

Master's Degree Dissertation

Nothing spreads like fear: effects of mortality salience caused by COVID-19 on consumption habits of consumers whose self-esteem comes from virtue or appearance

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Nothing Spreads like Fear: Effects of Mortality Salience Caused by COVID-19 on Consumption Habits of Consumers Whose Self-Esteem Comes from Virtue or Appearance

Abstract

Consumption is driven by different strong motivations, like emotion, identity, and social connection. But the values, habits, and norms that shape what we consume and how we consume could shift. Currently, we are experiencing a pandemic which is expected to have an impact on consumer behavior in the future. Because the pandemic, COVID-19, is causing mortality salience on people and it is previously shown in many literary articles that mortality salience affects consumer choice. Previous studies provide many results showing events that remind individuals of death to engender existential anxiety and one major way to cope with it is to bolster self-esteem. This paper examines the effects of mortality salience caused by COVID-19 on the consumption behavior of people whose self-esteem is based on virtue or appearance. It investigates whether increased mortality salience will push consumers with high virtue to buy more environmentally conscious products while consumers with appearance as self-esteem domain will buy more luxurious products. In the first step, the paper explains the theoretical development of the relevant aspects of mortality salience and self-esteem. Intending to quantify this effect, the second part of the paper explains the experiment done and uses test statistics to analyze the outcomes. Lastly, it shows the results which provide evidence that mortality salience will lead to more environmentally conscious consumption from people whose self-esteem is more inclined to virtue. Whereas mortality salience did not increase the luxury buying behavior of people with high body-esteem and raised the following question: Can mortality salience lead people to shop less?

Keywords: Mortality salience, Identity Signaling Behavior, Self-Esteem, Environmental Products, Compensatory Consumption, Luxury Shopping, Terror Management Theory

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INTRODUCTION

Our awareness of our physical being can be superseded by an unknown-origin virus that we have no power over can transform our world view and attitudes within. Of course, it is likely to see a change in our consumer choices.

Public emergencies not only affect human society directly but also cause a series of secondary or derivative events because of their chain reaction. Public emergencies result in the spread of emotions and change views and attitudes of the public (Liu, Wang and Zhang, 2019).

Consumption behavior is habit driven and the COVID-19 crisis, which causes intense negative emotions, can disrupt habits.

COVID-19 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in December 2019 in Wuhan, the capital of China's Hubei province, and has since spread globally, resulting in the ongoing 2019–20 coronavirus pandemic. More than half of the world population is under lockdown and according to research, it is the most searched topic on the internet and mostly covered topic in any media channel. Therefore, as mentioned above, it is likely that this pandemic will have an impact on many aspects of society in the future, including consumer behavior.

Pandemics like COVID-19 affect a substantial number of people and result in the spread of negative emotions, one being mortality salience. COVID-19 crisis will heighten mortality salience on people, which refers to reminding people of their mortality. The elevated state of mortality salience from death fear generates a sense of existential anxiety leading to the use of two main coping strategies to alleviate this anxiety, defense of one's cultural worldview and attempts to bolster and enhance self-esteem (Pyszczynski, Greenberg, Solomon, Arndt, and Schimel, 2004). In this thesis, I focus on self-esteem. Previous research done on elderly people show that overall, meaning in life appears to be significantly correlated with death anxiety in older adults, and self-esteem can mediate this effect (Cao, Gao, Huang, Miao, Peng, Zhang and Zheng, 2019). Much more research has been done on this topic. Similarly, in this thesis, I suggest that this sense of existential anxiety from COVID-19 can trigger people to spend in ways that

support their core values and support their self-esteem in the future. Point to make here is that everybody has a different domain of self-esteem. Terror Management Theory argues that, when mortality is made salient, individuals increase their efforts to live up to the standards upon which their self-esteem is based. For different individuals, the particular domains leading to self-esteem (i.e., domains central to self-worth for which the individual feels capable of living up to the standards) are likely to differ (Crocker, Jennifer, Luhtanen, Cooper and Bouvrette, 2003).

The CDC and World Health Organizations emphasize the importance of adequate handwashing during the COVID-19 crisis and implementing this habit to continuous life. From large media patrons to micro-influencers on Instagram, the idea of changing the “normal” lifestyle before COVID-19 is highlighted. This will undoubtedly encourage people to lead healthy lives, care more about the environment. It may move consumers to evaluate things from a different perspective. On the other hand, the media is full of “Life is short” type content which can influence people to willing to pay more for products, pushing them to buy more luxurious goods. But who will be doing one of these consumptions depends on the source of their self-esteem.

Combined with the timeliness of the topic reflected by media attention have led to the motivation of this paper to focus on the effect of the current COVID-19 crisis on consumer choices for a different type of consumer concerning their domain of self-esteem.

I examine two domains of consumer habits, luxury product appeal, and environmentally conscious consumer behaviors, representing two different contingencies of self-worth, appearance for luxury product appeal, and virtue for environmentally conscious consumer behaviors. Appearance is an external contingency, requiring others’ validation; one’s virtue is an internal contingency (Crocker & Park, 2004). The following research question will be addressed:

“Will the effects of mortality salience caused by the COVID-19 crisis have an impact on consumption choices of consumers whose self-esteem is based on virtue

or appearance in a way that leads them towards environmentally-conscious products or more luxurious products respectively?”

In the first step, the paper explains the theoretical development of the relevant aspects of mortality salience. After an explanation of the theoretical developments, experiment and data analysis is explained and the results are shown. The paper concludes by summarizing the main findings, addressing some limitations, and giving recommendations for future research and businesses.

THEORETICAL DEVELOPMENT

Identity Signaling Behavior and Compensatory Consumption

Identity is characterized as the attributes, values, temperament, appearances, and/or expressions that make an individual. Identity can be referred to as our thoughts and beliefs about our self. We create a self because we need to recognize ourselves as a separate entity from others. Accordingly, we behave in ways to signal that self to our surroundings. Furthermore, David Gal defines identity signaling behavior as behavior motivated by the belief that the behavior will convey particular information about the individual to the self or others. In summary, people's possessions are part and parcel of the self. So, what triggers this behavior? David Gal indicates that identity signaling behavior is not driven by a single desire; rather, many different motives likely lead people to engage in identity signaling behavior. He argues that several distinct findings can be classified into motives related to the need for belonging, need for self-expression, and need for self-enhancement. Three subtopics intersect each other in many ways but yet discussed individually.

The need for self-enhancement is one of the drivers of identity signaling behavior which is what this thesis focuses on. Self-enhancement refers to the desire “to enhance the positivity of the self-concept and to protect the self from negative information” (Sedikides & Strube, 1997). The need for self-enhancement is also investigated through three subtopics by David Gal. He claims identity signaling behavior can function to enhance self-worth through social approval, generation of social proof, and response to a threat.

In this paper response to a threat will be used as a domain to identity signaling behavior that functions to enhance self-esteem. Individuals are particularly likely to engage in need for self-enhancement when their self is threatened. If you lack quality, you buy to reflect that quality more. The most popular example given to prove this is that when people feel a threat to their intelligence, they buy books to look more intelligent. Indeed, identity-signaling behavior can be considered central to consumption given the view that much consumption is symbolic rather than functional (Holbrook & Hirschman, 1982). The relation of these responses with consumer behavior is investigated under compensatory consumption theory.

One of the main discussions of consumer behavior regarding consumption is that people do not consume products and services based entirely on their functionality and for utilitarian purposes (Belk et al. 1982). One's mobile phone, watch, clothes, and even online music they like and save often hold additional psychological value to the consumer. What we choose to consume serves as a mirror for the self and thus for one's identity. Additionally, consumption is also a stage on which individuals signal their identity, their unique self, to outsiders along with pointing out their connections to social groups.

Possibility of compensatory consumer behavior occurs when a consumer perceives a self-discrepancy or an inconsistency between one's ideal and actual self. Self-discrepancies have several important features. Self-discrepancies can emerge in a variety of domains, such as intelligence, masculinity, sense of power, or freedom of space. Due to the aversive nature of self-discrepancies, people are motivated to engage in self-regulation efforts to restore their desired state (Galinsky, Madel, Levav, and Rucker, 2016). These self-regulation efforts can manifest in different forms of consumer behavior because different threats to different aspects of self have different outcomes which I will explain later on.

It is mentioned in the introduction that public emergencies, in this paper COVID-19 crisis, not only directly impact the human population but also result in a sequence of

secondary or indirect incidents due to their chain reaction. Public emergencies propagate feelings and change public opinions and perceptions.

I assume that COVID-19 will heighten mortality salience, which is the threat to self this thesis focuses on that leads to identity signaling through self-esteem. The heightened state of mortality salience creates a sense of existential anxiety which is a term used for the sense of threat to healthy self. This sense of existential anxiety can trigger people to show identity signaling behavior by compensatory consumption, by spending in ways that support their values and support their self-esteem because as I mentioned particular use of consumption is the reliance on consumption as a tool to ward off psychological threats. Specifically, it is the idea that consumption can be motivated in an effort to assuage psychological threats like mortality salience.

In this paper, I suggest COVID-19 will increase mortality salience and this will increase the identity signaling behavior of consumers which leads to compensatory consumption to prevent threats to themselves. Terror Management Theory (TMT; Greenberg, Solomon, and Pyszczynski, 1997) provides a framework for understanding this kind of consumer behavior.

Terror Management Theory, Mortality Salience, and Self-Esteem

Terror management theory was developed by Jeff Greenberg, Sheldon Solomon, and Tom Pyszczynski and expanded in their 2015 book, *The Worm at the Core*. The idea stems from the work of anthropologist Ernest Becker, whose book of 1973, *The Denial of Death*, concluded that most human acts are carried out solely as a way of avoiding or evading the fear of death. Terror Management Theory claims that a basic psychological conflict resulting from realizing that death is inevitable and to some extent, like with the COVID-19 crisis, unpredictable can create a self-preservation instinct. This conflict produces existential anxiety indicated as terror, and the terror is then managed by embracing heavily on cultural beliefs (e.g. belief in afterlife, religion), or striving for self-esteem. One can say it is an evolutionary instinct. In this thesis, my focus is self-esteem aspect of TMT. I hypothesize that the COVID-19 crisis will heighten mortality salience on people. It is an illness without a cure that is contagious and resulted in a huge amount of death and continuing to do so. Moreover, I expect that mortality salience will trigger people to show more self-esteem while consuming. What needs to be mentioned here is that this change of consumption can be in different forms

because everybody has a different domain of self-esteem. Some examples of sources of self-esteem are family support, competition, God's love, virtue, academic competence, appearance, and approval from others and previous literary works show that each domain results in different types of behaviors. Therefore, mortality salience will interact with different domains as a potential source of esteem for individuals. More accurately, when mortality salience is heightened, an individual for whom a domain which is an important source of self-esteem will show increases in behaviors consistent with meeting standards of value for that domain, whereas an individual for whom the same domain is not an important source of self-esteem will engage in different behaviors consistent with a different domain. For example in the previous study it is found that amongst university students, students who based their self-esteem on appearance partied more, used more alcohol and drugs, and were higher in symptoms of disordered eating, whereas students who based their self-esteem on virtue used less alcohol and drugs, had fewer symptoms of disordered eating, and even earned higher grades in college (Crocker & Luhtanen, 2003). Accordingly, I expect to see different consumer behaviors under different consumption frameworks.

In this thesis, I will talk about two different sources of self-esteem: Virtue and Appearance. To clarify this general hypothesis, I apply this framework to environmentally conscious consumer behavior and luxury brand appeal.

Mortality Salience, Appearance, and Luxury Brand Appeal

One of the domains of self-esteem is appearance. With the increasing social media, the importance put on the physical body increased too. Theory, research, and common observation suggest that one's physical body is a potential source of self-esteem. Therefore, from the TMT viewpoint, attitudes towards the body should be an essential component of how people preserve calmness when faced with recognition of their mortality. (Goldenberg et al., 2000)

In their study, Goldenberg et al found out that people with high body esteem increase their identification with their bodies following reminders of their mortality, people with low body esteem do not.

Accordingly, one can conclude that mortality salience can affect the consumption choices of people with high body esteem since they will be triggered to increase self-esteem. One product segment which can be related to body esteem is luxury.

Consumers purchase products behind the logo not only for the product but also for what they symbolize. As such, premium brands are popularly sought because, in addition to their utilitarian product value, they give their owners a practical, hedonic, and symbolic appeal compared to their cheaper counterparts. Therefore it is likely to see an increased luxury consumption from people with high body esteem when their healthy self is threatened. In the article “Luxury Consumption Factors”, Melika Husic and Muris Cicic indicate that despite the September 11 attacks and other events disruptive to global trade, the luxury market has grown from \$20 billion in 1985 to \$68 billion in 2000. This increase is said to be interesting but can also be linked to increased mortality salience because of the attacks.

Many consumers who choose to invest in luxury goods instinctively aim to satisfy an appetite for symbolic meanings that boost their appearance. In this paper, I experiment to see the effects of mortality salience on people with high body esteem with their luxury brand choices.

In sum, I hypothesize an interaction of mortality salience and body esteem. For low body esteem people, the choice of less luxurious products will be higher and for high body esteem people, the choice of less luxurious products will be lower.

Mortality Salience, Virtue, and Environmentally Conscious Consumer Behaviors

One of the domains of self-esteem is virtue. In this thesis, I assume virtue is behavior showing the high moral standards of an individual. Individuals whose esteem depends heavily on virtue mostly act as the way correlated with their standards and show increased behaviors indicating such standards.

Mortality salience can affect consumption choices of people with high virtue and we can see this on environmentally conscious consumer behaviors. There has been literary research done to investigate the reasons under eco-friendly buyer behavior. One article related with this thesis is called “Understanding green purchase behavior through death anxiety and individual social responsibility: Mastery as a moderator” The findings of the article, in their own words is the following: The findings reveal that consumers' anxiety of death affects consumers' green purchase attitude and then ultimately green

purchase intention through the mediating variables of environmental concern and pro-environmental behavior. On a similar line, individual social responsibility is found to act as a precursor in increasing consumers' concern for the environment and, eventually, green purchase attitude and intention. In their article called “Let Us Eat and Drink, for Tomorrow We Shall Die: Effects of Mortality Salience and Self-Esteem on Self-Regulation in Consumer Choice” Ferraro, Shiv and Bettman experimented donating behavior of people under mortality salience. They found out that among individuals high on virtue as a source of self-esteem, the decision to give to charity, the amount contributed to the charity, and intentions to engage in socially conscious consumer behaviors were higher when mortality salience was high.

My prediction, given the theoretical development and examples above, is the same. I expect an interaction of mortality salience condition with high versus low virtue, with high virtue participants being more likely to show environmentally-conscious consumer behavior and low virtue participants will show less environmentally-conscious consumer behavior under mortality salience.

EXPERIMENT

In order to prove the two hypotheses explained above, I designed and experimented with the following.

Design and Procedure

Under the circumstances of lockdown, the experiment is prepared and done online. Questions of the survey are prepared on Google Forms and sent to participants randomly using Qualtrix. Two hundred and seven participants participated in the experiment. The procedure for the experiment was adapted and inspired by Ferraro, Shiv, and Bettman (2005). The survey is done informing participants that it is aimed to gather the information that can be useful to use in the future about consumer behavior, nothing about the effects of COVID-19 on us is mentioned. Participants are first asked about their gender and age information. Furthermore, randomly selected participants administered the mortality salience manipulation (Often used in previous TMT research

(e.g., Arndt, Greenberg, and Cook, 2002): “In the space provided, please briefly describe at least 4 emotions/feelings that the thought of your death because of COVID-19 arouses in you”. Under this question, I added a picture showing a young patient to make mortality salience stronger and make the participants think and reflect more because I want to reduce the possibility that the participants won't write because it is an online and voluntary survey.

Additionally, based on the method used by Arndt et al. I asked some of the participants selected randomly to write about dental pain: “In the space provided, please briefly describe the emotions that a dental pain arouses in you” without any image, to use as the control group.

Furthermore, Arndt et al. (2002, 320) present a process model of mortality salience effects with an initial stage in which “death thoughts first provoke proximal defenses designed to remove death-related cognitions from conscious awareness.” Increased accessibility of death-related thoughts occurs with delay, with worldview defense or self-esteem bolstering used as distal defenses to combat the anxiety raised by mortality salience. (Ferraro, Shiv and Bettman, (2005) Therefore, a delay period is necessary for standard mortality salience effects to occur, and by putting the self-worth scale after manipulation, my procedure provided the requisite delay between the mortality salience manipulation and choices. Depending on this, participants then complete the self-worth scale in order to determine their domain of self-esteem after the mortality salience manipulation.

The scale I used is inspired by the Contingencies of Self-Worth Scale by (Crocker, Luhtanen, Cooper, and Bouvrette, 2003). I reduced the number of questions of the original scale to reduce participant fatigue since it is a voluntary experiment. I took the questions which are important for virtue and appearance from the Contingencies of Self- Worth Scale, added three filler questions, and prepared my version. This version also includes five items related to virtue and five items related to appearance as a source of self-esteem.

Participants then indicate their intentions to engage in different behaviors on five-point extremely unlikely to extremely likely scales. This scale includes five environmentally conscious consumer behaviors that should be related to virtue as a source of self-

esteem(e.g. “Refuse to buy a product if it is made of plastic”); three filler items unrelated to virtue or appearance (e.g. “Travel to somewhere you always wanted”).

Participants then indicate their intentions to buy from a certain brand on seven-point not appealing to highly appealing scales for six brands which three of them are non-luxury brands and three are luxury brands. The question I asked is: Can you please rate the brands in terms of how appealing they are to you? I choose Louis Vuitton, Calvin Klein, and Prada as luxury brands because they are known by everyone as luxury brands and choose Zara, H&M, and Mango as not luxury brands because compared to Louis Vuitton, Calvin Klein and Prada they stand as not as luxurious and expensive.

In the end, I put manipulation check questions. Participants respond to a series of 8 true/false statements (e.g. “I am very much afraid to die”) that served as a manipulation check for the mortality salience manipulation. These statements are taken from Templer’s unidimensional Death Anxiety Scale which consists of 15 items. Higher scores indicate greater death anxiety.

Results

Sample

Two surveys, one with dental pain which is the control group survey and one with COVID-19 mortality manipulation, have been randomly filled by participants. The data set consists of 207 observations. 102 people participated in the dental pain control group survey, 51 male, 46 female and 5 prefer not to say their gender, aged between 18-65 and more than %50 of the participants older than 46 years old. 105 people participated in the COVID-19 survey, 53 male and 52 female, aged between 18-75 and more than %50 of the participants older than 46 years old.

Manipulation Check

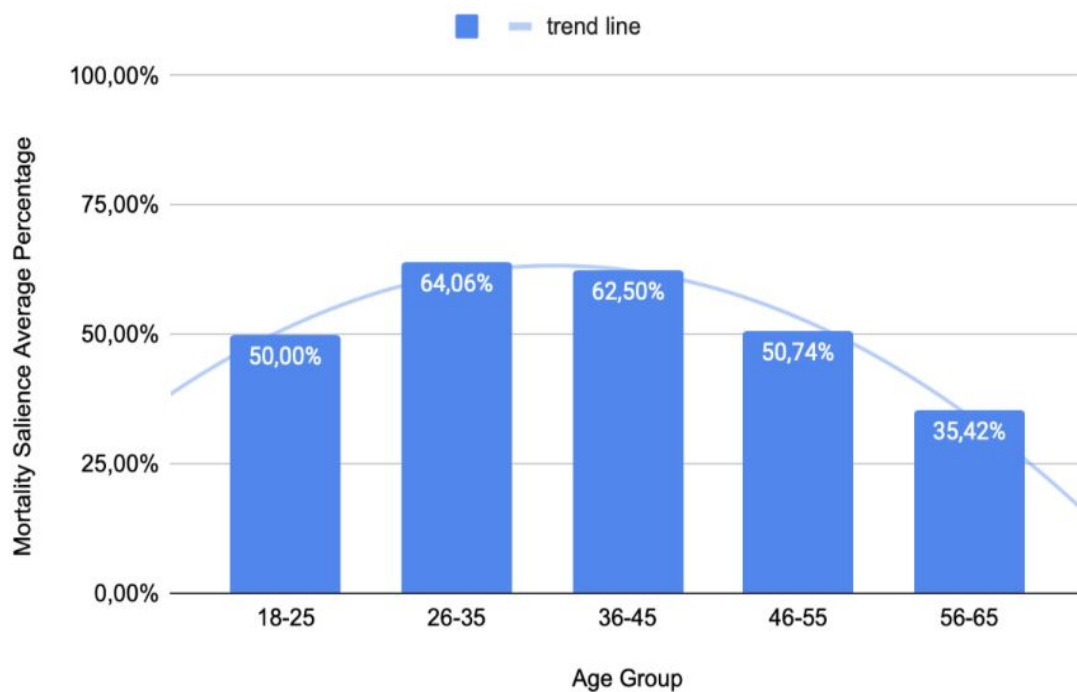
The average score of the 8 true/false statements for each participant is calculated for manipulation check. Manipulation check scores of statements about thoughts of death revealed participants experienced mortality salience. In dental condition, the average of the statements that were answered true by participants equals 0.5171 whereas in the COVID-19 condition average of the statements that were answered true equals 0.5214.

More than half of the questions answered true is indicating a fear of death in participants. However, the number of statements to which participants agreed was not significantly higher for COVID-19 mortality manipulation which shows the method used for manipulation was not as effective as intended. Nevertheless, average mortality salience is higher in the COVID-19 survey so one can say participants of that survey fear death more.

Mortality Salience

Since two conditions did not show significant differences with regards to the mortality salience score, I wanted to investigate this measure more detailed. First of all, there were no gender differences. Therefore, I investigated this score with the only other demographic data which is the age group.

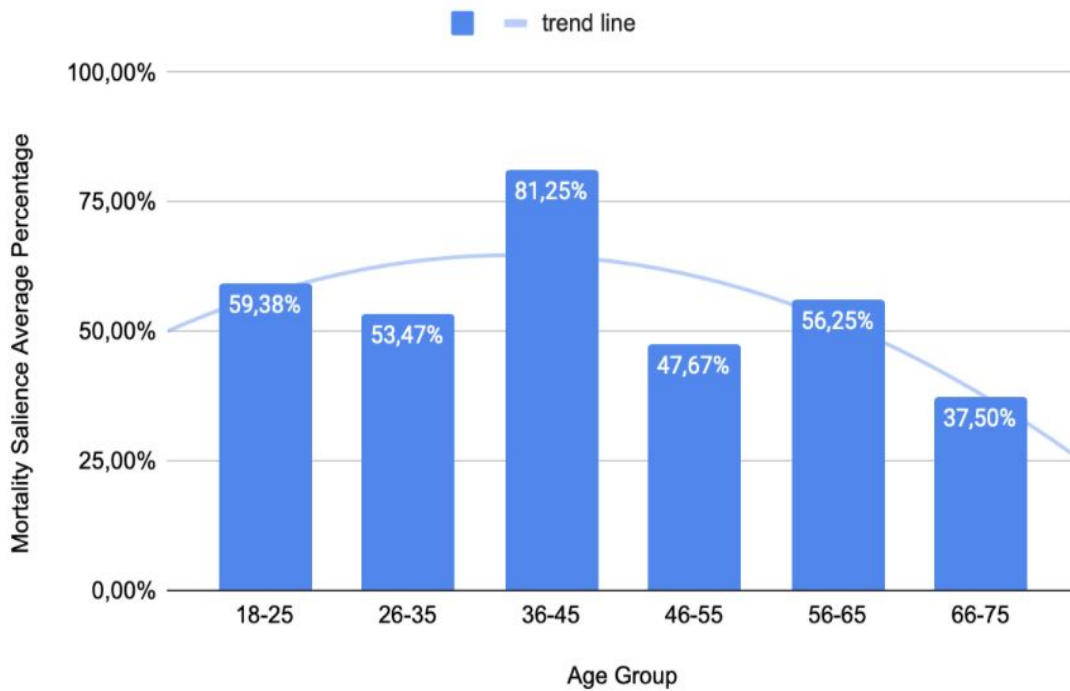
Figure 1: Bar graph showing the average percentages of mortality salience score for age groups of participants in dental pain condition



Dental pain condition is the control condition hence participants of this do not encounter a mortality manipulation. However, the thought of pain if not directly, eventually creates a threat to the healthy self, therefore, create death anxiety. Accordingly, one can say that the mortality salience score of these participants can be seen as their daily,

unconscious fear of death. As you can see in Figure 1, death anxiety is seen most in participants aged between 26-35 and it starts decreasing as age increases after this point.

Figure 2: Bar graph showing the average percentages of mortality salience score for age groups of participants in COVID-19 condition



In the COVID-19 manipulation condition, death anxiety is seen most in participants aged between 36-45. The age group that shows the maximum average percentage increased in this condition and this may be related to the fact that in news it is usually stated that older people are dying because of the COVID-19 virus. Moreover, when compared with the dental pain condition, in age groups 18-25, 36-45, and 56-65 there has been an increase while in age groups 26-35 and 46-55 there has been a decrease. Even though overall means are not significantly different between two survey results, we can see each age group reacted differently and for some age groups the mean mortality salience score changes significantly. This makes sense because during the

COVID-19 pandemic, age has been a huge part of the media coverage and it is expected that people with different age groups react differently.

Variables

Before analyzing the data, the virtue score and appearance score are calculated for each participant for each condition and the results are recorded in SPSS. Variables named “Virtue_Score”, “App_Score” and “Dental_Virtue_Score”, “Dental_APP_Score” for COVID-19 and dental pain conditions respectively. After, if virtue(appearance) score was higher than appearance(virtue) score, this meant virtue(appearance) is more important to that individual in terms of self-esteem, I put “1” to virtue(appearance) and “0” otherwise and created binary variables. So, for example, the App_Binary variable equals zero indicates the virtue score is higher, and equals one indicates the appearance score is higher. Furthermore, averages of environmentally conscious behavior (“COVID_ECO” and “Dental_ECO”), luxury brand appeal (“Luxury” and “Dental_Luxury”) and non-luxury (“Non_Luxury” and “Dental_Non_Luxury”) brand appeal are calculated for each participant for each condition and variables are created in SPSS for analysis.

Luxury Brand Appeal

My hypothesis with regards to luxury brand appeal was when mortality salience is higher, people with self-esteem coming from appearance will buy more luxurious products.

Figure 3: Bar graph showing means of luxury and non-luxury brand appeal of participants in dental pain condition

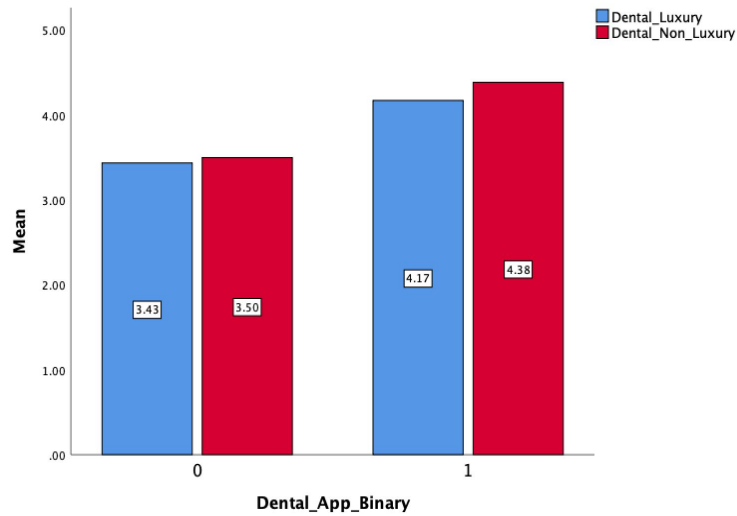
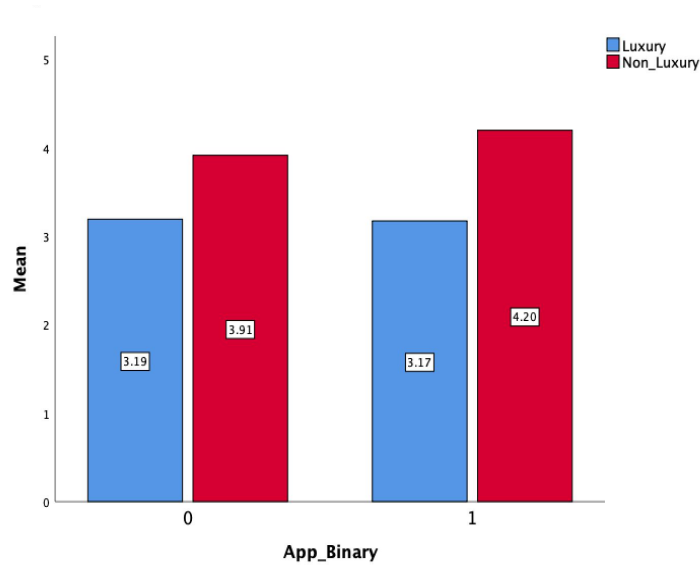


Figure 4: Bar graph showing means of luxury and non-luxury brand appeal of participants in COVID-19 condition



Data analysis resulted accordingly; When mortality salience is higher, participants scored higher in appearance choose luxury brands less. In the graph(Figure 3) you can see for participants that “Dental_APP_Binary” equals to one, mean of luxury brand

appeal is 4.17 whereas in the second graph(Figure 4) for participants that “App_Binary” equals to one, mean of luxury brand appeal is decreased to 3.17.

One-way ANOVA between groups is used when you want to test two groups to see if there’s a difference between their means. Therefore, one-way ANOVA is used to examine the difference of mean luxury brand appeal of participants scored higher on appearance for the two conditions.

Table 1: ANOVA results of luxury brand appeal score for participants scored higher on appearance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.894	1	15.894	5.297	.025
Within Groups	192.054	64	3.001		
Total	207.948	65			

As is seen in the table above, p-value = 0.025 < 0.05 meaning the mean luxury brand appeal is significantly different.

Moreover, there is no increase in non-luxury brand appeal. This proved my hypothesis wrong and created the following question: Is there a relation between appearance and luxury brand appeal?

In order to answer this question, I did a bivariate correlation test. Correlation describes the effect of two or more events occurring together and thus connected. A correlation expresses the frequency of the association or co-occurrence between variables in a single value between -1 and +1. This value that measures the strength of linkage is called the correlation coefficient, in my test Pearson Correlation.

Table 2: Correlation between appearance score and luxury brand appeal in dental pain condition

		Dental_APP	Dental_Luxury
Dental_APP	Pearson Correlation	1	.381**
	Sig. (2-tailed)		.000
	N	102	102
Dental_Luxury	Pearson Correlation	.381**	1
	Sig. (2-tailed)	.000	
	N	102	102

** . Correlation is significant at the 0.01 level (2-tailed).

As it is seen in the table above, the correlation between appearance score and luxury brand appeal has a positive correlation because Pearson Correlation equals to 0.381, and the p-value equals to zero. A positive coefficient value expresses a positive relationship between the two variables and the p-value smaller than 0.05 means this correlation is significant. Hence, I can say that there is a positive relationship between appearance and luxury brand appeal in low mortality salience condition.

Table 3: Correlation between appearance score and luxury brand appeal in COVID-19 condition

		App_Score	Luxury
App_Score	Pearson Correlation	1	.002
	Sig. (2-tailed)		.986
	N	105	105
Luxury	Pearson Correlation	.002	1
	Sig. (2-tailed)	.986	
	N	105	105

On the other hand, as is seen in the table above, the correlation between appearance score and luxury brand appeal has a positive Pearson Correlation that equals 0.002. A positive Pearson Correlation value close to zero means there is no correlation. Therefore

there has to be another reason why participants high on appearance did not appeal to luxury brands more. The results I explained creates a further question: Could the fear of death make people who value their appearance become minimalistic and do less shopping?

Furthermore, participants who scored higher on virtue seem to prefer non-luxury brands more when in higher mortality salience condition. In the graph(Figure 3) you can see for participants that “Dental_APP_Binary” equals to zero, mean of luxury brand choice is 3.43 whereas in the second graph(Figure 4) for participants that “App_Binary” equals to zero, mean of luxury brand choice is decreased to 3.19.

Table 4: ANOVA results of non-luxury appeal score of all participants scored high on virtue

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.065	1	6.065	2.765	.099
Within Groups	304.958	139	2.194		
Total	311.023	140			

Additionally the mean of non-luxury brand appeal increased from 3.50 to 3.91 showing that people high on virtue are more appealing to non-luxury brands when mortality is made more salient. As is seen in the table above, p-value = Sig = 0.099 meaning the mean non-luxury brand appeal is significantly different for significance level bigger than 0.1. Accordingly, one can say virtuous people will be more likely to choose non-luxury products in the future.

Intentions to Engage in Environmentally Conscious Consumer Behaviors

Each participant’s responses to the 5 environmentally conscious consumer behaviors were added and their average is found(since five-point scales were used for this purpose, the minimum value on this variable is 0 and the maximum is 5).

One-way ANOVA is done to environmentally conscious behavior scores for both COVID-19 and dental pain conditions.

Table 5: ANOVA results of environmentally consciousness score of participants in dental pain condition

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.025	1	.025	.038	.846
Within Groups	64.892	100	.649		
Total	64.916	101			

In the dental pain condition p-value >0.05 so the means of environmentally conscious consumer behavior scores for participants whose self-esteem is rooted from virtue and participants whose self-esteem is rooted from appearance is not significantly different in lower mortality salience condition. Two types of participants are not so different in terms of environmentally conscious behavior but participants in the virtue category are more environmentally conscious.

Table 6: ANOVA results of environmentally consciousness score of participants in COVID-19 condition

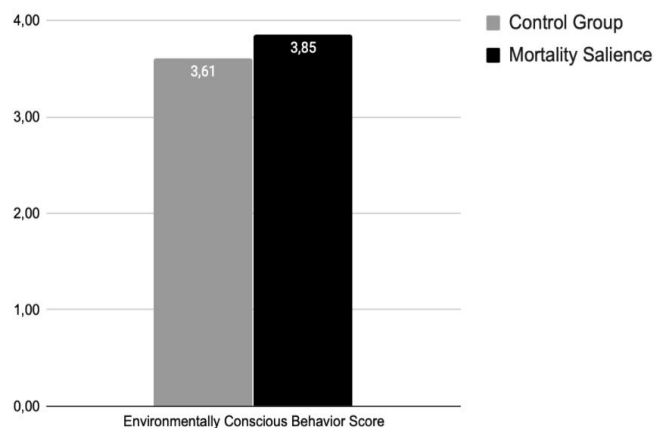
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9.503	1	9.503	14.967	.000
Within Groups	65.398	103	.635		
Total	74.901	104			

On the other hand in the COVID-19 condition p-value < 0.05. Therefore, this is a significant result showing that the two means of environmentally conscious consumer behavior for participants whose self-esteem is rooted in virtue and participants whose self-esteem is rooted in appearance are unequal for higher mortality salience condition.

Participants with higher virtue scores significantly acted more environmentally conscious.

In both conditions, virtuous participants scored higher for environmentally conscious behavior which supports the idea that virtuous customers are more engaged with eco-friendly behavior.

Figure 5: Bar graph showing mean environmentally conscious behavior score for participants scored high on virtue



Moreover, in lower mortality condition participants scored high on virtue had their mean environmentally conscious behavior score equal to 3.61 whereas in higher mortality condition participants high on virtue had their mean environmentally conscious behavior score equal to 3.85. This increase in the mean proves that the results are consistent with my hypothesis and TMT. Additionally, I used ANOVA to test the

hypothesis that the mean environmentally conscious behavior score is the same for participants scored high on virtue for the two conditions.

Table 7: ANOVA results of environmentally consciousness behavior score of all participants scored high on virtue

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.091	1	2.091	3.251	.074
Within Groups	89.392	139	.643		
Total	91.483	140			

As is seen in the table above, p-value = Sig = 0.074 meaning the result is not significant at 0.05 significance level but there is a 0.926 probability that the mean environmentally conscious behavior is different. To sum up, among individuals high on virtue as a source of self-esteem, intentions to engage in environmentally conscious consumer behaviors were higher when mortality salience was high than when it was low.

GENERAL DISCUSSION

Main findings

We can say not everyone will be infected with COVID-19 but we can't deny the fact that everyone will experience its emotional impacts. As with any other crisis, pandemic triggers the most innate fear in us, the fear of death. Negative emotions that COVID-19 creates spreads to more people and spreads faster than the virus itself. However, this fear of death can be seen in different scales for different age groups, and maybe in future research more different results can be found for different demographics.

This thesis shows, making mortality salient can have substantial effects on consumption behaviors. What we choose to consume serves as a mirror for the self and to prevent from the threat caused by COVID-19 to our healthy self, we will consume products that increase our self-esteem. This study provides general support for the TMT hypothesis that reminders of mortality increase the individual's striving for self-esteem.

Moreover, how people respond to events that make mortality more salient will depend upon which sources of self-esteem are most important and salient to each individual. In this study, we see individuals with higher virtue will choose to behave more environmentally conscious. Also, individuals with higher virtue will choose to shop more from non-luxury brands.

Furthermore, this thesis raises an important question. Is this pandemic really what the world needed and will make people more minimalistic? The results showed that people who value their appearance decreased not only their luxury brand appeal but also their non-luxury brand appeal. Does this mean people who value their looks will shop less and maybe increase their self-esteem by trying to be more physically fit or find other ways to satisfy their self-esteem domain?

Recommendations for businesses

The first and most obvious recommendation is that businesses need to be more environmentally conscious by not only producing environmentally friendly products but also making their production processes greener. Also, using this aspect in their marketing campaigns will be more crucial and contribute to their brand image.

Likewise, it is a fact that consumers may start acting minimalistic therefore sustainable products may attract more in the future. More importantly, for many minimalists, the philosophy is about getting rid of excess stuff and living life based on experiences rather than possessions. Therefore, brands should devote to a rewarding product experience or for people who want to build a business should invest in selling experiences.

Additionally, brands can focus more on not only delivering products that “make you look good” but creating a versatile brand that boosts customers’ appearance value in multiple ways. Companies should give the message that their customer is not only a customer that ends up with an expensive product but also someone who belongs to a community of people that share similar attributes and these attributes should contribute to their appearance in multiple aspects.

Limitations

Under the circumstances of lockdown, the experiment is prepared and done online. Therefore I could not control the environment of participants. There are possibilities that they might have been distracted or affected by their environment. Secondly, the

number of participants may be increased for future research to conclude more precise results.

Recommendations for future research

Further research can be done about if people experience mortality salience because of a pandemic, in this condition COVID-19. Not everyone may respond similarly to the COVID-19 crisis because not everyone will be equally upset or feel mortality salience. More links can be tried to make between mortality salience and COVID-19.

Also, mortality salience can be implemented more strongly and creatively. As it is mentioned earlier, mortality manipulation was not as strong as intended in this research. Additionally, more searches can be done to measure how long the mortality salience will be effective on consumers. Maybe they will act under mortality salience in the short term but not in the long term.

Furthermore, in the future, it might be a better idea to select an age group more specific and work on that group since in COVID-19 pandemic age has been a huge part of the media coverage and it is expected that people with different age groups act differently.

Last but not least, the scale I used to measure the domain of self-esteem is inspired by the Contingencies of Self-Worth Scale by (Crocker, Luhtanen, Cooper, and Bouvrette, 2003). I reduced the number of questions of the original scale to reduce participant fatigue since it is a voluntary experiment. I took the questions which are important for virtue and appearance, added three filler questions, and prepared my version. However, eliminating other sources of self-esteem may not be the best idea since the participants of this study may record higher in virtue or appearance but this does not mean their source of esteem is either virtue or appearance, it could be one of the other sources and this could give more useful information.

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