



Does the communication channel change the power of emotions?

A 2×2 experiment on emotional vs. rational
advertisement in social media vs. non-social channels

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Abstract

Advertising effectiveness depends not only on message content but also on the communication channel through which it is delivered. This dissertation studies whether the effectiveness of emotional versus rational advertising appeals differs across social media and out-of-home (OOH) channels. Based on media effectiveness literature, a 2×2 between-subjects experimental design was employed, manipulating advertising appeal (emotional vs. rational) and communication channel (social media vs. OOH). Data was collected through an online experiment (survey) with 215 participants using fictitious brand stimuli.

The results show that emotional appeals generate significantly more favorable brand attitudes than rational appeals, although no direct differences were found for purchase intention or brand loyalty. Regarding channel effects, OOH advertising outperformed social media in influencing brand loyalty and showed a marginal advantage for purchase intention, while brand attitudes did not differ significantly between channels. No interaction effects were found between appeal type and channel. Mediation analyses revealed that ad likeability was the only psychological mechanism through which advertising appeal influenced brand attitude, purchase intention, and brand loyalty. Affective arousal and processing fluency did not mediate these relationships. Moderation analyses further indicated that need for cognition did not affect consumer responses, whereas category involvement consistently strengthened the effectiveness of OOH advertising.

Overall, the findings contribute to advertising research by integrating message appeal, communication channel, psychological mechanisms, and individual differences within a single framework, while offering managerial insights into the continued relevance of OOH advertising and the central role of ad likeability.

Keywords: Advertising appeals; Emotional advertising; Rational advertising; Social media advertising; Out-of-home advertising; Ad likeability; Brand attitude; Purchase intention; Brand loyalty

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Sumário

A eficácia da publicidade depende não apenas do conteúdo da mensagem, mas também do meio de comunicação através do qual esta é transmitida. Esta dissertação analisa se a eficácia dos apelos publicitários emocionais e racionais difere entre as redes sociais e a publicidade exterior (out-of-home – OOH). Com base na literatura sobre eficácia dos meios de comunicação, adotou-se um desenho experimental 2×2 entre sujeitos, manipulando o tipo de apelo e o meio de comunicação. Os dados foram recolhidos através de um questionário aplicado a 215 participantes.

Os resultados demonstram que os apelos emocionais geram atitudes perante a marca significativamente mais favoráveis do que os apelos racionais, não se verificando, contudo, efeitos diretos significativos na intenção de compra ou na lealdade à marca. Relativamente aos meios de comunicação, OOH revelou-se mais eficaz na promoção da lealdade à marca e apresentou uma vantagem marginal na intenção de compra, não se observando diferenças significativas nas atitudes perante a marca. Não foram identificados efeitos de interação entre o tipo de apelo e o meio de comunicação.

As análises de mediação indicaram que a agradabilidade do anúncio foi o único mecanismo psicológico através do qual o tipo de apelo influenciou a atitude perante a marca, a intenção de compra e a lealdade. A ativação afetiva e a fluência de processamento não exerceram efeitos mediadores significativos. As análises de moderação mostraram ainda que a necessidade de cognição não influenciou as respostas dos consumidores, enquanto o envolvimento com o produto reforçou a eficácia da publicidade OOH.

Palavras-chave: Apelos publicitários; Publicidade emocional; Publicidade racional; Publicidade em redes sociais; Publicidade exterior (OOH); Agradabilidade do anúncio; Atitude de marca; Intenção de compra; Lealdade à marca

Título: O meio de comunicação influencia o poder das emoções? Um estudo experimental 2×2 sobre anúncios emocionais e racionais em redes sociais e publicidade exterior

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Executive Summary

In an increasingly fragmented media environment, marketers face critical decisions not only about what to communicate but also where to communicate it. Emotional and rational advertising appeals have long been central to persuasion strategies, yet their effectiveness may depend on the communication channel through which they are delivered. This dissertation examines how emotional versus rational advertising appeals perform across social media and out-of-home (OOH) channels and explores the psychological mechanisms and individual differences that shape consumer responses.

The study employs a 2×2 between-subjects experimental design, manipulating advertising appeal (emotional vs. rational) and channel (social media vs. OOH). Participants were exposed to one of four fictitious advertisements and subsequently evaluated the brand in terms of brand attitude, purchase intention, and brand loyalty. In addition, the study examined affective arousal, processing fluency, and ad likeability as potential mediators, as well as need for cognition and category involvement as moderators.

The results reveal several important insights. First, emotional appeals were more effective than rational appeals in generating favorable brand attitudes. This suggests that emotional cues play a particularly strong role in shaping initial brand evaluations, especially when consumers lack prior familiarity with the brand. However, emotional appeals did not directly increase purchase intention or brand loyalty, indicating that positive feelings alone may not be sufficient to drive more effortful or long-term behavioral responses.

Second, the findings highlight the continued relevance of out-of-home advertising. OOH advertising outperformed social media in influencing brand loyalty and showed a marginal advantage in purchase intention, while brand attitudes were similar across channels. These results challenge the widespread assumption that social media is inherently more effective and suggest that the visibility, stability, and repeated exposure characteristic of OOH advertising can foster stronger behavioral outcomes, particularly those related to loyalty.

Contrary to expectations, no interaction effects were found between advertising appeal and channel. Emotional appeals did not become more effective in social media contexts, nor did rational

appeals perform better in OOH environments. This suggests that, at least in the context of short and simple advertising exposures, appeal type and channel exert independent rather than complementary effects.

The mediation analyses provide further insight into how advertising works. Among the psychological mechanisms examined, ad likeability emerged as the only consistent mediator. Emotional appeals increased ad likeability, which in turn enhanced brand attitude, purchase intention, and brand loyalty. In contrast, affective arousal and processing fluency did not explain the effects of advertising appeal. This finding highlights the importance of creative execution and overall enjoyment of the advertisement, beyond emotional intensity or informational clarity.

Finally, the moderation analyses revealed that individual differences matter selectively. Need for cognition did not influence how consumers responded to emotional or rational appeals, suggesting that cognitive style may be less relevant in low-effort, visually driven advertising contexts. Category involvement, however, consistently moderated channel effects: highly involved consumers responded more positively to OOH advertising across all outcomes, whereas low-involvement consumers showed no strong preferences. This indicates that OOH advertising may be particularly effective for targeting consumers who are already engaged with the product category.

From a managerial perspective, these findings suggest that emotional appeals are especially valuable for building favorable brand perceptions, while OOH advertising remains a powerful channel for strengthening behavioral outcomes such as loyalty, particularly among involved consumers. Moreover, ad likeability emerges as a critical driver of advertising effectiveness, highlighting the need for marketers to prioritize creative quality and enjoyment alongside message content and media planning.

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Lots of love,

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1. Introduction

1.1 Background context

Advertising is everywhere: on our phones, in the streets, across social platforms, and on the walls of bus stops we pass daily. While the formats differ, a common thread remains: advertisers must decide how to capture attention and persuade consumers. Should a brand rely on an emotional story that sparks feelings, or should it focus on rational information that explains benefits clearly?

Both strategies have long been central to advertising, yet the context in which they are used has changed dramatically. With audiences scrolling past hundreds of messages online and simultaneously being exposed to physical, non-digital formats such as out-of-home (OOH) media, the effectiveness of these appeals is not only about the message itself but also about the channel through which it is delivered.

1.2 Defining the problem

Research on advertising appeals has shown that both emotional and rational strategies can be effective, but, to the best of my knowledge, much of this work has been conducted within single media contexts. For example, studies on digital platforms shows how emotional content drives engagement and sharing (Berger & Milkman, 2012), while rational appeals have been mostly tested in formats such as television and print, often with mixed results depending on product type and audience (Otamendi & Sutil Martín, 2020). In parallel, research on media effectiveness has examined how out-of-home (OOH) advertising captures attention, reinforces recall, and influences consumer behavior in public settings (Wilson, 2022; Madlenak et al., 2023).

While these streams provide valuable insights, they have been developed largely in isolation. Existing studies tell us either how emotional versus rational appeals work within a given channel, how different media performs overall, but they stop short of integrating both dimensions into a single framework. In the making of this research, to the best of my knowledge, no study comparing the four possible combinations (emotional & social media, rational & social media, emotional & OOH, and rational & OOH) was found. Addressing this gap is essential to understand not only how appeals perform within each channel but also whether their relative effectiveness depends on the channel through which they are delivered.

1.3 Significance of the study

From an academic perspective, this research advances advertising theory by bridging two research streams that are usually treated separately: advertising appeals and media effectiveness. It contributes by being the first to test the combined effect of appeal type (emotional or rational) and channel (social media or OOH) within a single comparative framework. For practitioners, the contribution is equally relevant. Marketers allocate large budgets across social and non-social media, yet often rely on intuition when deciding which type of message to use in which format. By directly comparing all four combinations of appeal and channel, this study provides actionable insights into how message effectiveness may shift depending on whether it appears in social media or OOH contexts.

1.4 Objectives and research question

The objective of this dissertation is to investigate how advertising appeals perform across different channels, with a focus on social media and OOH formats. Specifically, the study addresses the five following research questions (RQ):

- **RQ1:** Which type of advertising appeal (emotional or rational) is more effective across different outcomes, such as brand attitudes, purchase intention, and brand loyalty?
- **RQ2:** Which advertising channel (social media or OOH) is more effective across these same outcomes?
- **RQ3:** Does the type of channel interact with type of appeal to influence consumer behavior?
- **RQ4:** Do individual differences moderate the effectiveness of advertising appeal and advertising channel on consumer behavior? Specifically:
 - Does Need for Cognition (NFC) moderate the relationship between advertising appeal (emotional vs. rational) and consumer responses (brand attitude, purchase intention, and brand loyalty)?
 - Does Category Involvement moderate the relationship between advertising channel (social media vs. OOH) and consumer responses (brand attitude, purchase intention, and brand loyalty)?

- **RQ5:** Do affective arousal, processing fluency, and ad likeability mediate the effects of advertising appeal on the main consumer behavior variables: brand attitude, purchase intention, and brand loyalty?

These questions enable the study to examine not only the relative performance of appeals and channels, but also whether channel itself shapes the effectiveness of appeals.

1.5 Positioning within literature

This work builds on two well-established streams of research. The first explores the psychological mechanisms of emotional and rational appeals, showing how feelings and cognitions guide persuasion (Chaudhuri & Buck, 1995; Muehling et al., 2014; Riemer & Noel, 2020). The second examines the effectiveness of different media, from digital platforms to outdoor advertising, highlighting differences in attention, recall, and consumer response (Wilson, 2022; Madlenak et al., 2023). However, these literatures have rarely been connected. By bridging them, this study addresses a gap and contributes to both advertising theory and media strategy.

1.6 Dissertation outline

The remainder of this dissertation is structured as follows. Chapter 1 introduces the topic, outlines the research problem, objectives, and research questions, and explains the study's significance. Chapter 2 provides a review of the literature on emotional and rational advertising appeals as well as on media effectiveness, highlighting the research gap and presenting the hypotheses. Chapter 3 describes the methodology, including the experimental design, sample, and data collection strategy. Chapter 4 reports the results of the empirical study. Finally, Chapter 5 discusses the findings considering existing literature, draws theoretical and managerial implications, acknowledges limitations, and suggests directions for future research.

2. Literature review

2.1 Background and Context

Advertising has long been one of the most visible tools of marketing, playing a central role in shaping consumer perceptions and behaviors. At its core, advertising seeks to inform, persuade, and remind audiences about brands and products, but the strategies it uses to achieve these goals vary widely. One of the most long-lasting distinctions in advertising strategy is the use of emotional versus rational appeals. Emotional appeals aim to connect with audiences through affective responses such as joy, nostalgia, or empathy, while rational appeals rely on facts, arguments, and functional benefits (Chaudhuri & Buck, 1995; Muehling et al., 2014). Both approaches have demonstrated effectiveness under different circumstances, yet questions remain about when and where each should be used.

At the same time, the media landscape has been transformed. Traditional media such as television, print, and radio continue to play an important role, but the rapid growth of digital channels, particularly social media, has transformed how advertisers reach audiences. Social platforms provide interactivity, personalization, and opportunities for virality, though they also face challenges such as content overload and short attention spans (Berger & Milkman, 2012). Alongside this shift, out-of-home (OOH) advertising, including billboards, transit ads, and bus shelters, remains a channel with high visibility and contextual relevance, often reaching consumers in public spaces where digital distractions may be less dominant (Wilson, 2022; Madlenak et al., 2023). For practitioners, the coexistence of these channels raises a critical strategic question: how should message content, emotional or rational, be matched to the channel through which it is delivered?

Prior research has tended to examine appeal type and advertising channel in isolation. Studies on advertising appeals have focused on psychological mechanisms, such as the role of affect in memory (Riemer & Noel, 2021), the conditions under which rational arguments are persuasive (Otamendi & Martín, 2020), or the influence of personal traits like need for cognition on individuals' responsiveness to emotional versus rational messages (Haugtvedt et al., 1992). In parallel, research on media effectiveness has compared formats such as radio, print, and digital, often highlighting differences in attention, recall, or sales impact (Sethuraman et al., 2011). More

recent studies have examined how digital environments, particularly social media, foster emotional engagement and content sharing (Berger & Milkman, 2012; Munsch, 2021), while research on OOH has emphasized its ability to capture attention and influence consumer decisions in everyday settings (Stalder, 2011).

Despite this progress, the interaction between appeal type and advertising channel has been underexplored. Very few studies have explicitly compared the effectiveness of emotional versus rational appeals across different media contexts. This is surprising given that advertisers rarely make decisions about appeals without simultaneously considering the channel through which they will be delivered.

In this way, situating the study at the intersection of appeal strategies and media channels allows for a more comprehensive understanding of persuasion in contemporary advertising. By examining how emotional and rational appeals perform across social media and OOH formats, this research not only addresses a theoretical gap but also speaks directly to the strategic dilemmas faced by practitioners allocating budgets in an increasingly fragmented media environment.

2.2 Emotional vs. Rational Appeals

One of the most established distinctions in advertising strategy lies in the use of emotional versus rational appeals. Emotional appeals seek to elicit affective reactions, such as warmth, joy, or empathy, that create a bond with the brand. In contrast, rational appeals emphasize factual information, logical arguments, and concrete product attributes such as quality, performance, or price. This distinction remains central to advertising theory because consumers do not process all messages in the same way. Contemporary dual-process models of decision-making show that persuasion can follow either an intuitive, affective route or a deliberate, analytic route depending on the audience and context. For example, Kahneman's (2011) System 1/System 2 framework distinguishes between fast, emotional, heuristic processing (System 1) and slower, cognitively effortful evaluation (System 2). Similarly, the Reflective-Impulsive Model (Strack & Deutsch, 2004) differentiates between impulsive, emotion-based responses and reflective, reason-based judgments. These perspectives complement earlier persuasion models by explaining why consumer responses to emotional and rational appeals vary widely across individuals and situations (Ladeira et al., 2019).

A growing body of work has examined how distinct emotions operate within advertising. High-arousal positive emotions such as joy and excitement are particularly effective at capturing attention, enhancing memory, and motivating approach behaviors. They act as affective heuristics that simplify evaluation and lead to more favorable brand judgments (Poels & Dewitte, 2019). Empirical research demonstrates that emotionally arousing content is more likely to be shared and engaged with online, highlighting how high-arousal emotions amplify reach in social contexts (Berger & Milkman, 2012).

Other emotional tones function through lower-arousal positive states, such as calmness, serenity, and relaxation. While less energizing than joy or excitement, these emotions can foster feelings of trust, comfort, and reassurance. Emotional-response research demonstrates that the pattern and intensity of emotions during ad exposure systematically influence evaluations (Micu & Plummer, 2010). Building on this, Labroo and Rucker (2010) show that advertising is evaluated more positively when the emotional orientation of the message aligns with that of the audience's current state. For instance, calm, avoidance-oriented appeals resonate better when consumers feel anxious or uncertain. In these contexts, calmness works not by stimulating excitement but by helping consumers regulate their feelings, thereby promoting more reflective evaluation, an effect especially relevant for brands positioned around relaxation or self-care.

Nevertheless, rational appeals continue to play a vital role as they are especially persuasive in contexts where consumers seek detailed information to guide their choices. Ruiz and Sicilia (2002) showed that rational messages are most effective among consumers with cognitive, analytic processing styles, who prefer information-based arguments over emotional cues. Rosselli et al. (1995) likewise found that rational arguments can drive persuasion when audiences engage in systematic processing, although affective mediation often remains influential. Rational appeals also tend to perform better for utilitarian products or in high-involvement decisions, where credibility and confidence in the purchase matter most. Otamendi and Martín (2020), using facial expression analysis, observed that informational appeals elicited higher cognitive engagement and perceptions of credibility, suggesting that rational appeals may be particularly effective in situations where consumers want reasons for their choices.

These findings have generated ongoing debate about which appeal is superior. Rather than offering a universal answer, the literature shows that the effectiveness of appeals depends on the cognitive route activated during message processing. Emotional appeals operate primarily through fast, intuitive, affect-based mechanisms aligned with System 1 processing, whereas rational appeals depend on slower, reflective, argument-driven evaluation characteristic of System 2 (Kahneman, 2011). Consequently, the core question is not whether emotion or reason should dominate advertising, but rather when, where, and for whom each strategy works best.

2.3 Media Channel Effectiveness

Advertising effectiveness is shaped not only by the content of the message but also by the channel through which it is delivered. Different media environments vary in their sensory richness, level of interactivity, and contextual placement, and these differences influence how consumers process and respond to advertising. Early work comparing mass media already highlighted these dynamics. Sethuraman et al. (2011), in a meta-analysis of brand advertising elasticities, demonstrated that responsiveness to advertising varied significantly across channels. Danaher and Dagger (2013) added that campaigns present in multiple channels tend to outperform single-channel efforts, since each channel contributes unique strengths that reinforce one another. This means that media choice is not a neutral backdrop but an active factor in determining how persuasive a message will be.

The growth of digital platforms has intensified this reality. Social media has transformed advertising by introducing interactivity, personalization, and the potential for virality. Berger and Milkman (2012) demonstrated that content evoking high-arousal emotions is more likely to be shared online, which highlights how social platforms can amplify advertising reach through consumer participation. Yet this amplification comes with significant challenges: social media users are overwhelmed with content, attention spans are short, and competition for visibility is fierce. Munsch (2021) observed that Millennials and Generation Z, who are heavy social media users, are experts at filtering out content they perceive as irrelevant, which makes breaking through clutter difficult. Broader studies of online advertising effectiveness reflect these concerns. Goldfarb and Tucker (2011) found that online display advertising was effective when it was well-targeted but generated resistance when perceived as intrusive. Similarly, Drèze and Hussherr (2003), through an eye-tracking study, showed that consumers often ignore banner ads (“banner blindness”), although repeated exposure still contributed to brand awareness. These findings

emphasize the dual nature of digital channels: they create unique opportunities for engagement but also heighten the risks of consumer avoidance.

Out-of-home (OOH) advertising provides a different profile of effectiveness. Despite being one of the oldest forms of advertising, OOH continues to deliver strong results by placing messages in consumers' daily routines. Wilson (2022) concluded that OOH advertising enhances brand visibility and recall, benefiting from its high frequency of exposure in public spaces. Madlenák et al. (2023) used eye-tracking and A/B testing to show that outdoor formats attract attention, even when competing with environmental distractions. Bus stop advertising, a specific sub-format of OOH, is especially powerful in this regard. Several studies demonstrated that repeated exposure at bus stops enhances familiarity and brand recognition, leveraging the captive attention of commuters. At the same time, the rise of digital out-of-home (DOOH) has expanded these possibilities. Stalder (2011) described how digital screens in public environments combine the permanence of traditional outdoor placements with the dynamism of digital formats, making OOH more adaptive and engaging than ever before.

Taken together, the literature demonstrates that each advertising channel offers a distinct mix of advantages and limitations. Social media enables interaction, personalization, and virality but is challenged by clutter and short attention. OOH provides visibility, contextual relevance, and repeated exposure but is limited in terms of interactivity. The conclusion is clear: media choice is not secondary but a key determinant of how advertising is received.

2.4 Advertising Response Variables and Theoretical Mechanisms

While emotional and rational appeals, as well as media channels, form the structural dimensions of advertising strategy, their impact ultimately depends on how audiences process, evaluate, and respond to advertising stimuli. Prior research identifies several key constructs that together shape how consumers evaluate brands and form behavioral intentions. This section reviews each construct, emphasizing its role in predicting the main dependent variables of this study.

2.4.1 Affective arousal

Affective arousal refers to the emotional activation elicited by an advertisement. Research consistently shows that the intensity of emotion experienced during ad exposure significantly shapes brand attitude and overall advertising effectiveness (Edell & Burke, 1987; Batra & Ray, 1986). High-arousal positive emotions such as joy or excitement increase attention, enhance memory, and trigger approach behavior, thereby supporting favorable brand evaluations (Poels & Dewitte, 2019).

Although arousal can support short-term purchase intention, the evidence for its influence on brand loyalty is mixed, as loyalty requires sustained attitudes and repeated interactions beyond momentary emotion (Chaudhuri & Holbrook, 2001). Overall, arousal is most consistently linked to immediate evaluative outcomes such as brand attitude and short-term behavioral intention.

2.4.2 Ad likeability

Ad likeability refers to the extent to which an advertisement is perceived as enjoyable, pleasant, and appealing. It is one of the most consistently validated predictors of advertising effectiveness across both academic research and industry practice. Meta-analytic evidence shows that ad likeability reliably predicts brand attitude, purchase intention, and even market-level sales performance, underscoring its central role in persuasion processes (Bergkvist & Rossiter, 2008). When consumers perceive an advertisement as entertaining or enjoyable, they form more favorable attitudes toward the ad, which subsequently enhance brand attitude (Shareef et al., 2019; Belanche et al., 2020). This positive affective response also increases purchase intention, as consumers who like and enjoy an advertisement are more open to its message and more willing to consider the promoted brand (Alalwan, 2018). Moreover, favorable attitudes toward the ad have been shown to reinforce brand associations over time, supporting more stable and enduring responses that can contribute to brand loyalty (Belanche et al., 2020). Together, these findings indicate that ad likeability is a central mechanism through which advertising influences brand evaluations and behavioral intentions.

2.4.3 Processing Fluency

Processing fluency refers to the subjective ease with which consumers perceive and interpret an advertisement, and it plays a central role in shaping their subsequent evaluations and behavioral responses. When an ad is visually clear, simple, and coherent, consumers experience higher fluency, which elicits spontaneous positive affect and leads to more favorable brand attitudes (Reber, Schwarz & Winkielman, 2004). Fluent messages feel more familiar, truthful, and trustworthy, increasing consumers' confidence in their judgments and enhancing their evaluations of the advertised brand (Alter & Oppenheimer, 2009). Research also shows that both perceptual and conceptual fluency improve brand evaluations and choice, as consumers tend to prefer information that feels easy to process (Lee & Labroo, 2004). More recent work in customer experience similarly highlights that effortless, low-friction processing strengthens consumers' overall reactions to marketing stimuli, improving decision quality and increasing the likelihood of positive behavioral outcomes such as purchase intention (Puccinelli et al., 2019). Although fluency has been studied less frequently in relation to long-term behaviors, its effects on positive evaluation and decision confidence suggest that higher fluency may indirectly support brand loyalty by creating repeated feelings of ease and comfort during brand encounters. Overall, processing fluency enhances consumer responses by making advertising messages feel smooth, intuitive, and psychologically accessible.

2.4.4 Need for Cognition

Need for Cognition (NFC) refers to an individual's intrinsic motivation to engage in and enjoy effortful cognitive activity (Cacioppo & Petty, 1982). Consumers high in NFC tend to scrutinize information carefully, rely on analytical processing, and form attitudes through systematic evaluation, whereas low-NFC individuals rely more on affective impressions and heuristic cues. Classic persuasion research shows that high-NFC consumers respond more strongly to detailed, argument-based messages, forming more stable and resistant brand attitudes when message content supports elaboration (Haugtvedt, Petty & Cacioppo, 1992; Zhang, 1996). Recent evidence further demonstrates that NFC moderates consumers' reactions to advertising executions: individuals high in NFC evaluate humorous or informational ads more positively when the message invites cognitive elaboration, which in turn enhances attitudes toward the ad and increases purchase

intention (Sjabadhyni et al., 2021). Additionally, research on ad cognition shows that consumers with higher cognitive engagement exhibit stronger favorable responses and higher intention to purchase when they perceive ads as informative and mentally stimulating (Wirya et al., 2022). Although fewer studies directly link NFC to brand loyalty, high-NFC consumers tend to form more enduring and cognitively grounded evaluations, suggesting that once a preference is established, it may translate into more stable long-term responses. Overall, NFC represents an important individual-difference factor shaping how consumers interpret advertising messages and how strongly these messages influence their attitudes and behavioral intentions.

2.4.5 Category Involvement

Category involvement refers to the extent to which a consumer perceives a product category as personally relevant or important, shaping the level of cognitive effort devoted to evaluating advertising messages. Classic work shows that high-involvement consumers engage in more extensive information processing, leading to stronger and more stable brand evaluations (Zaichkowsky, 1985; Petty & Cacioppo, 1986). More recent research confirms that involvement amplifies consumers' attention to advertising content and strengthens the formation of brand attitudes, as highly involved individuals are more motivated to interpret and evaluate marketing information (Wirya et al., 2022; Puccinelli et al., 2019). High involvement also increases the likelihood that positive ad evaluations translate into purchase intentions: when consumers care about the category, they scrutinize product cues more carefully and rely on ads to support their decision-making (Tran, 2024). Furthermore, involvement contributes to the development of enduring behavioral tendencies such as brand loyalty, because repeated category engagement reinforces familiarity, preference consistency, and long-term commitment toward preferred brands (Eisend, 2022). Overall, category involvement plays a crucial role in influencing consumer behavior, shaping how individuals attend to, interpret, and act upon advertising stimuli, ultimately affecting brand attitudes, purchase intentions, and loyalty.

2.4.6 Brand Attitude

Brand attitude refers to a consumer's overall evaluative judgment of a brand, integrating both affective and cognitive assessments that develop through exposure to marketing stimuli. Foundational research establishes brand attitude as a key predictor of subsequent behavioral

responses, including purchase intention and loyalty (Spears & Singh, 2004; Batra & Ray, 1986). Recent studies reinforce this relationship, showing that favorable brand attitudes enhance consumers' willingness to engage with brands and increase conversion likelihood in both online and offline contexts (Alalwan, 2018). Contemporary evidence also highlights that brand attitude is shaped not only by the informational content of an advertisement but also by consumers' emotional reactions, aesthetic evaluations, and subjective processing experiences (Belanche et al., 2020). Positive attitudes arise when advertising stimuli are perceived as relevant, credible, enjoyable, or easy to process, and these positive evaluations then transfer to the brand itself, strengthening consumer preference and differentiation in competitive markets (Puccinelli et al., 2019). Involvement and cognitive engagement further reinforce brand attitude, as consumers who pay closer attention to category information or evaluate brand cues more deeply tend to form stronger and more stable attitudes (Wirya et al., 2022). Overall, brand attitude functions as a central mechanism linking advertising exposure to consumer behavior, anchoring both short-term intentions and longer-term brand relationships.

2.4.7 Purchase Intention

Purchase intention reflects a consumer's self-reported likelihood of buying a brand or product, serving as a key indicator of future marketplace behavior. Foundational behavioral models posit that purchase intention is shaped by consumers' attitudes, evaluations of value, and perceived behavioral control (Ajzen, 1991; Spears & Singh, 2004). Recent empirical studies reinforce this link, showing that favorable consumer responses to advertising, such as enjoyment, relevance, credibility, and ease of processing, translate into higher purchase intentions across digital and traditional media (Alalwan, 2018; Belanche et al., 2020). Consumer engagement with the category also plays an important role, as high-involvement individuals are more likely to process advertising deeply and convert positive evaluations into purchasing decisions (Wirya et al., 2022; Puccinelli et al., 2019). Research additionally highlights the influence of affective and experiential cues: when ads evoke positive emotions or create enjoyable experiences, consumers show greater motivation to consider purchasing, particularly in environments where immediacy and accessibility reinforce impulsive decision-making (Tran, 2024). Overall, purchase intention is a dynamic construct shaped by cognitive evaluations, emotional reactions, and involvement-related factors that together determine whether advertising exposure translates into behavioral motivation.

2.4.8 Brand Loyalty

Brand loyalty refers to a consumer's enduring commitment to a brand, expressed through repeated purchasing, positive attitudes, and resistance to switching, even when competitors offer alternatives (Oliver, 1999; Chaudhuri & Holbrook, 2001). Loyalty encompasses both behavioral and attitudinal dimensions: behavioral loyalty reflects repeated purchase patterns, while attitudinal loyalty captures emotional attachment, trust, and identification with the brand. Recent research demonstrates that positive consumer experiences, such as enjoyable advertising, clear value perceptions, and strong brand attitudes, enhance loyalty by reinforcing brand associations and strengthening consumer-brand relationships (Puccinelli et al., 2019). Brand loyalty is also influenced by involvement and knowledge: consumers with higher category involvement form deeper, more stable affiliations with brands and are more likely to sustain loyalty over time (Eisend, 2022; Wirya et al., 2022). Studies further show that emotional resonance and favorable ad evaluations play an important role in cultivating long-term loyalty, as affective reactions foster connection and trust beyond the moment of purchase (Belanche et al., 2020). Thus, brand loyalty emerges from the combined effects of emotional engagement, cognitive evaluation, and category involvement, representing a critical outcome for long-term brand equity and customer retention.

By examining these interrelated concepts, this study aims to provide a holistic understanding of how different advertising appeals and media channels shape consumer responses and contribute to brand-building in communication environments.

Together, these insights illustrate that advertising effectiveness is multidimensional: shaped by message content, media context, and consumer psychology, and provide the theoretical foundation for the hypotheses that follow.

2.5 Summary of Gaps and Hypotheses

The literature reviewed in this chapter highlights three main insights. First, emotional and rational appeals influence consumer responses in distinct ways as already discussed. Second, media channels such as social media and out-of-home (OOH) advertising offer different persuasive conditions. Social media excels at interactivity and virality but suffers from clutter and short attention, while OOH provides stable visibility and repeated exposure, reinforcing recall (Wilson,

2022; Madlenák et al., 2023). Third, to the best of my knowledge, existing research rarely considers these two dimensions together. Building on this observation, the present study addresses this gap and is organized around the five following hypothesis:

- H1: Emotional appeals will, on average, be more effective than rational appeals across advertising outcomes.
 - H1 a): Emotional appeals will be more effective than rational appeals in influencing brand attitude.
 - H1 b): Rational appeals will be more effective than emotional appeals in influencing purchase intention.
 - H1 c): Emotional appeals will be more effective than rational appeals in influencing brand loyalty.
- H2: Social media advertising will, on average, be more effective than OOH advertising across advertising outcomes.
 - H2 a): Social media advertising will be more effective than OOH advertising in influencing brand attitude.
 - H2 b): Social media advertising will be more effective than OOH advertising in influencing purchase intention.
 - H2 c): Social media advertising will be more effective than OOH advertising in influencing brand loyalty.
- H3: The type of channel will interact with the type of appeal to influence consumer behavior, such that the relative effectiveness of emotional versus rational appeals will differ between social media and OOH contexts.
- H4:
 - H4a: Need for Cognition (NFC) moderates the effect of Advertising Appeal
 - H4b: Category Involvement moderates the effect of Advertising Channel
- H5:
 - H5a: Emotional appeals increase affective arousal, which enhances (a1) Brand Attitude, (a2) Purchase Intention, (a3) Brand Loyalty.

- H5b: Emotional appeals increase processing fluency, which consequently increases (b1) Brand Attitude, (b2) Purchase Intention, (b3) Brand Loyalty.
- H5c: Emotional appeals increase ad likability, which in turn increases (c1) Brand Attitude, (c2) Purchase Intention, (c3) Brand Loyalty.

To test these hypotheses, the study advances the conceptual framework presented in the following section, which integrates the independent, dependent, mediating and moderating variables.

2.6 Conceptual Framework

Drawing on the research gap identified, and the hypotheses developed in the previous section, this study proposes a conceptual framework, which is summarized in Figure 1 and 2. At its core, the model considers two independent variables: appeal type (emotional versus rational) and channel (social media versus out-of-home). These are expected to influence consumer outcomes, which are represented through three dependent variables: brand attitude, purchase intention, and brand loyalty (H1 – H3). This relationship is summarized in Figure 1.

To clarify how advertising appeals exert their influence, in Figure 2, the model integrates three mediating variables - affective arousal, processing fluency, and ad likeability - which operate specifically within the relationship between appeal type and consumer outcomes (H5). These variables capture the internal psychological processes that take place between exposure to the ad and consumers' resulting evaluations. For instance, an emotional appeal may increase affective arousal, evoking feelings of relaxation or happiness that subsequently enhance brand attitude. Likewise, a rational appeal may enhance processing fluency by presenting information that is clear and easy to understand, which in turn contributes to more favorable brand evaluations. Considering these mediators is essential because it allows the study to move beyond describing whether advertising works to explaining how it works: identifying the underlying pathways that link ad exposure to consumer responses. Without them, analyses would only reveal surface-level differences between ad types or channels, without clarifying the psychological mechanisms driving those effects. This omission could lead to an oversimplified interpretation, suggesting that one ad type is "better" than another when, in reality, their effectiveness depends on the emotional and cognitive processes they activate.

In addition, the framework incorporates two moderators, each linked to a different advertising characteristic. Need for Cognition (NFC) is expected to moderate the effect of appeal type on consumer outcomes (H4a), based on the premise that individuals high in NFC are more responsive to rational, information-rich messages, while low-NFC individuals may react more strongly to emotionally driven content. Category involvement, in turn, is hypothesized to moderate the effect of advertising channel (H4b), assuming that highly involved consumers process advertising more deeply and may therefore respond differently to static, high-visibility formats such as OOH compared with social media formats. Including moderators therefore allows the model to account for variability across individuals, providing a more nuanced and realistic understanding of advertising effectiveness. If such moderators were excluded, results could misleadingly assume that all consumers process and respond to advertising messages in the same way, ignoring the role of individual predispositions that condition ad effectiveness.

Analytically, this design enables the study to assess both direct and indirect effects of the independent variables, as well as potential interaction effects between advertising characteristics and individual traits. By controlling for these internal and individual factors, the model provides a more accurate explanation of the effects on brand attitude, purchase intention, and brand loyalty, avoiding potential misinterpretations that could arise from overlooking the psychological and contextual dynamics underlying advertising effectiveness.

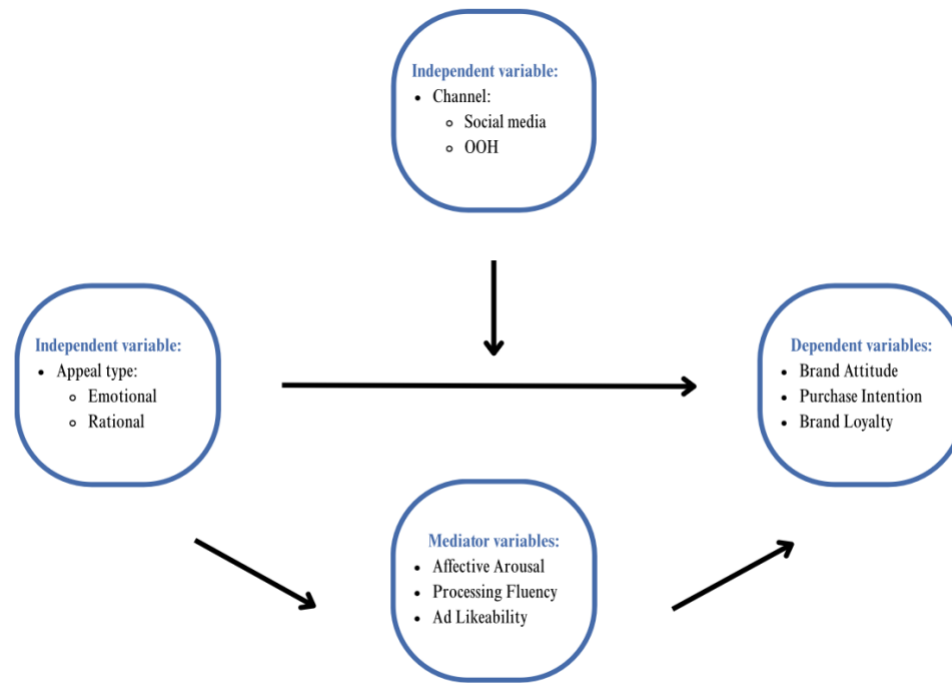


Figure 1: Conceptual framework of the interactive effect of appeal type and advertising channel on consumer outcomes, considering mediator variables.

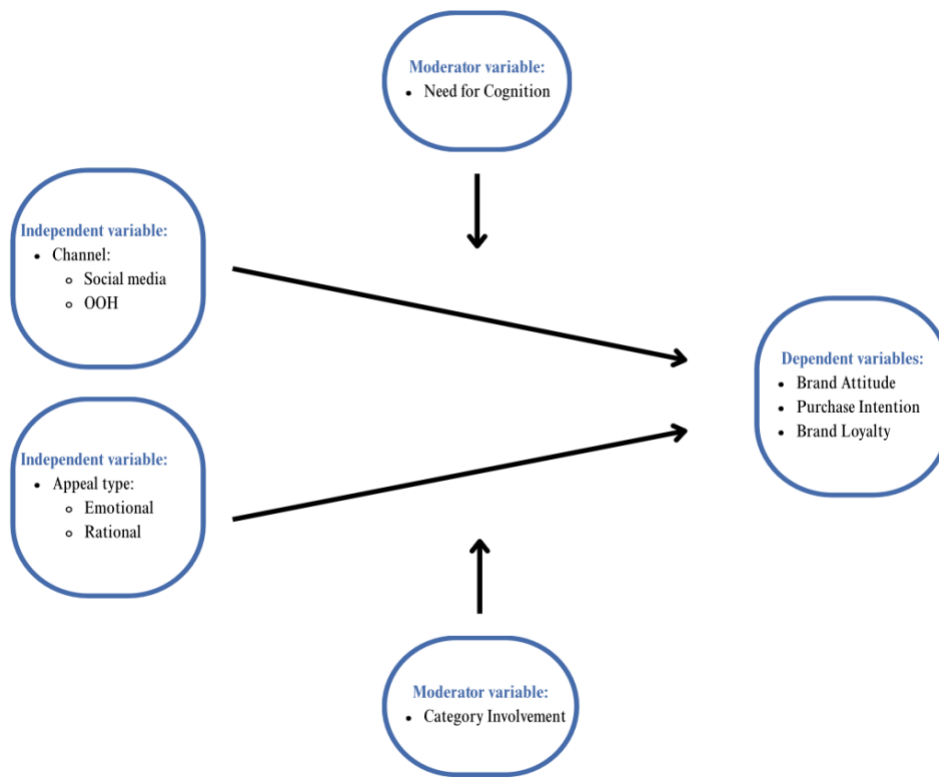


Figure 2: Conceptual framework of the effect of appeal type and advertising channel on consumer outcomes, considering moderators variables.

The following chapter outlines the methodology adopted to test this conceptual framework, including the research design, variables, data collection procedure, and planned analyses.

3. Methodology

This chapter describes the methodological approach adopted to investigate the effectiveness of emotional versus rational advertising appeals across social media and out-of-home contexts. The study builds on the theoretical foundations outlined in the previous chapter and applies a quantitative, experimental survey design to test the proposed hypotheses.

The chapter is structured as follows: first, the sample and its characteristics are described. Next, the research design is presented, detailing how the experimental conditions were created and how participants were assigned to them. The following section outlines the measurements and instruments used to capture the dependent variables, mediators, moderators, and control variables. Finally, the procedure for data collection is explained step by step, from recruitment to debriefing. Together, these sections provide transparency about how the study was conducted and ensure that the findings reported in Chapter 4 can be evaluated considering their methodological foundations.

3.1 Sample

The study relies on a sample of adult participants recruited through a convenience sampling strategy. Recruitment took place primarily through personal and professional networks, including social media, family, and friends. This approach was considered appropriate given the exploratory nature and scope of a Master's thesis project, while still ensuring access to a diverse pool of respondents.

A *priori* power analysis using G*Power 3.1 indicated that a total sample of 199 participants (approximately 50 respondents per experimental condition) is required to detect a medium effect size (Cohen's $d = 0.40$) with 80% power at $\alpha = .05$ (two-tailed) for an independent samples t-test. The final sample exceeded this requirement, resulting in a total of 215 valid responses.

Before conducting the statistical analyses, the dataset exported from Qualtrics to SPSS was thoroughly screened and cleaned. All incomplete entries and missing values were removed through listwise deletion. Two control variables were included in the dataset to provide a more accurate assessment of consumer behavior: product category usage frequency, capturing participants' engagement with the product category, and time spent on social media, reflecting differences in familiarity with digital environments.

Descriptive statistics were then examined to characterize the final sample. Most respondents identified as female (61.9%), followed by male (37.2%), with small proportions identifying as non-binary/third gender (0.5%) or preferring not to disclose (0.5%). In terms of age, nearly half of the sample (46.0%) belonged to the 18 - 24 age group, 25.1% were aged 25 - 34, and 15.3% were aged 45 - 54, with smaller proportions aged 35 - 44 (8.8%) and 55 or older (4.7%). Regarding social media use, 44.7% reported spending 1 - 2 hours per day on social platforms, 18.6% spent 2 - 3 hours, and 8.8% used them for more than 3 hours daily. Lower usage levels were reported by 17.2% (30 - 59 minutes) and 10.7% (less than 30 minutes). Category usage frequency showed that 53.5% of participants used products in the relevant category several times per week or more, while an additional 17.7% reported weekly usage. Less frequent usage was uncommon, with only a small proportion using the products monthly or less. These characteristics indicate that most participants were reasonably familiar with the product category and active users of social media, supporting the suitability of the sample for evaluating the advertising stimuli used in this study.

3.2 Research Design

The study adopts a 2 (Advertising Appeal: Emotional vs. Rational) $\times$ 2 (Advertising Channel: Social Media vs. OOH) between-subjects factorial experimental design, in which participants were randomly assigned to one of four conditions. The independent variables were the type of advertising appeal (emotional vs. rational) and the advertising channel (social media vs. OOH). This design results in four experimental groups: (1) an emotional appeal presented as a social media post (N=46), (2) a rational appeal presented as a social media post (N=53), (3) an emotional appeal presented as an out-of-home advertisement (N=59), and (4) a rational appeal presented as an out-of-home advertisement (N=57).

Note that each participant viewed only one version of the advertisement, which minimized potential demand effects¹ and carry-over biases². Random assignment to conditions was automatically implemented through Qualtrics.

¹ Demand effects occur when participants guess the purpose of a study and alter their responses accordingly.

² Carry-over biases arise when exposure to more than one stimulus condition influences subsequent evaluations.

The manipulations were operationalized through fictitious advertisements created for a non-existent brand, ensuring that participants' responses were not influenced by prior brand familiarity. Moreover, the product presented in the advertisements was wireless headphones, a familiar and widely used category, which helped minimize potential biases related to product novelty or lack of consumer knowledge and allows the observed effects to be more clearly attributed to the advertising appeal and channel manipulations.

To maintain consistency across conditions, both versions displayed the same product features, differing only in the presence of an affective element. In the emotional appeal conditions, an additional photograph of a woman relaxing was included to evoke a calm, positive emotional response and enjoyment. The rational appeal versions presented the same information without the affect-eliciting image, emphasizing factual and functional attributes such as product performance and technical features. The channel manipulation was achieved by adapting the ad format: one version appeared as a mock Instagram post (social media), while the other was designed as a bus-stop poster (OOH).

All the designs created can be found below:

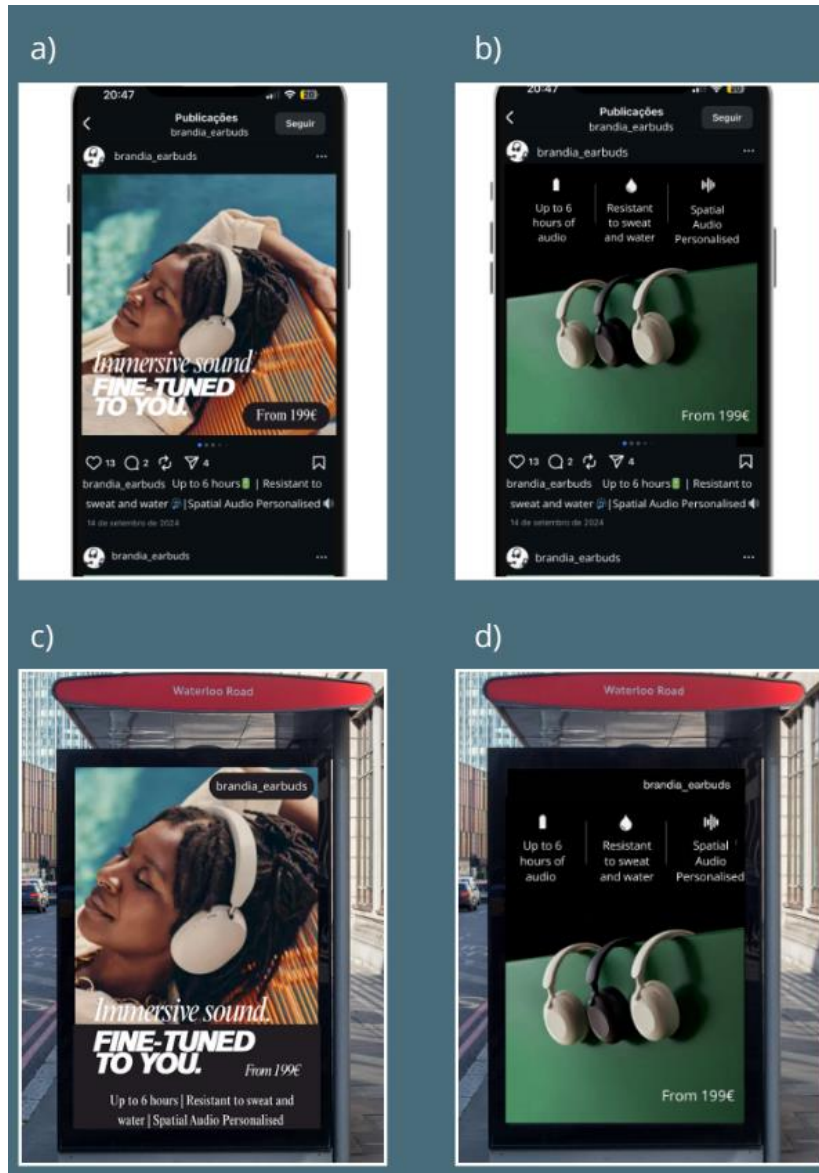


Figure 2: Visual Stimuli Used in the Experiment: Appeal Type × Advertising Channel

Figure 2a: Visual Stimuli: Emotional x Social media

Figure 2b: Visual Stimuli: Rational x Social media

Figure 2c: Visual Stimuli: Emotional x OOH

Figure 2d: Visual Stimuli: Rational x OOH

The whole questionnaire can be found in Appendix A.

3.3 Measurements and instruments

The constructs examined in this study were measured using 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree) and were computed by averaging their respective items. Reliability of multi-item constructs were also calculated using Cronbach's alpha³, with values above .70 considered acceptable.

The independent variables (type of appeal and advertising channel) were experimentally manipulated as described in Section 3.2. To ensure the manipulations were perceived as intended, manipulation check items were included in the questionnaire. Participants indicated the extent to which the advertisement was emotional or rational and whether it resembled a social-media post or an out-of-home advertisement.

The dependent variables captured consumer responses to the advertisement. Three outcomes were examined: brand attitude, purchase intention, and brand loyalty.

Brand attitude refers to an individual's overall evaluation of a brand, including affective and cognitive impressions. The construct was measured with a 3-item scale developed by Spears and Singh (2004), including statements such as "I like this brand", "I find this brand appealing" and "I have a favorable opinion of this brand". The scale demonstrated excellent reliability ($\alpha = .902$).

Purchase intention captures a consumer's self-reported likelihood of buying the product in the future. The 3-item scale was adapted from Spears & Singh (2004) and Dodds, Monroe & Grewal (1991), including statements such as "I would consider buying this brand", "I would intend to buy this brand" and "I would consider buying this brand the next time I shop for this category". The scale showed high internal consistency ($\alpha = .892$).

Brand loyalty reflects a consumer's intention to repeatedly choose and recommend the brand. The 3-item scale was adapted from Chaudhuri & Holbrook (2001), including statement such as "I would

³ Cronbach's alpha is a measure of internal consistency that assesses the extent to which the items of a scale reliably measure the same underlying construct.

choose this brand again”, “I would recommend this brand to others” and “I would prefer this brand over alternatives”. The reliability of the scale was excellent ($\alpha = .887$).

To explore the mechanisms through which appeals persuade, three mediating variables were included. Affective arousal refers to the emotions elicited by the advertisement. Items were adapted from Bagozzi, Gopinath & Nyer (1999) and Micu & Plummer (2010), including statements such as “The ad was enjoyable”, “This ad gave me a sense of calm” and “This ad made me feel relaxed”. This scale demonstrated very high reliability ($\alpha = .916$).

Processing fluency describes the subjective ease with which consumers process the advertisement. The scale was based on Reber, Schwarz & Winkielman (2004) and Lee & Labroo (2004), and included statements such as “This ad was easy to understand” and “This ad was clear and straightforward”. Although slightly below the ideal threshold, the reliability ($\alpha = .602$) was acceptable for exploratory research with a short scale.

Ad likeability measures how enjoyable and appealing the advertisement itself is perceived to be. Items were adapted from Biel (1990) and Haley & Baldinger (1991) and included statements such as “I liked this ad” and “I find this ad appealing”. This construct showed outstanding reliability ($\alpha = .933$).

These mediators represent the cognitive and affective pathways through which advertising messages are expected to influence consumer responses.

Two moderators were also measured to account for individual differences.

Need for Cognition (NFC) reflects the tendency to engage in and enjoy effortful cognitive activities. The short-form 3-item version of the NFC scale was adapted from Cacioppo & Petty (1982) and included statements such as “I prefer complex to simple problems” and “I enjoy situations that involve thinking in depth”. The scale demonstrated acceptable reliability ($\alpha = .704$).

Category involvement captures the personal relevance and importance of the product category to the consumer. The 3-item scale was adapted from Zaichkowsky’s (1985) and included statements such as “I don’t mind spending above-average prices on this type of product” and “I mainly use this type of product for personal use”. The reliability of the scale was satisfactory ($\alpha = .747$).

The study also controlled for variables that could independently affect advertising responses.

Category usage frequency was measured by asking participants how often they purchased products in the relevant category, with responses coded on a six-point scale ranging from “never” to “very often”.

Time spent on social media was measured as an ordinal variable capturing average daily social-media use, with five categories from “less than 30 minutes” to “more than 4 hours per day.”

Demographic variables such as age and gender were collected for descriptive purposes.

Table 1: Cronbach’s alphas of all variables.

Construct	Cronbach’s α	Interpretation
Affective Arousal	0.916	Excellent
Processing Fluency	0.602	Moderate
Ad Likeability	0.933	Excellent
Brand Attitude	0.902	Excellent
Purchase Intention	0.892	Excellent
Brand Loyalty	0.887	Very Good
Need for Cognition	0.704	Acceptable
Category Involvement	0.747	Good

3.4 Procedure

Data was collected through an online survey experiment implemented on Qualtrics. Participants were recruited using a convenience sampling strategy. Upon opening the survey link, participants were first presented with an informed consent form outlining the purpose of the study, the voluntary nature of participation, and assurances of anonymity and confidentiality. Only those who provided consent were able to proceed.

After consenting, participants were randomly assigned by the survey software to one of four experimental conditions derived from the 2×2 factorial design. Each respondent was exposed to a single advertisement from the fictitious brand “*Brandia*”, which varied by appeal type (emotional vs. rational) and channel (social media vs. out-of-home). The advertisement was displayed for approximately 20 seconds, during which participants were instructed to memorize as many details

as possible, as they would be asked a brief quiz about it. Random assignment ensured balanced group sizes and minimized systematic bias across conditions.

Immediately following exposure, participants completed a short brand and product recall questions to confirm attention to the stimulus, followed by manipulation checks verifying whether the ad was perceived as emotional or rational and whether it appeared as a social-media or outdoor format. Next, they responded to the main measures capturing the dependent variables, the mediators, the moderators, and the control variables described in Section 3.3. An instructional attention check was embedded midway through the questionnaire to identify inattentive respondents.

The survey concluded with a brief demographic section collecting age and gender, followed by a thank-you message. On average, completing the survey required between three to five minutes.

4. Results

This chapter presents the results of the empirical study. The analyses proceed in several stages: first, descriptive statistics were examined to provide an initial overview of responses. Secondly, manipulation checks were conducted to confirm that participants accurately perceived the intended differences between experimental conditions. Finally, the study's hypotheses were subsequently tested through a series of two-way ANOVAs (H1-H3), followed by moderation analyses (H4), and mediation analyses (H5).

4.1 Descriptive Statistics

Descriptive statistics were computed to summarize participants' evaluations of the fictitious brand across the three main dependent variables: brand attitude, purchase intention, and brand loyalty.

Overall evaluations were positive across the sample, with all means exceeding the midpoint of the scale. Brand attitude showed an average of $M = 4.70$ ($SD = 1.12$), indicating generally favorable impressions of the brand. Purchase intention yielded a mean of $M = 4.32$ ($SD = 1.27$), reflecting moderate likelihood of considering the product. Brand loyalty was slightly lower but still positive ($M = 4.00$, $SD = 1.25$), suggesting moderate long-term behavioral intentions toward the brand.

To examine associations among these outcome variables, Pearson correlations were computed. The results indicated strong, positive, and statistically significant correlations between all three constructs ($p < .001$), suggesting that participants who felt more positively toward the brand also reported higher purchase intention and brand loyalty. Table 2 presents the descriptive statistics and correlation matrix.

Table 2: Descriptive statistics and intercorrelations between the dependent variables.

Variable	M	SD	1	2	3
Brand Attitude	4.70	1.12	-	.701**	.716**
Purchase Intention	4.32	1.27	.701**	-	.774**
Brand Loyalty	4.00	1.25	.716**	.774**	-

Note. $N = 215$. ** $p < .01$ (two-tailed).

4.2 Manipulation checks

Before testing the hypotheses, manipulation checks were conducted to verify whether participants perceived the differences between emotional versus rational appeals and social media versus out-of-home (OOH) channels as intended.

Independent-samples t-tests confirmed that participants in the emotional condition rated the advertisement as significantly more emotional ($M = 4.11$, $SD = 1.97$) than those in the rational condition ($M = 2.53$, $SD = 1.59$), $t(213) = 6.51$, $p < .001$, $d = 0.89$. Conversely, participants exposed to the rational appeal perceived the ad as significantly more rational/informative ($M = 5.92$, $SD = 0.99$) compared to those in the emotional condition ($M = 4.73$, $SD = 1.75$), $t(213) = -6.16$, $p < .001$, $d = -0.84$.

These results confirm that the manipulation of advertising appeal was successful: emotional ads were perceived as more emotional, and rational ads as more informational.

Similarly, channel manipulation was effective. Participants who viewed the social-media version of the ad perceived it as more similar to a social media post ($M = 6.02$, $SD = 1.31$) than those who viewed the OOH version ($M = 3.70$, $SD = 1.94$), $t(213) = 10.41$, $p < .001$, $d = 1.38$. Likewise, participants in the OOH condition rated the ad as more like an outdoor advertisement ($M = 6.22$, $SD = 1.31$) than those in the social-media condition ($M = 3.86$, $SD = 2.04$), $t(213) = -10.23$, $p < .001$, $d = -1.40$.

Together, these findings indicate that both manipulations were perceived in the intended direction, validating the experimental design.

4.3 Hypothesis Testing

4.3.1 Effect of Advertising Appeal (H1)

A two-way ANOVA⁴ was conducted to examine the main effect of appeal type (emotional vs. rational) on the dependent variables. In addition to significance testing, estimated marginal means

⁴ Preliminary analyses were conducted to determine whether the control variables (category usage frequency and time spent on social media) had any significant effects on the dependent variables (brand attitude, purchase intention, and

were inspected to clarify the direction of effects. Levene's tests confirmed that the assumption of homogeneity of variances was met for all analyses ($p > .05$).

Results revealed a significant main effect of appeal type on brand attitude, $F(1, 211) = 5.40$, $p = .021$, $\eta^2 = .025$. Participants exposed to emotional appeals ($M = 4.89$, $SD = 1.06$) reported more favorable brand attitudes than those exposed to rational appeals ($M = 4.52$, $SD = 1.16$).

However, the main effect of appeal on purchase intention was not significant, $F(1, 211) = 1.30$, $p = .255$, $\eta^2 = .006$, indicating that emotional ($M = 4.43$, $SD = 1.28$) and rational ($M = 4.22$, $SD = 1.26$) appeals did not differ in their impact on consumers' intention to purchase. Similarly, the effect of appeal on brand loyalty was not significant, $F(1, 211) = 2.11$, $p = .148$, $\eta^2 = .010$. Although emotional appeals ($M = 4.13$, $SD = 1.33$) elicited slightly higher loyalty than rational appeals ($M = 3.87$, $SD = 1.16$), this difference was not statistically meaningful.

Overall, these findings suggest that emotional appeals enhance brand attitude but do not significantly influence purchase intention or brand loyalty. Therefore, H1 was partially supported.

4.3.2 Effect of Advertising Channel (H2)

To assess the main effect of channel on consumers' responses, the same two-way ANOVA models were examined with channel (social media vs. out-of-home) as the focal factor. Levene's tests confirmed that the assumption of homogeneity of variances was met across all dependent variables ($p > .05$).

The results indicated that the main effect of channel on brand attitude was not significant, $F(1, 211) = 0.68$, $p = .412$, $\eta^2 = .003$, suggesting that social media ($M = 4.63$, $SD = 1.16$) and out-of-home advertising ($M = 4.76$, $SD = 1.09$) generated comparable brand attitudes.

Similarly, the main effect of channel on purchase intention did not reach statistical significance, $F(1, 211) = 3.60$, $p = .059$, $\eta^2 = .017$, although there was a slight tendency for higher purchase

brand loyalty). Results from ANCOVA indicated that neither variable significantly influenced these outcomes (all $p > .05$). Consequently, subsequent analyses were performed using two-way ANOVAs.

intention in the out-of-home condition ($M = 4.47$, $SD = 1.28$) compared to social media ($M = 4.14$, $SD = 1.24$).

In contrast, a significant main effect of channel was found for brand loyalty, $F(1, 211) = 5.31$, $p = .022$, $\eta^2 = .025$. Participants exposed to out-of-home advertising ($M = 4.18$, $SD = 1.28$) reported higher brand loyalty than those exposed to social media ads ($M = 3.78$, $SD = 1.18$). Although this difference was statistically significant, the direction of the effect was opposite to that predicted, as loyalty was higher for OOH rather than for social media. Taken together, these findings provide no support for H2.

4.3.3 Interaction Effect Between Appeal and Channel (H3)

The interaction effect between advertising appeal and channel was examined to determine whether the effectiveness of emotional versus rational appeals depended on the communication channel. The two-way ANOVAs showed no significant interaction for brand attitude, $F(1,211) = 0.45$, $p = .502$; purchase intention, $F(1,211) = 0.02$, $p = .899$; or brand loyalty, $F(1,211) = 0.16$, $p = .687$.

These findings indicate that the relationship between appeal type and advertising effectiveness did not depend on the channel. Contrary to expectations, emotional appeals were not more effective in social media nor were rational appeals more effective in OOH advertising. Therefore, H3 was not supported.

4.3.4 Moderation Analysis (H4)

To examine whether individual differences shaped participants' responses to the advertising stimuli, two moderators were tested in accordance with H4: Need for Cognition (H4a) and Category Involvement (H4b). Moderation analyses were conducted using PROCESS Model 1, with separate models estimated for each dependent variable. All continuous moderators were mean-centered, and 5,000 bootstrap samples were used to compute confidence intervals.

Hypothesis 4a proposed that Need for Cognition (NFC) would moderate the effect of advertising appeal on consumer behavior outcomes. Contrary to expectations, the interaction between appeal and NFC was not significant for any dependent variable.

For brand attitude, the interaction term was non-significant ($b = 0.03$, $SE = 0.09$, $p = .7472$), indicating that the relative effectiveness of emotional versus rational appeals did not differ depending on participants' tendency to engage in effortful cognitive processing.

The same pattern emerged for purchase intention, where the Appeal $\times$ NFC interaction failed to reach significance ($b = -0.06$, $SE = 0.11$, $p = .5878$). Finally, brand loyalty also showed no evidence of moderation, with an interaction term that was effectively null ($b = 0.01$, $SE = 0.10$, $p = .9728$).

Taken together, these results provide no support for H4a, demonstrating that Need for Cognition does not meaningfully influence how consumers react to emotional versus rational advertising.

Hypothesis 4b proposed that Category Involvement would moderate the effect of advertising channel on consumer behavior. The analyses revealed a consistent pattern across the three dependent variables, showing evidence of moderation by Category Involvement.

For brand attitude, the interaction between channel and category involvement was significant ($b = 0.22$, $SE = 0.10$, $p = .0371$). Conditional effects indicated that the advertising channel had no meaningful impact among low-involvement consumers, whereas for high-involvement consumers, OOH advertising produced significantly more favorable brand attitudes than social media advertising. This suggests that more engaged consumers respond more positively to traditional, static, high-visibility channels such as OOH.

For purchase intention, the interaction was marginally significant ($b = 0.23$, $SE = 0.12$, $p = .0524$). Examination of conditional effects revealed that, once again, the advertising channel had no effect for low-involvement consumers. However, for those with high category involvement, OOH advertising generated substantially higher purchase intentions than social media formats. This pattern, consistent with that observed for brand attitude, suggests that involvement strengthens preference for OOH advertising by increasing attention or perceived relevance.

A similar pattern emerged for brand loyalty, where the interaction between channel and involvement approached significance ($b = 0.22$, $SE = 0.11$, $p = .0583$). Conditional effects demonstrated that OOH advertising significantly increased brand loyalty among high-involvement individuals, with no comparable effect among low-involvement participants. This indicates that

individuals highly familiar with or invested in the product category not only evaluate the brand more positively but also show stronger loyalty tendencies when exposed to OOH advertising.

Across all dependent variables, Category Involvement consistently moderated the relationship between advertising channel and consumer behavior, with OOH advertising outperforming social media specifically among high-involvement consumers. These findings provide partial support for H4b, with a clear and recurring pattern despite some p-values falling marginally above conventional thresholds.

4.3.5 Mediation Analysis (H5)

To address RQ5, which examined whether affective arousal, processing fluency, and ad likeability mediated the effects of advertising appeal on brand attitude, purchase intention, and brand loyalty, a series of mediation analyses were conducted using PROCESS Model 4 (Hayes, 2022). Advertising appeal (emotional vs. rational) was entered as the independent variable, the three psychological variables were entered as parallel mediators ($M_1 - M_3$), and each consumer behavior outcome was tested in a separate model. All analyses used 5,000 bootstrap samples with 95% confidence intervals.

The first model examined whether affective arousal, processing fluency, and ad likeability mediated the relationship between advertising appeal and brand attitude. Results indicated that advertising appeal significantly predicted affective arousal ($b = -1.27, p < .001$) and ad likeability ($b = -0.81, p < .001$), but did not significantly predict processing fluency ($b = 0.14, p = .327$). This indicates that emotional versus rational appeals influenced the feelings elicited by the advertisement and how likeable it was perceived to be, although they did not affect how easy the ad was to process.

When examining the effects of the mediators on brand attitude, only ad likeability emerged as a strong and significant predictor ($b = 0.42, p < .001$). Affective arousal ($b = 0.13, p = .057$) showed only a marginal effect. Processing fluency was positively associated with brand attitude ($b = 0.13, p = .032$); however, because advertising appeal did not significantly predict processing fluency, this variable did not satisfy the conditions required for mediation. In other words, although

processing fluency was related to brand attitude, it did not function as a mechanism through which advertising appeal influenced brand evaluations.

The bootstrapped indirect effects confirmed these patterns. The indirect effect of appeal on brand attitude through ad likeability was significant, with the confidence interval excluding zero (CI = $[-0.55, -0.16]$). In contrast, the indirect effects through affective arousal (CI = $[-0.39, 0.04]$) and processing fluency (CI = $[-0.02, 0.07]$) both included zero, indicating that these mediators did not transmit the effect of appeal onto brand attitude.

Overall, the results indicate that emotional versus rational appeals affected brand attitude exclusively through ad likeability. Therefore, the hypothesis proposing mediation via ad likeability (H5c.1) was supported, whereas the proposed mediations via affective arousal (H5a.1) and processing fluency (H5b.1) were not supported.

The second model tested whether the same three mediators explained the effect of advertising appeal on purchase intention. As in the previous model, advertising appeal significantly predicted affective arousal ($b = -1.27, p < .001$) and ad likeability ($b = -0.81, p < .001$) but not processing fluency ($b = 0.14, p = .327$).

When the mediators were entered simultaneously into the model predicting purchase intention, only ad likeability emerged as a significant predictor ($b = 0.40, p < .001$), indicating that more likeable ads were associated with increased purchase intentions. Affective arousal ($b = 0.13, p = .065$) and processing fluency ($b = 0.08, p = .159$) did not significantly predict purchase intention.

Bootstrapped confidence intervals confirmed a significant indirect effect of advertising appeal on purchase intention through ad likeability (CI = $[-0.59, -0.13]$), whereas the indirect pathways through affective arousal (CI = $[-0.38, 0.04]$), and processing fluency (CI = $[-0.01, 0.05]$) both included zero, indicating non-significance.

Taken together, these results show that advertising appeal influences purchase intention only through its effect on ad likeability. Thus, H5c.2 was supported, while H5a.2 and H5b.2 were not supported.

The third model examined whether the same mediating variables explained the effect of advertising appeal on brand loyalty. Consistent with the previous analyses, advertising appeal significantly influenced affective arousal ($b = -1.27$, $p < .001$) and ad likeability ($b = -0.81$, $p < .001$) but did not predict processing fluency ($b = 0.14$, $p = .327$).

When predicting brand loyalty, ad likeability was the only mediator that significantly contributed to the outcome ($b = 0.49$, $p < .001$). Neither affective arousal ($b = 0.10$, $p = .182$) nor processing fluency ($b = 0.02$, $p = .823$) significantly explained variance in brand loyalty.

Bootstrapped indirect effects confirmed a significant mediation pathway through ad likeability ($CI = [-0.62, -0.20]$). In contrast, the indirect effects through affective arousal ($CI = [-0.37, 0.05]$) and processing fluency ($CI = [-0.02, 0.03]$) were non-significant, with confidence intervals including zero.

Overall, these findings indicate that the effect of advertising appeal on brand loyalty operates exclusively through ad likeability. Accordingly, H5c.3 was supported, whereas H5a.3 and H5b.3 were not supported.

These results for brand loyalty mirror the patterns observed for brand attitude and purchase intention, indicating that ad likeability was the only mediator through which advertising appeal influenced consumer behavior in this study.

Overall, the analyses presented in this chapter provide a comprehensive account of how appeal type, advertising channel, and individual differences influenced consumer responses. The implications and interpretation of these findings are discussed in the following chapter.

5. Discussion

This study examined how emotional and rational advertising appeals, delivered through social media and out-of-home (OOH) formats, influence key consumer responses. It also explored the psychological mechanisms and individual differences that may shape these effects. This chapter discusses the main findings in comparison to existing literature and highlights their contribution to understanding advertising effectiveness.

Overall, the results demonstrated that emotional appeals were more effective than rational appeals in shaping brand attitudes, although this advantage did not extend to purchase intention or brand loyalty. OOH advertising generally outperformed social media, particularly for loyalty-related outcomes, while no interaction emerged between appeal and channel. Regarding psychological processes, only ad likeability mediated the effect of appeal on consumer responses. Finally, the moderating analyses revealed that need for cognition did not influence the effectiveness of the messages, whereas category involvement consistently strengthened the impact of OOH advertising.

Emotional advertising appeals generated more favorable brand attitudes than rational appeals, a result consistent with research showing that emotional content can enhance evaluations by eliciting positive feelings that transfer to the brand (Batra and Ray, 1986; Micu and Plummer, 2010). Emotional stimuli in advertising often shape attitudes through the feelings they evoke, and this effect may have been particularly pronounced in the present study because the brand was fictitious and consumers lacked prior associations. Emotional cues may have played a particularly important role in shaping first impressions.

However, emotional appeals did not significantly increase purchase intention or brand loyalty. This divergence between attitudes and behavioral intentions is consistent with research indicating that emotional responses are more influential in shaping evaluative judgments than in driving behavioral intent (Ruiz & Sicilia, 2004; Goldsmith et al., 2000). A possible explanation is that behavioral intentions require more diagnostic or confidence-building information, such as credibility, argument quality, or performance-based claims, than emotional appeals typically provide, especially in product categories where functional performance plays a role. In this context, the emotional cues may have improved how participants felt about the brand without offering sufficient information to affect their intention to purchase or their longer-term loyalty.

At the same time, the mediation analysis showed that emotional appeals increased ad likeability, which in turn positively predicted all three outcomes. This means that while emotional appeals were not strong enough to directly change behavioral intentions or loyalty, they did shape these outcomes indirectly via how much participants liked the advertisement. Overall, emotional appeals influenced consumer responses primarily through affective reactions to the ad, rather than through direct persuasion effects.

Turning to channel effects, the results revealed that OOH advertising outperformed social media on brand loyalty and marginally on purchase intention, while producing comparable brand attitudes. These findings challenge the often-presumed dominance of digital channels and reinforce research suggesting that OOH advertising remains highly effective due to its visibility, repetition, and contextual presence in public environments (Wilson, 2022; Madlenák et al., 2023). Unlike social media, which is characterized by rapid scrolling and content saturation, OOH placements may receive more stable attention, enabling repeated exposure to accumulate into stronger memory traces and loyalty-related outcomes. The fact that channel differences were not reflected in brand attitude suggests that initial evaluations may form similarly across channels, whereas more intentional, behaviorally oriented constructs, purchase intention and loyalty, may benefit from the stability and repetition characteristic of OOH media.

Contrary to expectations, there was no evidence of an interaction between appeal and channel. This indicates that emotional appeals did not become more effective on social media, nor did rational appeals gain strength in OOH contexts. The absence of interaction deviates from theoretical perspectives suggesting that message effectiveness depends on a match between appeal type and media environment (Labroo & Rucker, 2010; Berger & Milkman, 2012). A likely explanation is that the differences between emotional and rational versions of the stimuli were not sufficiently strong to produce cross-channel amplification. Similarly, the OOH and social media formats may not have differed enough in the way participants perceived them to interact with message content. Another possibility is that the fictitious nature of the ads reduced channel-specific effects, as real-world expectations and associations tied to each channel were absent.

As already mentioned above, only ad likeability emerged as a significant mediator between appeal and all consumer response variables. This finding is consistent with recent research positioning

likeability as one of the most reliable predictors of advertising effectiveness, influencing consumer engagement, evaluative judgments, and behavioral responses (Jongenelis et al., 2022; Yoon, 2022). Likeability acts as an immediate evaluative reaction to the advertisement, simplifying judgments about the brand and increasing persuasion through affective transfer. The present results suggest that consumers relied primarily on how enjoyable and appealing they found the ad, rather than on the emotional intensity it elicited or the ease with which they processed it, to form brand-related evaluations and intentions. In contrast, the absence of mediation by affective arousal may suggest that low-arousal positive emotions, such as relaxation or calmness, as depicted in the stimuli, may not exhibit the same behavioral influence as high-arousal emotions like joy, surprise, or excitement, which past research has shown to be more strongly associated with sharing and action (Berger & Milkman, 2012). Similarly, the rational and emotional versions of the ad were visually similar and simple to interpret, likely limiting variability in processing fluency.

The moderation results revealed a clear distinction between the two individual-difference constructs tested (H4). Need for cognition did not moderate any relationship, suggesting that consumers with higher or lower tendencies toward cognitive effort responded similarly to emotional and rational appeals and across both channels. This contrasts with classical findings from Haugtvedt et al. (1992) and Petty and Cacioppo (1986), who found that high Need for Cognition individuals respond more strongly to information-heavy messages. One explanation is that the rational messages used here lacked the argument strength typically required to engage systematic processing, while the emotional messages were not vivid or intense enough to generate different reactions. Moreover, the predominantly young sample may exhibit relatively homogeneous levels of Need for Cognition, limiting variability in processing preferences.

Category involvement, on the other hand, consistently moderated the effect of channel on brand attitude, purchase intention, and loyalty. High-involvement consumers responded significantly more positively to OOH advertising, while low-involvement consumers showed no preference. This pattern aligns with literature suggesting that involvement amplifies attention and depth of processing (Zaichkowsky, 1985; Petty & Cacioppo, 1986), making highly involved individuals more responsive to contextual cues such as the immersive, real-world presence of OOH advertising.

Taken together, these findings illustrate the multifaceted nature of advertising effectiveness, demonstrating that content, channel, individual differences, and psychological mechanisms contribute in distinct ways. Emotional appeals appear to influence attitude formation but not necessarily behavior, OOH advertising proves particularly effective for consumers already invested in the category, and ad likeability emerges as the primary driver of persuasion. These results contribute to a deeper understanding of how message design and media environments jointly shape consumer responses and offer different directions for further theoretical refinement.

6. Conclusion and Implications

6.1 Conclusion

This dissertation studied how emotional and rational advertising appeals influence consumer responses when delivered through two distinct communication channels: social media and out-of-home advertising. The study also examined the individual and psychological mechanisms that shape these effects, specifically focusing on need for cognition, category involvement, affective arousal, processing fluency, and ad likeability. By integrating message characteristics, media context, and consumer-level factors into one analytical framework, this research provides a more comprehensive understanding of how advertising persuasion operates across contemporary media environments.

The findings revealed that emotional appeals generated more favorable brand attitudes than rational appeals, reinforcing the role of affective communication in shaping initial brand evaluations. However, this advantage did not extend to purchase intention or brand loyalty, where emotional and rational appeals performed similarly. Regarding channel effects, OOH advertising outperformed social media on brand loyalty and showed a marginal advantage in purchase intention, though both channels produced comparable brand attitudes. No interaction effects were observed between appeal and channel, suggesting that their influence on consumer responses operates independently rather than in combination.

In exploring underlying psychological mechanisms, only ad likeability mediated the effect of appeal on consumer outcomes. Emotional appeals increased ad likeability, which in turn enhanced brand attitude, purchase intention, and loyalty. Affective arousal and processing fluency did not operate as mediators. With respect to individual differences, need for cognition did not moderate any relationships, whereas category involvement significantly strengthened the effectiveness of OOH advertising across outcomes. Collectively, these results highlight the central role of ad likeability as a persuasion mechanism and underscore the importance of channel context, particularly for highly involved consumers.

Overall, this study contributes to a more nuanced understanding of advertising effectiveness by showing that different components of persuasion such as appeal, channel, individual dispositions, and psychological pathways, do not exert equal effects across all consumer outcomes. Instead, their

influence varies depending on the specific stage of consumer response, the media environment, and the level of consumer involvement.

6.2 Theoretical Implications

The findings of this study offer several implications for advertising and communication theory. First, the superiority of emotional appeals in shaping brand attitudes reinforces long-standing evidence in favor of affect-based persuasion. Prior research shows that emotional content generates positive affective heuristics, which consumers use in forming judgments about unfamiliar or low-information brands (Batra & Ray, 1986; Micu & Plummer, 2010). However, the absence of direct effects on behavioral intentions indicates that emotional content does not uniformly drive all stages of persuasion. This distinction supports dual-process theories such as the Elaboration Likelihood Model (Petty and Cacioppo, 1986), which predicts that affective cues may be effective when forming immediate evaluations but less so when motivating more effortful behavioral decisions unless they are accompanied by sufficient justification.

Second, the lack of significant interaction between appeal type and channel challenges assumptions about message-channel congruence. Prior research suggests that emotional messages should be particularly effective in dynamic, interactive digital environments (Berger & Milkman, 2012; De Vries, Gensler & Leeftang, 2012), while rational messages may align better with channels that provide more processing time (Pieters & Wedel, 2004; Rosselli, Skelly & Mackie, 1995). The absence of interaction effects in this study suggests that, at least in the context of short exposure to simple stimuli, media affordances may not meaningfully enhance or constrain message persuasiveness. This raises questions about the conditions under which message-channel fit becomes a decisive factor, suggesting that effects may depend more on message intensity, brand familiarity, or exposure duration than on format alone.

Third, the central role of ad likeability as the only consistent mediator across outcomes highlights its robustness as a predictor of persuasion. Decades of research have shown that ad likeability is one of the strongest and most reliable predictors of advertising success, influencing recall, attitudes, and behavioral intentions (Biel, 1990; Haley & Baldinger, 1991; Bergkvist & Rossiter, 2008). While affective arousal and processing fluency have been shown in prior research to influence attitudes and memory (Reber, Schwarz & Winkielman, 2004; Lee & Labroo, 2004), the current

findings suggest that their effects may not emerge when stimuli are relatively subtle or low in contrast. The strong mediating role of ad likeability suggests that the effectiveness of advertising depends not only on emotional or informational content, but also on the creative execution of the ad itself. This highlights the need to integrate creative evaluation models, which emphasize aesthetic appeal and enjoyment, with traditional persuasion theories that focus on message content, positioning affective reactions toward the advertisement itself, not only toward the brand, as key drivers of consumer responses.

Fourth, the moderating analyses offer nuanced insights into individual differences. The absence of moderation by need for cognition contradicts earlier findings that high-NFC individuals respond more strongly to rational arguments (Haugtvedt, Petty & Cacioppo, 1992), suggesting that NFC effects may require richer, more elaborated informational content than what was used in this experiment. On the other hand, the moderating role of category involvement supports the idea that involvement enhances attention and depth of processing (Zaichkowsky, 1985; Warrington & Shim, 2000), making consumers more responsive to contextual cues such as OOH visibility. These findings contribute to segmentation theory by showing that involvement, not cognitive style, may be a more relevant moderator in low-stakes, visual advertising contexts.

Overall, these theoretical contributions highlight the value of examining appeals, channels, mediators, and moderators together rather than in isolation. By testing these dimensions within a single experimental framework, the study provides a more holistic view of how persuasion unfolds across contemporary media landscapes.

6.3 Managerial Implications

From a managerial perspective, this study provides actionable insights for advertising strategy and media planning. First, the finding that emotional appeals produce more favorable brand attitudes suggests that marketers should emphasize emotional storytelling when the goal is to shape brand perception or create positive associations, particularly when introducing new or unfamiliar brands. Emotional content can quickly generate warmth, attention, and affect (Micu & Plummer, 2010; Batra & Ray, 1986), making it well suited for early-stage brand building or campaigns aimed at strengthening brand meaning rather than driving immediate behavioral responses.

Second, although emotional appeals did not directly increase purchase intention or loyalty, their influence through ad likeability highlights the importance of crafting advertisements that are enjoyable, aesthetically appealing, and engaging. Creative teams should focus not only on the emotional content of the message but also on ensuring that the ad itself is perceived positively. Elements such as visual design, tone, narrative coherence, and overall aesthetic quality are likely to play a critical role in enhancing ad likeability and, by extension, influencing behavioral outcomes.

Third, the results suggest that OOH advertising may be particularly effective for strengthening behavioral responses, especially among consumers with high product category involvement. This finding offers clear guidance for media planning: when targeting involved consumers, those who frequently use the category, follow trends, or research products, OOH placements may yield stronger behavioral impact than social media alone. OOH formats benefit from repeated passive exposure, prominent visibility, and contextual integration into consumers' daily routines, making them especially suitable for reinforcing loyalty and purchase readiness.

Fourth, for audiences with lower category involvement, neither channel nor appeal type showed strong differentiating effects. This suggests that marketers targeting low-involvement consumers may need to rely on broader reach, frequency, or integrated campaigns rather than expecting strong persuasion from individual messages. In these cases, combining emotional appeals with high-visibility media may indirectly enhance purchase likelihood through increased ad likeability.

Finally, given the absence of significant effects for need for cognition, marketers may place less emphasis on tailoring emotional versus rational content based on cognitive style in similar campaign contexts. Instead, involvement and ad likeability appear to be more decisive factors in shaping consumer reactions, suggesting that segmentation strategies should prioritize these dimensions.

6.4 Limitations and Future Research

Despite its contributions, this study has several limitations that offer useful directions for future research. First, the sample was predominantly young, with high familiarity with digital media, which may limit generalizability. Future studies should include broader demographic groups to

examine whether age, digital literacy, or lifestyle influence the effectiveness of emotional and rational appeals across channels.

Second, the stimuli used in the experiment, while controlled and realistic, were presented in a single exposure. Real-world campaigns involve repeated exposures, brand familiarity, and stronger associative networks, which may alter how appeals operate across channels. Future research could incorporate longitudinal designs to capture cumulative and memory-based effects.

Third, the emotional appeal in this study elicited low-arousal positive emotions (e.g., relaxation), which may behave differently from high-arousal emotions such as excitement or joy. Emotional intensity is known to shape sharing, recall, and engagement, particularly on social media. Future studies should compare different emotional tones to test whether higher-arousal appeals interact more strongly with digital channels.

Fourth, the rational condition in this study contained moderate informational content. Stronger rational messages, with detailed argumentation or performance claims, may be necessary to elicit systematic processing and activate moderators such as need for cognition. Future research should explore how message strength interacts with cognitive traits to influence persuasion.

Finally, all dependent variables were self-reported, leaving open questions about actual behavioral responses. Incorporating behavioral metrics, such as click-through rates, eye-tracking, or purchase data, would provide a richer understanding of the practical impact of message and channel strategies.

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8. Appendices

Disclaimer

This document has been prepared with the assistance of DeepL Write, an AI-powered writing companion, to enhance the writing style and correct grammatical errors. DeepL Write was used to ensure clarity and accuracy in the text while maintaining the intended meaning and tone of the content. For more information on DeepL Write, please visit <https://www.deepl.com/en/write>.

8.1 Appendix A: questionnaire

Informed consent form

Dear participant,

This research study is part of a dissertation project at Católica Lisbon SBE. Your data will help us obtain a better understanding of how consumers respond to different advertising messages and channels.

The survey will take around 3 minutes to complete and your participation is completely voluntary.

The survey is anonymous, and all data will be kept strictly confidential. Only aggregated results will be reported for academic purposes. You may withdraw at any stage of the experiment by closing the browser's window.

This experiment is being run by: Carolina Costa (s-mcgdcosta@ucp.pt)

If you would like to take part, please click on the ">>" button to give your consent and enter the experiment.

Thank you very much for your participation!



Introduction to the experiment

The following questions refer to a fictional brand created for the purpose of this study.

Please imagine that Brandia is a new company entering the market that specializes in high-quality wireless earbuds/headsets designed for everyday use.

The brand positions itself as modern, accessible, and focused on delivering a comfortable listening experience with premium sound quality.

The company is currently testing different types of advertisements to understand how consumers perceive its new product.

In the next page, we will show you a fictitious ad during 20 seconds. You should try to memorize as many details as possible in the ad to answer a short quiz after that.

Once you are ready, click on the '>>' button to move to the next page.



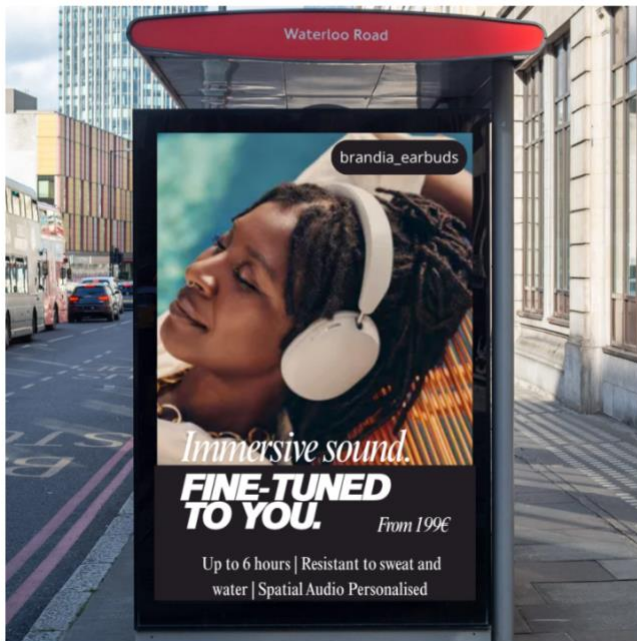
Experimental Condition 1

Try to memorize as many details as possible. Your memory will be tested shortly.



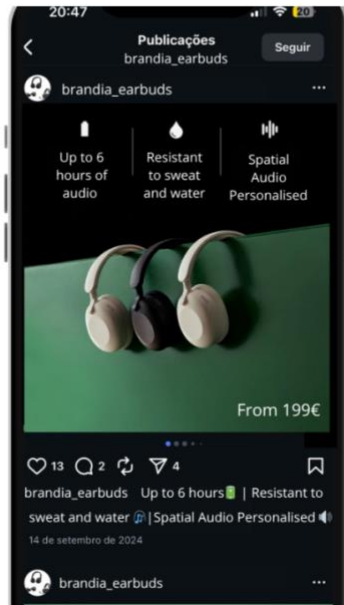
Experimental Condition 2

Try to memorize as many details as possible. Your memory will be tested shortly.



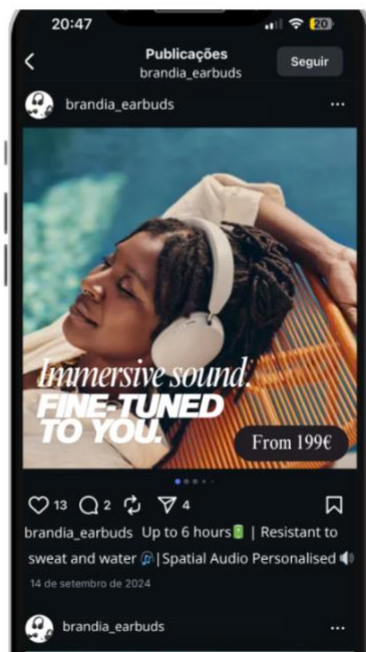
Experimental Condition 3

Try to memorize as many details as possible. Your memory will be tested shortly.



Experimental Condition 4

Try to memorize as many details as possible. Your memory will be tested shortly.



Brand and product recall

Please indicate how much you agree or disagree with the following statements about the ad you just saw.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This ad looked like a social media post.	☐	☐	☐	☐	☐	☐	☐
This ad was rational/informative.	☐	☐	☐	☐	☐	☐	☐
This ad looked like an outdoor ad (e.g., billboard/bus shelter).	☐	☐	☐	☐	☐	☐	☐
This ad was emotional.	☐	☐	☐	☐	☐	☐	☐



What was the brand's name?

Audara EarBuds	☐
Brandia EarBuds	☐
Soundvia EarBuds	☐
Lunvo EarBuds	☐

What product was being advertised?

Smartwatch	☐
Portable speaker	☐
Smartphone	☐
Headset	☐

Manipulation check

Please indicate how much you agree or disagree with the following statements about the ad you just saw.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This ad looked like an outdoor ad (e.g., billboard/bus shelter).	☐	☐	☐	☐	☐	☐	☐
This ad was rational/informative.	☐	☐	☐	☐	☐	☐	☐
This ad looked like a social media post.	☐	☐	☐	☐	☐	☐	☐
This ad was emotional.	☐	☐	☐	☐	☐	☐	☐



Affective Arousal

Please indicate how much you agree or disagree with the following statements about the ad you just saw.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
The ad was enjoyable.	☐	☐	☐	☐	☐	☐	☐
This ad made me feel relaxed.	☐	☐	☐	☐	☐	☐	☐
This ad gave me a sense of calm.	☐	☐	☐	☐	☐	☐	☐



Processing Fluency

Please indicate how much you agree or disagree with the following statements about the ad you just saw.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
This ad was clear and straightforward.	☐	☐	☐	☐	☐	☐	☐
It took little effort to process this ad.	☐	☐	☐	☐	☐	☐	☐
This ad was easy to understand.	☐	☐	☐	☐	☐	☐	☐



Ad Likeability

Please indicate how much you agree or disagree with the following statements about the ad you just saw.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I like this ad.	☐	☐	☐	☐	☐	☐	☐
I find this ad appealing.	☐	☐	☐	☐	☐	☐	☐
This ad is enjoyable.	☐	☐	☐	☐	☐	☐	☐



Loyalty

Imagine if this brand was real.

Please indicate how much you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I would choose this brand the next time I buy this type of product.	☐	☐	☐	☐	☐	☐	☐
I would continue to prefer this brand over others.	☐	☐	☐	☐	☐	☐	☐
I would recommend this brand to others.	☐	☐	☐	☐	☐	☐	☐



Purchase Intention

Imagine if this brand was real.

Please indicate how much you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
It would be likely that I would buy this brand.	☐	☐	☐	☐	☐	☐	☐
I would intend to purchase this brand in the future.	☐	☐	☐	☐	☐	☐	☐
I would consider buying this brand the next time I shop for this category.	☐	☐	☐	☐	☐	☐	☐



Brand Attitude

Imagine if this brand was real.

Please indicate how much you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I find this brand appealing.	☐	☐	☐	☐	☐	☐	☐
I like this brand.	☐	☐	☐	☐	☐	☐	☐
I have a favorable opinion of this brand.	☐	☐	☐	☐	☐	☐	☐



Attention check

To confirm you are reading carefully, please select "6" for this statement.

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
0	1	2	3	4	5	6	7	8	9	10



Need for Cognition

Please indicate how much you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I enjoy situations that involve thinking in depth.	☐	☐	☐	☐	☐	☐	☐
I prefer complex to simple problems.	☐	☐	☐	☐	☐	☐	☐
I like tasks that require a lot of thought.	☐	☐	☐	☐	☐	☐	☐



Category Involvement

Please indicate how much you agree or disagree with the following statements.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I mainly use this type of product for personal use.	☐	☐	☐	☐	☐	☐	☐
I don't mind spending above-average prices on this type of product.	☐	☐	☐	☐	☐	☐	☐
This type of product is more for pleasure and enjoyment than necessity.	☐	☐	☐	☐	☐	☐	☐



Social media time

On a typical day, about how much time do you spend on social media (Instagram, X, TikTok, etc.)?

Less than 30min	☐
30 - 59 min	☐
1 - 2 hours	☐
2 - 3 hours	☐
3+ hours	☐

Category usage

How often do you use products in this category?

Never	☐
Less than monthly	☐
Monthly	☐
2 - 3 times per month	☐
Weekly	☐
Several times per week or more	☐

Age

How old are you (in years) ?

Under 18	☐
18 - 24	☐
25 - 34	☐
35 - 44	☐
45 - 54	☐
55 or older	☐

Gender

What is your gender?

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