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Chair of Marketing Plan & Markstrat Simulation

Unlocking the Power of Unfamiliar Music in Advertising: a Neuromarketing Study

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Abstract

The aim of this thesis is to analyze the effect of familiarity with advertising music on consumers' responses. In particular, the variables implied in the study are familiarity with the music, purchase intention, ad recall and brand attitude.

The research question of the study is: which type of music should marketers invest in for their commercials (unfamiliar vs. familiar), based on its likelihood to enhance ad recall, brand attitude, and increase purchase intention?

Specifically, the present research aims to investigate whether the unfamiliarity with advertising music positively influences purchase intention. In addition, ad recall and brand attitude are proposed as mediators.

The study involved 213 individuals, that completed an online survey after listening to one of the two audio advertisings that we created. Afterwards, the results of the survey were exported to SPSS and analyzed.

After the SPSS analysis, the final results confirmed the main and direct effect: unfamiliarity with the song in advertising positively influences purchase intention. In addition, all the indirect effects have been confirmed except the last one, the one between brand attitude and purchase intention. Therefore, it has been proven that the direct relationship between the independent variable (type of music) and the dependent one (purchase intention) is mediated by the variable ad recall.

The findings of this research offer practical recommendations for advertisers and marketers. It suggests the use of unfamiliar music in advertising, particularly when promoting new brands or products that need to increase awareness. Unfamiliar music can enhance ad recall, improve brand attitude and purchase intentions.

Advertisers should recognize that using well-known songs in ads may activate pre-existing associations, while unfamiliar music creates fertile ground for new brand associations.

Additionally, brands can use unfamiliar music to show creativity and dedication, therefore enhancing positive consumer perceptions. Furthermore, engaging consumers through challenges related to songwriting or jingle creation can and reinforce brand-consumer relationships.

Incorporating unfamiliar music can add distinctiveness to a brand's image, making it stand out and align perfectly with the ad's content. Marketers should also consider that unfamiliar songs can become familiar over time with repeated exposure, making them the key to success.

1. INTRODUCTION

Music is known for its ability to touch our souls, evoke emotions, and enhance our cognitive functions. Scientific studies have in fact explored the powerful effects of music on the human brain, uncovering its potential to boost moods, improve memory, and improve concentration. This intrinsic power of music has not gone unnoticed by the advertising world, which increasingly uses this incredible instrument to establish and reinforce the connection with consumers.

1.1 The impact of music on human minds

1.1.1 Music: the language of feelings

It is hard to meet someone who would admit they do not like music.

But what makes music so incredibly powerful?

Music possesses a unique and undeniable power that is the ability to transcend linguistic boundaries, for this reason it is often referred to with the title of the "universal language". Across all societies, a primary and enduring role of music is to serve as a communal force, bringing people together. It acts as a unifying thread, a universal bridge that overcomes barriers and forges a shared sense of belonging among diverse groups of individuals (Storr, 1992)¹.

In line with what has just been said, music fosters engagement in social functions, directly linking musical activity to the fulfilment of basic human needs, such as communication and cooperation. It is likely that music played a pivotal role in the evolution of humans by supporting social functions (Koelsch, 2014)².

¹ Storr, A. (2015). *Music and the Mind*. Simon and Schuster.

² Koelsch, S. (2014). Brain correlates of music-evoked emotions. *Nature Reviews Neuroscience*, 15(3), 170-180.

A fascinating thing about music is that even when it does not involve logical language, it does reveal feelings with detail and truth that language can't reach (Langer, 1951)³.

Considering the music's ability to convey emotions with precision and authenticity that words often struggle to match, one might even venture to define music as the "language of feelings" (Trimble and Hesdorffe, 2017)⁴.

Unsurprisingly, hearing music is closely associated with strong feelings, and music stimuli activate the entire limbic system, that is involved in the processing of emotions (Jäncke, 2008)⁵.

“All of us have had the experience of being transported by the sheer beauty of music—suddenly finding ourselves in tears, not knowing whether they are of joy or sadness, suddenly feeling a sense of the sublime, or a great stillness within. I do not know how to characterize these transcendent emotions, but they can still be evoked” (Sacks, 2006)⁶.

Sacks' reflection on the profound impact of music, perfectly encapsulates the universality of its emotional power. Music, indeed, possesses a unique capacity to evoke emotions, often challenging easy categorization.

1.1.2 Music and the Brain: A Neuroscientific Perspective

However, research has revealed that music's impact on individuals goes beyond the world of emotions.

The rapid advancements in cognitive neuroscience and neuroimaging technology have incentivized an increasing number of studies aimed at explaining the intricate relationship between music and its effects on the brain.

³ Langer, S. K. (1951). *Philosophy in a new key: A study in the symbolism of reason, rite, and art*: New York. The New American Library.

⁴ Trimble, M., & Hesdorffer, D. (2017). Music and the brain: the neuroscience of music and musical appreciation. *BJPsych international*, 14(2), 28-31.

⁵ Jäncke, L. (2008). Music, memory and emotion. *Journal of biology*, 7(6), 1-5.

⁶ Sacks, O. (2006). The power of music. *Brain*, 129(10), 2528-2532.

Given that music essentially manifests as sound waves, its interaction with brain waves has emerged as a central focus of inquiry in numerous research domains (Zhang, 2020)⁷. Notably, as external stimuli can have a profound impact on brain waves, auditory stimuli, particularly in the form of music, have garnered significant interest (Kučikienė et al., 2018)⁸.

One notable study, which delved into the influence of music on brain activity, employed spectral analysis of EEG data. This study assessed the effects of listening to Mozart's music, specifically his Sonata K448, on brainwave patterns.

The results revealed a remarkable increase in the alpha power, following exposure to Mozart's Sonata.

This pattern of brainwave activity, characterized by heightened alpha power, has been linked to memory, cognition and open mind to problem-solving (Verrusio et al., 2015)⁹. These findings contribute to the understanding of how music can modulate brain activity but also highlight the potential cognitive benefits associated with listening to musical compositions.

In the intricate landscape of the human brain, a fundamental goal is to predict rewarding events. At the heart of this mechanism, there are the midbrain dopamine neurons that signal potential upcoming rewards, allowing not only the anticipation of desirable outcomes, but also the motivation to receive them (Pecina et al., 2013)¹⁰.

This neural response can manifest in reaction to specific events or can intensify as an individual moves closer to a pleasant result (Howe et al., 2013)¹¹. Therefore, this

⁷ Zhang, S. (2020). The positive influence of music on the human brain. *Journal of Behavioral and Brain Science*, 10(1), 95-104.

⁸ Kučikienė, D., & Praninskienė, R. (2018). The impact of music on the bioelectrical oscillations of the brain. *Acta Medica Lituanica*, 25(2), 101.

⁹ Verrusio, W., Ettore, E., Vicenzini, E., Vanacore, N., Cacciafesta, M., & Mecarelli, O. (2015). The Mozart effect: a quantitative EEG study. *Consciousness and cognition*, 35, 150-155.

¹⁰ Peciña, S., & Berridge, K. C. (2013). Dopamine or opioid stimulation of nucleus accumbens similarly amplify cue-triggered 'wanting' for reward: entire core and medial shell mapped as substrates for PIT enhancement. *European Journal of Neuroscience*, 37(9), 1529-1540.

¹¹ Howe, M. W., Tierney, P. L., Sandberg, S. G., Phillips, P. E., & Graybiel, A. M. (2013). Prolonged dopamine signalling in striatum signals proximity and value of distant rewards. *nature*, 500(7464), 575-579.

anticipatory function plays a vital role as it incentivizes individuals to participate in actions that result in rewards.

Dopamine neurons possess the remarkable ability to encode the degree to which an actual outcome aligns with prior expectations. This means that they respond most vigorously when reality surpasses our predictions, creating a positive prediction error signal (Cohen et al., 2012)¹².

Traditionally, dopamine has been linked to fundamental rewards necessary for survival, such as food and sex (Kringelbach et al., 2012; Oei et al., 2012)¹³.

However, it also plays a pivotal role in processing more abstract forms of rewards, such as music. In the field of music, what constitutes 'better-than-expected' is a deeply subjective matter, influenced by individualized cortical processes shaped by past experiences (Salimpoor et al., 2015)¹⁴.

The pleasure people feel while listening to music, is believed to rely on the brain's capacity to form anticipations about the musical composition, foresee its progression, and subsequently encounter either validation or contradiction of those forecasts (Rohrmeier et al., 2012)¹⁵.

Therefore, as individuals engage with music, they identify the gradual development of sound patterns. Then, this recognition leads to the continuous formation of expectations and predictions.

Interestingly, there are two primary sources of musical expectations. The first one, explicit knowledge, arises from familiarity with a particular musical piece, where listeners can predict its progression based on past exposure. This case relates to people listening to a

¹² Cohen, J. Y., Haesler, S., Vong, L., Lowell, B. B., & Uchida, N. (2012). Neuron-type-specific signals for reward and punishment in the ventral tegmental area. *nature*, 482(7383), 85-88.

¹³ Kringelbach, M. L., Stein, A., & van Hartevelt, T. J. (2012). The functional human neuroanatomy of food pleasure cycles. *Physiology & behavior*, 106(3), 307-316.

Oei, N. Y., Rombouts, S. A., Soeter, R. P., Van Gerven, J. M., & Both, S. (2012). Dopamine modulates reward system activity during subconscious processing of sexual stimuli. *Neuropsychopharmacology*, 37(7), 1729-1737.

¹⁴ Salimpoor, V. N., Zald, D. H., Zatorre, R. J., Dagher, A., & McIntosh, A. R. (2015). Predictions and the brain: How musical sounds become rewarding. *Trends in cognitive sciences*, 19(2), 86-91.

¹⁵ Rohrmeier, M. A., & Koelsch, S. (2012). Predictive information processing in music cognition. A critical review. *International Journal of Psychophysiology*, 83(2), 164-175.

famous and well-known song. The second one is an implicit understanding that emerges from the general awareness of the rules and conventions governing music. It derives from cumulative past experiences of music listening, so there is no need to previously know the song, to generate this kind of expectation (Miranda et al., 2007)¹⁶.

Thus, this process of prediction and reward anticipation is fundamental to understand how we perceive and enjoy various aspects of life, including the experience of music.

In the sphere of cognitive enhancement, the influence of music has obsessed researchers for decades. It was in the 1960s when Georgi Lozanov, a Bulgarian psychiatrist, psychotherapist, and educator introduced what he termed the 'implicit learning method. Lozanov believed in the power of music that could not only reduce emotional tension but also to sharpen concentration, ultimately enhancing the efficiency of learning (Zhang, 2020)¹⁷.

Over the past decade, researchers have conducted extensive investigations into the connection between music and memory, with a specific focus on unraveling the molecular biological mechanisms underlying music's impact on memory faculties. According to researchers, music possesses the remarkable ability to modulate the release of neurotransmitters and peptide hormones within our brain. These changes are believed to enhance memory.

One specific example is the following. When a person experiences music, there's an observed increase in the secretion the hormone Vasopressin AVP. In turn, this hormone, activates a protein called MAPK. As a consequence, this protein, leads to an increase in the transcription level of a gene known as the "immediate early gene" c-fos. The importance of c-fos lies in its profound influence on synaptic differentiation.

¹⁶ Miranda, R. A., & Ullman, M. T. (2007). Double dissociation between rules and memory in music: An event-related potential study. *Neuroimage*, 38(2), 331-345.

¹⁷ Zhang, S. (2020). The positive influence of music on the human brain. *Journal of Behavioral and Brain Science*, 10(1), 95-104.

Nerve cells are connected through synapses, and their differentiation refers to the process of making these connections more efficient and specialized. This process is associated with memory processes and learning (Hilliard, 2005)¹⁸.

In essence, the mentioned process suggests that music, through the release of hormones like vasopressin AVP and the activation of specific genes like c-fos, may play a role in enhancing memory and cognitive mechanisms.

Another interesting point is the impact of music on neuronal NMDA receptors.

Studies have demonstrated that music can boost the activity and effectiveness of neuronal NMDA receptors. Synaptic plasticity heavily relies on the function of these receptors, since it is the brain's capacity to change and adapt.

Of particular significance is the role of NMDA receptors in the induction of long-term effects (LTP) within neural circuits. LTP is a fundamental process in the field of neuroscience, as it forms the basis for the creation of long-term memories. Essentially, LTP involves the strengthening of connections between neurons in response to repeated stimulation. NMDA receptors, whose activity can be influenced by music, are especially vital in the complex neural networks of the hippocampus. More in detail, the hippocampus is a brain region that is involved in the formation and consolidation of memory.

What makes NMDA receptors even more noteworthy is their crucial role within the intricate neural networks of the hippocampus. The hippocampus is a distinct region of the brain that is closely associated with the formation and consolidation of memories (Wang, 2015)¹⁹. In summary, music's impact extends to the formation of long-lasting memories, particularly within the intricate neural pathways of the hippocampus.

¹⁸ Hilliard, R. E. (2005). Music therapy in hospice and palliative care: a review of the empirical data. *Evidence-Based Complementary and Alternative Medicine*, 2, 173-178.

¹⁹ Wang, H., Jiang, J., & Jiang, C. (2015). The effects of music training on cognitive abilities. *Advances in Psychological Science*, 23(3), 419.

1.1.3 Healing Harmonies: The Power of Music Therapy

How our brain reacts to music, can make us think that we are made for music.

“Our auditory systems, our nervous systems are tuned for music. Perhaps we are a musical species no less than a linguistic one” (Sacks, 2006)²⁰.

While exploring the multiple effects of music on individuals, it is worth mentioning the concept of music therapy.

Music therapy is a form of professional application of music, that aims at optimizing individuals’ quality of life. This means that music is used in order to improve physical, social, communicative, emotional, intellectual and spiritual health and well-being (Haase, 2012)²¹.

There are various settings in which music therapy finds its place, including mental health, medical, developmental, and educational contexts (Edwards, 2016)²².

For example, within the field of mental health, one area is the alleviation of depression. Depression is a public health concern, characterized by a persistent and debilitating low mood, diminished interest, loss of pleasure, lack of energy and other symptoms such as sleep, low self-esteem, appetite and weight disturbance, poor concentration and feelings of guilt (Marcus et al., 2012)²³.

It is remarkable how music therapy, through its short-term beneficial effects, offers a ray of hope to individuals experiencing depression. In fact, it has been demonstrated that listening to music enhances the overall functioning of individuals who are experiencing this mental health disorder (Maratos et al., 2008)²⁴.

²⁰ Sacks, O. (2006). The power of music. *Brain*, 129(10), 2528-2532.

²¹ Haase, U. (2012). Thoughts on WFMT's Definition of Music Therapy1. *Nordic Journal of Music Therapy*, 21(2), 194-195.

²² Edwards, J. (Ed.). (2016). *The Oxford handbook of music therapy*. Oxford University Press.

²³ Marcus, M., Yasamy, M. T., van Ommeren, M. V., Chisholm, D., & Saxena, S. (2012). Depression: A global public health concern.

²⁴ Maratos, A., Gold, C., Wang, X., & Crawford, M. (2008). Music therapy for depression. *Cochrane database of systematic reviews*, (1).

In addition to this, the literature includes many studies where music demonstrates efficacy in reducing anxiety levels and decreasing the perception of pain (Hennenberg et al., 2023)²⁵.

Consequently, researchers view music not only as a source of entertainment but also as a potential therapeutic tool.

1.2 The power of music in advertising

Music has shown to have a profound impact on human minds and emotions, and this has not gone unnoticed in the advertising industry.

In our modern world, we are constantly bombarded by advertisements, encountering them throughout our daily routines. From the moment we wake up to the instant we lay down to rest, we find ourselves immersed in a sea of promotional content all begging for our attention.

In addition to this, in a landscape where consumers are increasingly knowledgeable about advertising and technology, including the use of ad-blocking software, the effectiveness of advertising relies more and more on consumers voluntarily engaging with it (Rosengren et al., 2013)²⁶.

The incorporation of music in advertising can be considered the key that improves consumers' processing of the commercial and favorably primes consumers' perceptions so that they derive greater value from it.

In a 2015 research study conducted by Nielsen, an information, data, and market measurement firm, the effectiveness of over 600 television advertisements was examined. The findings (figure 1) revealed that commercials featuring some form of music

²⁵ Hennenberg, J., Hecking, M., Sterz, F., Hassemer, S., Kropiunigg, U., Debus, S. & Löffler-Stastka, H. (2023). Exploring the Synergy of Music and Medicine in Healthcare: Expert Insights into the Curative and Societal Role of the Relationship between Music and Medicine. *International Journal of Environmental Research and Public Health*, 20(14), 6386.

²⁶ Rosengren, S., Dahlén, M., & Modig, E. (2013). Think outside the ad: Can advertising creativity benefit more than the advertiser? *Journal of advertising*, 42(4), 320-330.

outperformed those without music across four critical metrics: creativity, empathy, emotive power, and information power (Nielsen, 2015)²⁷.

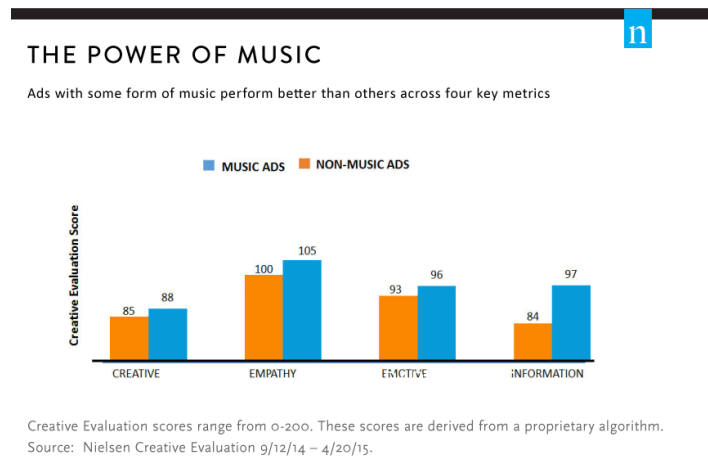


Figure 1

Source: <https://www.nielsen.com/it/insights/2015/i-second-that-emotion-the-emotive-power-of-music-in-advertising/>

Cuesta et al. (2018)²⁸ conducted neuromarketing study to investigate the influence of music on advertising effectiveness. They used a variety of measures, including facial emotion analysis and galvanic skin response (GSR). Their study involved 19 university women who were exposed to a TV perfume advertisement in a controlled laboratory environment.

Nine participants were randomly assigned to watch the ad with music, while ten viewed a silent version of the same ad.

What emerged from the study is that the advertisement with music elicited a higher level of galvanic skin response compared to the silent version.

²⁷ Nielsen. (2015). The Emotive Power of Music in Advertising. Retrieved from: <https://www.nielsen.com/it/insights/2015/i-second-that-emotion-the-emotive-power-of-music-in-advertising/>

²⁸ Cuesta, U., Martínez-Martínez, L., & Niño, J. I. (2018). A case study in neuromarketing: Analysis of the influence of music on advertising effectiveness through eye-tracking, facial emotion and GSR. *Eur. J. Soc. Sci. Educ. Res*, 5(2), 73-82.

Since GSR sensors measure the electrical conductivity of the skin, this tool is used as an indicator of emotional arousal. It is in fact an element that provides information about the customer's response to commercial messages (Gurgu et al., 2020)²⁹.

Therefore, this result suggests that the presence of music in advertising leads to stronger emotional reactions in viewers.

In addition, participants exposed to the musical version of the ad exhibited higher levels of engagement, as evident from their facial expressions. This indicates that music in advertising has the capacity to make the content more enjoyable for the audience.

Moreover, the presence of music in the advertisement positively influenced viewers' liking of the product as well. This suggests that music contributes to creating a more favorable perception of the advertised product (Cuesta et al., 2018)³⁰.

1.3 Striking the right chord: The research question

As mentioned before, all the competitors belonging to the marketing world need to find ways to stand out and defeat the other players.

Considering the influential role of music in advertising and being the effects of music on consumer perception and behavior so complex, choices about what music to use, are incredibly important (Anglada-Tort et al., 2022)³¹.

By reviewing the literature, it is possible to realize that if previous research examining the effects of music on consumer behavior and choice has undeniably brought valuable insights, there's one fundamental aspect that has not been analyzed in depth.

Previous research has largely focused on various aspects of music, sidelining one fundamental element: familiarity.

²⁹ Gurgu, E., Gurgu, I. A., & Tonis, R. B. M. (2020). Neuromarketing for a better understanding of consumer needs and emotions. *Independent Journal of Management & Production*, 11(1), 208-235.

³⁰ Cuesta, U., Martínez-Martínez, L., & Niño, J. I. (2018). A case study in neuromarketing: Analysis of the influence of music on advertising effectiveness through eye-tracking, facial emotion and GSR. *Eur. J. Soc. Sci. Educ. Res*, 5(2), 73-82.

³¹ Anglada-Tort, M., Schofield, K., Trahan, T., & Müllensiefen, D. (2022). I've heard that brand before: the role of music recognition on consumer choice. *International Journal of Advertising*, 41(8), 1567-1587.

In fact, this thesis is motivated by the aspiration to address this significant gap in the existing literature.

Given the context provided, this study will focus on the use of unfamiliar songs compared to well-known ones in advertising.

Specifically, this study aims to investigate the following research question:

Which type of music should marketers invest in for their commercials (unfamiliar vs. familiar), based on its likelihood to enhance ad recall, brand attitude and increase purchase intention?

To address this question, the next chapter will describe the state of the art and present the conceptual background of this research. The “experimental research” chapter contains a description of the methodological approach, followed by the analysis of the results.

In conclusion, the chapter titled 'Discussion and Conclusion' delves into an examination of the study's findings and offers insights into their business and managerial applications.

2 THEORETICAL BACKGROUND

2.1 Literature review

In the context of music and advertising, an intriguing paradox emerges.

While music holds the potential to wield significant influence over consumer choices and brand perception, marketers often lean on their gut instinct intuition and personal preferences when making musical selections, seemingly bypassing the wealth of scientific evidence, methodologies, and theories that could guide their decisions (Herget et al., 2018)³².

³² Herget, A. K., Schramm, H., & Breves, P. (2018). Development and testing of an instrument to determine Musical Fit in audio–visual advertising. *Musicae Scientiae*, 22(3), 362-376.

Since one of the primary challenges faced by brands when incorporating music into their marketing strategies is quantifying the return on their investment in music, often referred to as music's ROI (Allan et al., 2015)³³ advertisers shouldn't rely only on personal musical tastes.

A wrong musical choice for advertising can negatively influence the effectiveness of communication, resulting in damaging effects on attitudes towards the brand and purchase intentions (Anglada-Tort et al., 2021)³⁴. Therefore, making the right decision about the song used in commercials, has an impact on the overall advertising costs.

Introducing the concept of familiar music, it includes songs that are well-known by the audience, they can be popular or trendy songs. They are essentially pieces of music that many individuals are able to recognize. On the contrary, unfamiliar music can involve an original composition written, played, and recorded specifically for the commercial or simply a song that is not famous or well-learned (Lantos and Craton, 2012)³⁵.

One might think that the most effective form of music for advertising is the familiar one. This assumption has a point, considering that as humans, we tend to have preferences for what we are already familiar with. The mechanism behind this concept is known as the mere exposure effect (Zajonc, 1968)³⁶.

What happens is that repeated exposure to a stimulus biases individuals' attitude towards it, increasing the liking of the stimulus. For this reason, it could be easier to believe that a song that has been played multiple times on radios and on different platforms, might work better for commercials compared to an unknown one.

³³ Allan, D. (2015). Audio Branding and ROI—A Review. *Audio Branding Yearbook 2014/2015*, 103-116.

³⁴ Anglada-Tort, M., Keller, S., Steffens, J., & Müllensiefen, D. (2021). The impact of source effects on the evaluation of music for advertising: Are there differences in how advertising professionals and consumers judge music? *Journal of Advertising Research*, 61(1), 95-109.

³⁵ Lantos, G. P., & Craton, L. G. (2012). A model of consumer response to advertising music. *Journal of Consumer Marketing*, 29(1), 22-42

³⁶ Zajonc, R.B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*. 9(2), 1–27.

Considering that a familiar music has been heard by consumers multiple times, it might have already established associations in individuals' minds. Consequently, even though a popular song can be liked by many people, it can hardly be perceived as unique (Nielsen, 2017)³⁷.

Taking into account marketer's dual goal of selecting a song that makes a commercial distinctive and, at the same time, fits the ad, it is worth mentioning the concept of advertising creativity. Advertising creativity is defined by Rosengren et al. (2020)³⁸ as the quality of advertising executions to be original and appropriate.

Reading the description of advertising creativity, I saw the opportunity to make a parallelism with the use of unfamiliar music as the background of advertising campaigns.

An unfamiliar advertising song can be described as an original composition written and recorded specifically for a commercial (Lantos and Craton, 2012)³⁹.

This kind of music appears to align with the concept of advertising creativity: it is original because it has never been heard before, and it must be appropriate since it was created precisely for the particular ad.

According to Hampp (2010)⁴⁰, unique and creative jingles are perceived by consumers as simple and real.

In addition to this, Abolhasani et al. (2017)⁴¹ draw upon Heidegger's concept of authenticity and discuss how music in advertising can create moments of authenticity for consumers, evoking emotions, memories, and reflections. This concept relates to

³⁷ Nielsen. (2017). The celebrity power of music in advertisements. Retrieved from: <https://www.nielsen.com/insights/2017/perspectives-the-celebrity-power-of-music-in-advertisements/>

³⁸ Rosengren, S., Eisend, M., Koslow, S., & Dahlen, M. (2020). A meta-analysis of when and how advertising creativity works. *Journal of Marketing*, 84(6), 39-56.

³⁹ Lantos, G. P., & Craton, L. G. (2012). A model of consumer response to advertising music. *Journal of Consumer Marketing*, 29(1), 22-42

⁴⁰ Hampp, A. (2010). A reprise for jingles on Madison Avenue. *Advertising Age*, 6(1), 22.

⁴¹ Abolhasani, M., Oakes, S., & Oakes, H. (2017). Music in advertising and consumer identity: The search for Heideggerian authenticity. *Marketing Theory*, 17(4), 473-490.

moments of authenticity when individuals experience a sense of deep connection or meaning in their lives.

In the context of advertising, using unique jingles could be seen as an attempt to create a more authentic and distinctive connection with consumers. This connection may, in turn, positively influence their purchase intentions and the attitude towards the brand.

In contrast, familiar music may be associated with a more conventional or less authentic approach, potentially resulting in less positive responses.

Creating a song from zero exclusively for the commercial, requires effort and at first it can seem risky since it would imply presenting an unfamiliar element to the audience.

However, marketers in this way would be provided with the most control over variables related to the advertising music. By tailoring the musical background to the marketing communication, it becomes easier to boost cognitive elements of advertising music (Lantos and Craton, 2012)⁴².

The cognitive elements of advertising music include the following.

Level and persistence of attention to music, refers to whether the music in the ad succeeds in capturing and holding the consumer's attention over time. In fact, it affects how much attention the consumer pays to the entire ad.

Then, features of music available for association, relate to the consumer's process of capturing musical elements and associating them with the brand. What happens with familiar music is that consumers deal with prior associations, so it becomes hard to create unique and new connections.

Another cognitive element that can be enhanced by a new advertising music, is the perception of distinctiveness. Since consumers make judgments about the uniqueness of the music used, avoiding the use of a trendy song could help differentiate the brand.

⁴² Lantos, G. P., & Craton, L. G. (2012). A model of consumer response to advertising music. *Journal of Consumer Marketing*, 29(1), 22-42

The perceived music-message fit is a cognitive component of advertising music as well. It is crucial since high fit generates a more favorable attitude than low fit, which can create dissonance or confusion (Lantos and Craton, 2012).

Thus, these cognitive elements of advertising music, play crucial roles in achieving various advertising objectives, from enhancing attention to ensuring the message aligns well with the music. Understanding these elements is fundamental regarding the impact of unfamiliarity with the song on consumers' responses like purchase intention, ad recall and brand attitude.

Consumers' purchase intention refers to the inclination of consumers to buy a product or a service (Younus et al. 2015)⁴³. In other words, purchase intention is a situation where individuals tend to buy a certain product in certain condition (Mirabi et al., 2015)⁴⁴. It is an effective tool to predict buying process since it is related to the behavior, perceptions and attitudes of consumers (Ghosh, 1990)⁴⁵.

According to the studies conducted on the music familiarity we believe that unfamiliar advertising music leads to positive purchase intentions. Given this premise, our first hypothesis explores the main and direct effect between the type of music (unfamiliar vs. familiar) and the purchase intention. Since we expect a positive relation between the two variables, we assume that:

H1 (X - Y): Unfamiliarity with the song influences purchase intention of the service more positively than familiarity with the song.

⁴³ Younus, S., Rasheed, F., & Zia, A. (2015). Identifying the factors affecting customer purchase intention. *Global Journal of Management and Business Research*, 15(2), 8-13.

⁴⁴ Mirabi, V., Akbariyeh, H., & Tahmasebifard, H. (2015). A study of factors affecting on customers purchase intention. *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, 2(1).

⁴⁵ Ghosh, A. (1990). *Retail Management* Dryden Press. Fort Worth: Chicago, IL, USA.

Even if some studies have revealed that popular music in advertising increases involvement, others have shown that it can be distracting and reduce recall (Raja et al., 2020)⁴⁶.

In fact, according to Pohl (2022)⁴⁷, when well-known songs are used in advertising, a cognitive illusion can be generated, caused by the familiarity perceived. Since popular music could make people no longer perceive and judge the commercial accurately, it could be detrimental to the advertising effectiveness.

This could be disadvantageous especially for new brands entering the market, since they are trying to create brand awareness and need their ads to be remembered, way more than already famous brands do. In fact, the importance of advertising for new brands can be explained through the fact that consumers are not able to draw from previous experiences (Rosengren et al., 2020)⁴⁸.

Ad recall, it is a commonly used measure to test advertising effectiveness. It determines the number of people who recall the content on a commercial. Thus, it evaluates the ability of the ad to be remembered. This is an important metric since it impacts brand and product awareness (Malygina et al., 2020)⁴⁹.

Therefore, it is important to highlight that highly familiar music can reduce recall of the stimulus by decreasing customers' attention to the central message (Allan, 2006; MacInnis and Park, 1991)⁵⁰.

⁴⁶ Raja, M. W., Anand, S., & Kumar, I. (2020). Multi-item scale construction to measure consumers' attitude toward advertising music. *Journal of Marketing Communications*, 26(3), 314-327.

⁴⁷ Pohl, R. F. (2022). *Cognitive Illusions*. Routledge.

⁴⁸ Rosengren, S., Eisend, M., Koslow, S., & Dahlen, M. (2020). A meta-analysis of when and how advertising creativity works. *Journal of Marketing*, 84(6), 39-56.

⁴⁹ Malygina, M., Shtanchaev, A., Churikova, M., & Perepelkina, O. (2020). Multimodal Ad Recall Prediction Based on Viewer's and Ad Features.

⁵⁰ Allan, D. (2006). Effects of popular music on attention and memory in advertising. *Journal of Advertising research*, 46(4), 1-11.

MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high-and low-involvement consumers' processing of ads. *Journal of consumer Research*, 18(2), 161-173.

In addition, it is worth repeating that an unfamiliar song generates the release of dopamine, since as people start listening to it, they start making expectations about how the song will develop.

As previously explained, dopamine can be seen as the key to subjects feeling pleasure while listening to music.

It is true that familiar songs can generate expectations as well. However, since people have already made different associations with well-known friends, unfamiliar songs can benefit more from this dopamine effect. We suppose that a brand-new song is able to make people experience a pleasurable advertising moment, that will help them remember what its content was.

According to what has been said, we believe that the consumers' perception of unfamiliarity with music positively influences the individuals' ad recall. Taking into account this premise, our second hypothesis examines the mediating indirect effect of ad recall on the relationship between the type of music (unfamiliar vs. familiar) and the purchase intention. Since we expect that the unfamiliar music has a positive influence on ad recall, compared to a familiar one, we developed the following hypothesis:

H2 (X- M1): Unfamiliarity with the song has a more positive effect on the ad recall than familiarity with the song.

Another element that can be enhanced through the use of a new advertising music is the perceived music-message fit. A low level of alignment between the music and the advertising can in fact create dissonance or confusion. Perceived music-message fit is a crucial cognitive component of advertising music since high fit generates a more favorable attitude than low fit. (Lantos and Craton, 2012)⁵¹.

⁵¹ Lantos, G. P., & Craton, L. G. (2012). A model of consumer response to advertising music. *Journal of Consumer Marketing*, 29(1), 22-42.

Brand attitude can be described as consumers' overall assessment of a brand, whether good or bad (Keller, 1998)⁵². Since brand attitude reflects the customer's neutral, negative, or positive perceptions and feelings toward a brand, it significantly impacts consumers' behavior patterns (Suh & Youjae, 2006)⁵³.

As mentioned earlier, consumers appreciate the feelings of authenticity and uniqueness that a brand is able to provoke. For this reason, we believe that being creative by proposing a new song in advertising, can be the key to generating positive attitudes towards a brand.

Considering the above-mentioned literature, our third hypothesis examines the mediating indirect effect of brand attitude on the relationship between the type of music (unfamiliar vs. familiar) and the purchase intention. Since we expect that the unfamiliar music has a positive influence on brand attitude, compared to a familiar one, we developed the following hypothesis:

H3 (X - M2): Unfamiliarity with the song has a more positive effect on brand attitude than familiarity with the song.

As previously mentioned, ad recall refers to the extent to which consumers can remember and retrieve information from advertisements while brand attitude represents consumers' overall evaluations and feelings towards a particular brand.

⁵² Keller, K.L. (1998) Strategic Brand Management: Building, Measuring and Managing Brand Equity. Upper Saddle River NJ: Prentice Hall

⁵³ Suh, J. C., & Youjae, Y. (2006). When brand attitudes affect the customer satisfaction-loyalty relation: The moderating role of product involvement. Journal of consumer psychology, 16(2), 145-155.

According to Zinkhan et al. (1983)⁵⁴, consumers who recall ad's content, are more likely to associate positive emotions with the brand. This emotional response can serve as a reward for remembering the ad and the product, ultimately influencing brand attitude.

Since we expect that a higher ad recall has a positive influence on brand attitude, we imagine that there's a positive relation between the first mediator and the second mediator.

Therefore, a fourth hypothesis has been developed:

H4 (M1-M2): High level of ad recall leads to a positive effect on brand attitude.

Ad recall is a crucial attribute of advertising effectiveness, since it shows the extent to which the commercial's content has gained a desirable spot in consumers' minds (Donovan et al., 2003)⁵⁵.

According to Nasco et al. (2007)⁵⁶, ad recall is important to marketers because when consumers need to decide whether to buy a product or not, recalling the information within an ad could be decisive.

Since recall helps to acquire specific information related to a product or a service, it is believed that the more a subject remembers an advertisement, the more likely it is to come to mind while shopping (Bushman and Bonacci, 2002)⁵⁷.

⁵⁴ Zinkhan, G. M., Gelb, B. D., & Martin, C. R. (1983). The Cloze Procedure-A Clue To Advertising Likability And Message Recall. *Journal of Advertising Research*, 23(3), 15-20.

⁵⁵ Donovan, R. J., Boulter, J., Borland, R., Jalleh, G., & Carter, O. (2003). Continuous tracking of the Australian National Tobacco Campaign: advertising effects on recall, recognition, cognitions, and behaviour. *Tobacco control*, 12(2), ii30-ii39.

⁵⁶ Nasco, S. A., & Bruner, G. C. (2007). Perceptions and recall of advertising content presented on mobile handled devices. *Journal of Interactive Advertising*, 7(2), 51-62.

⁵⁷ Bushman, B. J., & Bonacci, A. M. (2002). Violence and sex impair memory for television ads. *Journal of Applied Psychology*, 87(3), 557.

Given these findings, our fifth hypothesis examines the mediating indirect effect of ad recall on the relation between familiarity with the song and purchase intention. Specifically, we expect that a higher ad recall has a positive impact on purchase intention.

For this reason, in our fifth hypothesis we assumed that:

H5 (M1-Y): High level of ad recall leads to a positive effect on purchase intention.

In the field of marketing and consumer behavior, brand attitude represents a crucial element that significantly influences consumers' behavioral intentions (Bozbay et al., 2018)⁵⁸.

In particular, a positive attitude towards a brand, influences the customer's decision to buy a particular brand and it helps create brand trust (Chaudhuri & Holbrook, 2001)⁵⁹.

We believe that a higher brand attitude can lead to greater purchase intentions. Our sixth hypothesis in fact explores the mediating indirect effect of brand attitude on the relation between familiarity with the song and purchase intention. Specifically, we expect that a higher brand attitude has a positive impact on purchase intention.

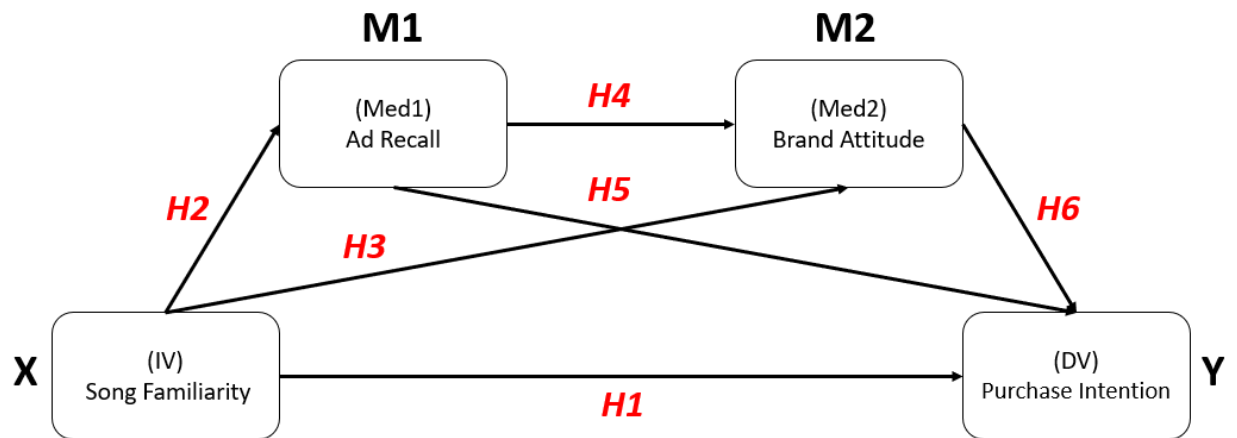
The last hypothesis has been developed in this way:

H6 (M2-Y) Specifically, high level of brand attitude leads to a positive effect on purchase intention.

⁵⁸ Bozbay, Z., Karami, A., & Arghashi, V. (2018, May). The relationship between brand love and brand attitude. In 2nd International Conference on Management and Business, Tebriz, Iran (pp. 8-9).

⁵⁹ Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of marketing*, 65(2), 81-93.

2.2 Conceptual framework



The main objective of this experimental study is to investigate how different levels of familiarity with musical backgrounds influence purchase intention.

In order to test this relationship, the conceptual framework was built by using two indirect effects represented by the mediating factors of brand recall and brand attitude.

Following this assumption, to realize the research model, the variables used are an independent variable represented by song familiarity, purchase intention as dependent variable, two mediating factors represented by ad recall and brand attitude.

The model 6 by Andrew F. Hayes⁶⁰ was adopted to develop the conceptual framework, which is characterized by the presence of an independent (X), a dependent (Y) and two mediators (M1,M2).

⁶⁰ Hayes, A. F. (2017). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Guilford publications.

3 EXPERIMENTAL RESEARCH

3.1 Methodological approach

3.1.1 Methodology and study

The present experimental study consists of a conclusive causal between subjects 2x1 research design. The results of the experiment are represented by responses to a questionnaire obtained through a survey conducted independently in Italy during May 2023 using Qualtrics XM online platform.

Survey participants were selected by adopting a non-probabilistic sampling methodology. In particular, a convenience method was used, taking advantage of ease and speed of access and selection of population subjects, reached through the Prolific website. This technique is advantageous both in terms of high speed of data collection and high response rate.

Considering the target sample, it was decided to include respondents with a demographic age between 20 and 50 years, collecting data from both female and male individuals, as gender was not expected to have a statistically significant influence on the results of the experiment.

3.1.2 Participants and sampling procedure

The survey was distributed to 250 individuals, of whom 213 respondents fully participated in the experimental study, answering fully and completely all the questions in the questionnaire. The remaining 37 incomplete responses were first selected and later discarded from the dataset during the data-cleaning procedure. Respondents were contacted through an anonymous link generated by the Qualtrics XM online platform and subsequently sent through Prolific's online data collection site.

The average age of respondents was 29.15 years, although the age range ranged from a minimum of 20 years to a maximum of 50 years.

Regarding the gender of the respondents, the prevailing gender was male, represented by 60.6% (129/213), while 39.4% (84/213) were female.

3.1.3 Data collection and questionnaire

To conduct the experimental study, it was necessary to develop a questionnaire consisting of 20 questions, of which 16 were specific and two were demographic.

In order to manipulate the independent variable (familiarity with the song: no vs.. yes), it was essential to implement two different auditory stimuli.

The first scenario results in an audio characterized by an unfamiliar background. The second scenario consists of an audio characterized by a familiar background.

As mentioned earlier, data were collected through a questionnaire that was divided into four main parts.

A brief introduction with an explanation of the academic purpose of the experimental research was placed at the beginning of the questionnaire.

After including the university's credentials, full compliance with privacy regulations regarding the anonymity policy about data collection and management was ensured.

The second part of the survey is a randomized block consisting of two separate scenarios. In fact, the randomization process was essential within the structure of the questionnaire so that a uniform number of exposures to both auditory stimuli could be obtained. To avoid potential cognitive bias related to brand sentiment, both scenarios were represented by two mock-ups of audio.

Both simulations were realized with Logic Pro X. Firstly, the voices simulating a commercial about a Surprise Travel Service were recorded. Then, I registered a new song, so I was sure to use a non-familiar song (to the respondents) in the ad. Therefore, two versions of the same commercial have been created by inserting the brand-new song

(unfamiliar song) as background for the first scenario, while a piece of familiar music (I Got A Feeling by Black Eyed Peas) for the second one.

The third part of the survey was introduced to respondents after they were subjected to one of the two scenarios. This block of the questionnaire consisted of 15 questions: 7 concerning mediator 1 (ad recall), 5 regarding mediator 2 (brand attitude), and then 3 to measure the dependent variable (purchase intention).

All questions were scored using a scale based on 7 rating points.

The first scale, related to mediator 1 (ad recall) was created independently.

For the ad recall, respondents answered to 7 open questions regarding the commercial they saw, for each correct answer, they got 1 point.

The second scale, a five-item scale developed by Spears and Singh (2004), was used to measure brand attitude (mediator 2). The present study adopted five 7-point bipolar semantic items: from unappealing to appealing, bad to good, unpleasant to pleasant, unfavorable to favorable, and unlikable to likable.

The third scale, related to purchase intention, the dependent variable, is a Likert scale based on 7 rating points, adapted from Y-P Chang (2016), that is classifies purchase intention into Thinking of purchase, Willing to purchase, and Recommending for others.

All scales were readjusted according to the needs of the experimental research.

Finally, the fourth and final part of the survey consists of the block dedicated to demographic questions, in which the gender and age of the respondents were asked.

3.2 Results of the experiment

3.2.1 Data analysis

The data collected through the questionnaire provided by the survey generated on Qualtrics XM, were exported to SPSS (Statistical Package for Social Science) statistical software for analysis.

Initially, an exploratory type of factor analysis was conducted in order to examine and validate the scale items used in the conceptual research model. Specifically, principal component analysis was performed as an extraction method by applying Varimax as a rotation technique. In order to decide how many factors to extract, the total explained variance table was observed by verifying that, according to Kaiser's rule, the Eigenvalues were greater than 1 and the cumulative variance as a percentage was greater than 60%.

In addition, both the table of commonalities and the component matrix were observed. Specifically, all items were found to have an extraction value greater than 0.5 and a loading score greater than 0.3. Therefore, it was decided to keep all items that make up the scales and validate them.

After validating all scales, a reliability test was conducted to check the scales' reliability level. In particular, all constructs' Cronbach Alpha value was observed, ensuring it was above 60 percent. As for the scale concerning the second mediator (brand attitude), a value of 0.943 was found, while for the scale of the dependent variable (purchase intention), a value of 0.960 was recorded. Therefore, all scales were found to be reliable.

In addition, the test of KMO related to the sampling adequacy measurement was performed. Regarding the scale related to the second mediator (brand attitude), a value of 0.906 was found, while regarding the scale concerning the dependent variable (purchase intention), a value of 0.758 was recorded. Therefore, in both cases, the level of adequacy was more than adequate.

Next, the Bartlett's test of sphericity was performed, which was statistically significant finding a p-value of 0.001 in all cases ($p\text{-value} < \alpha = 0.05$).

3.2.2 Results of the hypotheses

After conducting both factor analyses and reliability tests, the main hypotheses of the conceptual research model were examined so that their statistical significance and, thus, relative success could be confirmed or rejected.

H1

To test the statistical significance of the direct hypothesis (H1), a comparison of averages was conducted by applying a One-Way ANOVA as an analysis to test the effect of the independent variable (song familiarity: no vs. yes) against the dependent variable (purchase intention).

Specifically, the independent variable (X) is nominal and is separated into two different conditions coded with 0 (yes) and 1 (no), while the dependent variable (Y) is metric.

After performing the ANOVA, looking at the table of descriptive statistics, it was possible to see that the group of respondents subjected to the scenario coded with 0 (107 people) had a mean value of 3.2336 found, while the respondents exposed to the hearing condition labeled with 1 (106) had a mean value of 6.2358 recorded. In addition, the ANOVA tabulation revealed a p-value related to the F-test equal to 0.001, which was statistically significant ($p\text{-value} < \alpha = 0.05$). Therefore, a statistically significant difference between the group averages could be seen, thus confirming the effect of X versus Y. Thus, the direct hypothesis H1 (main effect) was found to be proved.

H2-H3-H4-H5-H6

To test the significance of the indirect hypotheses (H2-H3-H4-H5-H6), a regression analysis was conducted through the application of Process Macro Model 6 version 4.0 developed by Andrew F. Hayes. This was used to test the mediation effect of brand recall and brand attitude on the relationship between the independent variable (familiarity with the song: no vs. yes) and the dependent variable (purchase intention).

To test the success of the mediation effects, it was necessary to distinguish them into five different relationships: a first effect between the independent variable and mediator 1 (H2), a second effect between the independent variable and mediator 2 (H3), a third effect between the two mediators (H4), a fourth effect between mediator 1 and the dependent variable (H5), a fifth and final effect between mediator 2 and the dependent variable (H6).

Specifically, to demonstrate the statistical significance of each hypothesis, a 95% confidence interval was adopted with an α reference value of 5%. In addition, it was necessary to make sure that the extremes of the confidence range (LLCI = Lower Level of Confidence Interval; ULCI = Upper Level of Confidence Interval) for each hypothesis respected the sign concordance (both positive or both negative) so that there was no 0 within. Finally, to assess the sign and magnitude of each effect, the β coefficients of the regression analysis of each relationship between the variables will be examined.

H2

Regarding the indirect effect between X and M1, through observation of the SPSS output, a p-value of 0.0000, a favorable confidence interval (LLCI=2.4092; ULCI=2.7379), and a positive regression coefficient β of 2.5735 could be seen. Therefore, this section of the indirect effect was statistically significant, confirming Hypothesis H2.

H3

Regarding the indirect effect between X and M2, through observation of the SPSS output, a p-value of 0.0000, a favorable confidence interval (LLCI=0.2645; ULCI=0.6552), and a positive regression coefficient β of 0.4599 could be seen. Therefore, this section of the indirect effect was statistically significant, confirming hypothesis H3.

H4

Regarding the indirect effect between M1 and M2, through the observation of SPSS output, a p-value of 0.0000, a favorable confidence interval (LLCI=0.6121;

ULCI=0.7495), and a positive regression coefficient β of 0.6808 could be seen. Therefore, this section of the indirect effect was statistically significant, confirming hypothesis H4.

H5

Regarding the indirect effect between M1 and Y, observing the SPSS output, a p-value of 0.0000, a favorable confidence interval (LLCI=0.5067; ULCI=0.7959), and a positive regression coefficient β of 0.6513 could be seen. Therefore, this section of the indirect effect was statistically significant, confirming hypothesis H5.

H6

Regarding the indirect effect between M2 and Y, through observing the output of SPSS, a p-value of 0.5069, an adverse confidence interval (LLCI=-0.1131; ULCI=0.2281), and a positive regression coefficient β of 0.0575 could be seen. Therefore, this section of the indirect effect was not statistically significant, not confirming the H6 hypothesis.

In light of the results obtained, it was possible to confirm the success of 4 out of 5 indirect hypotheses, failing to confirm the overall mediating effect (indirect effect).

4 GENERAL DISCUSSION AND CONCLUSIONS

4.1 Theoretical contributions

This research challenges the conventional belief that familiar music is always more effective in advertising. In fact, by confirming that consumers exhibit a higher intention to purchase a service when it is promoted with an unfamiliar musical background, it redefines the role of music familiarity. In addition, this study highlights the importance of authenticity and creativity in advertising.

The main purpose of this research was to establish how familiarity with advertising music affects purchase intention and to address this question, we used a commercial for a new brand that promoted a new travel service.

Six main hypotheses have been developed. More in detail, the first one is related to the direct and main effect between the independent variable (type of advertising music: unfamiliar vs. familiar) and the dependent one (purchase intention). The other five hypotheses concern the indirect effects produced by the mediation factors of ad recall and brand attitude. After collecting data through the questionnaire provided by the online survey and analyzing the results with the SPSS statistical software, only the last hypothesis (H6) was not confirmed, while the other five (H1, H2, H3, H4, H5) were confirmed.

The first hypothesis (H1) examined the direct effect of the type of advertising music (unfamiliar vs. familiar) on purchase intention. It was verified, indicating that consumers were more inclined to express an intention to purchase a service when it was promoted with an unfamiliar musical background.

By proving that consumers demonstrate a higher intention to purchase a service when it is promoted with an unfamiliar musical background, the research challenges the traditional assumption that familiar music is always more effective. This theoretical insight highlights the importance of authenticity in advertising and expands our knowledge of how music impacts consumer behavior.

The second hypothesis (H2) explored the impact of music familiarity on ad recall. It revealed that consumers exposed to unfamiliar advertising music demonstrated a greater ability to recall the ad's content compared to those exposed to familiar music.

This discovery offers a more profound comprehension of how music familiarity influences cognitive processes in advertising. It suggests that unfamiliar music captures consumers' attention and aids in memory retention, which has implications for advertising effectiveness.

Moving on to the third hypothesis (H3), it investigated the influence of music familiarity on brand attitude. We found that consumers generally expressed more positive brand attitudes when they interacted with advertising featuring an unfamiliar musical background. The study enriches the understanding of the connection between music familiarity and brand attitude. Confirming that consumers generally express more positive brand attitudes when exposed to unfamiliar advertising music challenges the

notion that familiar music always elicits more favorable responses. This theoretical insight highlights the potential of unfamiliar music in shaping brand perceptions.

The fourth hypothesis (H4) explored the relationship between the two mediators, ad recall and brand attitude. It confirmed a positive association, indicating that individuals with high ad recall levels tended to express higher levels of brand attitude.

The fifth hypothesis (H5) focused on the relationship between ad recall and purchase intention. It demonstrated that high levels of ad recall led to greater purchase intentions, highlighting the mediating role of ad recall in the relationship between music familiarity and purchase intention.

It emphasizes that memorable advertising experiences realized through unique song choices can influence consumers' intentions to make a purchase.

While the first five hypotheses were confirmed, the sixth hypothesis (H6), which linked brand attitude to purchase intention, was not supported. This could be attributed to the perceived risk associated with the service being promoted, namely, participating in a surprise travel. Consumers may have expressed favorable brand attitudes but hesitated to purchase such a "hazardous" service.

In conclusion, the study underscores the significance of ad recall as a mediator in the relationship between music familiarity and purchase intention. Specifically, the positive impact of unfamiliar advertising music on purchase intention is explained by ad recall. This emphasizes the pivotal role of ad recall in understanding how music familiarity influences consumer behavior and purchase decisions. Although we did not confirm the mediating role of brand attitude in the relationship between music familiarity and purchase intention, we still established that unfamiliar music can lead to favorable brand attitudes.

This experimental study contributes to providing new findings regarding music advertising related to service communication. Taking into account the work that has been done, this thesis aimed to explore a specific element of music advertising: the familiarity. It is true that the concept of music advertising had already been analyzed in multiple scientific studies, but its familiarity aspect related to ad recall, brand attitude and purchase intention, required more attention.

In the field of creative advertising, these results seem coherent with the beneficial effects of advertising creations that are both appropriate and innovative (Rosengren et al., 2020)⁶¹.

Specifically, the affect transfer model can be considered, since it focuses on the potential of creativity to evoke positive feelings that extend to consumer responses to the brand and to the ad.

This aligns with our findings, which demonstrate that consumers exposed to advertising featuring unfamiliar musical backgrounds tend to exhibit more positive brand attitudes and higher purchase intentions.

New original music in advertising can contribute to the overall creativity of the ad, making it more enjoyable and liked, thus stimulating positive feelings (Rosengren et al., 2013; De Houwer et al., 2001)⁶².

Another model that can be taken into consideration is the processing model. It suggests that creative advertising is more likely to be attended to and processed by consumers, because it stands out (Yang and Smith, 2009)⁶³. Since we saw the use of unfamiliar music in advertising as a way to enhance creative aspect of the ad, this model supports our research.

More creative advertising arouses more ad processing, resulting in longer exposure and greater attention. In fact, consumers are more likely to notice and engage with ads that show creativity and uniqueness, like the ones that feature unfamiliar music, leading to higher levels of ad recall.

⁶¹ Rosengren, S., Eisend, M., Koslow, S., & Dahlen, M. (2020). A meta-analysis of when and how advertising creativity works. *Journal of Marketing*, 84(6), 39-56.

⁶² Rosengren, S., Dahlén, M., & Modig, E. (2013). Think outside the ad: Can advertising creativity benefit more than the advertiser? *Journal of advertising*, 42(4), 320-330.

De Houwer, J., Thomas, S., & Baeyens, F. (2001). Association learning of likes and dislikes: A review of 25 years of research on human evaluative conditioning. *Psychological bulletin*, 127(6), 853.

⁶³ Yang, X., & Smith, R. E. (2009). Beyond attention effects: Modeling the persuasive and emotional effects of advertising creativity. *Marketing Science*, 28(5), 935-949.

This study offers fresh insights into the intricate dynamics of music in advertising, by providing foundations for future research and offering valuable insights to academics and marketers seeking to optimize their advertising strategies.

4.2 Managerial Implications

One of the primary objectives of this research is to provide valuable insights that can help advertisers and marketers build their marketing strategies more effectively. It is relevant to consider that today's business landscape is dynamic and competitive, and that consumer behavior is constantly evolving. Consequently, understanding the hidden mechanisms of advertising is fundamental for achieving sustainable brand success. This study investigates the fascinating field of advertising music, with a special focus on the influence of familiarity. By exploring the intricate relationship between music familiarity and consumer responses, we aim to equip advertisers and marketers with insights that can be applied to their promoting activities.

In this section, we reveal the managerial implications drawn from our findings and we offer instructions for unlocking the power of unfamiliar music in advertising.

In general, we strongly recommend the use of unfamiliar music in advertising, as our research has demonstrated its positive impact on brand attitude, ad recall, and purchase intentions.

This suggestion can be very useful when advertisers' goal is to promote a new brand or product. Advertising, in fact, acts as a powerful tool for increasing brand and product awareness, especially for lesser-known brands. By incorporating unfamiliar music into marketing campaigns, it is possible to increase their potential to attract audiences and create lasting impressions.

Unfamiliar music can be a strategic asset when launching new brands or products, since its distinctiveness has the unique ability to draw consumer attention in a crowded market.

Familiarity with the music can work against brands' purposes, as it may distract consumers' focus from their message. Instead, unfamiliar music gently guides consumers

toward the ad's content, allowing them to concentrate on the core message. This focused attention can significantly contribute to higher ad recall and, consequently, improved brand attitude and purchase intentions.

Trendy music can sometimes "steal the show" in advertisements, drawing attention away from the information a brand tries to communicate. In contrast, unfamiliar music maintains the audience's focus straight on the ad's content, making it easier for them to remember it afterwards. With this approach, consumers are indeed more likely to engage with and comprehend the message they are listening to.

As we've established, high ad recall is linked to both positive brand attitudes and increased purchase intentions. For this reason, advertisers can benefit from incorporating unfamiliar music in their campaigns.

In addition, advertisers should realize that using well-known songs in their ads may trigger pre-existing associations in consumers' minds. Since consumers may already have strong associations with familiar songs, they could be less open to forming new connections between the song, the brand brand, and the promoted product or service.

And how could this be positive for brands considering that building associations is vital for them?

Therefore, it is essential to consider that using unfamiliar music can contribute to creating fertile ground for new associations with the brand and help it stand out and connect with its target audience.

Marketers should also consider the signaling model, which suggests that creativity in advertising acts as a valuable marketing signal. To be more specific, this model posits that consumers appreciate when a brand invests effort in creating a unique advertisement (Rosengren et al., 2020)⁶⁴. Therefore, crafting a custom song or jingle specifically for brand promotion can be seen positively by consumers. The signaling model proposes that such creative efforts signal the brand's commitment and dedication, enhancing consequently positive consumer's perceptions and responses. By embracing unfamiliar

⁶⁴ Rosengren, S., Eisend, M., Koslow, S., & Dahlen, M. (2020). A meta-analysis of when and how advertising creativity works. *Journal of Marketing*, 84(6), 39-56.

music and investing in creative advertising, brands can effectively convey their commitment to quality and customers' satisfaction.

In addition, marketers could benefit from the findings related to the unfamiliarity of songs in advertising, by deciding to make consumers participate in exciting challenges.

When consumers actively engage with a brand, whether through social media or other interactive platforms, their participation contributes positively to their satisfaction levels. This intensified satisfaction, in turn, reinforces their loyalty to the brand (Apenes, 2016)⁶⁵.

Launching challenges for songwriting or jingle creation can highly engage consumers, considering their interest in participating in brand activities.

Brands can invite consumers to compose songs for their advertisements, with the best entry receiving recognition. This approach would not only lead to the discovery of a unique song for the brand's marketing campaigns, but the whole challenge would also foster consumers' engagement and satisfaction. At the same time, it would also give space to the artist, spreading the message that not only famous singers can be considered.

The benefits are multiple: an appealing ad song, an intensified consumer involvement, and a strengthened brand-consumer relationship.

When a brand uses a well-known song in its advertising, it aligns itself with something already famous and functional. In this way, advertisers do not consider that they are missing an opportunity to add distinctiveness to the brand image.

On the other hand, featuring a new and original song can infuse authenticity into the brand's identity, by making the consumers perceive the brand as unique. Embracing new music in advertising in fact can contribute to brand distinctiveness.

In addition, incorporating an unfamiliar song that is tailor-made for a commercial can significantly lead to a perfect fit between the music and the advertisement. This strategic decision guarantees that the chosen music not only complements but also aligns with the ad's content, message, and overall branding objectives.

⁶⁵ Apenes Solem, B. A. (2016). Influences of customer participation and customer brand engagement on brand loyalty. *Journal of Consumer Marketing*, 33(5), 332-342.

It's essential for marketers to recognize that, over time, even an initially unfamiliar song will become familiar to the audience with repeated exposure. Brands often opt for familiar songs to avoid appearing anonymous to consumers, since it is believed that trendy songs can lead to success by capitalizing on their popularity. However, the unfamiliarity of a new song should not dissuade brands from using it in advertising. With each repetition, the song gains recognition, and consumers begin to associate it with the brand. Therefore, brands can confidently incorporate unfamiliar music, knowing that it will become familiar to their audience over time.

4.3 Limitations and further research

It is evident that this study presents limitations, which could potentially inspire further research on this subject.

The first two limitations of this study pertain to the age and gender of the target sample.

Therefore, it could be worthwhile to incorporate these two crucial demographic factors as control variables within our research to investigate potential variations in consumer perceptions.

For what concerns the age, music preferences are known to be influenced by age-related phenomena. Life cycle effects indeed create both physical and psychological differences across age groups and can significantly impact emotional and behavioral responses to music. For example, older people have difficulties in hearing, and younger people tend to crave a kind of music that reflects fun and excitement (Hamermesh, 1982)⁶⁶.

As individuals age, their music preferences may evolve, potentially leading to alterations in emotional and behavioral responses.

For this reason, advertisers could consider these age-related dynamics when choosing music for their campaigns and researchers should consider these insights while conducting studies on this topic.

⁶⁶ Hamermesh, D. S. (1982). Consumption during retirement: The missing link in the life cycle (No. w0930). National Bureau of Economic Research.

Research on the relationship between gender and musical preferences has produced conflicting results (Wheeler, 1985)⁶⁷. However, some studies agree on the common observation that women tend to prefer softer musical styles, while men lean toward harder, more aggressive genres (North and Hargreaves, 2008)⁶⁸.

These gender-related insights regarding musical preference could be considered when analyzing advertising strategies that use music, by studying the preferences of the target.

In general, it could be interesting to investigate differences in consumers' responses depending on age and gender. Therefore, in light of these limitations, future research could explore deeply how these demographic factors interact with the use of music in advertising and its impact on consumer responses.

In addition to this, the study's questionnaire was designed in Italian, thus primarily targeting Italian-speaking participants. While this approach was suitable for the current research, it draws a potential path for future investigations. In fact, conducting similar experiments in different geographical contexts, with distinct languages and cultural groups, could offer valuable insights about how consumer perceptions and behaviors can vary depending on the cultural background. Expanding the research to incorporate different cultures and languages may provide a broader understanding of the relationship between music familiarity, brand attitude, purchase intention, and ad recall.

Another limitation of this study is its exclusive reliance on auditory stimuli. While this approach allowed us to dive into the influence of music familiarity, it excluded the potential effects of visual elements. What happens in the real world is that both auditory and visual components often are presented together to convey marketing messages and influence consumer responses.

Future research could overcome this limit by incorporating visual stimuli, such as images or video content, to create a more realistic setting where sounds and visual elements act together as a marketing stimulus.

⁶⁷ Wheeler, B. L. (1985). Relationship of personal characteristics to mood and enjoyment after hearing live and recorded music and to musical taste. *Psychology of Music*, 13(2), 81-92.

⁶⁸ North, A., & Hargreaves, D. (2008). *The social and applied psychology of music*. OUP Oxford.

Additionally, this study employed a quantitative research approach, so it implied relying on a survey and on statistical analysis to investigate the relationships between variables.

While this method provided valuable insights by explaining the statistical significance of the relationships among music familiarity, brand attitude, ad recall, and purchase intention, it still has certain limitations. To be more specific, quantitative research may not manage to uncover the variety of individual sensations that qualitative methods, such as in-depth interviews or focus groups, could capture. Thus, integrating qualitative research methods would allow researchers to explore deeply the complexities of music familiarity and its impact on consumer behavior.

Moreover, to conduct this study we relied on a traditional approach. Even though this methodology has its merits, it doesn't include the potential insights that could derive from involving more innovative and advanced research methods, such as neuromarketing.

In fact, neuromarketing has the power to overcome the limitations of traditional marketing methods, by obtaining consumers' implicit emotional and cognitive reactions to marketing stimuli. The fascinating thing about neuromarketing is that it considers that people are not always able to express what they feel. Sometimes they are not even aware that they are experiencing certain sensations.

To be more precise, as biometric measures, eye tracking and galvanic skin response (GSR) could be adopted to conduct further research on this topic.

For what concerns eye-tracking technology, it could help analyze participants' visual attention and gaze patterns while they are exposed to advertisements with music characterized by different familiarity levels. By tracking eye movements, it would be possible to determine which elements of the ad participants focus on the most. Specifically, research could investigate whether participants' attention is more directed toward the product, brand logo, or other elements when unfamiliar or familiar music is playing in the background.

Regarding GSR, changes in participants' skin conductance are an indicator of arousal. In this context, galvanic skin response could help assess the changes in the emotional response of participants when exposed to ads with unfamiliar and familiar music.

Concerning neuroimaging tools, we would suggest using EEG taking into consideration the high temporal resolution and the ability to adapt traditional experimental designs into neuroscience studies (Byrne et al., 2022)⁶⁹.

More in detail, EEG can help separate positive and negative responses to marketing stimuli (Deitz et al., 2016)⁷⁰ like in this case would be the different kinds of music advertising.

In fact, it has been demonstrated that the difference in power between the left and right prefrontal cortex, is a crucial measure to distinguish positive reactions from negative one, especially in the alpha frequency band (Smith et al., 2017)⁷¹.

Specifically, an increase in the cortical activity to the left side indicates an approach response, while an increase in cortical activity to the right side indicates an avoidance response. For this reason, it's possible to affirm that EEG can help understand the motivational direction and preference towards a stimulus. In addition, this neural marker is useful since it often anticipates the creation of behavioral intentions (Gable et al., 2010)⁷².

In an ideal scenario, future research in this domain should aim to integrate multiple neuroscientific techniques such as eye-tracking, EEG, and GSR. Combining these methods could provide a comprehensive understanding of consumer responses to advertising stimuli. Furthermore, it would be interesting to explore a synergistic approach by combining traditional marketing research methods with neuromarketing techniques.

⁶⁹ Byrne, A., Bonfiglio, E., Rigby, C., & Edelstyn, N. (2022). A systematic review of the prediction of consumer preference using EEG measures and machine-learning in neuromarketing research. *Brain Informatics*, 9(1), 1-23.

⁷⁰ Deitz, G. D., Royne, M. B., Peasley, M. C., & Coleman, J. T. (2016). EEG-based measures versus panel ratings: Predicting social media-based behavioral response to Super Bowl ads. *Journal of Advertising Research*, 56(2), 217-227.

⁷¹ Smith, E. E., Reznik, S. J., Stewart, J. L., & Allen, J. J. (2017). Assessing and conceptualizing frontal EEG asymmetry: An updated primer on recording, processing, analyzing, and interpreting frontal alpha asymmetry. *International Journal of Psychophysiology*, 111, 98-114.

⁷² Harmon-Jones, E., Gable, P. A., & Peterson, C. K. (2010). The role of asymmetric frontal cortical activity in emotion-related phenomena: A review and update. *Biological psychology*, 84(3), 451-462.

This integration could offer a more complete perspective, allowing researchers to exploit the strengths of each approach and compensate for their respective limitations.

All these limitations have been explained to indicate a path for researchers, hoping they will inspire them to conduct studies that can provide more insights regarding the best ways to valorize the power of music in advertising.

Keywords

Unfamiliar music; Purchase Intention; Ad Recall; Brand Attitude.

“In the last 20 years, there have been huge advances here, but we have, as yet, scarcely touched the question of why music, for better or worse, has so much power. It is a question that goes to the heart of being human”. (Sacks, 2006)⁷³.

⁷³ Sacks, O. (2006). The power of music. *Brain*, 129(10), 2528-2532.

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APPENDIX

Questionnaire:

Music familiarity question:

Conoscevi la canzone usata come sottofondo?

Si

No

Ad Recall questions:

Di cosa parla la pubblicità che hai sentito?



Tra chi avviene la conversazione nella pubblicità?



Chi sceglie la destinazione del viaggio e i compagni di avventura?



"Sorprendimi ma non Troppo" si occupa di organizzare il viaggio dei tuoi sogni, tu invece qual è l'unica cosa che devi fare prima di partire?



Quante domande ha il quiz di "Sorprendimi ma non Troppo" che devi completare affinché ti organizzino il viaggio?



Quando viene un cliente a conoscenza della destinazione del viaggio?



Quando entra il cliente a contatto con i suoi compagni di viaggio?



Ora ti farò delle domande per capire la tua percezione del brand "Sorprendimi ma non troppo"



Brand attitude Question:

Descrivi le tue sensazioni nei confronti del brand "*Sorprendimi ma non Troppo*" presentato nella pubblicità:

Non attraente	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Attraiante
Cattivo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Buono
Spiacevole	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Piacevole
Sfavorevole	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Favorevole
Antipatico	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Simpatico

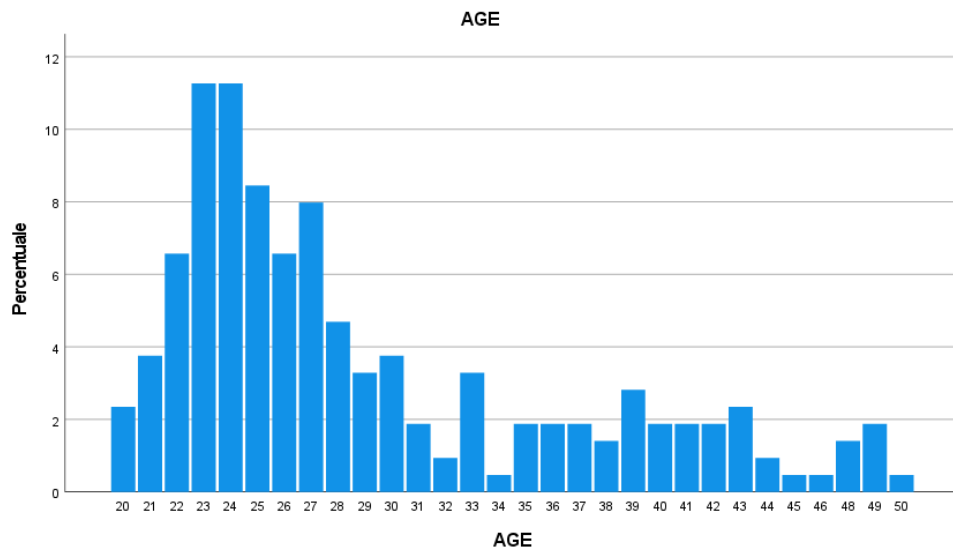
Purchase intention Questions:

Indica quanto sei d'accordo con le seguenti affermazioni:

	Per niente d'accordo 1	2	3	4	5	6	Molto d'accordo 7
Se volessi fare un viaggio, penseresti di usare questo servizio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Se volessi fare un viaggio, proveresti questo servizio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Se un tuo amico volesse organizzare un viaggio, gli consiglieresti questo servizio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Descriptive statistics AGE

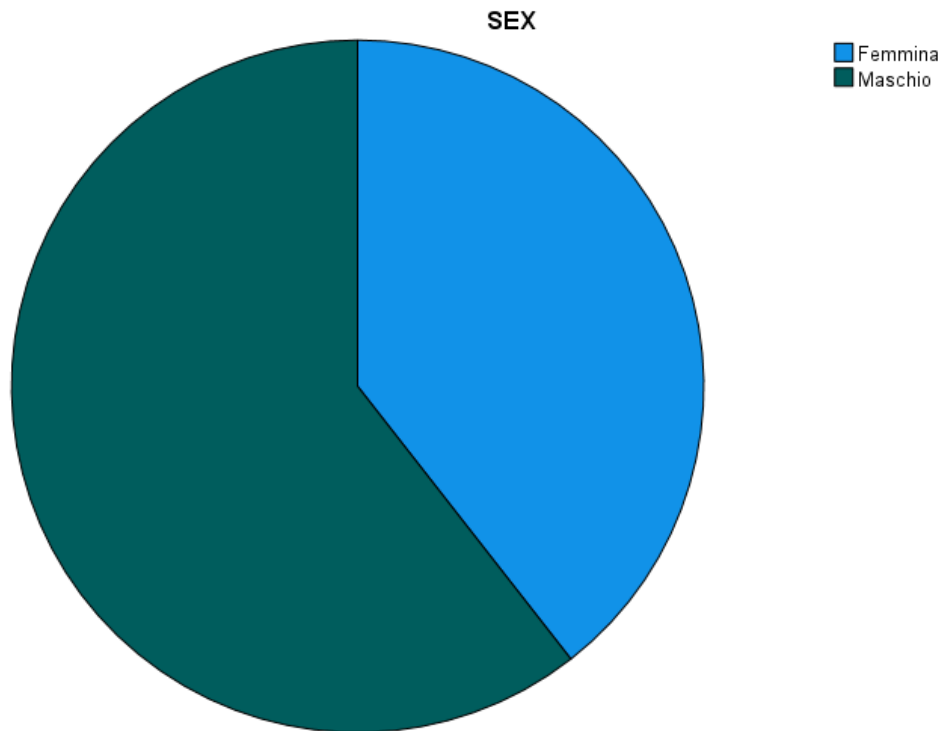
AGE					
		Frequenza	Percentuale	Percentuale valida	Percentuale cumulativa
Valido	20	5	2,3	2,3	2,3
	21	8	3,8	3,8	6,1
	22	14	6,6	6,6	12,7
	23	24	11,3	11,3	23,9
	24	24	11,3	11,3	35,2
	25	18	8,5	8,5	43,7
	26	14	6,6	6,6	50,2
	27	17	8,0	8,0	58,2
	28	10	4,7	4,7	62,9
	29	7	3,3	3,3	66,2
	30	8	3,8	3,8	70,0
	31	4	1,9	1,9	71,8
	32	2	,9	,9	72,8
	33	7	3,3	3,3	76,1
	34	1	,5	,5	76,5
	35	4	1,9	1,9	78,4
	36	4	1,9	1,9	80,3
	37	4	1,9	1,9	82,2
	38	3	1,4	1,4	83,6
	39	6	2,8	2,8	86,4
	40	4	1,9	1,9	88,3
	41	4	1,9	1,9	90,1
	42	4	1,9	1,9	92,0
	43	5	2,3	2,3	94,4
	44	2	,9	,9	95,3
	45	1	,5	,5	95,8
	46	1	,5	,5	96,2
	48	3	1,4	1,4	97,7
	49	4	1,9	1,9	99,5
	50	1	,5	,5	100,0
		Totale	213	100,0	100,0



Descriptive statistics GENDER

SEX

		Frequenza	Percentuale	Percentuale valida	Percentuale cumulativa
Valido	Femmina	84	39,4	39,4	39,4
	Maschio	129	60,6	60,6	100,0
Totale		213	100,0	100,0	



Factorial Analysis mediator 2

Test di KMO e Bartlett

Misura di Kaiser-Meyer-Olkin di adeguatezza del campionamento.		,906
Test della sfericità di Bartlett	Appross. Chi-quadrato	1033,872
	gl	10
	Sign.	<,001

Varianza totale spiegata

Componente	Totale	Autovalori iniziali		Caricamenti somme dei quadrati di estrazione		
		% di varianza	% cumulativa	Totale	% di varianza	% cumulativa
1	4,159	83,178	83,178	4,159	83,178	83,178
2	,291	5,819	88,998			
3	,211	4,228	93,226			
4	,193	3,866	97,092			
5	,145	2,908	100,000			

Metodo di estrazione: Analisi dei componenti principali.

Comunalità

	Iniziale	Estrazione
BRAND ATTITUDE_1	1,000	,824
BRAND ATTITUDE_2	1,000	,847
BRAND ATTITUDE_3	1,000	,822
BRAND ATTITUDE_4	1,000	,871
BRAND ATTITUDE_5	1,000	,795

Metodo di estrazione: Analisi dei componenti principali.

Matrice dei componenti^a

	Componente 1
BRAND ATTITUDE_1	,908
BRAND ATTITUDE_2	,920
BRAND ATTITUDE_3	,907
BRAND ATTITUDE_4	,933
BRAND ATTITUDE_5	,892

Metodo di estrazione: Analisi dei componenti principali.

a. 1 componenti estratti.

Reliability Test Mediator 2

Statistiche di affidabilità

Alpha di Cronbach	Alpha di Cronbach basata su elementi standardizzati	N. di elementi
,943	,949	5

Factorial Analysis dependent variable

Test di KMO e Bartlett

Misura di Kaiser-Meyer-Olkin di adeguatezza del campionamento.		,758
Test della sfericità di Bartlett	Appross. Chi-quadrato	765,222
	gl	3
	Sign.	<,001

Varianza totale spiegata

Componente	Totale	Autovalori iniziali		Caricamenti somme dei quadrati di estrazione		
		% di varianza	% cumulativa	Totale	% di varianza	% cumulativa
1	2,791	93,035	93,035	2,791	93,035	93,035
2	,143	4,782	97,817			
3	,065	2,183	100,000			

Metodo di estrazione: Analisi dei componenti principali.

Comunalità

	Iniziale	Estrazione
PURCHASE INTENTION_1	1,000	,932
PURCHASE INTENTION_2	1,000	,953
PURCHASE INTENTION_3	1,000	,906

Metodo di estrazione: Analisi dei componenti principali.

Matrice dei componenti^a

	Componente 1
PURCHASE INTENTION_1	,966
PURCHASE INTENTION_2	,976
PURCHASE INTENTION_3	,952

Metodo di estrazione: Analisi dei componenti principali.

a. 1 componenti estratti.

Reliability Test dependent variable

Statistiche di affidabilità

Alpha di Cronbach	Alpha di Cronbach basata su elementi standardizzati	N. di elementi
,960	,963	3

ONE WAY ANOVA

Descrittive

DV	N	Medio	Deviazione std.	Errore std.	95% di intervallo di confidenza per la media		Minimo	Massimo
					Limite inferiore	Limite superiore		
,00	107	3,2336	,62982	,06089	3,1129	3,3544	1,00	4,00
1,00	106	6,2358	,50178	,04874	6,1392	6,3325	5,00	7,00
Totale	213	4,7277	1,60839	,11021	4,5105	4,9449	1,00	7,00

ANOVA

DV	Somma dei quadrati	df	Media quadratica	F	Sig.
Tra gruppi	479,944	1	479,944	1478,694	<,001
Entro i gruppi	68,485	211	,325		
Totale	548,429	212			

REGRESSION ANALYSIS

```
*****
Model   : 6
  Y     : DV
  X     : IV
  M1    : MED1
  M2    : MED2

Sample
Size: 213

*****
OUTCOME VARIABLE:
MED1

Model Summary
      R      R-sq      MSE      F      df1      df2      p
,9048  ,8186  ,3703  952,4612  1,0000  211,0000  ,0000

Model
      coeff      se      t      p      LLCI      ULCI
constant  3,7944  ,0588  64,5020  ,0000  3,6784  3,9104
IV        2,5735  ,0834  30,8620  ,0000  2,4092  2,7379

*****
```

OUTCOME VARIABLE:
MED2

Model Summary

R	R-sq	MSE	F	df1	df2	p
,9680	,9371	,0948	1564,3365	2,0000	210,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	,8840	,1355	6,5235	,0000	,6169	1,1512
IV	,4599	,0991	4,6403	,0000	,2645	,6552
MED1	,6808	,0348	19,5396	,0000	,6121	,7495

OUTCOME VARIABLE:
DV

Model Summary

R	R-sq	MSE	F	df1	df2	p
,9712	,9432	,1492	1155,8887	3,0000	209,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	,5630	,1864	3,0208	,0028	,1956	,9304
IV	1,1989	,1305	9,1869	,0000	,9416	1,4562
MED1	,6513	,0734	8,8788	,0000	,5067	,7959
MED2	,0575	,0865	,6648	,5069	-,1131	,2281