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**A Lockdown's pause of the present:**

Nostalgia Proneness on Customer Behavior dealing  
with the COVID-19 Pandemic

Duarte Casimiro Farinha Semedo Patrício

Dissertation report presented as partial requirement for  
obtaining the Master's degree in Information  
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**A LOCKDOWN'S PAUSE OF THE PRESENT**

**NOSTALGIA PRONENESS ON CUSTOMER BEHAVIOR  
DEALING WITH THE COVID-19 PANDEMIC**

by

Duarte Casimiro Farinha Semedo Patrício

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**Supervisor:** Diana Orghian

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## **ABSTRACT**

The aim of this thesis is to investigate nostalgia and its influence on customer behavior and its decision process on anxious times. More specifically, it examines the impact that the prior memories of a joyful past can have on an anxiety inducing present, started by the COVID-19 pandemic in 2020.

It will provide insights on whether nostalgia proneness benefits an individual on dealing with an apprehensive time like the prior lockdown – as a coping mechanism towards the present. Moreover, it analyzes if this nostalgia towards pre-pandemic times influences a consumer's purchase intention of products and services that are considered nostalgic through the eyes of a pandemic present – if a customer prefers a product that broadcast nostalgia (because presently they cannot be purchased/performed due to the imposed restrictions by COVID-19) or if it will be reticent as a result of the fear of contamination. Additionally, a link between nostalgia and loneliness is going to be analyzed, as loneliness can influence a predisposition towards nostalgia.

The investigation was conducted adopting a quantitative approach by way of an online questionnaire. The participants were people over 18 years old that were Portuguese and have been confined in Portuguese territory. In order to analyze and investigate the defined hypotheses, the collected data was quantitatively analyzed and treated, using statistical procedures.

As a conclusion, we verified the tendency of nostalgic individuals being more predisposed towards evoked nostalgia, where nostalgic respondents preferred nostalgic products in terms of purchase intention. Moreover, individuals seem to employ this feeling of nostalgia as a coping mechanism towards the anxious and uncertain present related with the pandemic. However, no solid link was found between nostalgia and loneliness, meaning our hypothesis regarding lonely respondents feeling more nostalgia was not supported by the data.

## **KEYWORDS**

Nostalgia, Marketing, Customer Behavior, Coping Mechanism, Purchase Intention, Loneliness, Pandemic, COVID-19

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# 1. INTRODUCTION

The future is always ahead of us. However, it is the past and history of our actions that determines the sense of overcoming in life (Bradbury, 2012). Nostalgia has an incredibly way of endorsing our choices and aspect of living, and the evoked memories drifted by the juvenility of happiness is well soldered in the essence of each individual.

Having in mind its power and effect, nostalgia leads life choice into areas where past and lived situations attended to ourselves. The emotional experience of nostalgia leads people longing for prior positive moments (Cui, 2015), being a healthy feeling on loving certain and specific things, such as a specific childhood cartoon or a certain sweet from that time. As such, different generations sense this feeling differently, as it is dependent of a person's personal experience, age, and maturity (Holbrook, 1993).

Indeed, Brands and Marketing unite to create and establish a personal angle in a consumer with implied nostalgia towards products and services. If a consumer engages its personality on a product that reminds them of better and prior times, this will enlarge the relationship with the brand, taking it to an intimate level, expanding their purchase intention and linking the phenomenon with an emotional experience (Marchegiani & Phau, 2011). By giving the buyer a sense of belonging and personal taste, they will feel more vulnerable and empathetic with the concept, probably more persuaded on acquiring the product (Loveland, Smeesters, & Mandel, 2010).

Differently, when it comes to an anxious period of our life – a season that brought trauma and drastic changes in a negative way – the tendency of an individual is to overcome it, not wanting to experience it again. For instance, talking about the pandemic that initiated on 2020 by COVID-19 (present during the development of this paper), an event that forced all of the global population to drastically change their usual routine, and living on an unreliable present, with no light at the end of the tunnel – the future. As so, any individual who remembered their former self before March 2020 will enter on a nostalgic proneness towards the past, by remembering these calmer and cheerfuller times. It will move to a comfort and distressed zone, because of the present's pandemic trauma (Verplanken, 2012).

Since the beginning of the pandemic, positive memories regarding the past have increased (Cho, 2020), meaning people were trying to escape to their former and happier past. Given that there is insufficient research about the impact of the Coronavirus disease on overall customer behavior, and so the present research aims to explore this new perspective. This is done by recurring to individuals and using their nostalgia-evoked memories on dealing with the present they have imposed with, as a coping mechanism on transmitting calmness and happiness as well as on thinking positively about the future.

Another interesting matter to evaluate is the prior explanation of Marketing in nostalgia and its way of associating it towards the present. Overall, the negative impact the pandemic has also collided with many businesses and, as such, industries had to reinvent themselves as many of them could not perform through their physical stores and usual routines (Lee & Kao, 2020). Besides the digital transformation that most of these companies had to conduct, not every single product and service could be mutated, leaving consumers with the urge for these prior and nostalgic products

towards the pandemic (Raj et. al., 2020) - individuals seek to one day achieve the former activities that they were able to accomplish before the pandemic.

As the lack of research linking a pre-pandemic life to nostalgia and relating it to product preferences and consumer behavior, this study aims to understand not only if a consumer relies on nostalgia as a way to endure the present situation but also if they are driven by it regarding purchase intention and behavior. Regarding the latter, this study will investigate if a product or service that creates in the consumer a nostalgic feeling will be preferred over a similar product but with not emotional (nostalgic) bond, specifically with the imposed COVID-19 reality.

One of the negative sides of nostalgia could be its link towards loneliness. This unhappy and pessimist feeling is related with absence of socialization, possibly erupted by former disconcerting relationships (Anderson et. al., 1994). This proneness is impacted by nostalgia itself, where a person that is precepting loneliness will remember joyful times where this lack of socialization did not exist (Kret & de Gelder, 2010), and this is nostalgia transparently. The nostalgia concept has a major role on acting as a resource that conserves mental health – not only in loneliness but also in other negative feelings (Zhou et. al., 2008). Naturally, this emotion increased during the lockdown by obvious reasons, and there is a study proving the increase of loneliness on the pandemic season (Killgore et. al., 2020).

Particularly this paper will conduct the effect that loneliness has towards the restrictions, since all of society had a constraint on social interactions/situations. On this point, it will be investigated if a lonelier individual directly imposes a greater nostalgia inclination - if directly a lonelier person will feel more nostalgia towards the past – on a general level using nostalgia as a coping mechanism, and on a particular level in relation towards product preferences on nostalgia scope.

Overall, this paper will address the following research questions: *“What is the effect of nostalgia proneness on customer behavior decisions towards their preferences and taste? Does nostalgia influence our way of coping with a depressed present? Are these effects influenced by a loneliness presence?”*

This paper will be structured in six main chapters. Subsequently to the present introduction, the literature review reflects what has been discussed within these topics so far and supporting all the hypotheses. Regarding the third chapter, the conceptual model is presented as well as the investigation hypothesis. Moreover, there is the carrying out of the aimed study through an online survey – with a description of the used methodology - which has allowed the analyses of the hypotheses and therefore drawing of conclusions regarding the research questions. To conclude, the seventh chapter ends the investigation with the limitations of the presented study, as well as its managerial implications and recommendations for future research.

## 2. LITERATURE REVIEW

### 2.1. NOSTALGIA CONCEPT

At some point in life, everyone will face nostalgia. This feeling takes people back to their younger selves; to the way they thought, felt, and consequently to simpler and happier times (Youn & Jin, 2017). It comes with the desire of experiencing those moments again, along with comfort, fulfillment, and joy (Holbrook, 1993). This results on an influence towards a customer's emotional and cognitive behavior (Davis, 1979).

Having a continuous significance in our lives, nostalgia indirectly pushes us to explore our surroundings for reconstructions of former people, products, places, experiences, in order to add some kind of value to our present and even future (Davis, 1979), since earlier research concluded the predominance of nostalgia when individuals are lonely (Wildschut et al., 2006).

Since being considered a mental disease (Hofer, 1668) until the social phenomenon that is today (Havlena, 1991), several studies about this matter have been made, where the nostalgia term has been more clarified over its lifetime. Holbrook in 1993 determined that nostalgia-related preferences are dependent of an individual's age and longing proneness (affiliated to a personality), where they could be capable of alter an individual's pattern of taste. Among these influences, popular and notable marks that laden a consumer's youth have the ability of influencing lifelong preferences and proneness (Schindler & Holbrook, 2003), where these biological and environmental mechanisms will be liable on nostalgic preferences. This apperceived nostalgia can evoke in many forms: from products, experiences, photography's, to even smells, sounds and tastes (Hirsch, 1992).

This feeling can be classified in many alternatives. It is understood by Baker and Kennedy (1994) the difference between simulated and real nostalgia, where the first form resembles the indirect influence evoked from other people and their passion for longing something, while the second represents past memories being desired. It has also been further proven the existence of a third type of nostalgia originated from the previous ones, where collective nostalgia embraces longing for a previous culture, community or even epoch. This evoked feeling is a collectivistic assumption, shared by subjects from similar backgrounds when presented with the same ambience (Davis, 1979). In other words, this type of nostalgia is attendant on emotions felt by members of a same culture, country, team, among others.

It has also been studied the bisection of nostalgic reactions into two different categories, where: a) Personal Nostalgia is codependently related to the direct experiences taken by a subject on his past; b) Historic Nostalgia depends on a time in history where a subject was inserted, but not necessarily had an explicit contact with it (Havlena & Holak, 1991).

Davis (1979) assumed three phases for the Nostalgia process, where on the first one (denominated Simple Nostalgia) the subject has a desire to return to the past, as "things were better" in it. The second phase or Reflexive Nostalgia, the person starts to analyze their past, as to ensure if it was better or simply different, where it interrogates "was it that exact way". In the third and last phase, also Interpreted Nostalgia, the subject ends up justifying the nostalgia that is being felt, objectifying it and analyzing the response of the second phase.



Authors	Types of Nostalgia
Stern (1992)	<b>Personal:</b> “idealize the personally remembered past”
	<b>Historical:</b> “expresses the desire to retreat from contemporary life by returning to a time in the distant past viewed as superior to the present”
Baker and Kennedy (1994)	<b>Real:</b> “refers to a sentimental or bittersweet yearning for the experienced past”
	<b>Simulated:</b> “refers to a sentimental or bittersweet yearning for the indirectly experienced past and may be remembered through the eyes and stories of a loved one”
	<b>Collective:</b> “a sentimental or bittersweet yearning for the past which represents a culture, a generation, or a nation”
Havlena and Holak (1996)	<b>Personal:</b> “it reflects direct experience with the object of nostalgia where the meaning is unique to the individual”
	<b>Cultural:</b> “while rooted in direct personal experience, is based on shared symbols, so that the resulting feeling of nostalgia reflects the individual's connection to other members of the culture”
	<b>Interpersonal:</b> “results from indirect experience obtained through direct interpersonal contact and is essentially individual, rather than collective, in its focus”
	<b>Virtual:</b> “dealing with indirect, collective experience, may involve one's own cultural history or may reflect a longing for a different cultural environment”

Table 1: Types of Nostalgia | Source: Adapted from Santos (2016)

To measure nostalgia influence on consumers, pioneers of this field conceived scales for measuring consumer’s perception and tendency over nostalgia, such as Holbrook’s Nostalgia Scale which aims to explore the consumer perspective to the past (Holbrook, 1993); McKechnie’s Antiquities Hobby Scale that evolves with different tendencies of a customer’s nostalgia (Cui, 2015); Pascal’s Nostalgia Scale centered on analyzing a subject’s attitudes facing a brand’s advertising and purchase prospect, amongst others that are equally important and will be further explained.

With this type of information, it is understandable the considerable advancement of the Nostalgia field, being primarily dependent of a consumer’s age as well as their own nostalgia

tendencies (Holbrook, 1993). Plentiful studies and differences regarding nostalgia have been developed, from numerous authors of several disciplines (described above), although all agree on being a reflection to the past (Spaid, 2013). Further definitions of this topic can be consulted (Appendix 1).

## **2.2. NOSTALGIA PRONENESS IN GENERATIONS**

When nostalgia is somehow inferred and implied to something, not every person will sense it. This is related to the nostalgic consumption being dependent on people's personal experience, age, and maturity (Holbrook, 1993).

The age-related peak-preference phenomenon, analyzed and developed by Schindler and Holbrook in 2003, is highlighted as crucial for understanding the importance of an individual's childhood on influencing long-term preferences through life, proposing the unlimited boundaries that this nostalgia could accomplish (such as products, arts, experiences, entertainment, among others). This phenomenon is correlated with an individual's arrangement of their past and the era where one was born and raised (childhood, adulthood). In addition, a childhood-memory exposure is proven to be the mechanism that triggers nostalgia-themed circumstances, being effective to delude the customer on a nostalgia strategy of advertising and brand acknowledgement (Muehling, Sprott & Sultan, 2014). It is also proven the efficiency on nostalgic advertisements inducing nostalgic thoughts, resulting on better customer-intentions and purchase attitudes. Davis (1979) implied that an adolescence of a youthful generation, when it enters in midlife and recalls for its teen years, will certainly include portions of their parent's nostalgia.

As a result of the constant market and technological growth, nostalgia levels culminate on older consumers as they start to desire for simple and outpaced cultures over unknown pioneering technologies. This can be a path to better understand the concept of different generations and the influence they have on nostalgia, since older generations usually experience additional nostalgia as they carry more memories and experiences. It is a constant feeling intensified over time (Goulding, 2002) as younger generations usually are accustomed to today's technology and products. With the integration of nostalgia on elements, older generations could be more attracted and involved on product placement, and increase purchase intention opportunities (Muehling et al., 2004).

When approaching modern generations, it is noticeable at first glance their youthfulness and their resistance to nostalgia-induced feelings and intentions (Kim & Yim, 2018) since they have a moderated perspective towards technology and habits change. They are marked by technological impulsion and expansion, and are distinguished by its adaptability to new products, seeking rapid development for new skills (Ng, Schweitzer & Lyons, 2010). This could estimate younger generations seek for change, instead of maintaining its comfort through a constant and simple quotidian.

Notwithstanding, nostalgia could strive these assertions with the previously explained Historical Nostalgia. Although younger generations do not have the original experience from a product belonging the past (like older generations), historical nostalgia justifies the fact that intermittently these experience from the past may not be imperative, where an individual does not need to live in a

specific era to appreciate a certain product (Santos, 2016), as younger people often listen and experience trails from moments they never lived (Cui, 2015).

### **2.3. NOSTALGIA AND MARKETING**

With nostalgia's omnipresence, it becomes a significant evidence its implied importance to brands and Marketing, as these channels can reach the customer with a brand's past, heritage and even relaunch (Hartmann & Brunk, 2019). For instance, nostalgic product placement concludes a link between a customer's fulfillment and gratification, and a company's notoriety and uniqueness (Leone, M., 2015). When a user evokes nostalgia from a product, this will expand their attitude regarding advertising, the brand itself and purchase intention (Marchegiani & Phau, 2011), as the consumer will enrich their emotional experience with the company.

With this being said, it is not possible to develop a nostalgia strategy where the aim is to attract any person, because distinct subjects can sense nostalgia differently (Davis, 1979), where each individual has its lifestyle, personality, and even youth. As previously mentioned, childhood-memory exposure is proven to be the mechanism that triggers nostalgia-themed circumstances, being effective to delude the customer on a nostalgia strategy of advertising and brand exposure (Muehling, Sprott & Sultan, 2014). With the integration of nostalgia, different individuals could be attracted and involved on the product placement differently, by increasing purchase intention opportunities (Muehling et al., 2004). The efficiency of nostalgic advertisements has been proven time and time again - inducing nostalgic thoughts - resulting on better customer-intentions and purchase attitudes. For instance, campaigns assigned to link this nostalgia between a customer and a brand are intended to be well organized.

One of the most crucial elements Marketing must empathize is the presence of a negative side of nostalgia, since this feeling is proven to hunt out both positive and negative thoughts (Youn & Jin, 2017), although individuals generally find more positive feelings rather than negative when reasoning about nostalgia (Holbrook & Schindler, 2003). For instance, this bittersweet nature can enhance the feeling of the past being something unattainable, resulting in sadness and disappointment. A brand's strategy must place its customers on "feeling reconnected with their desirable past and social communities that shared a similar symbolic experience" (Sierra & McQuitty, 2007).

Marketing evolves on this substance as giving the consumer a sense of belonging (Loveland, Smeesters, & Mandel, 2010) and linking them to the product by a bond of nostalgic feelings, where individuals feel vulnerable and more favorable (Muehling et al., 2014). Marketing nostalgia comes from this overview, where the nostalgic path is implied to a product that may add value to the customer, and the customer has a mind to add notoriety to the brand and the business (Cui, 2015). Literature is not relevant regarding a possible comparison between nostalgic and evolved products, and the way a nostalgic individual can be more affected by these products and services from the past. Therefore, the following research hypotheses are possible to conduct on this study:

**H1 a):** Individuals that are more nostalgic will show a more favorable attitude towards nostalgia evoked products/services from a brand, compared to other individuals.

It is determined the influence of nostalgia in objects linked with an individual's antiquity, where it derives close bonds with family, friends and other important relationships that marked their past (Holbrook & Schindler, 2003). This enhances a social mechanism on a person's wellbeing (Merchant et al., 2013), and provides word-of-mouth of evoked nostalgia towards others. In stimulus with nostalgia-based advertising and social media, customers will pass along this feeling to others as talking about their own interests and memories, by being socially connected and achieve people that share their interests (Youn & Jin, 2017). This e-word-of-mouth exercise with a close group of friends and followers, enhances a brand's notoriety and engagement (Loveland et al., 2010).

Social media influence has grown over the years, where this social engagement eases the spread of information around the world, lifting online acceptance and popularity (Tong et al., 2008). This underlines the importance of social media on obtaining information and knowledge, as e-WOM can result in a greater product involvement and influence with brand-related fallouts (Youn & Jin, 2017). In social aspects of the nostalgia field, social media influences nostalgic ideas and thoughts over product placement and soft selling, where this influence will generate more favorable outcomes in advertisements and brand intuition over time (Loveland et al., 2010).

#### **2.4. ANXIETY AND NOSTALGIA AS A COPING MECHANISM – COVID 19 PANDEMIC**

Although it is understood the different impact of nostalgia on contrasting individuals and its lifestyle, it has rapidly become effective that their joining could be fulfilled by seasons of more complicated, anxious, and briskly change of habits and routines. This is implied as a basic rule of life, where any individual (regarding their age, experience and life) who feels more afflict and tense will want to rebound to simpler and uncomplicated times - and this is transparently nostalgia. The anxiety present on an individual when contrasting with a nostalgic proneness from the past, may actually instigate a reflection for calmer and happier times, moving the individual into a distressed well-being (Verplanken, 2012). Nostalgia has credible implications for the future of a person, as it orientates, optimizes and inspires creativity for a greater and optimistic future (Sedikides & Wildschut, 2016).

This articulation is well implied since the beginning of 2020, where a global pandemic obligated different people to maintain a "forced" lockdown and experience a full rotation of their usual quotidian, with a "stay-at-home" routine. This lack of freedom and new way of living culminate on individuals starting to apprehend a leisure period of their own, although this spare time off is contradictory. People were trapped inside their homesteads, having to accomplish new activities and ways of endorsing calmness (Kleiber et al., 2011).

Gammon and Ramshaw (2020) concluded that decisions made by individuals in times of impotence and anxiety can reveal an importance regarding coping strategies. Note that a forced lockdown is considered a time of stress. A person who is handling a confinement and lack of freedom, will certainly want to distract themselves with mechanisms which allow them to "look back and find comfort in pre-pandemic times" (Gammon & Ramshaw, 2020).

This period was pointed by an adjustment on leisure, where perhaps this pleasure could occur in any place, but during a pandemic home was the only ally for relaxation. In leisurely environments,

different individuals encounter a diversity of emotions and experiences that have the intention of giving positive feeling and happiness (Fairley, 2013), assuming it could evoke nostalgia from it.

Although an increase of free time was experienced, people had to rely on their home to culminate these activities. The two main factors regarding leisure are decision-freedom and self-choice (Kleiber et al., 2011), and again people had to acclimate this lack of freedom to their routines as having spare time for relaxation and adapting to this new reality. The enforced leisure led to a rise in creativity in terms of seeking out new ways of relaxation, ways that were not as prioritized as in pre-pandemic times (Lee & Kao, 2020). People started to seize this obligated confinement with activities that led them to remember former times and happy moments that passed by, as the lockdown period stagnated our lives and almost felt like the present was paused; This in relation to prior times where everyone was used to going out and having vital plans, and from one day to the next everyone was forced to stay home.

So, to conclude this fact, there was an increase in memories from the past – from a pre-pandemic time - where everyone eventually wanted to “escape” into them. Cho in 2020 also demonstrated nostalgia’s importance on an individual’s leisure, as it affected life contentment and raised encouragement and participation intention.

For countless people, it was verified that a lot of activities involving leisure consumption on these new times of the lockdown could rely on assisting to former famous movies and programs, playing traditional board games, cooking old recipes, and many other forms of activities that reminded a consumer of a simpler and happier past (Gammon & Ramshaw, 2020). For instance, watching old sports games on the television or even playing these sports may enhance past leisure effect and nostalgia, as being a coping mechanism to rely on a person’s happiness (Verplanken, 2012). Another example studied during the pandemic was the propensity of consumers to change their music preferences, where it was proved that individuals significantly have heard more former and nostalgic songs that reminded them of simpler times (Yeung, 2020) during the pandemic, where this additionally suggests a person’s demand on nostalgia in anxious and drastic changes. We can conclude that remembering these nostalgic thoughts can heighten an individual’s tendency to be more nostalgic, along this line of reasoning. For all the previous discussion between anxiety and nostalgia being a beneficial factor, the following hypothesis is developed:

**H2:** Individuals living in times of anxiety will remember former leisure activities that evoke nostalgia, as a coping mechanism to the present.

Leisure’s Nostalgia Scale (Cho, Pyun & Wang, 2019) endorses a quantitative side of the nostalgia feeling, where this rigorous scale equates it with leisure. It was developed on its finest potential, moving the scientific generation forwardly. The mentioned scale assists the absence of researching the nostalgia field with a quantitative approach, aligning the leisure context. By joining the identify theory with direct experience taken from nostalgia, two dimensions came to conclusion as the purpose and structure of nostalgia (Cho et. al., 2014). This results as the experience, personal identity, socialization and group identity being the four main factors on holding the scale forwardly (Cho, Pyun & Wang, 2019). Experience influences an individual’s past as retrieves nostalgia from it. Personal identity is based on the identity theory and on individual’s characteristics and behaviors. Socialization enables individuals on sharing information and developing networking amongst others. Group identity enables a distinction on different groups as different characteristics exist.

Despite the considerable amount of studies regarding nostalgia and its repercussion on different individuals, and the immense knowledge about leisure and nostalgic effects, there is not a solid experience respecting the integration of nostalgia on this pandemic and a verification of its practical implications. This would be interesting to analyze, in order to achieve new ways of thinking towards better product placement on nostalgic thoughts, as well as a better knowledge on customer behavior towards anxious times. It would be relevant as well to analyze nostalgic coping mechanisms during this anxious period, “having the ability to reflect on the knowable and comforting past, being more enjoyable – and far less anxiety inducing – than contemplating a traumatic present and a potentially bleak future” (Gammon & Ramshaw, 2020).

## **2.5. NOSTALGIA IN PRODUCTS AND SERVICES BEFORE THE PANDEMIC**

Most of these remembered leisure activities were combined with the thought of nostalgic activities that individuals could accomplish before COVID-19. These plans and activities developed on a pre-pandemic past, usually contemplate products and services that are no longer allowed on the present of the lockdown, by cause of the imposed restrictions. These products and services, viewed as “traditional” activities that involve social proximity - being a risk to contract the Coronavirus Disease - are ad hoc known as nostalgic for most of the population, since they cause individuals to remember former and happier times (when the Pandemic did not exist), conditioning these consumers to retrieve back to these former times, as they wish to go back to.

It is understood the negative impact that the pandemic had over various industries, that accomplish their services through physical contact and brick-and-mortar sales. These industries could not function “traditionally” over the pandemic, since their operation shook the interventions to prevent the transmission of the virus. Individuals were forbidden to accomplish non-essential activities, and this “restraint” devastated economies, employments and client activities (Lee & Kao, 2020). Most of these businesses had to rely on online platforms in order to substitute the physical impact they could no longer offer. The online demand regarding multiple services (as food, film, music industry) had risen as the absence for dine-in offer, the fear of physically attending a service, and the increase of hours that a person has passed at home occurred, and so on (Raj et. al., 2020).

With this being said, companies are driven to change their “business-as-usual” and transforming themselves to a permanent shift from in-person services and towards digitalization of the offer. (Raj et. al., 2020). But the nostalgia proneness on traditional offer could change this paradigm, as individuals seek to one day achieve the former activities that they were able to accomplish before the pandemic. Since there is no solid study combining nostalgic products and services as activities that are no longer able to be consummated because of the coronavirus, and the nostalgia proneness of this desire is leading the customer on wanting to achieve those moments again (Youn & Jin, 2017), the following hypothesis is developed:

**H1 b):** Individuals living in times of anxiety will prefer nostalgia evoked products/services over alternatives of the same category.

## 2.6. NOSTALGIA AND LONELINESS PRONENESS

The feeling of loneliness is characterized with unhappiness, depression, self-guilt and pessimism, with an absence of social approval (Anderson et. al., 1994). This complex and negative emotion marks an individual by having unsatisfying relationships, by relational devaluation and the feeling of getting hurt (Leary et. al., 1998). This could be emancipated by shyness or lack of social skills, and it is a universal perception. As individual's constantly attempt to maintain favorable people around their life, these can be interrupted by a situational or individual behavior, which can be accompanied by life conversions – making the individuals feel at drift and rejected (Sedikides et. al., 2009). This intensifies the importance of being socially connected, mostly with the ones that are taken for granted (Gammon & Ramshaw, 2020) in such an apprehensive circumstance like a pandemic.

This loneliness proneness can be overpassed in nostalgia reverie, as the negative effects are triggers to remind simpler and happier times from the past. Nostalgia plays a role in the adjustment to loneliness (Kret & de Gelder, 2010), and this nostalgic feeling is increased following an experimental loneliness consecration. This can be commented as well on various levels of social connectedness and social support, where individuals will remember previous times and where nostalgia is a psychological resource that protects and fosters mental health (Zhou et. al., 2008).

As a time where most of us are nostalgic regarding our past, with memories of being able to connect with anyone that we wanted, the measures taken in account to contain the virus outbreak increased feelings of loneliness (Luchetti et. al., 2020). A study conducted during the beginning of the outbreak was developed in order to analyze possible loneliness proneness on individuals, and it came to a conclusion that an increase of loneliness occurred, associated to depression and even suicidal ideation (Killgore et. al., 2020), having to be considered a public health concern during the efforts to battle the COVID-19 disease. As it was concluded the connection between nostalgia and loneliness, and there was verified an increase of this lonely feeling during the pandemic, formally and to conclude this correlation on anxious times like the pandemic, the following hypotheses were developed:

**H3: a)** Lonelier individuals will be more favorable to remembering former leisure activities that evoke nostalgia.

**H3: b)** Lonelier individuals will be more favorable towards nostalgia evoked ads and products/services from a brand, compared to other individuals.

This remembrance of past activities that are ensured on loneliness is well analyzed in the UCLA Loneliness Scale (Russell, D. W., 1996). This scale is proven to be well conducted and highly reliable, aiming to measure interpersonal relationships of an individual, as well as a correlation of loneliness and health/well-being. A lot of different targets were joint on this study, to understand the different preferences and patterns on a person's age and lifestyle (college students, teachers, nurses and retired people). It was understood that "loneliness was found to be negatively associated with measures of the adequacy of the individual's interpersonal relationships, particularly measures of social support" (Russell, D. W., 1996).

### 3. CONCEPTUAL MODEL

#### 3.1. INVESTIGATION MODEL

This research aims to study the nostalgia proneness being presented as a coping mechanism on a substance of anxious situations, to verify its placement on turning individuals into a calmer wellbeing, by remembering former times with certain actions that transmit nostalgia as a coping mechanism (as an indirect way of endorsing treasurable memories from the past). Also, its impact on brands that could fill this gap, on becoming an opportunity of endorsing their nostalgia-based former services and activities prior to the pandemic, and see an increase of attention on times like these, where the customer can be more vulnerable to purchase intention. Additionally, linking nostalgia towards the loneliness feeling, analyzing its influence and codependency.

On following up on the Literature Review, it was elaborated a theoretical model (figure 1) with the objective of answering to the investigation’s purpose. This model, where it reflects the previously mentioned hypotheses, serves as a support for the present study:

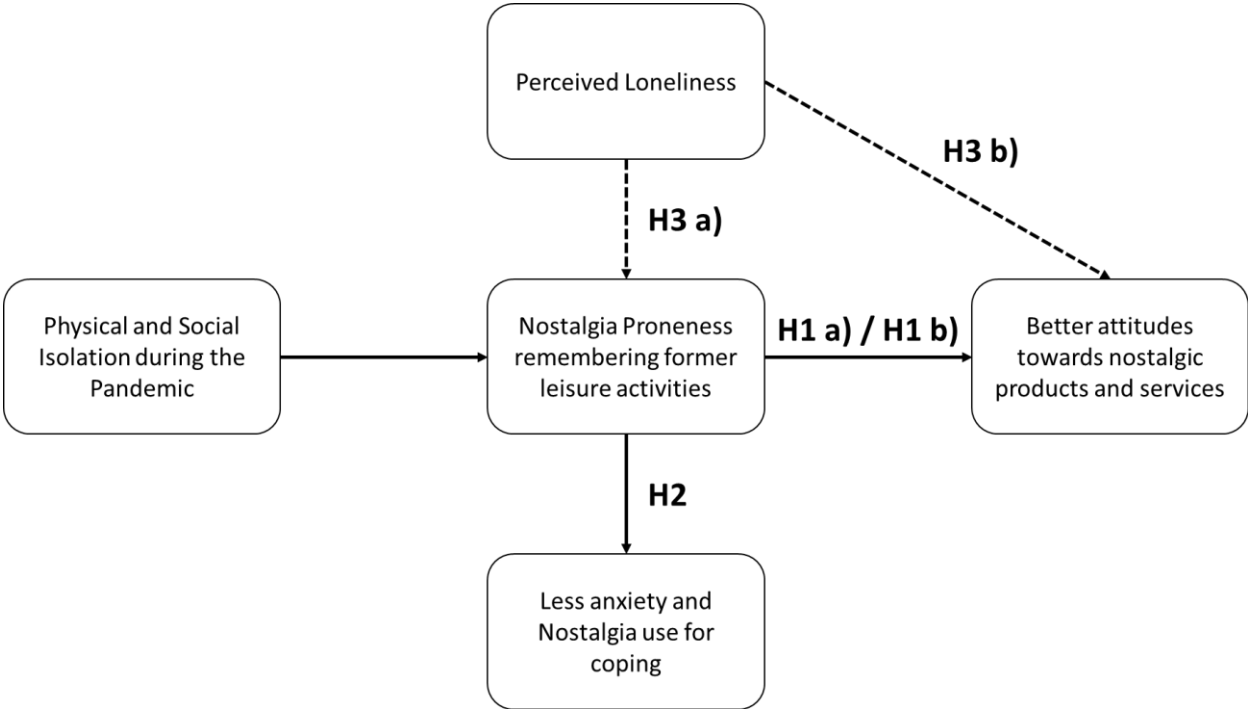


Figure 1 – Theoretical Model



### 3.2. INVESTIGATION'S HYPOTHESES

Following the theoretical model, the previously framework of the investigation's hypotheses on the Literature Review is now presented:

**1<sup>st</sup> Investigation Question:** Does nostalgia proneness influence directly the contact with products and services?

**H1: a)** Individuals that are more nostalgic will show a more favorable attitude towards nostalgia evoked products/services from a brand, compared to other individuals.

**H1: b)** Individuals living in times of anxiety will prefer nostalgia evoked products/services over alternatives of the same category.

**2<sup>nd</sup> Investigation Question:** Does the nostalgia proneness help to cope with anxious times (like the confinement due to the pandemic)?

**H2:** Individuals living in times of anxiety will remember former leisure activities that evoke nostalgia, as a coping mechanism to the present.

**3<sup>rd</sup> Investigation Question:** Does the feeling of loneliness accentuate nostalgia proneness on individuals?

**H3: a)** Lonelier individuals will be more favorable to remembering former leisure activities that evoke nostalgia.

**H3: b)** Lonelier individuals will be more favorable towards nostalgia evoked ads and products/services from a brand, compared to other individuals.

## **4. METHODOLOGY**

### **4.1. TYPE OF RESEARCH, TARGET POPULATION AND SAMPLE**

The type of utilized research is established on descriptive quantitative data, where a questionnaire was developed. A quantitative research is structured, statistical and represents a large number of representative cases, where the sample is effectively and efficiently controlled (Malhotra & Birks, 2007). As the current period taken in count, the phenomenon is being study during a specific moment of time (regarding the beginning of the pandemic until the present).

The target population is constituted by individuals from any gender, older than 18 years, which are residents in Portugal. It is considered relevant this target population since they are individuals that witnessed the pandemic's change of quotidian by being in lockdown in a similar country, having an independency both financially and emotionally. Since the sample itself lacks representativeness, it exists since the beginning the limitation of the results not being generalizable (Malhotra & Birks, 2007).

The proposed stimulus for this study is based on the nostalgia proneness and its appearance on remembered former leisure activities during the lockdown; and the loneliness feeling enhancing nostalgia-based attitudes. The products/services categories to follow up customer behavior are related to normalized activities before the confinement and alternative activities that were possible during the lockdown period, which are divided into three different groups – food industry, music industry and movie industry.

### **4.2. DATA COLLECTION**

Regarding the primary data collection, this information was retrieved by the construction of a survey, since a questionnaire is proven to be an adequate method to respond the formulated questions taken in count for this study (Saunders et al., 2009). The survey's link was shared and disclosed through different social networks and closest contacts, in order to reach a higher number of respondents and a greater reach.

The answers were collected through 4<sup>th</sup> and 9<sup>th</sup> of January of 2021, having a total of 266 completed questionnaires.

The construction of the survey as well as the data collection was supported by Qualtrics Online Software.

### **4.3. QUESTIONNAIRE CONSTRUCTION AND UTILIZED MEASURES**

The survey was elaborated in one language (Portuguese) since it serves only Portuguese citizens. It is composed by close-ended and mandatory questions, and it is divided in 5 parts: Part I – respondent's general proneness on the pandemic; Part II – Loneliness Proneness; Part III – Remembered Nostalgia in Leisure Activities; Part IV – Pre-Pandemic VS Post-Pandemic Activities; Part

V - Nostalgia's involvement on Pre-Pandemic activities; Part VI – Nostalgia evoked advertising and their effect; Part VII- demographic data collection. A pre-test was made with 6 individuals, in order to understand the duration and possible changes the survey could enhance.

The used questions were based on different scales that were previously created, and these scales are all trustful and validated, having also been tested by other authors. The questions itself are adapted from the scales for this study, and in order to avoid an extensive questionnaire only relevant items were joint on the survey.

Element	Question	Item nr.	Type of Scale	Source
Loneliness	Q11	17	Linkert Scale (5 points)	Adapted from Russell (1996)
Nostalgia in Leisure	Q12	13	Linkert Scale (5 points)	Adapted from Cho, Pyun & Wang (2019)
Involvement (movies, food, music)	Q23 / Q24	2 * 6	Semantic Differential	Adapted from Zaichkowsky (1994)
Longing for the Past	Q25	2	Linkert Scale (5 points)	Adapted from Sierra & McQuitty (2007)
Nostalgia	Q25	1	Linkert Scale (5 points)	Adapted from Holbrook (1993)
Authenticity	Q25	2	Linkert Scale (5 points)	Adapted from Napoli, Dickinson, Beverland & Farrelly (2014)
Evoked Nostalgia on Advertising	Q26	4	Linkert Scale (5 points)	Adapted from Pascal, Sprott & Muehling (2002)

*Table 2: Elements on the Questionnaire's construction*

The Part I of the survey served as a general assemblage regarding the pandemic situation on the respondent's eyes, to analyze its habits towards the lockdown and virus.

Regarding the Part II, which is related to the loneliness proneness on individuals as to the pandemic's present, the UCLA Loneliness Scale (Russel, 1996) was taken in count on developing this part of the survey used for this methodology – since it has proven to be effective and trustful - in order to achieve a greater perspective on how lonely the respondents felt over this period. Not all the items of this scale were utilized, as a way of avoiding an extensive questionnaire and involving only the favorable items to the current study.

Taking in count the Part III – Remembered Nostalgia in former leisure activities – the ambition was to understand if the respondents kept remembering their formal leisure activities before the pandemic started, to understand their nostalgia proneness towards the lockdown. The Leisure Nostalgia Scale (Cho, Pyun & Wang, 2019) was the main pillar of this part, which is proven and so validated to be an adequate scale on measuring the respondent's proneness to nostalgia, on memories relating former leisure activities. The original scale has 4 dimensions – Leisure Experience, Environment, Socialization, Personal Identity, Group Identity – but only the Leisure Experience and Socialization factors were considered appropriate to the current study, as it links directly with the pandemic and the deficit of social relationships and activities. Besides this field, questions regarding anxiety and the way that remembering former leisure activities could help as a coping mechanism towards the lockdown were added.

As for the Part IV of the study, the main intention was to compare different products – as activities - from the same category, in order to see different impacts. In this case, in a pairwise logic it was presented a former activity that was possible to accomplish before the pandemic, and a digital “substitute” that was possible to engage despite the limitations that COVID 19 acquires. Three different categories were analyzed, as for the Music, Food and Film Industry. For instance, in the music category we compared the Pre-Pandemic Activity of going to a festival VS a digital Post-Pandemic Activity solution which enables listening to an album on Spotify. Relating the Food industry, the respondent tackled with a traditional Pre-Pandemic Activity of dinning in a restaurant VS a Post-Pandemic Activity as to order food of an application (Uber Eats). Regarding the third dimension, the Film Industry, we compared the Pre-Pandemic Activity of going to the cinema to watch a movie VS the Post-Pandemic Activity of appreciating a movie through an online platform (Netflix). All of the activities were linked to a brand and had the same items of questions, regarding the Interest and Significance level attributed. These factors were taken of The Personal Involvement Inventory (Zaichkowsky, 1994) and further it will be compared different impacts of these variables on the respondents.

Parts V and VI of the questionnaire combine different items relating to the nostalgia proneness on nostalgic products through the eyes of the Pandemic (Traditional activities that are currently unavailable to achieve because of the limitations the pandemic brought), to analyze if there is a general repercussion on nostalgic thoughts due to these activities. Advertising related to previous activities associated on the considerable agglomeration of people were conducted, and this analysis will be completing the study.

Part VII took into account some demographic data collection in count, regarding the respondent's age, age, living area and current occupation.

## 5. RESULTS AND DISCUSSION

### 5.1. STATISTICAL ANALYSIS

The statistical analysis involved measures of descriptive statistics (absolute and relative frequencies, averages and standard deviations), and parametric and non-parametric measures. The significance level to reject the null hypothesis was established in  $(\alpha) \leq 0,05$ . For further analysis, it was utilized the Cronbach's Alpha for internal consistency, Spearman's correlation coefficient, One-way ANOVA and Two-Way repeated measures ANOVA analysis. The sample's distribution normality with a dimension greater than 30 was accepted, according to the Central Limit Theorem.

The statistical analysis was developed with the SPSS software's (Statistical Package for the Social Sciences), in the version 27,0 for Windows.

### 5.2. SAMPLE CHARACTERIZATION

The sample is constituted by a total of 251 individuals, ranged from 19 to 71 years old ( $M= 29,9$  ;  $SD= 12,5$ ) with 30,3% of the population being male and 69,7% female. Most of them are currently employed (38,9%), followed by students (32,7%). In terms of the sample's distribution throughout communities and its living quotidian, 84,5% of the respondents live in an urban community.

	N	%
<i>Gender</i>		
Male	175	69,7
Female	76	30,3
<i>Age (M; SD)</i>	29,9	12,5
<i>Occupation</i>		
Student	82	32,7
Working-Student	56	22,3
Self-Employed	15	6,0
Employed	90	35,9
Unemployed	3	1,2
Retired	2	0,8
Other	3	1,2
<i>Residency</i>		
Urban Community	212	84,5
Rural Community	39	15,5

Table 3 – Demographic Characterization (N = 251)

### 5.3. OVERALL PRONENESS AT THE PANDEMIC LOCKDOWN

A total of 21 respondents (8,4%) stated that they were infected by COVID-19, and 90 individuals of the total sample affirmed that one of their family members had the infection (35,9%), meaning that approximately one third of the sample had some type of contact with the coronavirus disease.

	N	%
No	230	91,6
Yes	21	8,4
Total	251	100,0

*Table 4 – Are you / have you ever been infected with COVID-19?*

	N	%
No	161	64,1
Yes	90	35,9
Total	251	100,0

*Table 5 – Do you have any family member who is / has been infected with COVID?*

From the people that worked during the confinement, which was nearly 80% of the sample (197 respondents), the majority of them worked from the safety of their house (31%) or just had to dislocate a few times to their traditional work place (37,1%).

	N	%
I didn't had a job during the confinement.	54	21,5
I always had to go to the office to work.	23	9,2
Most of the times I had to go to the office to work, and sometimes I worked from home.	15	6,0
Half of the time I had to go to the office to work, and the other half I worked from home.	25	10,0
Most of the times I worked from home, and sometimes I had to go to the office to work.	73	29,1
I always worked from home.	61	24,3
Total	251	100,0

*Table 6 – Workplace during the lockdown*

Regarding the house members of the respondents during the pandemic, nearly all of them shared their home with someone, meaning only 6,4% of the sample lived alone. Most of the individuals lived with more than one person (195 respondents), being that 89,4% of the cases these companions are close family members.

	N	%
I lived alone.	16	6,4
One person.	40	15,9
Up to three persons.	134	53,4
More than three persons.	61	24,3
Total	251	100,0

*Table 7 – With how many people did you shared your home during the lockdown?*

Talking about the rules and obligatory restrictions the COVID-19 pandemic took to the quotidian, the respondents were asked if they usually respect these orders (social distancing, wearing a certified mask, adequate hand sanitation), where 53% of the sample admitted that most of the times they comply with the imposed rules, and 43,4% of them guide strictly to these obligations.

	N	%
Most of the situations I do not follow the imposed rules.	3	1,2
Sometimes, I follow the imposed rules.	6	2,4
Most of the times, I follow the imposed rules.	133	53,0
I always follow the imposed rules.	109	43,4
Total	251	100,0

*Table 8 - Respect and compliance for the imposed rules by the COVID-19 pandemic*

Regarding the overall fear and concern level towards the disease, more than two thirds of the sample (78,1%) admitted being afraid of getting infected. This information along the previous table (Table 8) is implying that the pandemic the sample was currently living was considered an anxious time.

	N	%
I am not afraid	9	3,6
I have a minor fear	46	18,3
I have some fear	149	59,4
I have very fear	47	18,7
Total	251	100,0

*Table 9 – Are you afraid of getting infected with COVID-19?*

#### 5.4. PRE-PANDEMIC ACTIVITIES VS POST-PANDEMIC ACTIVITIES

Talking about activities and services that were only safe to conduct prior to the COVID-19 pandemic, and different activities that were safe to perform during the lockdown, the respondents were asked to compare different significance and interest levels on three different Industries: Food, Music and Movie. Each of these categories is characterized for having a Pre-Pandemic Activity (as so, an activity that currently is not allowed) and a Post-Pandemic Activity, an alternative activity possible to conduct on the lockdown.

In the interest field, as for the Pre-Pandemic Activities, “going to a restaurant” (M= 4,30 ; SD= 0,99) and “going to a music festival” (M= 4,18 ; SD= 1,15) motivated higher evaluations of interest levels, but “going to a cinema” had less interest to the sample when compared to the Post-Pandemic Activity “watching a movie through Netflix” (M= 4,02 ; SD= 1,01 VS M= 4,12 ; SD= 0,97).

	Mean	Std. Deviation
Movie – Pre-Pandemic Activity: Cinema	4,02	1,01
Movie – Post-Pandemic Activity: Netflix	4,12	0,97
Food – Pre-Pandemic Activity: Restaurant	4,30	0,99
Food – Post-Pandemic Activity: Uber Eats	3,55	1,22
Music – Pre-Pandemic Activity: Festival	4,18	1,15
Music – Post-Pandemic Activity: Spotify	4,07	0,98

Legend: 1 – No interest; 5 – Maximum interest

Table 10 – Interest level of the different services

In terms of significance level, we could see exactly the opposite evaluation on the global sample. In this case, individuals gave higher scores to the possible activities on the lockdown – Post-Pandemic Activities (Spotify: M= 4,04 ; SD= 0,94 VS Festival: M= 3,93 ; SD= 1,03) (Uber Eats: M= 4,08 ; SD= 1,11 VS Restaurant: M= 3,30 ; SD= 1,28) contrary to the Movie segment, where the Pre-Pandemic Activity “going to a cinema” (M= 4,25 ; SD= 0,92) had a higher significance level to the respondents prior to Netflix (M= 3,80 ; SD= 1,05).

	Mean	Std. Deviation
Movie – Pre-Pandemic Activity: Cinema	4,25	0,92
Movie – Post-Pandemic Activity: Netflix	3,80	1,05
Food – Pre-Pandemic Activity: Restaurant	3,30	1,28
Food – Post-Pandemic Activity: Uber Eats	4,08	1,11
Music – Pre-Pandemic Activity: Festival	3,93	1,03
Music – Post-Pandemic Activity: Spotify	4,04	0,94

Legend: 1 – No significance; 5 – Maximum significance

Table 11 – Significance level of the different services



Overall, there was a considerable amount of nostalgia towards the activities the respondents could perform prior do the pandemic. When presented questions regarding the nostalgia felt with the previous Pre-Pandemic Activities (Cinema, Restaurant, Festival), the mean of all the affirmations is significantly superior towards the midpoint of the scale (3 – I don't agree or disagree). The statement "When I am reminded of the time period from which the activity was more present, I long to revisit that era" motivated a higher agreement quota.

	Mean	Std. Deviation
I would like to relive the time period from which the activities were more present because those times are better than present times.	4,30	0,93
When I am reminded of the time period from which the activity was more present, I long to revisit that era	4,60	0,69
The activities remind me of a better era.	4,32	0,87
Things used to be better before the pandemic.	4,27	0,88
Since the beginning of the pandemic we are experiencing a decline in the quality of life.	3,51	1,16

Legend: 1 – I definitely do not agree; 5 – I definitely agree

*Table 12 – Nostalgia proneness on Pre-Pandemic activities*

## 5.5. NOSTALGIC ADVERTISING

The respondents were confronted with three different advertisings regarding different social events / services the pandemic ended, where in a hypothetical scenario the ad was analyzed. Each advertising had the same questions, regarding the nostalgia disposition on that instance and feeling.

Regarding the night life and disco clubs, the displayed advertise was about one of the most known night clubs in Lisbon. 70,9% of the respondents used to attend these types of activities, and the affirmation "this advertising reminds me of the past" motivated higher agreement indexes (M = 3,85 ; SD = 1,34). All of the affirmation's means are above the midpoint of the scale (3 – I do not agree or disagree), and towards the affirmation "when it is possible, I want to do what the advertise reflects", 170 of the respondents partially or definitely agree on it, which is more or less the same number of individuals that used to attend disco clubs prior the pandemic.

	Mean	Std. Deviation
This advertisement reminds me of the past.	3,85	1,34
This advertisement helps me remember good memories.	3,68	1,36
This advertisement makes me feel nostalgic.	3,60	1,39
This advertisement is a good remembrance of the past.	3,73	1,32
When it is possible, I want to do what the advertisement reflects.	3,76	1,42

Legend: 1 – I definitely do not agree; 5 – I definitely agree

*Table 13 – Disco Club Advertising*

The following advertise regards sport related events, where it was about a football match of the Portugal national team with the stadium full of fans. Only 43% of the total sample attended sport events before the start of COVID-19. The affirmation “This advertisement reminds me of the past” motivated higher agreement levels ( $M = 3,38$  ;  $SD = 1,39$ ). The mean of the affirmations “This advertisement makes me feel nostalgic” and “When it is possible, I want to do what the advertisement reflects.” is not significantly superior to the midpoint of the scale (3 – I do not agree or disagree). For instance, relatively the same number of respondents that used to attend sports event agreed (partially or definitely) on wanting to attend what the advertisement reflects (116).

	Mean	Std. Deviation
This advertisement reminds me of the past.	3,38	1,39
This advertisement helps me remember good memories.	3,20	1,43
This advertisement makes me feel nostalgic.	3,01	1,45
This advertisement is a good remembrance of the past.	3,24	1,44
When it is possible, I want to do what the advertisement reflects.	3,12	1,52

Legend: 1 – I definitely do not agree; 5 – I definitely agree

*Table 14 – Sport Events Advertising*

The last advertisement is about a traditional Portuguese party that is well known by its meaning (“Festas Populares”). 71,7% of the respondents used to attend these popular festivities, and the affirmation “This advertisement reminds me of the past” motivated higher levels of agreement ( $M = 4,06$  ;  $SD = 1,23$ ). The means of all the affirmations are significantly superior to the midpoint of the scale (3 – I do not agree or disagree). 74,5% of the sample partially or definitely agreed on wanting to attend what the advertise reflects, once the pandemic is over.

	Mean	Std. Deviation
This advertisement reminds me of the past.	4,06	1,23
This advertisement helps me remember good memories.	3,94	1,29
This advertisement makes me feel nostalgic.	3,71	1,38
This advertisement is a good remembrance of the past.	3,96	1,25
When it is possible, I want to do what the advertisement reflects.	3,98	1,32

Legend: 1 – I definitely do not agree; 5 – I definitely agree

*Table 15 – Traditional Portuguese Parties Advertising*

## 5.6. INTERNAL CONSISTENCY

Mentioning the 2 former scales utilized for this survey (Part III and Part IV), there is the Loneliness Scale (inspired on the UCLA Loneliness Scale – Russel, 1996) and the Nostalgia in Leisure Scale (inspired on the Leisure Nostalgia Scale - Cho, Pyun & Wang, 2019).

The internal consistency will indicate the correlation of the different variables, and if they are correlated it is assumed that they are measuring the same construct. The internal consistency value for the Loneliness Scale was 0,834 (good), which means the 17 questions of the scale are all measuring loneliness levels. For the Nostalgia in Leisure Scale, it was 0,900 (excellent), which means all of the 13 questions are measuring nostalgia proneness on leisure. The Alpha value categorization follows the published in Hill (2009). A further internal consistency can be consulted on the Appendix 3 and 4.

	Cronbach's Alpha	Nr. of Items
Loneliness	,834	17
Nostalgia in Leisure	,900	13

*Table 16 – Internal Consistency*

In the following table there is described the descriptive statistics obtained in the Loneliness Scale and the Leisure in Nostalgia Scale, to prove if the sample had an overall presence of loneliness - and also a prevalence of nostalgic feelings.

The obtained value on the Loneliness Scale is significantly inferior to the middle point of the scale (3 – I do not agree or disagree),  $t(249) = -13.277$ ,  $p = .001$ , which means the respondents of the sample reported low levels of loneliness overall.

The obtained value on the Nostalgia in Leisure Scale is significantly superior to the middle point of the scale (3 – I do not agree or disagree),  $t(249) = -11.804$ ,  $p = .001$ , which means the respondents reported high levels of nostalgia from former leisure activities.

	Minimum	Maximum	Mean	Std. Deviation
Loneliness	1,24	4,47	2,48	,61
Nostalgia in Leisure	1,38	4,62	3,50	,67

Legend: 1 – I definitely do not agree; 5 – I definitely agree

Table 17 – Descriptive Statistics

## 5.7. INVESTIGATION’S HYPOTHESES TEST

### 5.7.1. Hypothesis 1 a)

**H1 a):** *Individuals that are more nostalgic will show a more favorable attitude towards nostalgia evoked products/services from a brand, compared to other individuals.*

We are comparing individuals that feel more nostalgic on the present pandemic, versus individuals that do not have a strong proneness to the nostalgia feeling, and posteriorly their different attitudes and impressions (regarding their significance and interest level attributed) to Pre-Pandemic Activities that are no longer allowed on the lockdown’s eyes.

We separated these two different groups based on the mean of their global answers to the Nostalgia in Leisure scale, where values below 3 (the midpoint of the scale - I do not agree or disagree) were considered to the Less Nostalgic group, and individuals that reported values above 3 were assumed to be the More Nostalgic group. Individuals that had a global mean of 3 were not considered nor categorized.

Into these two different groups, a one-way ANOVA analysis was conducted to interpret the data. Being a parametric measure, the sample had to verify one of these two assumptions - the normality and/or homogeneity of the sample – and by the Central Limit Theorem the sample is considered to have a normal distribution ( $n > 100$ ), so it is possible to conduct the test, being a robust measure. The Tests of homogeneity of variances of the variables are also available on the Appendix 6 and 7.

Firstly, as to analyze the interest level admitted to the Pre-Pandemic Activities, the descriptive table was conducted.

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
Cinema	Less Nostalgic	42	3.74	1.345	0.207	3.32	4.16	1	5
	More Nostalgic	205	4.13	0.895	0.063	4.01	4.25	1	5
	Total	247	4.06	0.994	0.063	3.94	4.19	1	5
Restaurant	Less Nostalgic	42	3.76	1.265	0.195	3.37	4.16	1	5
	More Nostalgic	205	4.40	0.900	0.063	4.28	4.53	1	5
	Total	247	4.30	0.999	0.064	4.17	4.42	1	5
Festival	Less Nostalgic	42	3.79	1.159	0.179	3.42	4.15	1	5
	More Nostalgic	205	4.07	0.993	0.069	3.93	4.20	1	5
	Total	247	4.02	1.026	0.065	3.89	4.15	1	5

Table 18 - Descriptive Statistics – Interest Level

As it is reported on the Descriptive Statistic’s Table above, as expected the more nostalgic subjects attributed higher values of interest on the pre-pandemic activities, compared to less nostalgic individuals.

In the Pre-Pandemic Activity “going to a cinema” the More Nostalgic group reported more favorable interest to this service (M= 4,13 ; SD= 0,895) comparing to the Less Nostalgic group (M= 3,74 ; SD= 1,345). The same engagement happened towards the action “going to a restaurant” (More Nostalgic: M= 4,40 ; SD= 0,9 VS Less Nostalgic: M= 3,76 ; SD= 1,265) and also “going to a music festival” (More Nostalgic - M= 7,67 ; SD= 0,993 VS Less Nostalgic - M= 3,79 ; SD= 1,159), although on this last action the difference is marginally significant.

When attending the ANOVA analysis output, to understand if there is a statistically significant difference between the group’s means, the following was developed:

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Cinema	Between Groups	5.401	1	5.401	5.570	0.019
	Within Groups	237.563	245	0.970		
	Total	242.964	246			
Restaurant	Between Groups	14.411	1	14.411	15.283	0.000
	Within Groups	231.014	245	0.943		
	Total	245.425	246			
Festival	Between Groups	2.783	1	2.783	2.663	0.104
	Within Groups	256.115	245	1.045		
	Total	258.899	246			

Table 19 – ANOVA Analysis – Interest Level

As described previously, the ANOVA Analysis show that the significance value on the Cinema ( $p = .019$ ) and Restaurant ( $p < .0005$ ) Pre-Pandemic Activities is below 0.05 , meaning there is a statistically significant difference in the Interest's mean on the More Nostalgic and the Less Nostalgic group. However, as the Festival significance value is superior to 0.05 ( $p = 0.104$ ), it is concluded that this mean difference is not significantly different with the nostalgia-evolved groups evolving this Industry.

Moving to the Significance Level, the same analysis was conducted:

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cinema	Less Nostalgic	42	3.71	1.175	0.181	3.35	4.08	1	5
	More Nostalgic	205	3.97	1.000	0.070	3.83	4.11	1	5
	Total	247	3.93	1.033	0.066	3.80	4.06	1	5
Restaurant	Less Nostalgic	42	3.88	1.152	0.178	3.52	4.24	1	5
	More Nostalgic	205	4.33	0.855	0.060	4.21	4.44	1	5
	Total	247	4.25	0.925	0.059	4.14	4.37	1	5
Festival	Less Nostalgic	42	3.52	1.087	0.168	3.18	3.86	1	5
	More Nostalgic	205	3.85	1.049	0.073	3.70	3.99	1	5
	Total	247	3.79	1.060	0.067	3.66	3.93	1	5

Table 20 - Descriptive Statistics – Significance Level

Conducting a similar analysis as to the significance level assigned by the two different groups to Pre-Pandemic Activities, it is clear to see the favorability of the mean on the More Nostalgic group (Cinema:  $M = 3,97$  ;  $SD = 1,000$ ) (Restaurant:  $M = 4,33$  ;  $SD = 0,855$ ) (Festival:  $M = 3,85$  ;  $SD = 1,049$ ) comparing to the Less Nostalgic group (Cinema:  $M = 3,71$  ;  $SD = 1,175$ ) (Restaurant:  $M = 3,88$  ;  $SD = 1,152$ ) (Festival:  $M = 3,52$  ;  $SD = 1,087$ ), although “going to a restaurant” perceived more favorable mean differences.

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Cinema	Between Groups	2.292	1	2.292	2.157	0.143
	Within Groups	260.396	245	1.063		
	Total	262.688	246			
Restaurant	Between Groups	6.930	1	6.930	8.343	0.004
	Within Groups	203.507	245	0.831		
	Total	210.437	246			
Festival	Between Groups	3.681	1	3.681	3.306	0.070
	Within Groups	272.788	245	1.113		
	Total	276.470	246			

Table 21 – ANOVA Analysis – Significance Level

According to the ANOVA analysis, and as described previously on the Descriptive Statistics Table, only the Restaurant Pre-Pandemic Activity had a significant value below 0.05 ( $p = 0.004$ ), which means this activity demonstrated significantly difference on the Significance's means on both groups (More Nostalgic and Less Nostalgic groups). "Going to a cinema" ( $p = 0.143$ ) and "going to a Music Festival" ( $p = 0.070$ ) remain with no statistically significant difference in the mean of both groups, as their significance values are superior to 0.05.

In conclusion, although not in every industry this difference is significant, overall the More Nostalgic subjects attributed higher values of significance and interest on the Pre-Pandemic Activities, compared to Less Nostalgic individuals.

The results did show that individuals feeling more nostalgic will certainly contrast longing for the past on their attitudes, when encountered activities or services that evoke nostalgia (in this case, services or activities that are far from us in terms of accomplishment on this new reality). When compared to individuals that do not sense nostalgia as much, it is noticeable the difference on interest and significance attributed to a Pre-Pandemic Activity that is considered nostalgic, where it is clear the group that indicates more meaningful attitudes to it. Therefore, the results were consistent with the Hypothesis H1 a), and so the hypothesis is **supported**.

### 5.7.2. Hypothesis 1 b)

*H1 b): Individuals living in times of anxiety will prefer nostalgia evoked products/services over alternatives of the same category.*

For the next hypothesis, the intention is to understand different patterns on customer behavior towards an anxious time like the pandemic. In this case, compare activities that could not be fulfilled during the restrictions imposed by the COVID-19's disease – becoming a nostalgic memory of the past – with other activities that were safer alternatives at the pandemic's eye.

In this analysis, it was taken in account the three previously mentioned Industries: Movie, Food and Music. For each segment 2 activities / services were presented, a Pre-Pandemic Activity and a Post-Pandemic Activity.

As it is understood, we have three different conditions in two different scenarios, with the same people measuring both significance and interest level of it. As so, It was conducted a Two-way repeated measures ANOVA, as we have two different measures of Time (Pre-Pandemic and Post-Pandemic) and three different measures of Industry (Movie, Food, Music) – and we want to understand if the mean difference between the Pre-Pandemic and the Post-Pandemic Activities is significantly different. The interest and the significance attributed level were analyzed separately.

The different pre-requirement for this test were respected, as for the normality of the sample (according to the Central Limit Theorem), the number of respondents (as it is greater than 30) and also the Sphericity (available on the Appendix 10).

For the interest level, the following samples statistics were concluded:

		Mean	N	Std. Deviation	Std. Error Mean
Movie Industry	Pre-Pandemic : Cinema	4.07	251	0.989	0.062
	Post-Pandemic : Netflix	3.55	251	1.220	0.077
Food Industry	Pre-Pandemic : Restaurant	4.30	251	0.994	0.063
	Post-Pandemic : Uber Eats	4.12	251	0.971	0.061
Music Industry	Pre-Pandemic : Festival	4.02	251	1.018	0.064
	Post-Pandemic : Spotify	4.08	251	1.111	0.070

Table 22 - Paired Samples Statistics – Interest Level

When it comes to the Movie and Food Industry, it is clear to see that Pre-Pandemic Activities - in this case “going to a cinema” (M= 4,07 ; SD= 0.989) and “going to a restaurant” (M= 4,30 ; SD= 0,994) are considered more interesting to the sample when compared to Post-Pandemic Activities “watching a movie through Netflix” (M= 3,55 ; SD= 1,22) and “order a meal through Uber Eats” (M= 4,12 ; SD= 0,971). However, when it comes to the Music Industry, what happens is the contrary to what was expected, where the Post-Pandemic Activity “listening to music through Spotify” (M= 4,08 ; SD= 1,11) motivated higher interest levels compared to the Pre-Pandemic Activity “going to a music festival” (M= 4,02 ; SD= 0,064).

#### Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	12.463	1	12.463	14.312	0.000
	Greenhouse-Geisser	12.463	1.000	12.463	14.312	0.000
	Huynh-Feldt	12.463	1.000	12.463	14.312	0.000
	Lower-bound	12.463	1.000	12.463	14.312	0.000
Industry	Sphericity Assumed	42.073	2	21.037	26.746	0.000
	Greenhouse-Geisser	42.073	1.901	22.126	26.746	0.000
	Huynh-Feldt	42.073	1.916	21.963	26.746	0.000
	Lower-bound	42.073	1.000	42.073	26.746	0.000
Time * Industry	Sphericity Assumed	28.790	2	14.395	14.554	0.000
	Greenhouse-Geisser	28.790	1.988	14.481	14.554	0.000
	Huynh-Feldt	28.790	2.000	14.395	14.554	0.000
	Lower-bound	28.790	1.000	28.790	14.554	0.000

Table 23 – Two-way repeated measures ANOVA analysis – Interest Level



As it can be concluded, all of the conditions have a significant value below .005 , meaning that in all conditions there is, at least, one significant mean difference in the industry and the time condition. To underline which are these significant differences, a Post-Hoc test was conducted as well:

Pairwise Comparisons						95% Confidence Interval for Difference	
Industry	(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	Lower Bound	Upper Bound
Movie	Pre-Pandemic	Post-Pandemic	,518*	0.095	0.000	0.331	0.704
	Post-Pandemic	Pre-Pandemic	-,518*	0.095	0.000	-0.704	-0.331
Food	Pre-Pandemic	Post-Pandemic	,187*	0.081	0.022	0.028	0.347
	Post-Pandemic	Pre-Pandemic	-,187*	0.081	0.022	-0.347	-0.028
Music	Pre-Pandemic	Post-Pandemic	-0.159	0.085	0.061	-0.326	0.007
	Post-Pandemic	Pre-Pandemic	0.159	0.085	0.061	-0.007	0.326

Table 24 – Pairwise Comparisons – Interest Level

Conducting and analyzing the Pairwise Comparisons, it demonstrated that on attributing interest on the Movie and Food Industry, the difference between the two conditions (Pre-Pandemic and Post-Pandemic) is significant, or in other words, there was a statistically significant improvement on the product interest according to the evoked nostalgia due to the pandemic ( $p < 0.05$  and the Pre-Pandemic Activity has a higher mean than the Post-Pandemic Activity).

Nonetheless, the difference in the Music Industry was not significant ( $p = 0.061$ ), meaning the difference between the means is not solid – although the sample overall transmitted a higher level of interest to the Post-Pandemic Activity in the Music Industry, this difference towards the Pre-Pandemic Activity is not relevant.

Moving to the significance level analysis:

		Mean	N	Std. Deviation	Std. Error Mean
Movie Industry	Pre-Pandemic : Cinema	3.93	251	1.031	0.065
	Post-Pandemic : Netflix	3.30	251	1.288	0.081
Food Industry	Pre-Pandemic : Restaurant	4.25	251	0.925	0.058
	Post-Pandemic : Uber Eats	3.83	251	1.041	0.066
Music Industry	Pre-Pandemic : Festival	3.80	251	1.056	0.067
	Post-Pandemic : Spotify	4.08	251	1.111	0.070

Table 25 - Paired Samples Statistics – Significance Level

In this case, it is prominent the mean difference that the Significance level attributed by the sample has over the three different segments:

- In the Movie and Food Industry, averagely the significance level attributed to the Pre-Pandemic Activities (Cinema: M= 3,93 ; SD= 1,031) (Restaurant: M= 4,25 ; SD= 0,925) is higher compared to Post-Pandemic Activities (Netflix: M= 3,30 ; SD= 1,288) (Uber Eats: M= 3,83 ; SD= 1,041).

- In the Music Industry, the opposite occurred: the sample preferred Spotify – the product categorized in the Post-Pandemic Activity (M= 4,08 ; SD= 1,111) – over the Pre-Pandemic Activity “going to a music festival” (M= 3,80 ; SD= 1,056).

**Tests of Within-Subjects Effects**

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	24.991	1	24.991	26.851	0.000
	Greenhouse-Geisser	24.991	1.000	24.991	26.851	0.000
	Huynh-Feldt	24.991	1.000	24.991	26.851	0.000
	Lower-bound	24.991	1.000	24.991	26.851	0.000
Industry	Sphericity Assumed	49.985	2	24.993	28.486	0.000
	Greenhouse-Geisser	49.985	1.876	26.640	28.486	0.000
	Huynh-Feldt	49.985	1.890	26.447	28.486	0.000
	Lower-bound	49.985	1.000	49.985	28.486	0.000
Time * Industry	Sphericity Assumed	57.794	2	28.897	26.582	0.000
	Greenhouse-Geisser	57.794	1.997	28.934	26.582	0.000
	Huynh-Feldt	57.794	2.000	28.897	26.582	0.000
	Lower-bound	57.794	1.000	57.794	26.582	0.000

Table 26 – Two-way repeated measures ANOVA analysis – Significance Level

From the ANOVA Analysis, all of the conditions have a significant value below .005 , where there is the existence of at least one significant mean difference in the conditions. The Pairwise Comparisons analysis will determine those significant mean differences:

**Pairwise Comparisons**

Industry	(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference	
						Lower Bound	Upper Bound
Movie	Pre-Pandemic	Post-Pandemic	,633*	0.098	0.000	0.441	0.826
	Post-Pandemic	Pre-Pandemic	-,633*	0.098	0.000	-0.826	-0.441
Food	Pre-Pandemic	Post-Pandemic	,422*	0.084	0.000	0.256	0.589
	Post-Pandemic	Pre-Pandemic	-,422*	0.084	0.000	-0.589	-0.256
Music	Pre-Pandemic	Post-Pandemic	-,283*	0.090	0.002	-0.460	-0.106
	Post-Pandemic	Pre-Pandemic	,283*	0.090	0.002	0.106	0.460

Table 27 – Pairwise Comparisons – Significance Level

With the Post-Hoc test conducted and analyzed – crucial to underline where the significant mean differences are – it can be concluded that in every case the mean difference on the significance value attributed on the time period (Pre-Pandemic V Post-Pandemic) in all of the industries is significant ( $p < .05$ ). Although in the Movie and the Food industry the significance value given to the Pre-Pandemic Activities is higher compared to the Post-Pandemic Activities (.633 and .422 respectively), in the Music Industry the opposite occurred (-.283) (as underlined previously) – even though the significant value on this mean difference is not as solid as the other two industries.

The results did show a tendency over the consumer behavior and proneness towards nostalgia-evoked products. It seems that overall, the respondents did credit in a valuable way Pre-Pandemic Activities that are not allowed on the present, mostly because there is nostalgia in the air (as it was concluded previously). In terms of interest level, the majority of the activities were preferred in the Pre-Pandemic version, and in the only case where the sample admitted a higher interest level to the Post-Pandemic Activity (Music Industry – preferring Spotify over a Festival) this difference was proved to be not significant enough. In significance level, the same pattern occurred – the majority of the respondents scored higher significance levels towards Pre-Pandemic Activities – being the only exception the music industry – and the mean difference towards the segments where Pre-Pandemic Activities were favored was significant comparing to the music industry. Thus, the results were conclusive to the hypothesis and so the hypothesis is **supported**.

### 5.7.3. Hypothesis 2

*H2: Individuals living in times of anxiety will remember former leisure activities that evoke nostalgia, as a coping mechanism to the present.*

For this purpose, the engagement nostalgia had over the anxious time of the pandemic and the lockdown were analyzed, in order to see if the Nostalgia Proneness benefited the respondents on dealing with this new reality, that is an anxious time carried with uncertainty.

For the Nostalgia in Leisure Scale developed for this study, it was analyzed the affirmation that kept the respondents thinking if the role of nostalgia had helped on reducing some of the anxiety they could feel from this period (“I have been feeling that certain evoked nostalgic memories can reduce the anxiety that I feel”). Further, another affirmation was taken in account in order to understand if the memories of former leisure activities could act as a coping mechanism to the current situation lived (“I have been feeling that certain evoked nostalgic memories help me deal in a better way with the current and uncertain present lived”).

Both statements were compared to the other questions of the scale in terms of internal consistency (above) and they are excellently correlated. Therefore, the affirmations were compared to the midpoint of the scale (3 – I do not agree or disagree) to see its impact.

	M	SD	Sig.
I have been feeling that certain evoked nostalgic memories can reduce the anxiety that I feel.	3,48	1,13	,001***

\*  $p \leq .01$  \*\*  $p \leq .01$  \*\*\*  $p \leq .001$

*Table 28 – Mean Comparison: Reducing Anxiety*

It is concluded that the affirmation had a superior mean compared to the midpoint of the utilized scale, and being significantly superior indicate us that the sample agreed with the affirmation.

	M	SD	Sig.
I have been feeling that certain evoked nostalgic memories help me deal in a better way with the current and uncertain present lived.	3,38	1,21	,001***

\*  $p \leq .01$  \*\*  $p \leq .01$  \*\*\*  $p \leq .001$

*Table 29 – Mean Comparison: Coping Mechanism*

The affirmation has a mean that is superior (3,38) to the midpoint of the scale, on the total sample, meaning that the respondents are agreeing with the sentence, as the nostalgia proneness helps as a coping mechanism on placing the mind away for the current situation with treasurable memories.

To see if these affirmations are correlated with the anxiety felt – to underline if present anxiety is linked to less evoked memories of nostalgic thoughts of the past – a correlation of these two relations was conducted. The two previously mentioned affirmations are going to be separately correlated with an affirmation where the respondent's concluded if they were feeling more anxious than normal.

For this instance, it is fundamental to understand the predisposition of the data to conclude which type of correlation is the preferred. To contrast if a parametric or a nonparametric measure is needed, it is essential to analyzed if both variables are normally distributed, linear and homoscedastic. The assumption of normality is assumed as the sample has a considerable dimension (according to the Central Limit Theorem). However, the linearity and homoscedasticity of the variables are not satisfied, being only possible to conduct a nonparametric test to analyze the correlation of these two variables. A Spearman's Correlation was utilized:

			I have been feeling more anxious than normal.	(...) can reduce the anxiety that I feel.
Spearman's rho	I have been feeling more anxious than normal.	Correlation Coefficient	1.000	,224**
		Sig. (2-tailed)		0.000
		N	251	251
	I have been feeling that certain evoked nostalgic memories can reduce the anxiety that I feel.	Correlation Coefficient	,224**	1.000
		Sig. (2-tailed)	0.000	
		N	251	251

\*\* . Correlation is significant at the 0,01 level (2-tailed).

Table 30 – Correlations

As it can be concluded, the obtained values on both questions show a correlation coefficient that is statistically significant, with a positive and frail value ( $r=.224$  ;  $p < 0.001$ ). This means individuals that are feeling more anxious have more predisposition on assuring that evoked memories of nostalgic thoughts help them with their anxiety levels.

			I have been feeling more anxious than normal.	(...) help me deal in a better way with the current and uncertain present lived.
Spearman's rho	I have been feeling more anxious than normal.	Correlation Coefficient	1.000	,216**
		Sig. (2-tailed)		0.001
		N	251	251
	I have been feeling that certain evoked nostalgic memories help me deal in a better way with the current and uncertain present lived.	Correlation Coefficient	,216**	1.000
		Sig. (2-tailed)	0.001	
		N	251	251

\*\* . Correlation is significant at the 0,01 level (2-tailed).

Table 31 – Correlations

In the second Spearman's Correlation, it is understood the positive yet fragile value of the correlation coefficient ( $r=.216$  ;  $p < 0.001$ ) meaning that it is statistically significant this correlation. The more anxiety felt over the respondents, the more certainty on agreeing that nostalgic memories help overcome the uncertain present lived – in this case, the pandemic's situation.

In summary and having in consideration the information displayed over the sample, it is possible to affirm that nostalgia had a placement on individual's minds over the lockdown due to COVID-19. Despite the fact of being an unknown reality until now, and for a considerable amount of people there is a strong proneness to nostalgia feeling from a past without the pandemic, it seems that these remembrance of former leisure activities helps dealing with the anxiety felt over the unknown, as well as cooperates as a coping mechanism for dealing with the current situation. This means that the results were consistent with hypothesis H2 being so the hypothesis is **supported**.

### 5.7.4. Hypothesis 3 a)

**H3: a)** *Lonelier individuals will be more favorable to remembering former leisure activities that evoke nostalgia.*

The following analysis was developed to underline the effect of the loneliness feeling over nostalgia-based proneness on an individual, where former studies underlined this relation.

Firstly, and with the purpose of analyzing the relation that a lonelier person has to its disposition towards nostalgia, a correlation between the two used scales on the study - Loneliness Scale and Nostalgia in Leisure Scale – was contrived, with the score of each individual (mean) on these two different scales.

For this instance, to contrast if a parametric or a nonparametric measure is needed, it is essential to analyzed if both variables are normally distributed, linear and homoscedastic. The assumption of normality is assumed as the sample has a considerable dimension (according to the Central Limit Theorem. The linearity and homoscedasticity of the variables were not satisfied (available at Appendix 5), and so a nonparametric test is possible to analyze the correlation of these two variables. A Spearman’s Correlation was utilized:

		Nostalgia	Loneliness
Spearman's rho	Correlation Coefficient	1.000	,134*
	Nostalgia		
	Sig. (2-tailed)		0.034
	N	250	250
Loneliness	Correlation Coefficient	,134*	1.000
	Sig. (2-tailed)	0.034	
	N	250	250

\*. Correlation is significant at the 0,05 level (2-tailed).

*Table 32 – Correlations*

As expected, the correlation coefficient between the obtained values in the Loneliness Scale and the obtained values in the Nostalgia in Leisure Scale is statistically significative, being positive and frail ( $r = .134$ ,  $p = .034$ ). In other words, individuals who are feeling lonely are more predisposed to be nostalgic as well.

As concluded previously, individuals that feel more lonely (in this case, due to the imposed restrictions and the practiced physical distancing) have a tendency to be more vulnerable to remembering former memories from their past (for instance, memories when the individuals were feeling less lonely that the times that are occurring), which means that the results were consistent with hypothesis H3 a), being the hypothesis **supported** from the analysis.

### 5.7.5. Hypothesis 3 b)

**H3 b):** *Lonelier individuals will be more favorable towards nostalgia evoked ads and products/services from a brand, compared to other individuals.*

The final hypotheses of the conducted study relates the loneliness proneness into customer purchase intention on products and activities that evoke nostalgia, as so these lonelier customers will have better attitudes towards this products (because they would be more nostalgic), compared to less lonelier customers.

For this instance, a one-way ANOVA analysis was conducted, to analyze two different groups measuring interest and significance given to Pre-Pandemic and Post-Pandemic Activities (from the same Industry). The requirements for this parametric test were respected (the normality of the sample, by the Central Limit Theorem, and the homogeneity of the variables, available on the Appendix 8 and 9).

The sample was divided in two different groups, based on the mean of their global answers to the Loneliness Scale, where values below 3 (the midpoint of the scale - I do not agree or disagree) were considered to the Less Lonely individuals, and respondents that reported values above 3 were assumed to be feeling More Loneliness. Individuals that had a global mean of 3 were not considered nor categorized.

To the first attributed value - significance level – the following analysis was conducted:

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cinema	Less Lonely	204	3.93	1.005	0.070	3.79	4.07	1	5
	More Lonely	43	3.88	1.179	0.180	3.52	4.25	1	5
	Total	247	3.92	1.035	0.066	3.79	4.05	1	5
Restaurant	Less Lonely	204	4.24	0.934	0.065	4.11	4.37	1	5
	More Lonely	43	4.33	0.892	0.136	4.05	4.60	2	5
	Total	247	4.26	0.926	0.059	4.14	4.37	1	5
Festival	Less Lonely	204	3.83	1.065	0.075	3.69	3.98	1	5
	More Lonely	43	3.56	0.983	0.150	3.26	3.86	1	5
	Total	247	3.79	1.055	0.067	3.65	3.92	1	5

*Table 33 - Descriptive Statistics – Significance Level*

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Cinema	Between Groups	0.081	1	0.081	0.075	0.784
	Within Groups	263.458	245	1.075		
	Total	263.538	246			
Restaurant	Between Groups	0.259	1	0.259	0.301	0.584
	Within Groups	210.672	245	0.860		
	Total	210.931	246			
Festival	Between Groups	2.690	1	2.690	2.432	0.120
	Within Groups	270.938	245	1.106		
	Total	273.628	246			

Table 34 – One-way ANOVA Analysis – Significance Level

The sample did not follow a consistent pattern in terms of significance preference towards the nostalgic products. From the descriptive statistics, loneliness didn't marked any preference towards Pre-Pandemic Activities as it would be expected, since the More Lonely group only gave higher values of significance – comparing to the Less Lonelier group – to “going to a restaurant” Pre-Pandemic Activity (More Lonely: M= 4,33 ; SD= 0,892 VS Less Lonely: M= 4,24 ; SD = 0,934). In the other activities, the Less Lonely group attributed a higher significance towards the Pre-Pandemic Activities (Cinema - More Lonely: M= 3,88 ; SD= 1,179 VS Less Lonely: M= 3,93 ; SD = 1,005) (Festival-More Lonely: M= 3,56 ; SD= 0,983 VS Less Lonely: M= 3,83 ; SD = 1,065).

When conducting the ANOVA analysis, it is also clear to see that there isn't any statistically significant difference between the group's means in any case. Their significance level is in all segments above 0.05 (Cinema: p = .784 ; Restaurant: p = .584 ; Festival: p = .120), meaning the mean difference between the Less Lonely and the More Lonely groups is not statistically significant enough to conclude any action.

For the interest level, the same analysis and conclusion was contrived:

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Cinema	Less Lonely	204	4.07	0.987	0.069	3.94	4.21	1	5
	More Lonely	43	4.07	1.055	0.161	3.74	4.39	1	5
	Total	247	4.07	0.997	0.063	3.95	4.20	1	5
Restaurant	Less Lonely	204	4.29	1.002	0.070	4.15	4.43	1	5
	More Lonely	43	4.35	0.997	0.152	4.04	4.66	1	5
	Total	247	4.30	1.000	0.064	4.17	4.42	1	5
Festival	Less Lonely	204	4.06	1.001	0.070	3.92	4.20	1	5
	More Lonely	43	3.79	1.103	0.168	3.45	4.13	1	5
	Total	247	4.01	1.022	0.065	3.88	4.14	1	5

Table 35 - Descriptive Statistics – Interest Level



		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Cinema	Between Groups	0.001	1	0.001	0.001	0.982
	Within Groups	244.688	245	0.999		
	Total	244.688	246			
Restaurant	Between Groups	0.126	1	0.126	0.126	0.723
	Within Groups	245.704	245	1.003		
	Total	245.830	246			
Festival	Between Groups	2.553	1	2.553	2.459	0.118
	Within Groups	254.410	245	1.038		
	Total	256.964	246			

*Table 36 – One-way ANOVA Analysis – Interest Level*

There isn't as well a pattern in terms of loneliness proneness to the two different associations, nor a solid preference towards the Pre-Pandemic Activities. And in all cases, the ANOVA analysis concluded that there is not any statistically significant difference on the analyzed means, where all of the significant values are above 0.05.

The information and analysis collected previously did not enhance any conclusion regarding whether lonelier individuals could attribute more favorable attitudes into nostalgic services and activities, as it was previously expected. Since there is not a solid impression for this matter, this means that the results were not consistent with hypothesis H3 b), being as so **not supported**.

This may have happened because of the sample size for the two groups – as the more lonelier group corresponds to 43 persons, and the less lonely groups corresponds to 204 respondents - with such a disparate difference, the impact on both groups could not be enhanced. Another reason for this specification on the sample can be the fact that only 6,4% of the total sample admitted being living by itself during the lockdown – meaning that the great majority of the respondents had the company of someone during this anxious time.

A distinct obstacle for this hypothesis could be the fact of the utilized scale – Loneliness Scale (inspired on the UCLA Loneliness Scale – Russel, 1996) - not being up to date with the experienced reality. This lockdown and the online presence and involvement of the technology could have changed the way that a person feels lonely – as nowadays it is easier to achieve company than the former years (like the one where this scale was developed).

## **6. CONCLUSIONS**

With the goal of analyzing and expanding the nostalgia application on customer behavior and their choices on anxious times, the present article is among one of the few that aim to point out the new reality that COVID 19 pandemic brought.

As prior research has been collected on the influence of nostalgic memories on the proneness of individuals and their choices (regarding the influence of loneliness and customer behavior) (e.g. Bartier, 2011; Havlena & Holak, 1991; Holbrook & Schindler, 1991), this study provides the aftermath and outcome of how an anxious time can affect products that are nostalgic because of the Coronavirus and its restrictions on attending different types of activities. This was possible to conduct throughout multiple quantitative methods.

This investigation demonstrates that individuals are more sensible to nostalgic activities, even though it is a temporary nostalgia. The anxiety of this period led people to prefer more traditional and pre-pandemic activities, alternately to the actual possible and alternative entertainments over an Industry. Moreover, it suggests that this nostalgia felt over a simpler pre-pandemic past possibly helped individuals on feeling calmer and better about themselves, by thinking of good memories and having in mind that the future can be as good as the past.

### **6.1. CONCLUSIONS OF THE STUDY**

#### **6.1.1. Customer Behavior and Nostalgia Proneness on Products**

The developed research expands prior studies on how the long-term presence of nostalgia affects product preference and customer's decisions – more precisely on anxious times where the past is preferred to the present reality.

Over the course of the analysis, most of the sample felt nostalgic towards their past, and the preferred category of activities around the sample was the Pre-Pandemic Activities. Not only the advertising mentioning nostalgic products impacted the sample, as the Nostalgia in Leisure Scale demonstrated that the majority of the individuals was in this state.

The group of more nostalgic individuals (n= 205) favored Pre-Pandemic Activities as expected (over the less nostalgic group), since they are longing for the past (Davis, 1979). Even with the advance of technology on modern services, the physical and traditional services were the ones with most interest and significant for the participants.

Moreover, the majority of the respondents associated greater interest and significance level towards the Pre-Pandemic versions of a certain activity – compared to Post-Pandemic services of the same category which are possible to conduct on a lockdown. Thus, nostalgia seems to affect the customer's perspective on choosing its preferences – nostalgic placement on an anxious time like the present lead to a better preference towards the purchaser.

One of the reasons for this pattern is that these familiar activities require a more physical type of socialization and interaction – something that the lockdown and the restrictions had taken away from the society – meaning that individuals seek for this possibility as it inspires nostalgia to them.

### **6.1.2. Nostalgia as a Coping Mechanism to the present**

This field of investigation aimed to extract the correlation that the role of nostalgia can enhance on turning people's current present better, when it is uncertain and unreliable. When the present moment is lugged with anxiety and distress, people feel uncomfortable and the nostalgic concept can have a considerable role on becoming a coping mechanism to it – as to turn individual's mind calmer and tranquil by remembering a preferred past in evoked memories.

Indeed, the study demonstrated that overall, it was acknowledged the importance of evoked nostalgic memories on dealing with an anxious present. As it was concluded, particular memories cooperate on lowering the levels on anxiety sensed, as well as effecting a person's disposition on becoming more calmer and better approaching the present.

Moreover, it was concluded there is a correlation between the level of anxiety felt on an individual during this new reality, with its predisposition on agreeing with the fact that nostalgia helps on calming this apprehension and on dealing with the lockdown's realism.

As people are more vulnerable and reticent, it is understood the preference towards a moment in time where this hesitance didn't reside – a past without COVID 19's disease. The nostalgia from the past and its freedom endorses people on adopting it as a coping to the present, and as an opportunity of thinking on a future - almost - like the past. The lockdown, in addition to contribute into a negative atmosphere, had limit an individual's freedom, interactions and emotions. These changes dived people on escaping the reality, and so nostalgia's demand thriven (Yeung, 2020).

### **6.1.3. Loneliness and its link towards Nostalgia**

The current research planned to point out the interrelationship between the loneliness feeling of an individual, with its predisposition towards nostalgia, as there are former investigations supporting this behavior (Anderson et. al., 1994; Sedikides et. al., 2009). As an individual is feeling apart and disconnected, their sense on focusing on positive memories where the loneliness was not present could be an escape to it, acquiring a link to nostalgia and its whole dimensions.

As such, there could be identified a group of respondents in the sample that were feeling lonelier, and the results followed a link between its loneliness proneness to nostalgic effects. The predisposition towards nostalgic evoked memories increase when individuals faced lonelier states of mind. This is well understood since lonelier awareness overall indicates less happiness and sense of belonging (Sedikides et. al., 2009), and facing former memories where this sensitivity did not exist may enhance positive consciousness.

Although a correlation between nostalgia and loneliness could be conducted, the same did not occurred facing nostalgic – Pre-Pandemic – products and activities. There was not constituted any

pattern in a preference towards activities from a prior time of the Pandemic, even though all of these activities faced some type of socialization skill. This could imply that even though nostalgia may benefit the loneliness proneness, it only occurred in a mindfulness approach – the lonelier group did not take in account the socialization aspect of the analyzed activities, since all of them transmit some type of social position.

## **6.2. THEORETICAL CONTRIBUTION**

On a theoretical perspective and taking into account how new the Pandemic is, the field regarding its effects in consumers has yet to be fully explored and the obtained results is a step closer to a richer picture of this phenomenon. It contributed with a quantitative study and focuses on the perspective of individuals living in times of anxiety. Also, it had brought some information that might later inform further investigations about nostalgia and its factors.

It was overall linked towards the respondents the influence of nostalgia on apprehensive times, where this feeling influences the decision-making process on preferring certain aspects. With this being said, the present investigation is a contribution on an academic level where it enumerates value and reinforces prior studies for this matter by other authors on nostalgia. Not only nostalgia culminates an individual's response to different stimulus, as it helps on predisposing a finer present with prior memories of well-being. Regarding the correlation between loneliness and nostalgia, further research should be done since no conclusion could be drawn from these specific results.

Nostalgic placement on the eye of a consumer can benefit purchase intentions, and also build a relationship between a brand's awareness and the consumer - improving brand attitudes.

## 7. LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The current investigation has some limitations that must be held in consideration, on interpreting its conclusions that could be addressed on future research with the restrictions in mind.

The first limitation is related to the size of the analyzed sample, where in each condition were marginally small. Thus, not only it influenced the general study, as the different groups formed to each trend (nostalgia, loneliness). Moreover, the predisposition of the difference in numbers of respondents that felt nostalgic (n =205) VS non-nostalgic (n = 42), and respondents that felt lonely (n = 43) VS less lonely (n = 204) was significant. This influences the weigh each condition has on the decision-making method and hypotheses.

Secondly, the research only considered Portuguese respondents and its reality towards the Pandemic and lockdown, and we have to keep in mind that every country has its approach on acquiring and behave towards a different time – by its traditions, cultures and costumes.

Moreover, it was concluded that the utilized sample had few respondents living by itself, meaning that their predisposition towards loneliness could be affected, as they had the company of their loved ones towards this phase.

The fourth condition can be associated to the usage of a unique method of data collection (questionnaire), that can be understood as a limitation – having in consideration that the usage of more than one method can generate more reliable results.

One more limitation can be the involvement of only three different industries and three different pairs of Activities. As such, it is not possible to ensure that the conclusions of this investigation are equally obtained on other product's categories, since a specific consumer has different preferences and tastes. More to adjoin, some of the Pre-Pandemic Activities presented could be existing – even on a different expedient - during the questionnaire, and this could also be considered a limitation on the accuracy of the responses. Different industries and different timeframes of a “nostalgic product” could be explored in the future.

The conclusion of the investigation also constructed new hypotheses to be developed, as contrarily to what was suggested on prior literature review. The empirical findings did not overall conclude the loneliness influence on acquiring evoked-nostalgia products and activities. Future research should be thought and addressed on this matter, to fully understand the impact towards the loneliness state of mind and evoked memories that bring back nostalgia.

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## 9. APPENDIX

### Appendix 1 – Nostalgia Definitions on Customer Behavior’s Area

Author	Definition
Davis (1979)	“A positively toned evocation of a lived past”
Belk (1990)	“A wistful mood that may be prompted by an object, a scene, a smell, or a strain of music”
Holbrook and Schindler (1991)	“A preference (general liking, positive attitude, or favorable affect) toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, in adolescence, in childhood or even before birth)”
Stern (1992)	“An emotional state in which an individual yearns for an idealized or sanitized version of an earlier time period”
Baker and Kennedy (1994)	“A sentimental or bittersweet yearning for an experience, product or service from the past”
Holak e Havlena (1998)	“a positively balanced complex feeling, emotion, or mood produced by reflection on things (objects, persons, experiences, ideas) associated with the past”

Source: Castellano et. Al. (2013); Bartier (2011)

### Appendix 2 – Survey Structure

#### Introduction to the Survey

Q1: Caro/a participante, obrigado pela sua disponibilidade para responder a este inquérito. Este estudo insere-se no âmbito de uma Dissertação de Mestrado em Gestão de Informação com especialização em Marketing Intelligence. O objetivo é estudar o comportamento das pessoas durante a pandemia da COVID-19. A duração do questionário não tem mais do que 6 minutos e destina-se a pessoas maiores de idade que vivam em Portugal. Todas as respostas são anónimas e os dados recolhidos destinam-se a fins meramente académicos. Todos os dados serão tratados de forma totalmente confidencial, respeitando as indicações do RGPD. Para qualquer esclarecimento, não hesite em contactar: m20190092@novaims.unl.pt

Muito obrigado!

- Declaro que tenho mais de 18 anos e que autorizo as minhas respostas a serem usadas no âmbito desta investigação.

## Part I: Respondent's general proneness on the Pandemic

Q2. Como já mencionado, neste questionário estamos interessados na sua experiência durante a pandemia da COVID-19. Vai agora responder a algumas questões sobre a sua experiência desde o início das restrições impostas (isto é, desde março até ao momento).

Q3. Já esteve ou está infetado/a com a COVID-19?

- Não.
- Sim.

Q4. Tem algum familiar que já esteve ou está infetado com a COVID-19?

- Não.
- Sim.

Q5. Numa escala semanal, em média, quanto tempo permanece confinado/a em casa?

- Menos de 1 dia por semana.
- Entre 1 a 2 dias por semana.
- Entre 3 a 5 dias por semana.
- Mais do que 5 dias por semana.

Q6. Se trabalhou/trabalha durante o confinamento, fê-lo de casa (teletrabalho) ou teve de se deslocar ao local de trabalho?

- Não trabalhei durante o confinamento.
- Tive de me deslocar sempre ao local de trabalho.
- Trabalhei a maior parte das vezes no local de trabalho e algumas vezes de casa.
- Trabalhei metade do tempo no local de trabalho e metade de casa.
- Trabalhei poucas vezes no local de trabalho e a maior parte das vezes de casa.
- Trabalhei o tempo todo de casa.

Q7. Recordando as alturas que permanece mais em casa, com quantas pessoas partilha o lar durante o confinamento?

- Vivo sozinho.
- 1 pessoa.
- Até 3 pessoas.
- Mais do que 3 pessoas.

Q8. Quem são estas pessoas?

- Amigos.
- Familiares.
- Outros, especifique: \_\_\_\_\_

Q9. Tem receio de ficar infetado/a com a COVID-19?

- Não tenho receio algum.
- Tenho pouco receio.
- Tenho algum receio.
- Tenho muito receio.

Q10. Tende a respeitar as regras impostas pela pandemia? (distanciamento social, uso de máscara, lavagem das mãos adequada, etc.). Por favor, responda com honestidade, recordamos que as suas respostas são confidenciais.

- Na maior parte das situações não cumpro as regras impostas.
- Às vezes cumpro as regras impostas.
- Na maior parte das vezes cumpro as regras impostas.
- Cumpro sempre as regras impostas.

**Part II: Loneliness Proneness**

Q11. De seguida vamos apresentar-lhe um conjunto de afirmações onde, para cada uma, terá de indicar o quanto concorda ou discorda com as mesmas. Não se esqueça que estas se referem ao período desde o início da pandemia. (Solidão)

Q11.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X1) Tenho-me sentido parte de um grupo de amigos.					
(X2) Tenho-me sentido isolado/a de outras pessoas.					
(X3) Tenho sentido falta de companhia.					
(X4) Tenho-me sentido mais unido/a com as pessoas à minha volta.					
(X5) Tenho sentido que não existe ninguém a quem possa recorrer.					
(X6) Tenho sentido muito em comum com as pessoas à minha volta.					
(X7) Tenho sentido que os meus interesses e ideias não são partilhados pelas pessoas à minha volta.					
(X8) Tenho sentido que ninguém me conhece de verdade.					
(X9) Tenho sentido que as minhas amizades são superficiais.					
(X10) Tenho sentido que as minhas amizades são superficiais.					
(X11) Tenho sentido que existem pessoas com quem posso falar.					
(X12) Tenho sentido que existem pessoas que realmente me entendem.					
(X13) Tenho sentido que existem pessoas com que me sinto próximo/a.					

(X14) Tenho sentido as pessoas à minha volta, mas não comigo.					
(X15) Tenho sentido que existem pessoas com quem posso contar.					
(X16) Tenho-me sentido mais aborrecido/a e com mais momentos onde não tenho nada para fazer.					
(X17) Tenho-me sentido mais ansioso/a do que o normal.					

### Part III: Remembered Nostalgia in Leisure Activities

Q12. Mais uma vez, vamos apresentar-lhe um conjunto de afirmações onde, para cada uma, terá de indicar o quanto concorda ou discorda com as mesmas. Não se esqueça que estas se referem ao período desde o início da pandemia. (Nostalgia)

Q12.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X18) Tenho-me lembrado de atividades de lazer que gostava.					
(X19) Tenho-me lembrado das atividades de lazer entusiasmantes que fazia no passado.					
(X20) Tenho-me lembrado de como construía amizades durante as minhas atividades de lazer preferidas.					
(X21) Tenho pensado na liberdade que sentia durante as minhas atividades de lazer preferidas.					
(X22) Tenho pensado nos meus amigos com quem partilhava as minhas atividades de lazer preferidas.					
(X23) Lembro-me de como passava o meu tempo livre durante as minhas atividades de lazer favoritas.					
(X24) Tenho sentido memórias positivas partilhadas por outros quando realizo a minha atividade favorita.					
(X25) Realizar atividades de lazer é para mim uma forma de carregar baterias (recuperar energia).					

(X26) Tenho tido memórias de estar com outras pessoas durante as minhas atividades de lazer preferidas.					
(X27) Tenho sentido que realizo certas atividades nostálgicas de modo a esquecer o presente para me tornar mais feliz.					
(X28) Tenho sentido que realizo mais atividades que me disputam nostalgia (pensamentos bons do passado).					
(X29) Tenho sentido que certas atividades nostálgicas podem reduzir alguma ansiedade sentida.					
(X30) Tenho sentido que certas atividades nostálgicas ajudam-me a lidar melhor com o presente que vivemos, de certo modo.					

#### Part IV: Pre-Pandemic VS Post-Pandemic Activities

Q13. Considere a seguinte situação: Ouvir um bom álbum de música de um artista que gosta pelo Spotify. Por favor, avalie a situação nas escalas abaixo.



Q14. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q15. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

Q16. Considere a seguinte situação: Ir a um Festival de verão (Ex: NOS Alive) e ver o seu artista favorito.



Q17. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q18. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

Q19. Considere a seguinte situação: Pedir pela Uber Eats a sua refeição favorita.



Q20. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q21. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

Q22. Considere a seguinte situação: Ir a um restaurante em Lisboa jantar fora.



Q23. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q24. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

Q25. Considere a seguinte situação: Ir aos Cinemas NOS assistir a um bom filme.





Q26. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q27. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

Q28. Considere a seguinte situação: Fazer maratona de uma ótima série no Netflix.



Q29. O quão interessante é para si esta atividade?

- Nada interessante.
- Pouco interessante.
- Indiferente.
- Interessante.
- Muito interessante.

Q30. O quão significativa é para si esta atividade?

- Nada significativa.
- Pouco significativa.
- Indiferente.
- Significativa.
- Muito significativa.

### Part V: Nostalgia's Involvement on Pre-Pandemic Activities

Q31. De seguida vamos fazer-lhe perguntas sobre as atividades que estavam mais presentes no nosso quotidiano antes da pandemia (como ir ao cinema, jantar fora em grupos ou ir a um festival) e que não podemos fazer com tanta regularidade nos dias de hoje. Responda às frases seguintes de acordo com a veracidade que sente.

Q31.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X31) Gostaria de reviver a época em que essas atividades estavam mais presentes nas nossas vidas, pois esses tempos eram melhores que os tempos de hoje.					
(X32) Gostaria de voltar ao tempo em que essas atividades estavam mais presentes na nossa vida.					
(X33) Estas atividades fazem-me lembrar de uma melhor época.					
(X34) As coisas eram melhores antes da pandemia.					
(X35) Desde o início da pandemia que estamos a piorar a nossa qualidade de vida.					

### Part VI: Nostalgia evoked advertising and their effect

Q32. Agora assista ao seguinte anúncio:



Discoteca K Urban Beach – Facebook

Q33. Frequentava discotecas e bares antes do início da pandemia?

- Não.
- Sim.

Q34. De seguida, responda às frases apresentadas de acordo com a veracidade que sente.

Q34.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X36) Este anúncio lembra-me do passado.					
(X37) Este anúncio ajuda-me a recordar memórias prazerosas.					
(X38) Este anúncio faz-me sentir nostálgico.					
(X39) Este anúncio é uma boa lembrança do passado.					
(X40) Quando for possível, quero fazer o que este anúncio retrata.					

Q35. Agora assista ao seguinte anúncio:



Portugal:Suécia para o Mundial 2014 - Federação Portuguesa de Futebol

Q36. Frequentava eventos desportivos antes do início da pandemia?

- Não.
- Sim.

Q37. De seguida, responda às frases apresentadas de acordo com a veracidade que sente.

Q37.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X41) Este anúncio lembra-me do passado.					
(X42) Este anúncio ajuda-me a recordar memórias prazerosas.					
(X43) Este anúncio faz-me sentir nostálgico.					
(X44) Este anúncio é uma boa lembrança do passado.					
(X45) Quando for possível, quero fazer o que este anúncio retrata.					

Q38. Agora assista ao seguinte anúncio:



Santos Populares - Revista TimeOut

Q39. Frequentava festas populares antes do início da pandemia?

- Não.
- Sim.

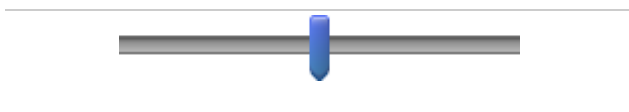
Q40. De seguida, responda às frases apresentadas de acordo com a veracidade que sente.

Q40.	Discordo Totalmente	Discordo Parcialmente	Nem concordo nem discordo	Concordo Parcialmente	Concordo Totalmente
(X46) Este anúncio lembra-me do passado.					
(X47) Este anúncio ajuda-me a recordar memórias prazerosas.					
(X48) Este anúncio faz-me sentir nostálgico.					
(X49) Este anúncio é uma boa lembrança do passado.					
(X50) Quando for possível, quero fazer o que este anúncio retrata.					

### Part VII: Demographic Data Collection

Q41. Qual a sua idade?

0 10 20 30 40 50 60 70 80 90 100



Q42. Qual o seu género?

- Feminino
- Masculino
- Outro: \_\_\_\_\_

Q43. Em que zona vive?

- Em zona urbana
- Em zona rural

Q44. Qual a sua ocupação?

- Estudante
- Trabalhador-Estudante
- Empregado por conta própria
- Empregado por conta de outrem
- Desempregado
- Reformado
- Outro: \_\_\_\_\_

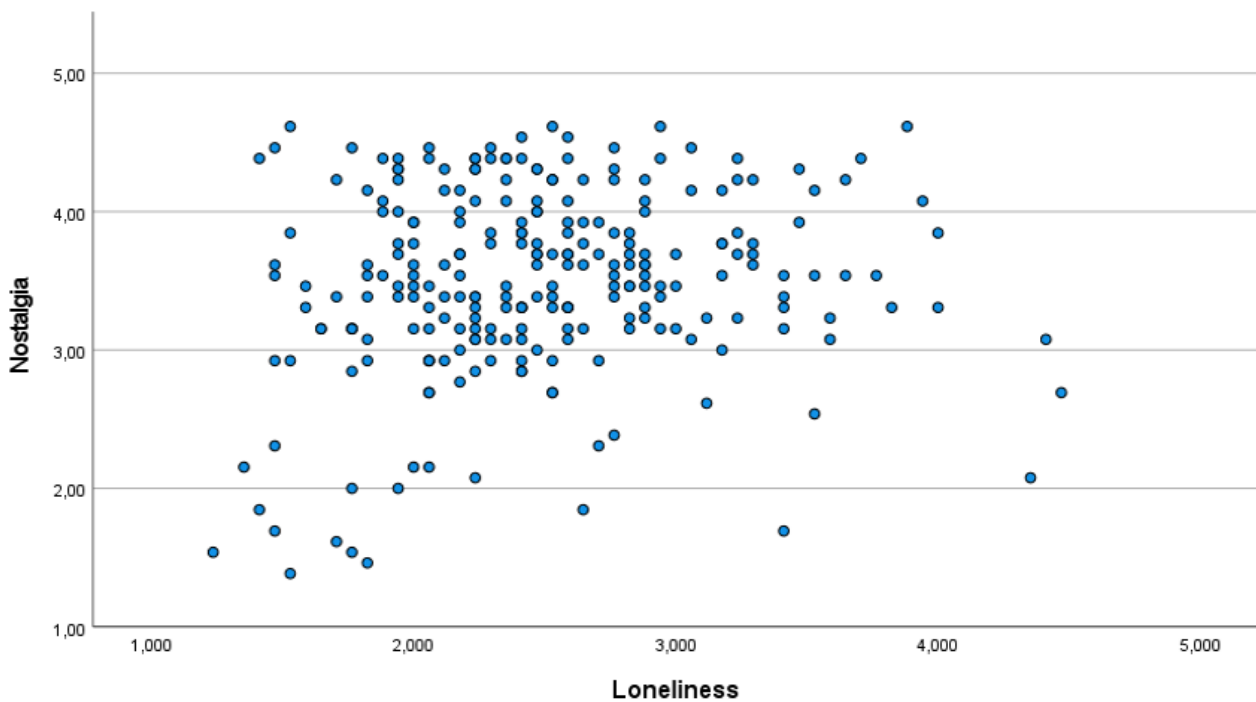
### Appendix 3 – Loneliness Scale: Internal Consistency

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
(X1)	40.10	96.471	0.409	0.296	0.827
(X2)	39.04	91.971	0.536	0.373	0.820
(X3)	39.25	90.735	0.553	0.438	0.819
(X4)	39.89	97.759	0.413	0.376	0.827
(X5)	40.57	94.519	0.606	0.466	0.818
(X6)	38.77	115.414	-0.412	0.343	0.863
(X7)	39.74	97.926	0.341	0.221	0.831
(X8)	40.02	92.028	0.573	0.429	0.818
(X9)	40.26	94.683	0.492	0.354	0.823
(X10)	39.49	93.391	0.524	0.374	0.821
(X11)	40.61	96.014	0.584	0.559	0.820
(X12)	40.26	95.575	0.583	0.477	0.820
(X13)	40.44	95.725	0.559	0.482	0.820
(X14)	39.69	94.134	0.499	0.354	0.822
(X15)	40.70	97.833	0.537	0.554	0.823
(X16)	39.14	95.106	0.363	0.230	0.832
(X17)	38.70	97.030	0.372	0.270	0.830

**Appendix 4 – Nostalgia in Leisure Scale: Internal Consistency**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
(X18)	44.28	76.774	0.745	0.649	0.886
(X19)	44.39	75.853	0.721	0.643	0.887
(X20)	45.00	76.181	0.639	0.433	0.890
(X21)	44.20	78.211	0.639	0.515	0.891
(X22)	44.34	77.895	0.635	0.489	0.891
(X23)	44.41	76.805	0.701	0.556	0.888
(X24)	44.66	81.798	0.463	0.250	0.898
(X25)	43.92	85.653	0.323	0.120	0.902
(X26)	44.40	77.043	0.681	0.517	0.889
(X27)	45.52	76.275	0.538	0.431	0.897
(X28)	45.25	76.838	0.622	0.456	0.891
(X29)	44.88	79.258	0.508	0.381	0.897
(X30)	44.98	75.614	0.650	0.484	0.890

**Appendix 5 – Nostalgia and Loneliness Scale – Linearity and Homoscedasticity**



**Appendix 6 – Tests of Homogeneity of Variances (Nostalgic Groups – Interest)**

		<b>Tests of Homogeneity of Variances</b>			
		Levene Statistic	df1	df2	Sig.
Cinema	Based on Mean	12.444	1	245	0.001
	Based on Median	5.503	1	245	0.020
	Based on Median and with adjusted df	5.503	1	203.593	0.020
	Based on trimmed mean	8.961	1	245	0.003
Restaurant	Based on Mean	9.234	1	245	0.003
	Based on Median	4.114	1	245	0.044
	Based on Median and with adjusted df	4.114	1	244.996	0.044
	Based on trimmed mean	7.335	1	245	0.007
Festival	Based on Mean	1.542	1	245	0.216
	Based on Median	0.185	1	245	0.667
	Based on Median and with adjusted df	0.185	1	235.377	0.668
	Based on trimmed mean	0.466	1	245	0.495

**Appendix 7 – Tests of Homogeneity of Variances (Nostalgic Groups – Significance)**

		<b>Tests of Homogeneity of Variances</b>			
		Levene Statistic	df1	df2	Sig.
Cinema	Based on Mean	2.690	1	245	0.102
	Based on Median	0.611	1	245	0.435
	Based on Median and with adjusted df	0.611	1	234.810	0.435
	Based on trimmed mean	1.821	1	245	0.178
Restaurant	Based on Mean	4.614	1	245	0.033
	Based on Median	1.252	1	245	0.264
	Based on Median and with adjusted df	1.252	1	244.321	0.264
	Based on trimmed mean	2.769	1	245	0.097
Festival	Based on Mean	0.514	1	245	0.474
	Based on Median	0.117	1	245	0.733
	Based on Median and with adjusted df	0.117	1	240.418	0.733
	Based on trimmed mean	0.677	1	245	0.411

**Appendix 8 – Tests of Homogeneity of Variances (Loneliness – Interest)**

		<b>Tests of Homogeneity of Variances</b>			
		Levene Statistic	df1	df2	Sig.
Cinema	Based on Mean	0.024	1	245	0.877
	Based on Median	0.028	1	245	0.867
	Based on Median and with adjusted df	0.028	1	243.624	0.867
	Based on trimmed mean	0.036	1	245	0.849
Restaurant	Based on Mean	0.067	1	245	0.796
	Based on Median	0.126	1	245	0.723
	Based on Median and with adjusted df	0.126	1	244.996	0.723
	Based on trimmed mean	0.011	1	245	0.917
Festival	Based on Mean	1.172	1	245	0.280
	Based on Median	0.122	1	245	0.727
	Based on Median and with adjusted df	0.122	1	241.481	0.727
	Based on trimmed mean	0.293	1	245	0.589

**Appendix 9 – Tests of Homogeneity of Variances (Loneliness – Significance)**

		<b>Tests of Homogeneity of Variances</b>			
		Levene Statistic	df1	df2	Sig.
Cinema	Based on Mean	2.093	1	245	0.149
	Based on Median	1.581	1	245	0.210
	Based on Median and with adjusted df	1.581	1	242.892	0.210
	Based on trimmed mean	1.696	1	245	0.194
Restaurant	Based on Mean	0.000	1	245	0.991
	Based on Median	0.096	1	245	0.756
	Based on Median and with adjusted df	0.096	1	226.183	0.756
	Based on trimmed mean	0.017	1	245	0.898
Festival	Based on Mean	0.011	1	245	0.917
	Based on Median	0.000	1	245	0.983
	Based on Median and with adjusted df	0.000	1	244.987	0.983
	Based on trimmed mean	0.016	1	245	0.899



**Appendix 10 – Mauchly's Test of Sphericity (Interest and Significance)**

**Mauchly's Test of Sphericity - Interest**

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon <sup>b</sup>	
						Huynh-Feldt	Lower-bound
Time	1.000	0.000	0		1.000	1.000	1.000
Industry	0.948	13.245	2	0.001	0.951	0.958	0.500
Time * Industry	0.994	1.491	2	0.475	0.994	1.000	0.500

**Mauchly's Test of Sphericity - Significance**

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Greenhouse-Geisser	Epsilon <sup>b</sup>	
						Huynh-Feldt	Lower-bound
Time	1.000	0.000	0		1.000	1.000	1.000
Industry	0.934	16.977	2	0.000	0.938	0.945	0.500
Time * Industry	0.999	0.323	2	0.851	0.999	1.000	0.500

