20–34. <https://doi.org/10.1108/17505930910945714>
- Dinh, T. C. T., Wang, M., & Lee, Y. (2023). How Does the Fear of Missing Out Moderate the Effect of Social Media Influencers on Their Followers' Purchase Intention? *SAGE Open*, 13(3), 21582440231197259. <https://doi.org/10.1177/21582440231197259>
- Good, M. C., & Hyman, M. R. (2020). 'Fear of missing out': Antecedents and influence on purchase likelihood. *Journal of Marketing Theory and Practice*, 28(3), 330–341. <https://doi.org/10.1080/10696679.2020.1766359>
- Granero, R., Fernández-Aranda, F., Steward, T., Mestre-Bach, G., Baño, M., del Pino-Gutiérrez, A., Moragas, L., Aymamí, N., Gómez-Peña, M., Mallorquí-Bagué, N., Tárrega, S., Menchón, J. M., & Jiménez-Murcia, S. (2016). Compulsive Buying Behavior: Characteristics of Comorbidity with Gambling Disorder. *Frontiers in Psychology*, 7. <https://doi.org/10.3389/fpsyg.2016.00625>
- Hodkinson, C. (2016). 'Fear of Missing Out' (FOMO) marketing appeals: A conceptual model. *Journal of Marketing Communications*, 25(1), 65–88. <https://doi.org/10.1080/13527266.2016.1234504>
- Horváth, C., & Adigüzel, F. (2018). Shopping enjoyment to the extreme: Hedonic shopping motivations and compulsive buying in developed and emerging markets. *Journal of Business Research*, 86, 300–310. <https://doi.org/10.1016/j.jbusres.2017.07.013>
- Hussain, S., Raza, A., Haider, A., Ishaq, M. I., & Talpur, Q. ul ain. (2023). Fear of missing out and compulsive buying behavior: The moderating role of mindfulness. *Journal of Retailing and Consumer Services*, 75. <https://doi.org/10.1016/j.jretconser.2023.103512>
- Iyer, G. R., Blut, M., Xiao, S. H., & Grewal, D. (2020). Impulse buying: A meta-analytic review. *Journal of the Academy of Marketing Science*, 48(3), 384–404. <https://doi.org/10.1007/s11747-019-00670-w>

- Izard, & Carol E. (1982). *Izard, Carol E. (1982). Measuring Emotions in Infants and Children. Cambridge: Press Syndicate of the University of Cambridge. P. 253.*
- Kowalczyk, L., Breugelmans, E., & Campo, K. (2021). It's not there, I love it! How relevance to objective needs of an unavailable item impacts emotions, store image, and behavior. *Journal of Retailing and Consumer Services, 63*, 102749.
<https://doi.org/10.1016/j.jretconser.2021.102749>
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist, 46*(4), 352–367. <https://doi.org/10.1037/0003-066X.46.4.352>
- Lee, Y. Y., Gan, C. L., & Liew, T. W. (2023). Rationality and impulse buying: Is your emotion a part of the equation? *Computers in Human Behavior Reports, 12*.
<https://doi.org/10.1016/j.chbr.2023.100337>
- Lo, L. Y. S., Lin, S. W., & Hsu, L. Y. (2016). Motivation for online impulse buying: A two-factor theory perspective. *International Journal of Information Management, 36*(5), 759–772. <https://doi.org/10.1016/j.ijinfomgt.2016.04.012>
- Mehrabian, A., & Russell, J. A. (1974). The Basic Emotional Impact of Environments. *Perceptual and Motor Skills, 38*(1), 283–301.
<https://doi.org/10.2466/pms.1974.38.1.283>
- Neumann, D. (2020). Fear of Missing Out. In *The International Encyclopedia of Media Psychology* (pp. 1–9). Wiley. <https://doi.org/10.1002/9781119011071.iemp0185>
- Pechorro, P., DeLisi, M., Gonçalves, R. A., Quintas, J., & Palma, V. H. (2021). The Brief Self-Control Scale and Its Refined Version among Incarcerated and Community Youths: Psychometrics and Measurement Invariance. *Deviant Behavior, 42*(3), 425–442. <https://doi.org/10.1080/01639625.2019.1684942>

- Prashar, S., Vijay, T. S., & Parsad, C. (2017). Effects of Online Shopping Values and Website Cues on Purchase Behaviour: A Study Using S–O–R Framework. *Vikalpa*, 42(1), 1–18. <https://doi.org/10.1177/0256090916686681>
- Przybylski, A. K., Murayama, K., Dehaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841–1848. <https://doi.org/10.1016/j.chb.2013.02.014>
- Qutishat, M., & Abu Sharour, L. (2019). Relationship Between Fear of Missing Out and Academic Performance Among Omani University Students: A Descriptive Correlation Study. *Oman Medical Journal*, 34(5), 404–411. <https://doi.org/10.5001/omj.2019.75>
- Rodrigues, R. I., Lopes, P., & Varela, M. (2021). Factors Affecting Impulse Buying Behavior of Consumers. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.697080>
- Rook, D. W. (1987). The Buying Impulse. *Journal of Consumer Research*, 14(2), 189. <https://doi.org/10.1086/209105>
- Rook, D. W., & Fisher, R. J. (1995). Normative Influences on Impulsive Buying Behavior. *Journal of Consumer Research*, 22(3), 305. <https://doi.org/10.1086/209452>
- Singh, P., Sharma, B. K., Arora, L., & Bhatt, V. (2023). Measuring social media impact on Impulse Buying Behavior. *Cogent Business and Management*, 10(3). <https://doi.org/10.1080/23311975.2023.2262371>
- Song, M., Choi, S., & Moon, J. (2021). Limited time or limited quantity? The impact of other consumer existence and perceived competition on the scarcity messaging-Purchase intention relation. *Journal of Hospitality and Tourism Management*, 47, 1447–6770. <https://doi.org/10.1016/j.jhtm.2021.03.012>

- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. *Journal of Personality*, 72(2), 271–324. <https://doi.org/10.1111/J.0022-3506.2004.00263.X>
- Verhagen, T., & Dolen, W. V. (2011). The influence of online store beliefs on consumer online impulse buying: A model and empirical application. *Information and Management*, 48(8), 320–327. <https://doi.org/10.1016/j.im.2011.08.001>
- Verplanken, B., & Sato, A. (2011). The Psychology of Impulse Buying: An Integrative Self-Regulation Approach. *Journal of Consumer Policy*, 34(2), 197–210. <https://doi.org/10.1007/s10603-011-9158-5>
- Zhang, Z., Jiménez, F. R., & Cicala, J. E. (2020). Fear Of Missing Out Scale: A self-concept perspective. *Psychology and Marketing*, 37(11), 1619–1634. <https://doi.org/10.1002/MAR.21406>
- Zhao, Y., Li, Y., Wang, N., Zhou, R., & Luo, X. (Robert). (2022). A Meta-Analysis of Online Impulsive Buying and the Moderating Effect of Economic Development Level. *Information Systems Frontiers*, 24(5), 1667–1688. <https://doi.org/10.1007/s10796-021-10170-4>

APPENDICES

Appendix 1: Factor Analysis – Emotions

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.749
Bartlett's Test of Sphericity	Approx. Chi-Square
	230.827
	df
	28
	Sig.
	<.001

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.820	35.255	35.255	2.820	35.255	35.255	2.094	26.181	26.181
2	1.299	16.234	51.490	1.299	16.234	51.490	1.879	23.487	49.668
3	1.070	13.378	64.867	1.070	13.378	64.867	1.216	15.199	64.867
4	.741	9.258	74.125						
5	.679	8.489	82.615						
6	.566	7.070	89.685						
7	.442	5.529	95.214						
8	.383	4.786	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component		
	Anxiety Emotions	Negative Affect Emotions	Social Oriented Emotions
How intensely are you feeling the following emotions, at this moment - Happy	.065	-.795	.141
How intensely are you feeling the following emotions, at this moment - Surprised	-.060	-.108	.868
How intensely are you feeling the following emotions, at this moment - Sad	.254	.776	.159
How intensely are you feeling the following emotions, at this moment - Angry	.285	.710	.126
How intensely are you feeling the following emotions, at this moment - Embarrassed	.265	.234	.618
How intensely are you feeling the following emotions, at this moment - Guilty	.767	.018	.130
How intensely are you feeling the following emotions, at this moment - Anxious	.761	.191	.048
How intensely are you feeling the following emotions, at this moment - Fearful	.839	.195	.020

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. ^a

a. Rotation converged in 4 iterations.

Appendix 2: Factor Analysis – Perceptions

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.841
Bartlett's Test of Sphericity	Approx. Chi-Square
	312.573
	df
	15
	Sig.
	<.001

Total Variance Explained

Component	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.313	55.223	55.223	3.313	55.223	55.223
2	.854	14.231	69.453			
3	.644	10.734	80.187			
4	.509	8.485	88.672			
5	.377	6.290	94.962			
6	.302	5.038	100.000			

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

a. Only one component was extracted. The solution cannot be rotated.

Appendix 3: Survey

Randomizer

Randomly present of the following elements Evenly Present Elements [Edit Count](#)

[Add Below](#) [Move](#) [Duplicate](#) [Collapse](#) [Delete](#)

Show Block: FOMO x Scarcity (14 Questions) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Show Block: FOMO x No Scarcity (14 Questions) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Show Block: Control x Scarcity (14 Questions) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Show Block: Control x No Scarcity (13 Questions) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

+ Add a New Element Here

Show Block: Demographics (5 Questions) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

Show Block: SurveyCicle (1 Question) [Toggle Questions](#) [Add Below](#) [Move](#) [Duplicate](#) [Delete](#)

English ▾

Thank you for participating in this survey, which is part of my Master's dissertation.

Your responses will provide valuable insights into how consumer react and engage with different types of social media content.

The survey is anonymous, and all information will be treated confidentially, solely for academic research. It should take **no longer than 5 minutes** to complete, and you are free to exit at any time. There are no right or wrong answers, so please answer each question as honestly as possible.

Thank you once more for your time and valuable contribution to this research!

In the next section, you will view an **Instagram advertisement for a smartwatch**. Please take a moment to carefully examine the image and picture that you have come across it in your Instagram feed.

After that, you'll be asked questions about your thoughts and observations. Based on your initial impression, please provide an honest response.

Note: Your honest opinion is valuable, and there are no right or wrong answers.

1 - Showed to people in the FoMO Condition

FINDSOM
Lisbon, Portugal

DON'T MISS OUT!
The must-have item that everybody is talking about!

Battery Autonomy up to **10 days**
SpO2 Monitor
Water Resistant up to **20 meters**

ONLY 5 UNITS LEFT

Make it yours before it is too late!

FINDSOM

View Page

508 likes · 8 shares
FINDSOM Limited Stock Alert! 🚨
The item everyone's talking about. 📱 Stay ahead of the trend with cutting-edge features. Act fast and upgrade your fitness journey today! 🏃‍♀️ #MustHave #LimitedStock

2 - Showed to people in the FoMO Condition

FINDSOM
Lisbon, Portugal

DON'T MISS OUT!
The must-have item that everybody is talking about!

Battery Autonomy up to **10 days**
SpO2 Monitor
Water Resistant up to **20 meters**

ONLY 5 UNITS LEFT

Make it yours before it is too late!

FINDSOM

View Page

508 likes · 8 shares
FINDSOM Join the trend that's sweeping all of fitness! 🏃‍♀️ ⚡
This must-have smartwatch combines style, function, and advanced health tracking for the best experience. 📱 Don't wait—be part of the movement today! #DontMissOut

3 - Showed to people in the Scarcity Condition

FINDSOM
Lisbon, Portugal

Your Health, Elevated.

Battery Autonomy up to **10 days**
SpO2 Monitor
Water Resistant up to **20 meters**

ONLY 5 UNITS LEFT

Discover the latest in wearable technology

FINDSOM

View Page

508 likes · 8 shares
FINDSOM Your health deserves the best. 🏃‍♀️
Enjoy long-lasting battery life, water resistance, and health tracking at its finest. 📱 Don't wait—secure yours now! 🚨
#WearableTech #HealthElevated #LimitedStock

4 - Showed to people in the Control Condition

FINDSOM
Lisbon, Portugal

Your Health, Elevated.

Battery Autonomy up to **10 days**
SpO2 Monitor
Water Resistant up to **20 meters**

ONLY 5 UNITS LEFT

Discover the latest in wearable technology

FINDSOM

View Page

508 likes · 8 shares
FINDSOM Your health, elevated. ⚡
It's time to take your fitness to the next level! 🏃‍♀️ #Fitness
#WearableTech #HealthElevated #FitnessGoals

Rate, in a scale from **1 - Not at all** to **5 - Very Much**, how does **FINDSOM's** advertisement feel to you.

Not at all 1 2 3 4 5 Very much

Attractive

Engaging

Memorable

Urgent

Appealing

Trustworthy

Exclusive

Please indicate how much each of the following statements resonate with you, in a scale from **1 - Not at all True** to **5 - Extremely True**.

Not at all True 1 2 3 4 5 Extremely True

I feel regretful when I miss events or opportunities.

I feel anxious when I miss an event because I know something important or fun might happen.

I feel disappointed when I can't participate in events due to other commitments.

I feel like I don't fit in my social groups when I miss events or opportunities.

I feel less included in my social groups when I miss opportunities.

English

Now, please imagine you are considering buying a smartwatch that aligns with your needs and preferences, **not necessarily the one in the ad.**

Within this scenario, imagine you come across the ad for **FINDSOM's** smartwatch.

At this moment, how likely are you to purchase **FINDSOM's** smartwatch? (In a scale from **1 - Not likely at all** to **5 - Extremely likely**)

1 - Not likely at all

2

3

4

5 - Extremely likely

How satisfied would you be if you decided to purchase this product? (In a scale from **1 - Not satisfied at all** to **5 - Extremely satisfied**)

1 - Not satisfied at all

2

3

4

5 - Extremely satisfied

English

Please indicate, in a scale from **1 - Strongly Disagree** to **5 - Strongly Agree**, how much you agree with each of the following statements.

	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
Most of my purchases are planned in advance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before I buy something, I carefully consider whether I need it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often buy without thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I buy what I like without thinking about consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I buy products according to how I feel at the moment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

English

Please rate, in a scale from **1 - Not at all** to **5 - Very Much**, how intensely are you feeling the following emotions, at this moment.

Not at all 1 2 3 4 5 Very much

Happy

Surprised

Sad

Angry

Embarrassed

Guilty

Anxious

Fearful

English

On average, how much time do you spend on social media per day?

0 to 1 hour

1 to 3 hours

3 to 5 hours

5 to 7 hours

More than 7 hours

Please indicate, in a scale from **1 - Strongly Disagree** to **5 - Strongly Agree**, how much you agree with the following statements.

	1 - Strongly Disagree	2	3	4	5 - Strongly Agree
I often act without thinking through the consequences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I keep everything neat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have trouble saying no.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I spend too much money.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer, in a scale from **1 - Not at all** to **5 - Extremely**, to the following questions.

	1 - Not at all	2	3	4	5 - Extremely
How strongly did you feel that this product was something others were eager to buy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you feel that not purchasing the smartwatch might cause you to miss out on something important?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did the idea that others were using this product influence your desire to buy it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How limited did you perceive the smartwatch availability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did the limited stock message make you feel the need to act quickly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How desirable did you find the smartwatch after seen that only a few units are left?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer, in a scale from **1 - Not at all** to **5 - Extremely**, to the following questions.

	1 - Not at all	2	3	4	5 - Extremely
How strongly did you feel that this product was something others were eager to buy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Did you feel that not purchasing the smartwatch might cause you to miss out on something important?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did the idea that others were using this product influence your desire to buy it?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please answer, in a scale from **1 - Not at all** to **5 - Extremely**, to the following questions.

	1 - Not at all	2	3	4	5 - Extremely
How limited did you perceive the smartwatch availability?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did the limited stock message make you feel the need to act quickly?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How desirable did you find the smartwatch after seen that only a few units are left?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Tell us a bit about yourself.

How old are you?

What is your gender?

Female

Male

Other

Prefer not to say

What is your education level (highest degree completed)?

High school or equivalent

Professional degree

Bachelor's degree

Master's degree

Doctorate degree

Other

What is your occupation?

Student

Employed full-time

Employed part-time

Working Student

Unemployed

Retired

Other

We thank you for your time spent taking this survey.

Your response has been recorded.

Appendix 4: Chi-Square Analysis

FOMO Condition * Scarcity Condition Crosstabulation

		Scarcity Condition		Total	
		Absent	Present		
FOMO Condition	Low	Count	41	31	72
		% within Scarcity Condition	52.6%	47.7%	50.3%
	High	Count	37	34	71
		% within Scarcity Condition	47.4%	52.3%	49.7%
Total		Count	78	65	143
		% within Scarcity Condition	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.337 ^a	1	.562		
Continuity Correction ^b	.170	1	.680		
Likelihood Ratio	.337	1	.562		
Fisher's Exact Test				.616	.340
Linear-by-Linear Association	.334	1	.563		
N of Valid Cases	143				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.27.

b. Computed only for a 2x2 table

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Nominal by Nominal	Phi	.049			.562
	Cramer's V	.049			.562
	Contingency Coefficient	.048			.562
Interval by Interval	Pearson's R	.049	.084	.577	.565 ^c
Ordinal by Ordinal	Spearman Correlation	.049	.084	.577	.565 ^c
N of Valid Cases		143			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Appendix 5: Linear regression – Control Variables

Descriptive Statistics

	Mean	Std. Deviation	N
IBT	2.2392	.76812	143
FOMO Condition	.4965	.50175	143
Scarcity Condition	.4545	.49968	143
On average, how much time do you spend on social media per day?	1.9441	.87835	143
SELFCONTROL	3.5507	.68212	143

Correlations

		IBT	FOMO Condition	Scarcity Condition	On average, how much time do you spend on social media per day?	SELFCONTROL
Pearson Correlation	IBT	1.000	.081	-.010	.254	-.527
	FOMO Condition	.081	1.000	.049	-.032	-.059
	Scarcity Condition	-.010	.049	1.000	-.070	-.016
	On average, how much time do you spend on social media per day?	.254	-.032	-.070	1.000	-.386
	SELFCONTROL	-.527	-.059	-.016	-.386	1.000
Sig. (1-tailed)	IBT	.	.169	.453	.001	<.001
	FOMO Condition	.169	.	.283	.350	.243
	Scarcity Condition	.453	.283	.	.203	.423
	On average, how much time do you spend on social media per day?	.001	.350	.203	.	.000
	SELFCONTROL	.000	.243	.423	.000	.
N	IBT	143	143	143	143	143
	FOMO Condition	143	143	143	143	143
	Scarcity Condition	143	143	143	143	143
	On average, how much time do you spend on social media per day?	143	143	143	143	143
	SELFCONTROL	143	143	143	143	143

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.532 ^a	.283	.263	.65955

a. Predictors: (Constant), SELFCONTROL, Scarcity Condition, FOMO Condition, On average, how much time do you spend on social media per day?

b. Dependent Variable: IBT

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.750	4	5.938	13.650	<.001 ^b
	Residual	60.030	138	.435		
	Total	83.781	142			

a. Dependent Variable: IBT

b. Predictors: (Constant), SELFCONTROL, Scarcity Condition, FOMO Condition, On average, how much time do you spend on social media per day?

Coefficients^a

Model		Unstandardized Coefficients		Standardized	t	Sig.	Collinearity Statistics	
		B	Std. Error	Coefficients Beta			Tolerance	VIF
1	(Constant)	4.105	.404		10.164	<.001		
	FOMO Condition	.083	.111	.054	.749	.455	.991	1.009
	Scarcity Condition	-.025	.111	-.017	-.229	.819	.991	1.009
	On average, how much time do you spend on social media per day?	.054	.069	.061	.781	.436	.842	1.187
	SELFCONTROL	-.563	.088	-.500	-6.377	<.001	.844	1.184

a. Dependent Variable: IBT

Appendix 6: ANCOVA – Control Variables

Levene's Test of Equality of Error Variances^a

Dependent Variable: IBT

F	df1	df2	Sig.
.098	3	139	.961

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + FOMO *
SELFCONTROL + FOMO *
Q12_SocialUsage + SCARCT *
SELFCONTROL + SCARCT *
Q12_SocialUsage

Tests of Between-Subjects Effects

Dependent Variable: IBT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	24.276 ^a	6	4.046	9.247	<.001	.290
Intercept	48.858	1	48.858	111.667	<.001	.451
FOMO * SELFCONTROL	.528	1	.528	1.208	.274	.009
FOMO * Q12_SocialUsage	.340	1	.340	.776	.380	.006
SCARCT * SELFCONTROL	.144	1	.144	.329	.567	.002
SCARCT * Q12_SocialUsage	.232	1	.232	.530	.468	.004
Error	59.505	136	.438			
Total	800.760	143				
Corrected Total	83.781	142				

a. R Squared = .290 (Adjusted R Squared = .258)

Estimates

Dependent Variable: IBT

Scarcity Condition	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Absent	2.248 ^a	.074	2.101	2.395
Present	2.224 ^a	.082	2.062	2.387

a. Covariates appearing in the model are evaluated at the following values: SELFCONTROL = 3.5507, On average, how much time do you spend on social media per day? = 1.9441.

Estimates

Dependent Variable: IBT

FOMO Condition	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Low	2.206 ^a	.078	2.052	2.359
High	2.267 ^a	.079	2.111	2.422

a. Covariates appearing in the model are evaluated at the following values: SELFCONTROL = 3.5507, On average, how much time do you spend on social media per day? = 1.9441.

Appendix 7: One sample t-tests – Manipulation Checks

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
SCAR_MANIPCHECK	64	2.1458	.76261	.09533

One-Sample Test

Test Value = 3

	t	df	Significance		Mean Difference
			One-Sided p	Two-Sided p	
SCAR_MANIPCHECK	-8.960	63	<.001	<.001	-.85417

One-Sample Test

Test Value = 3

95% Confidence Interval of the Difference

	Lower	Upper
SCAR_MANIPCHECK	-1.0447	-.6637

One-Sample Effect Sizes

	Standardizer ^a	Point Estimate	95% Confidence Interval	
			Lower	Upper
SCAR_MANIPCHECK	Cohen's d	.76261	-1.120	-.804
	Hedges' correction	.77184	-1.107	-.794

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation.
Hedges' correction uses the sample standard deviation, plus a correction factor.

T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
FOMO_MANIPCHECK	71	1.6526	.52383	.06217

One-Sample Test

Test Value = 3

	t	df	Significance		Mean Difference
			One-Sided p	Two-Sided p	
FOMO_MANIPCHECK	-21.674	70	<.001	<.001	-1.34742

One-Sample Test

Test Value = 3

95% Confidence Interval of the Difference

	Lower	Upper
FOMO_MANIPCHECK	-1.4714	-1.2234

One-Sample Effect Sizes

	Standardizer ^a	Point Estimate	95% Confidence Interval	
			Lower	Upper
FOMO_MANIPCHECK	Cohen's d	.52383	-2.572	-2.085
	Hedges' correction	.52953	-2.545	-2.063

a. The denominator used in estimating the effect sizes.
Cohen's d uses the sample standard deviation.
Hedges' correction uses the sample standard deviation, plus a correction factor.

Appendix 8: Independent sample t-tests – FoMO and IBT

		Group Statistics				
		FOMO Condition	N	Mean	Std. Deviation	Std. Error Mean
IBT	Low		41	2.2195	.79725	.12451
	High		37	2.2757	.77223	.12695

		Independent Samples Test									
		Levene's Test for Equality of Variances				t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	Lower	Upper
						One-Sided p	Two-Sided p				
IBT	Equal variances assumed	.160	.690	-.315	76	.377	.753	-.05616	.17811	-.41091	.29858
	Equal variances not assumed			-.316	75.606	.376	.753	-.05616	.17782	-.41035	.29803

		Independent Samples Effect Sizes				
		Standardizer ^a	Point Estimate	95% Confidence Interval		
				Lower	Upper	
IBT	Cohen's d	.78550	-.072	-.516	.373	
	Hedges' correction	.79336	-.071	-.511	.370	
	Glass's delta	.77223	-.073	-.517	.373	

a. The denominator used in estimating the effect sizes.
 Cohen's d uses the pooled standard deviation.
 Hedges' correction uses the pooled standard deviation, plus a correction factor.
 Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Appendix 9: Independent sample t-tests – Scarcity and IBT

		Group Statistics				
		Scarcity Condition	N	Mean	Std. Deviation	Std. Error Mean
IBT	Absent		41	2.2195	.79725	.12451
	Present		31	2.1226	.68445	.12293

		Independent Samples Test									
		Levene's Test for Equality of Variances				t-test for Equality of Means				95% Confidence Interval of the Difference	
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	Lower	Upper
						One-Sided p	Two-Sided p				
IBT	Equal variances assumed	3.700	.058	.542	70	.295	.589	.09693	.17874	-.25956	.45342
	Equal variances not assumed			.554	68.811	.291	.581	.09693	.17497	-.25214	.44601

		Independent Samples Effect Sizes				
		Standardizer ^a	Point Estimate	95% Confidence Interval		
				Lower	Upper	
IBT	Cohen's d	.75099	.129	-.338	.596	
	Hedges' correction	.75915	.128	-.335	.589	
	Glass's delta	.68445	.142	-.327	.608	

a. The denominator used in estimating the effect sizes.
 Cohen's d uses the pooled standard deviation.
 Hedges' correction uses the pooled standard deviation, plus a correction factor.
 Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Appendix 10: Two-way ANOVA – FoMO, Scarcity and IBT

Descriptive Statistics				
Dependent Variable: IBT				
FOMO Condition	Scarcity Condition	Mean	Std. Deviation	N
Low	Absent	2.2195	.79725	41
	Present	2.1226	.68445	31
	Total	2.1778	.74724	72
High	Absent	2.2757	.77223	37
	Present	2.3294	.81781	34
	Total	2.3014	.78912	71
Total	Absent	2.2462	.78089	78
	Present	2.2308	.75848	65
	Total	2.2392	.76812	143

Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
IBT	Based on Mean	1.236	3	139	.299
	Based on Median	1.181	3	139	.319
	Based on Median and with adjusted df	1.181	3	123.617	.320
	Based on trimmed mean	1.224	3	139	.304

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent Variable: IBT

b. Design: Intercept + FOMO + SCARCT + FOMO * SCARCT

Tests of Between-Subjects Effects

Dependent Variable: IBT

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.763 ^a	3	.254	.426	.735	.009
Intercept	707.879	1	707.879	1185.238	<.001	.895
FOMO	.612	1	.612	1.024	.313	.007
SCARCT	.016	1	.016	.028	.868	.000
FOMO * SCARCT	.201	1	.201	.336	.563	.002
Error	83.017	139	.597			
Total	800.760	143				
Corrected Total	83.781	142				

a. R Squared = .009 (Adjusted R Squared = -.012)

Pairwise Comparisons

Dependent Variable: IBT

(I) FOMO Condition	(J) FOMO Condition	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
Low	High	-.131	.130	.313	-.388	.125
High	Low	.131	.130	.313	-.125	.388

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: IBT

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	.612	1	.612	1.024	.313	.007
Error	83.017	139	.597			

The F tests the effect of FOMO Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Pairwise Comparisons

Dependent Variable: IBT

(I) Scarcity Condition	(J) Scarcity Condition	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
Absent	Present	.022	.130	.868	-.235	.279
Present	Absent	-.022	.130	.868	-.279	.235

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: IBT

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	.016	1	.016	.028	.868	.000
Error	83.017	139	.597			

The F tests the effect of Scarcity Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

3. FOMO Condition * Scarcity Condition

Dependent Variable: IBT

FOMO Condition	Scarcity Condition	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Low	Absent	2.220	.121	1.981	2.458
	Present	2.123	.139	1.848	2.397
High	Absent	2.276	.127	2.024	2.527
	Present	2.329	.133	2.067	2.591

Appendix 11: Two-way ANOVA – FoMO, Scarcity, Anxiety and IBT

Descriptive Statistics

Dependent Variable: REGR factor score_1 for analysis 2

FOMO Condition	Scarcity Condition	Mean	Std. Deviation	N
Low	Absent	-.2265291	.65934958	41
	Present	-.1584139	.81530591	31
	Total	-.1972017	.72591166	72
High	Absent	.0621277	1.02034815	37
	Present	.3499941	1.34838950	34
	Total	.1999792	1.18892104	71
Total	Absent	-.0896022	.85652703	78
	Present	.1075226	1.14654462	65
	Total	.0000000	1.00000000	143

Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
REGR factor score_1 for analysis 2	Based on Mean	3.824	3	139	.011
	Based on Median	2.176	3	139	.094
	Based on Median and with adjusted df	2.176	3	108.446	.095
	Based on trimmed mean	3.190	3	139	.026

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: REGR factor score_1 for analysis 2

b. Design: Intercept + FOMO + SCARCT + FOMO * SCARCT

Tests of Between-Subjects Effects

Dependent Variable: REGR factor score_1 for analysis 2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	7.190 ^a	3	2.397	2.471	.064	.051
Intercept	.007	1	.007	.007	.935	.000
FOMO	5.618	1	5.618	5.792	.017	.040
SCARCT	1.121	1	1.121	1.155	.284	.008
FOMO * SCARCT	.427	1	.427	.440	.508	.003
Error	134.810	139	.970			
Total	142.000	143				
Corrected Total	142.000	142				

a. R Squared = .051 (Adjusted R Squared = .030)

Pairwise Comparisons

Dependent Variable: REGR factor score_1 for analysis 2

(I) FOMO Condition	(J) FOMO Condition	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Low	High	-.399 [*]	.166	.017	-.726	-.071
High	Low	.399 [*]	.166	.017	.071	.726

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: REGR factor score 1 for analysis 2

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	5.618	1	5.618	5.792	.017	.040
Error	134.810	139	.970			

The F tests the effect of FOMO Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Pairwise Comparisons

Dependent Variable: REGR factor score 1 for analysis 2

(I) Scarcity Condition	(J) Scarcity Condition	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
Absent	Present	-.178	.166	.284	-.505	.149
Present	Absent	.178	.166	.284	-.149	.505

Based on estimated marginal means

a. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: REGR factor score 1 for analysis 2

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	1.121	1	1.121	1.155	.284	.008
Error	134.810	139	.970			

The F tests the effect of Scarcity Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

3. FOMO Condition * Scarcity Condition

Dependent Variable: REGR factor score 1 for analysis 2

FOMO Condition	Scarcity Condition	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Low	Absent	-.227	.154	-.531	.078
	Present	-.158	.177	-.508	.191
High	Absent	.062	.162	-.258	.382
	Present	.350	.169	.016	.684

Appendix 12: Two-way ANOVA – FoMO, Scarcity, Urgency and IBT

Descriptive Statistics

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

FOMO Condition	Scarcity Condition	Mean	Std. Deviation	N
Low	Absent	1.4878	.67535	41
	Present	2.3226	1.37567	31
	Total	1.8472	1.10899	72
High	Absent	1.6216	1.13899	37
	Present	3.3824	.88813	34
	Total	2.4648	1.35046	71
Total	Absent	1.5513	.92086	78
	Present	2.8769	1.25633	65
	Total	2.1538	1.26884	143

Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
How does FINDSOM's advertisement feel to you. - Urgent	Based on Mean	8.156	3	139	<.001
	Based on Median	4.072	3	139	.008
	Based on Median and with adjusted df	4.072	3	111.490	.009
	Based on trimmed mean	6.891	3	139	<.001

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: How does FINDSOM's advertisement feel to you. - Urgent

b. Design: Intercept + FOMO + SCARCT + FOMO * SCARCT

Tests of Between-Subjects Effects

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	80.865 ^a	3	26.955	25.359	<.001	.354
Intercept	687.019	1	687.019	646.331	<.001	.823
FOMO	12.598	1	12.598	11.852	<.001	.079
SCARCT	59.571	1	59.571	56.043	<.001	.287
FOMO * SCARCT	7.582	1	7.582	7.133	.008	.049
Error	147.750	139	1.063			
Total	892.000	143				
Corrected Total	228.615	142				

a. R Squared = .354 (Adjusted R Squared = .340)

Pairwise Comparisons

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

(I) FOMO Condition	(J) FOMO Condition	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Low	High	-.597 [*]	.173	<.001	-.940	-.254
High	Low	.597 [*]	.173	<.001	.254	.940

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	12.598	1	12.598	11.852	<.001	.079
Error	147.750	139	1.063			

The F tests the effect of FOMO Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

Pairwise Comparisons

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

(I) Scarcity Condition	(J) Scarcity Condition	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Absent	Present	-1.298 [*]	.173	<.001	-1.641	-.955
Present	Absent	1.298 [*]	.173	<.001	.955	1.641

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Univariate Tests

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	59.571	1	59.571	56.043	<.001	.287
Error	147.750	139	1.063			

The F tests the effect of Scarcity Condition. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

3. FOMO Condition * Scarcity Condition

Dependent Variable: How does FINDSOM's advertisement feel to you. - Urgent

FOMO Condition	Scarcity Condition	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Low	Absent	1.488	.161	1.169	1.806
	Present	2.323	.185	1.956	2.689
High	Absent	1.622	.169	1.287	1.957
	Present	3.382	.177	3.033	3.732

Appendix 13: Oneway ANOVA – FoMO, Urgency and Anxiety

		Descriptives							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
How does FINDSOM's advertisement feel to you. - Urgent	Low	72	1.8472	1.10899	.13070	1.5866	2.1078	1.00	5.00
	High	71	2.4648	1.35046	.16027	2.1451	2.7844	1.00	5.00
	Total	143	2.1538	1.26884	.10611	1.9441	2.3636	1.00	5.00
REGR factor score 1 for analysis 2	Low	72	-.1972017	.72591166	.08554951	-.3677826	-.0266209	-1.14366	2.96848
	High	71	.1999792	1.18892104	.14109897	-.0814338	.4813922	-1.09548	4.38171
	Total	143	.0000000	1.00000000	.08362420	-.1653092	.1653092	-1.14366	4.38171

		Tests of Homogeneity of Variances				
		Levene Statistic	df1	df2	Sig.	
How does FINDSOM's advertisement feel to you. - Urgent	Based on Mean	7.800	1	141	.006	
	Based on Median	4.183	1	141	.043	
	Based on Median and with adjusted df	4.183	1	130.912	.043	
	Based on trimmed mean	7.925	1	141	.006	
REGR factor score 1 for analysis 2	Based on Mean	8.059	1	141	.005	
	Based on Median	4.090	1	141	.045	
	Based on Median and with adjusted df	4.090	1	111.093	.046	
	Based on trimmed mean	6.026	1	141	.015	

		Robust Tests of Equality of Means			
		Statistic ^a	df1	df2	Sig.
How does FINDSOM's advertisement feel to you. - Urgent	Welch	8.918	1	135.136	.003
	Brown-Forsythe	8.918	1	135.136	.003
REGR factor score 1 for analysis 2	Welch	5.794	1	115.532	.018
	Brown-Forsythe	5.794	1	115.532	.018

a. Asymptotically F distributed.

Appendix 14: Oneway ANOVA – Scarcity, Urgency and Anxiety

Oneway

		Descriptives							
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
How does FINDSOM's advertisement feel to you. - Urgent	Absent	78	1.5513	.92086	.10427	1.3437	1.7589	1.00	5.00
	Present	65	2.8769	1.25633	.15583	2.5656	3.1882	1.00	5.00
	Total	143	2.1538	1.26884	.10611	1.9441	2.3636	1.00	5.00
REGR factor score 1 for analysis 2	Absent	78	-.0896022	.85652703	.09698259	-.2827192	.1035149	-1.14366	4.38171
	Present	65	.1075226	1.14654462	.14221136	-.1765773	.3916224	-1.09548	4.10087
	Total	143	.0000000	1.00000000	.08362420	-.1653092	.1653092	-1.14366	4.38171

		Tests of Homogeneity of Variances				
		Levene Statistic	df1	df2	Sig.	
How does FINDSOM's advertisement feel to you. - Urgent	Based on Mean	7.732	1	141	.006	
	Based on Median	9.002	1	141	.003	
	Based on Median and with adjusted df	9.002	1	137.446	.003	
	Based on trimmed mean	9.257	1	141	.003	
REGR factor score 1 for analysis 2	Based on Mean	3.227	1	141	.075	
	Based on Median	2.069	1	141	.152	
	Based on Median and with adjusted df	2.069	1	130.590	.153	
	Based on trimmed mean	2.546	1	141	.113	

Robust Tests of Equality of Means

		Statistic ^a	df1	df2	Sig.
How does FINDSOM's advertisement feel to you. - Urgent	Welch	49.989	1	114.980	<.001
	Brown-Forsythe	49.989	1	114.980	<.001
REGR factor score 1 for analysis 2	Welch	1.311	1	116.439	.254
	Brown-Forsythe	1.311	1	116.439	.254

a. Asymptotically F distributed.

Appendix 15: Hayes' PROCESS macro: Model 4 – FoMO, Scarcity, Urgency, Anxiety and IBT

Matrix

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : IBT
X : FOMO
M1 : URGENCY
M2 : ANXIETY

Sample
Size: 143

OUTCOME VARIABLE:
URGENCY

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2442	.0596	1.5247	8.9421	1.0000	141.0000	.0033

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.8472	.1455	12.6939	.0000	1.5595	2.1349
FOMO	.6176	.2065	2.9903	.0033	.2093	1.0258

Standardized coefficients

	coeff
FOMO	.4867

OUTCOME VARIABLE:
ANXIETY

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1993	.0397	.9671	5.8313	1.0000	141.0000	.0170

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.1972	.1159	-1.7015	.0910	-.4263	.0319
FOMO	.3972	.1645	2.4148	.0170	.0720	.7223

Standardized coefficients

	coeff
FOMO	.3972

 OUTCOME VARIABLE:
 IBT

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2292	.0525	.5711	2.5687	3.0000	139.0000	.0569

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2744	.1331	17.0886	.0000	2.0112	2.5375
FOMO	.0777	.1321	.5885	.5572	-.1834	.3389
URGENCY	-.0343	.0521	-.6577	.5118	-.1372	.0687
ANXIETY	.1689	.0654	2.5819	.0109	.0395	.2982

Standardized coefficients

	coeff
FOMO	.1012
URGENCY	-.0566
ANXIETY	.2198

***** TOTAL EFFECT MODEL *****
 OUTCOME VARIABLE:
 IBT

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.0808	.0065	.5903	.9256	1.0000	141.0000	.3377

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.1778	.0905	24.0513	.0000	1.9988	2.3568
FOMO	.1236	.1285	.9621	.3377	-.1304	.3777

Standardized coefficients

	coeff
FOMO	.1610

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

	Effect	se	t	p	LLCI	ULCI	c'_ps
	.1236	.1285	.9621	.3377	-.1304	.3777	.1610

Direct effect of X on Y

	Effect	se	t	p	LLCI	ULCI	c'_ps
	.0777	.1321	.5885	.5572	-.1834	.3389	.1012

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0459	.0532	-.0476	.1641
URGENCY	-.0212	.0346	-.0946	.0426
ANXIETY	.0671	.0494	-.0036	.1838

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0598	.0676	-.0641	.2024
URGENCY	-.0275	.0452	-.1235	.0562
ANXIETY	.0873	.0611	-.0049	.2254

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: Standardized coefficients for dichotomous or multicategorical X are in partially standardized form.

----- END MATRIX -----

Matrix

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : IBT
X : SCARCT
M1 : URGENCY
M2 : ANXIETY

Sample
Size: 143

OUTCOME VARIABLE:
URGENCY

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.5220	.2725	1.1795	52.8231	1.0000	141.0000	.0000

Model						
	coeff	se	t	p	LLCI	ULCI
constant	1.5513	.1230	12.6150	.0000	1.3082	1.7944
SCARCT	1.3256	.1824	7.2680	.0000	.9651	1.6862

Standardized coefficients
coeff
SCARCT 1.0448

OUTCOME VARIABLE:
ANXIETY

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	.0985	.0097	.9973	1.3814	1.0000	141.0000	.2418

Model	coeff	se	t	p	LLCI	ULCI
constant	-.0896	.1131	-.7924	.4295	-.3131	.1339
SCARCT	.1971	.1677	1.1753	.2418	-.1344	.5287

Standardized coefficients

	coeff
SCARCT	.1971

OUTCOME VARIABLE:

IBT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2242	.0503	.5724	2.4523	3.0000	139.0000	.0659

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2990	.1266	18.1534	.0000	2.0486	2.5494
SCARCT	-.0182	.1490	-.1220	.9031	-.3127	.2764
URGENCY	-.0239	.0594	-.4027	.6878	-.1414	.0936
ANXIETY	.1751	.0646	2.7095	.0076	.0473	.3028

Standardized coefficients

	coeff
SCARCT	-.0237
URGENCY	-.0395
ANXIETY	.2279

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:

IBT

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0100	.0001	.5941	.0141	1.0000	141.0000	.9056

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.2462	.0873	25.7363	.0000	2.0736	2.4187
SCARCT	-.0154	.1295	-.1188	.9056	-.2713	.2405

Standardized coefficients

	coeff
SCARCT	-.0200

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
-.0154	.1295	-.1188	.9056	-.2713	.2405	-.0200

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
-.0182	.1490	-.1220	.9031	-.3127	.2764	-.0237

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0028	.0879	-.1546	.1923
URGENCY	-.0317	.0878	-.1923	.1571
ANXIETY	.0345	.0391	-.0192	.1323

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0036	.1154	-.1989	.2501
URGENCY	-.0413	.1150	-.2442	.2087
ANXIETY	.0449	.0486	-.0263	.1641

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: Standardized coefficients for dichotomous or multicategorical X are in partially standardized form.

----- END MATRIX -----

Appendix 16: Hayes' PROCESS macro: Model 4 – FoMO, Scarcity, Urgency, Anxiety and Purchase Likelihood

Matrix

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : PURCHLIK
X : FOMO
M1 : URGENCY
M2 : ANXIETY

Sample
Size: 143

OUTCOME VARIABLE:
URGENCY

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2442	.0596	1.5247	8.9421	1.0000	141.0000	.0033

Model	coeff	se	t	p	LLCI	ULCI
constant	1.8472	.1455	12.6939	.0000	1.5595	2.1349
FOMO	.6176	.2065	2.9903	.0033	.2093	1.0258

Standardized coefficients

	coeff
FOMO	.4867

OUTCOME VARIABLE:
ANXIETY

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1993	.0397	.9671	5.8313	1.0000	141.0000	.0170

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.1972	.1159	-1.7015	.0910	-.4263	.0319
FOMO	.3972	.1645	2.4148	.0170	.0720	.7223

Standardized coefficients

	coeff
FOMO	.3972

OUTCOME VARIABLE:
PURCHLIK

Model Summary

R	R-sq	MSE	F	df1	df2	p
.1368	.0187	1.2995	.8835	3.0000	139.0000	.4514

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.1394	.2008	10.6562	.0000	1.7424	2.5363
FOMO	-.1692	.1992	-.8495	.3971	-.5632	.2247
URGENCY	.1139	.0786	1.4498	.1494	-.0414	.2693
ANXIETY	-.0573	.0987	-.5813	.5620	-.2524	.1377

Standardized coefficients

	coeff
FOMO	-.1487
URGENCY	.1269
ANXIETY	-.0504

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:
PURCHLIK

Model Summary

R	R-sq	MSE	F	df1	df2	p
.0536	.0029	1.3017	.4066	1.0000	141.0000	.5247

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.3611	.1345	17.5601	.0000	2.0953	2.6269
FOMO	-.1217	.1908	-.6376	.5247	-.4989	.2556

Standardized coefficients

coeff
FOMO -.1069

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
-.1217	.1908	-.6376	.5247	-.4989	.2556	-.1069

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
-.1692	.1992	-.8495	.3971	-.5632	.2247	-.1487

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0476	.0770	-.0909	.2165
URGENCY	.0703	.0620	-.0232	.2155
ANXIETY	-.0228	.0518	-.1307	.0782

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.0418	.0672	-.0822	.1877
URGENCY	.0618	.0539	-.0208	.1873
ANXIETY	-.0200	.0458	-.1166	.0677

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

NOTE: Standardized coefficients for dichotomous or multicategorical X are in partially standardized form.

----- END MATRIX -----

Matrix

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 4.2 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2022). www.guilford.com/p/hayes3

Model : 4
Y : PURCHLIK
X : SCARCT
M : URGENCY

Sample
Size: 143

 OUTCOME VARIABLE:
 URGENCY

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.5220	.2725	1.1795	52.8231	1.0000	141.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.5513	.1230	12.6150	.0000	1.3082	1.7944
SCARCT	1.3256	.1824	7.2680	.0000	.9651	1.6862

Standardized coefficients

	coeff
SCARCT	1.0448

 OUTCOME VARIABLE:
 PURCHLIK

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.2099	.0440	1.2569	3.2250	2.0000	140.0000	.0427

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.1145	.1852	11.4169	.0000	1.7483	2.4806
SCARCT	-.4938	.2208	-2.2369	.0269	-.9302	-.0574
URGENCY	.1907	.0869	2.1935	.0299	.0188	.3626

Standardized coefficients

	coeff
SCARCT	-.4337
URGENCY	.2125

***** TOTAL EFFECT MODEL *****

OUTCOME VARIABLE:
 PURCHLIK

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.1058	.0112	1.2909	1.5956	1.0000	141.0000	.2086

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.4103	.1286	18.7358	.0000	2.1559	2.6646
SCARCT	-.2410	.1908	-1.2632	.2086	-.6182	.1362

Standardized coefficients

	coeff
SCARCT	-.2117

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y *****

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI	c_ps
-.2410	.1908	-1.2632	.2086	-.6182	.1362	-.2117

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI	c'_ps
-.4938	.2208	-2.2369	.0269	-.9302	-.0574	-.4337

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
URGENCY	.2528	.1112	.0179	.4612

Partially standardized indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
URGENCY	.2220	.0972	.0158	.4026

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

NOTE: Standardized coefficients for dichotomous or multicategorical X are in partially standardized form.

----- END MATRIX -----