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**Has the COVID-19 Pandemic Made Us More Materialistic? The Effect of COVID-19 and
Lockdown Restrictions on the Endorsement of Materialism**

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Keywords: *COVID-19; Materialism; Extrinsic Goals; Mortality Salience; Consumption,
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Abstract

The COVID-19 pandemic has led to an increase in the factors that typically facilitate the endorsement of materialistic values (e.g., higher media consumption, stress and anxiety, loneliness, death anxiety, and lower moods). In this paper, we examine how contextual changes affecting the antecedents of materialism influence its advocacy with a mixed-method approach. First, a correlational study (Study 1) suggests that increases in media consumption and stress and anxiety during the pandemic predicted current levels of materialism, however these effects were limited. Second, contrary to our expectations, a longitudinal study (Study 2) shows that people's focus on money decreased during the pandemic. Last, a social media content analysis (Study 3) reveals a downward trend in users' online discourses about consumption-related behaviours, but an upward trend in brands promoting spending as a way to attain well-being. The observed effects could fuel deeper societal change in the labour market and in consumer behaviour, and have further implications for individual and societal well-being in a post-pandemic world. We recommend future interventions aimed at diminishing materialistic attitudes to examine the effects of decreasing media consumption and to explore how other factors introduced by the pandemic (e.g., a health or well-being focus) might moderate its advocacy.

Keywords: *COVID-19; Materialism; Money; Consumption; Contextual Effects; Attitude Change; Media Consumption;*

Has the COVID-19 Pandemic Made Us More Materialistic? The Effect of COVID-19 and Lockdown Restrictions on the Endorsement of Materialism

Introduction

Materialism, understood as beliefs that link wealth and consumption with personal achievement and happiness (Richins & Dawson, 1992), has been extensively linked to lower levels of well-being (Dittmar, Bond, Hurst, & Kasser, 2014; Moldes & Ku, 2020) and higher rates of compulsive buying (Dittmar, 2005; Mueller et al., 2011; Roberts, Manolis, & Tanner, 2006). Research shows that the advocacy of materialistic values is influenced by higher *media consumption* (e.g., Kasser, Ryan, Couchman, & Sheldon, 2004; Shrum, Burroughs, & Rindfleisch, 2005), *personal* and *social insecurities* (e.g., Kasser, et al., 2004; Pieters, 2013), and *adverse emotions* (e.g., Donnelly, Ksendzova, Howell, Vohs, & Baumeister, 2016). Moreover, it has been suggested that in consumer-oriented societies, mortality reminders intensify materialistic orientations and desires (Arndt, Solomon, Kasser, & Sheldon, 2004). Lockdown restrictions introduced in most countries to control the spread of the COVID-19 virus in early 2020 substantially altered these factors. For example, early figures suggest that people spent 20% more time watching broadcast TV and 27% more time on streaming platforms (GlobalWebIndex, 2020). Moreover, across different countries including the United Kingdom (UK), there has been a substantial increase in reported rates of anxiety and depression (Commonwealth Fund, 2020), a rise in loneliness (ONS, 2021a), and a decrease in well-being, happiness, and a sense of self-worth (Fujiwara et al., 2020). In addition, the COVID-19 outbreak has consistently featured in news headlines globally, with narratives around issues of “illness”, “death”, and “survival” making health and health-related behaviours a frequent topic of conversations. Consequently, people have more frequently encountered situations in which they have been reminded of their own mortality.

Given this context, it is possible that the societal and behavioural changes that “stay-at-home” restrictions have brought about, and the recurrent mortality reminders may be boosting the endorsement of materialistic values. Recent research conducted in China suggests that the perception of COVID-19 as a life-threatening illness may facilitate the endorsement of materialistic beliefs (Song, Jin, Gao, & Zhao, 2020), and that materialism mediates the link between the severity of the health emergency and impulsive consumption tendencies (Li, Zhao, Huang, & Li, 2020). However, no prior studies have looked at possible changes in materialistic values during the COVID-19 pandemic or have holistically looked at how behavioural and emotional changes experienced due to lockdown restrictions may be contributing to this possible rise in materialism.

Consequently, the present research aims to identify the role of different behavioural and affective changes brought by the COVID-19 pandemic in the endorsement of materialism, and to examine possible changes in attitudes towards money and consumption. This research will increase our understanding of the impact that contextual effects have on value changes by examining how naturally occurring alterations in the causal factors identified in the literature will impact its advocacy. Therefore, the present work contributes to the marketing and psychology literature by deepening our understanding of the widely researched construct of materialism. Moreover, by identifying the effect and weight that changes in the causal factors of materialism have on its endorsement, this research elicits potential factors to prioritise in interventions aimed at reducing dysfunctional consumption and/or to enhance well-being.

What Drives People towards Materialism?

Materialism, defined as “*individual differences in people’s long-term endorsement of values, goals, and associated beliefs that center on the importance of acquiring money and possessions*”

that convey status” (Dittmar, Bond, Hurst, & Kasser, 2014, p. 880) is thought to be facilitated by a multiplicity of factors. Beyond early socialization processes experienced in childhood (e.g., Banerjee & Dittmar, 2008; Richins & Chaplin, 2015), the literature has identified *media consumption* (e.g., Kasser et al., 2004; Shrum, Burroughs, & Rindfleisch, 2005), individual and social *psychological insecurities* (e.g., Kasser, et al., 2004), *negative emotions* (e.g., Donnelly, Ksendzova, Howell, Vohs, & Baumeister, 2016), and *mortality reminders* (e.g., Kasser & Sheldon, 2000) as elements that contribute to the advocacy of materialistic values. In the following sections, we review each of these factors and their links to materialism.

Media Consumption and Materialism

Implicit and explicit associations linking consumption and wealth with happiness and success, along with messages highlighting the importance of buying, are embedded not only in advertisements but also in a variety of media content, ranging from reality TV (e.g., *The Real Housewives*) and fictional movies (e.g., *The Wolf of Wall-Street*), to lifestyle magazines and social media fashion influencers. These “rags-to-riches” stories that often idealise wealthy, imaginary, and happy shoppers’ narratives have become embedded in the media and influence the worldview of millions of people. For example, a recent meta-analytic report showed that individuals exposed to materialistic messages, such as fashion and luxury advertisement or rags-to-riches stories, had a higher advocacy of materialistic values than control groups (Moldes & Ku, 2020). Indeed, TV consumption has been found to distort mental representations of the world as frequent television watchers were found to estimate a higher proportion of affluent people within a population (O’guinn, & Shrum, 1997). These distortions on the perception of the distribution of wealth could also make individuals feel relatively worse off than others, a belief that has been found to boost the endorsement of materialistic values (Zhang, Tian, Lei, Yu, & Liu, 2015). Moreover, the idealised lifestyles and “perfect” bodies depicted by the media (Dittmar, 2008) drive individuals to

engage more often in upward social comparisons, which have also been found to increase materialistic attitudes and behaviours (Zheng, Baskin, & Peng, 2018). Therefore, given the link between media consumption and the advocacy of materialistic values previously found in the literature, we would expect that increases in media exposure due to lockdown restrictions will lead to an increase in materialistic values.

Individual and Social Insecurities and Materialism

Another key factor in the endorsement of materialism are individual and social insecurities (Kasser, et al., 2004) that emerge in environments and through experiences that do not assist individuals in fulfilling their basic psychological needs of competence, relatedness, and autonomy (Ryan & Deci, 2000). Supporting this claim, experimental research has found that manipulations of self-doubt and self-esteem lead to higher levels of materialism (Chan & Arkin, 2002; Chaplin & John, 2007). Furthermore, materialism has been associated with higher social interaction anxiety (Kashdan & Breen, 2007), and with higher peer rejection in both children (Banerjee & Dittmar, 2008) and adult populations (Jiang, Zhang, Ke, Hawk, & Qiu, 2015). Along the same lines, longitudinal research suggests that loneliness leads to higher materialism, which ironically also results in higher loneliness (Pieters, 2013). Indeed, the link between materialism and loneliness has been found to be present in both Western (Pieters, 2013) and Eastern populations (Loh, Gaur, & Sharma, 2021). Therefore, given the association between individual and social insecurities and materialism, we would expect that a rise in social isolation due to lockdown restrictions will lead to an increase in materialistic values.

Affective and Cognitive Well-being and Materialism

It has been suggested that materialism and consumption are endorsed by individuals as a coping mechanism, in order to lift one's mood and to escape negative moods (e.g., Atalay &

Meloy, 2011; Donnelly, Ksendzova, Howell, Vohs, & Baumeister, 2016). Extensive evidence suggests that materialism is associated with lower life satisfaction (e.g., Felix & Garza, 2012; Frost & Frost, 2000; Norris & Larsen, 2011; Wong, Rindfleisch, & Burroughs, 2003), a higher negative affect (e.g., Hudders & Pandelaere, 2012; Kasser et al., 2014; Romero, Gomez-Fraguela, & Villar, 2012), and higher stress and anxiety levels (e.g., Burroughs, & Rindfleisch, 2002; Niemiec, Ryan, & Deci, 2009). Therefore, given the negative relationship between a person's well-being and the endorsement of materialistic values, we would expect that a decline in mood and an increase in stress and anxiety due to the COVID-19 pandemic will lead to a rise in materialistic values.

Death Anxiety and Materialism

Terror management theory (TMT) postulates that after encountering information that make one's mortality salient (MS), individuals are more likely to engage in behaviours to increase their self-esteem and protect their worldviews (Greenberg, Solomon &, Pyszczynski, 1997). Therefore, TMT hypothesizes two mechanisms that lead to materialism after a MS exposure: one through seeking self-enhancement and the other through the reinforcement of cultural worldviews, with both pathways thought to have been enabled by consumer culture (Arndt, Solomon, Kasser, & Sheldon, 2004). Indeed, mortality reminders have been found to increase the value given to money (Zaleskiewicz, Gasiorowska, & Kesebir, 2015), boost one's intentions to spend money (Fransen, Fennis, Pruyn, & Das, 2008), and intensify behaviours that seek individual gains (Kasser & Sheldon, 2000). Moreover, death-anxiety and fear have been both linked to materialistic attitudes (Jin & Ru, 2021; Longmire, Chan, & Lawry, 2021). In addition, within the context of the COVID-19 pandemic, a recent study found a small to medium correlation between materialism and a composite measure looking at the perceived risk of contracting the virus, fear about the virus, and perceived social isolation (Song, Jin, Gao, & Zhao, 2020), suggesting that perceived self-threat of

the virus and social isolation during the COVID-19 outbreak are associated with higher materialism. However, the distinct effect that each predictor had on materialism was not examined. Given the link between death anxiety and the endorsement of materialistic values found by prior literature, we would expect that higher perception of COVID-19 as a life threat will be associated with higher materialism.

The Present Research

The present research examines how behavioural and affective changes brought by the COVID-19 pandemic may be influencing people's materialistic value orientations. Specifically, in Study 1, we investigate the effects that an increase in media consumption, social isolation, negative affect, stress and anxiety, and the perceived self-threat of COVID-19 have on an individual's current endorsement of materialism (see Figure 1). Based on past research, we expect that increases in these factors will be positively associated with materialistic value orientations:

Hypothesis 1: An increase in a) media consumption, b) social isolation, c) negative affect, d) stress and anxiety, and e) a heightened life threat due to the COVID-19 pandemic and lockdown restrictions will be positively linked to materialism.

Furthermore, given the increase in the factors that have been found to contribute to the advocacy of materialism during the COVID-19 pandemic, we also predict an overall increase in the actual endorsement of materialistic attitudes during the COVID-19 pandemic (Study 2):

Hypothesis 2: People's materialistic attitudes will have increased during the COVID-19 pandemic.

Last, to follow up on Study 2, an exploratory study was designed to further examine changes in the use of consumption as a result of the COVID-19 pandemic. Therefore, we carry out a

content analysis of online data comparing two timeframes: pre-pandemic and during the pandemic (Study 3).

Study 1

Study 1 was designed to test H1, and thus examines the links between materialism and changes resulting from COVID-19 and lockdown restrictions in the factors that have been identified as contributing to materialism, including media consumption, social isolation, negative affect, stress and anxiety, and the perception of COVID-19 as a life threat.

Procedure and Sample

A priori power analyses using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) recommended a minimum of 726 participants for .85 power (given $\alpha = .05$) for a small effect size ($f^2 = 0.02$) with nine predictors (five factors: media consumption, social isolation, lower moods, stress and anxiety, and perceived threat; and four control variables: age, sex, financial impact of COVID-19, and subjective socio-economic status). Therefore, 741 UK residents were recruited in early June 2021 through an online subject pool (Prolific) to complete a four-minute questionnaire in exchange for a small monetary reward. Participants' age ranged between 18 and 79 ($M = 34.90$, $SD = 11.63$) and 71.8% were females. Most participants (86.6%) selected White as their ethnic origin, 6.4% were Asian, 2.2% were Black, and 4.5% selected Mixed. Moreover, 51.7% of the respondents indicated they were full-time employed, 19.6% part-time employed, 16.6% full-time students, while 18.1% selected Others and described themselves as business owners, freelancers, homemakers, retired, disable, or unemployed.

Measures

Materialism. We measured materialism using the 9-items Materialistic Value Scale (Richins, 2004) in which participants rated statements (e.g., “*I admire people who own expensive homes, cars, and clothes*” or “*Buying things gives me a lot of pleasure*”) on a 5-point scale ranging from 1 = strongly disagree to 5 = strongly agree (Cronbach’s $\alpha = .82$). This measure is multifaceted, as it includes not only the centrality that individuals give to money but also how respondents link money and possessions with success and happiness.

Changes in media consumption. We asked participants to indicate if their media consumption had increased or decreased within the past six months with 4-items looking at traditional TV consumption, online streaming platforms (e.g., Netflix or Disney+), online video content (e.g., YouTube or TikTok), and advertisements on a 7-point scale ranging from -3 = a significant decrease to 3 = a significant increase, with 0 = no change ($\alpha = .70$).

Social isolation due to COVID-19 and lockdown. Two items were developed to measure participants’ social isolation (“*During the COVID-19 outbreak... I have been missing social contact*” and “*... I have felt more socially isolated than before*”). Participants had to rate their level of agreement on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree ($\alpha = .77$).

Negative affect due to COVID-19 and lockdown. Three items were developed to measure participants’ negative emotions during the outbreak (“*During the COVID-19 outbreak... I’ve been feeling more negative emotions than before*,” “*... my mental health has deteriorated*,” and “*...I have felt lower moods than before*”). Participants had to rate their level of agreement on a 7-point scale ($\alpha = .91$).

Stress and anxiety due to COVID-19 and lockdown. Two items were developed to measure participants’ stress during the pandemic (“*During the COVID-19 outbreak... my stress levels have*

increased” and “... I been feeling more anxious than before”). Participants had to rate their agreement on a 7-point scale ($\alpha = .84$).

Perception of COVID-19 as a life threat. The perceived threat to one’s life posted by COVID-19 was assessed using two items (“Do you think that the spread of the COVID-19 virus is a threat to your life and health?” and “Do you think that the spread of the COVID-19 virus is a threat to the life and health of your loved ones?”) on a 5-point scale ranging from 1 = not at all to 5 = extremely ($\alpha = .80$).

Financial impact of COVID-19 and lockdown. Two items were developed to assess the economic impact of the COVID-19 outbreak (“During the COVID-19 outbreak... I have been able to save more money [reversed], and “... my financial situation has worsened”). Participants rated their agreement on a 7-point scale ($\alpha = .74$).

Subjective economic status (SES). Participants were asked to rate their financial situation by responding to the question “Comparing yourself with other people in your country, how would you describe your (or family) financial situation?” on a 7-point scale that ranged from 1 = very poor to 7 = very rich.

Demographics. Data on the participants’ sex, age, race, occupation, and nationality was collected.

Results and Discussion

We first calculate the zero-order correlations using the open statistical software R (see Table A in supplementary materials) to assess the direct effects brought about by COVID-19 and lockdown restrictions in media consumption, on social isolation, negative affect, stress and anxiety, and the perception of COVID-19 as a life threat on a participant’s current endorsement of

materialism. These analyses revealed that current levels of materialism were positively correlated with changes in media consumption ($r = .24$), social isolation ($r = .16$), negative affect ($r = .19$), and stress and anxiety ($r = .20$). However, we did not find a direct relationship between materialism and the perception of COVID-19 as a life threat.

Subsequently, to understand the role that each of the changes in the five factors played in a participant's current level of materialism, a hierarchical linear regression was performed with the materialistic values scale as the dependent variable, subjective economic status, age, gender, and the economic impact of COVID-19 as control, and the changes in the factors identified by prior literature as predictors (see Table 1). First, we introduced the control variables of age, gender, and socioeconomic status to control for the participant's demographic characteristics. This model accounted for 10.32% of the variance in materialism and revealed that only age was significant at predicting materialism, $\beta = -.26$, $p < .001$, bootstrapped 95% CI [-.02, -.01] showing that younger respondents had a higher advocacy of materialistic values. In the second step, we introduced financial impact of COVID-19 to examine economic contextual effects. This variable was significant at predicting materialism, $\beta = .13$, $p < .001$, bootstrapped 95% CI [.03, .09]. Model comparisons showed that the second model explained 2.14% more variance in materialistic values and was significantly better than the first one. Finally, the variables looking at increases in media consumption, social isolation, negative moods, stress and anxiety, and the perception of COVID-19 as a life threat were introduced as predictors. The results revealed that only increases in media consumption, $\beta = .15$, $p < .001$, bootstrapped 95% CI [.06, .18], and in stress due to COVID-19, $\beta = .14$, $p = .045$, bootstrapped 95% CI [.00, .13], were significant predictors of materialism. This third model was significantly better than the second and increased in 4.18% the variance explained in materialism. To assess multicollinearity, given some significant correlations observed among the predictor variables introduced in the model (see Table A in the supplementary materials), we

requested the variance inflation factor (VIF) and the tolerance statistic (Field, Milles, & Field, 2012). VIF values were below the cut-off point of 10 (Bowerman & O'Connell, 1990) and the tolerance was above 0.2 (Menard, 1995), suggesting that multicollinearity was not a cause of concern.

Furthermore, to understand the unique contribution of each predictor and identify possible suppressor effects, we conducted a commonality analysis in R (Kraha, Turner, Nimon, Zientek, & Henson, 2012) using the package *yhat* (Nimon, Lewis, Kane, & Haynes, 2008). The analyses suggested that age was the variable that contributed to more unique variance (37.35%), followed by changes in media consumption (12.93%), and that the common effect for both variables contributed to substantial shared variance (11.74%). Other noteworthy common effects observed included media consumption with social isolation (1.32%) and with stress and anxiety (1.16%). These results suggest that media consumption partially operated in combination with other factors in the model. Moreover, commonality analyses also revealed that social isolation and negative affect, despite not being significant predictors in the hierarchical regression, contributed to the regression equation uniquely (1.15% and 0.54%, respectively), and also in combination with other factors (e.g., social isolation shared 1.32% of variance with media consumption; for a detailed account of the commonality analysis see the supplementary materials uploaded to <https://osf.io/bn4dm/>). In addition, commonality analyses revealed that despite the high correlation between negative affect and stress and anxiety ($r = .86$), both variables only had a small common effect in the regression (0.43%), highlighting its independence as a predictor of materialism. Finally, commonality coefficients showed that subjective economic status was a suppressor for both the financial impact of COVID-19 (-1.57%) and age (-0.78%), suggesting that its inclusion strengthened the effects of age and financial impact of COVID-19 observed in the model.

Overall, these results showed that changes in all factors were positively linked to materialism, with the exception of the perceived life threat of COVID-19. However, only increases in media consumption, and higher stress and anxiety due to COVID-19 predicted people's endorsement of materialism when all factors were tested using a holistic approach and after accounting for demographic and other contextual effects. Moreover, it is worth noting that alterations in these factors due to the pandemic only accounted for a small variance in the model, suggesting that changes in the antecedents of materialism as a result of the pandemic may only have a small impact on people's materialistic values.

Study 2

Following up on Study 1, Study 2 tested H2 by assessing possible value changes due to the COVID-19 pandemic and lockdown restrictions in the UK. The first data collection (Time 1) took place in February 2020 where 200 UK-based participants were recruited through an online subject pool (Prolific). Fifteen months later (Time 2), the same participants were invited to take part in a second questionnaire, which was completed by 87 of the invited participants (44%).

Sample

Time 1 (T1) Sample. T1 sample ($N = 200$) was composed of 69% female, age ranging from 18 to 67 years old ($M = 24.95$, $SD = 7.97$). 84.5% of the respondents selected White as their ethnic origin, with 7.5% Asian, 3.5% Black, 2% Mixed, and 2% Other. Moreover, 61% of the participants indicated that they were full-time students, 18.5% full-time employed, 6.5% part-time employed, 6% part-time students, 2.5% unemployed, 1.5% homemakers or retired, and 5.5% preferred not to say.

Time 2 (T2) Sample. T2 sample ($n = 87$) was composed of 71.3% female, age ranging from 18 to 67 years old ($M = 26.36$, $SD = 9.45$). 86.2% of the respondents selected White as their ethnic

origin, with 6.9% Asian, 3.4% Black, 2.3% Mixed, and 1% Other. Moreover, 59.5% indicated that they were full-time students, 20.2% full-time employed, 6% part-time employed, 9.5% part-time students, 1.2% unemployed, 3.6% homemakers or retired, and 3.4% preferred not to say.

Attrition. A MANOVA was used to compare the participants that completed the questionnaire during Time 1 and Time 2 with the participants that only completed Time 1. This revealed non-significant differences in any of the scales and subfactors collected at Time 1 (all $ps > .05$).

Measures

Time 1¹

Life aspirations. Participants' goals were assessed using 18 items (e.g., “*It is important to me that I will work to make the world a better place*” or “*It is important to me that I will be financially successful*”) taken from the Aspiration Index (AI: Kasser & Ryan, 1993) looking at the importance given to the life goals of money (AI-M $\alpha = .84$), image (AI-I $\alpha = .80$), popularity (AI-P $\alpha = .77$), self-acceptance (AI-S $\alpha = .67$), community orientations (AI-C $\alpha = .78$), and affiliation (AI-A $\alpha = .77$). Higher scores indicated that a higher importance was given to these goals.

Experiential spending preference. We also measured the participants' material versus experiential spending preference (Howell, Pchelin, & Iyer, 2012) using four items (e.g., “*Some people generally spend their money on a lot of different life experiences (e.g., eating out, going to a concert, traveling, etc.). They go about enjoying their life by taking part in daily activities they personally encounter and live through. To what extent does this characterization describe you?*”).

¹ Time 1 data was part of a larger project on consumption and well-being. Therefore, Time 1 data also included other scales such as Life Satisfaction that will not be discussed in this report. The full range of materials used for the data collection for this study can be reviewed in the Methodological Appendix of this manuscript. Note that the order of administration of the measures was the same for Time 1 and Time 2.

Higher scores indicated a higher preference for experiential consumption over material spending (Exp-Mat $\alpha = .72$).

Demographics. We collected data on age, sex, ethnic background, and occupation.

Time 2

Similarly to Time 1, in Time 2 we assessed participants' goals with 18 items taken from the Aspiration Index (money $\alpha = .89$, image $\alpha = .76$, popularity $\alpha = .74$, self-development $\alpha = .69$, intimate relationships $\alpha = .75$, and community orientations $\alpha = .84$), and the preference for experiential purchases ($\alpha = .73$). Moreover, as in Study 1, we also collected the 9-items MVS ($\alpha = .79$).

Results and Discussion

A series of paired samples t-test was used to assess the participants' changes in the endorsement of different life goals between T1 and T2. The results revealed non-significant changes in the importance given to self-development, affiliation, community, image, and popularity (all $ps > .05$). However, there was significant difference in the importance that participants gave to the goal of financial success between T1 ($M = 5.41$, $SE = 1.34$) and T2 ($M = 4.99$, $SE = 1.27$), $t(86) = 4.21$, $p < .001$, Hedges' $g = .32$, bootstrapped 95% CI [.21, .61]. Moreover, there were no significant differences between the participants' experiential spending preference between T1 ($M = 4.24$, $SE = 1.17$) and T2 ($M = 4.14$, $SE = 1.19$), $t(86) = .729$, $p = .468$, bootstrapped 95% CI [-.14, .33], suggesting that participants did not change in their material-experiential consumption orientation. Post hoc power analyses calculated with the software G*Power, which introduced the effect size ($d_z = 0.47$) and correlation between variables $r = 0.75$, suggested a power of .99 (given $\alpha = .05$).

Study 2 compared attitudes towards money and experiential versus material consumption preference before and during the pandemic, revealing that the importance given to money by participants had decreased: this contradicts our initial prediction (see Figure 2)². Furthermore, no change was observed in participants' tendencies towards material versus experiential consumption.

Study 3

Study 3 was an exploratory study designed to expand the insights gained from Study 2 by collecting publicly available online data on reported shopping behaviours to examine possible changes in how individuals use consumption during the COVID-19 pandemic. Recent reports have shown that the outbreak of COVID-19 and the lockdown restrictions have increased the level of negative emotions experienced by individuals (Commonwealth Fund, 2020; Fujiwara et al., 2020; ONS, 2021), and research suggests that people engage in consumption activities to cope with negative or adverse emotions (Donnelly et al., 2016). Moreover, materialism has often been linked with compulsive buying (e.g., Dittmar, 2005). Therefore, we were interested in exploring possible increases of “retail therapy” shopping during the COVID-19 pandemic, which is spending behaviour carried out as a way to deal with undesired emotional states.

² It is worth noting that both measures, MVS and AI have been widely used by prior research on materialism (Dittmar et al., 2014). However, we acknowledge that they may be capturing different dimensions of materialism. Therefore, further correlational analyses were performed with the T1 and T2 data to understand the relationships between the materialism measures (see Table A in Supplementary Materials). The results suggested that MVS at T2 was positively associated with the variables measuring the importance given to the extrinsic goal of money at both T1 and T2 ($r = .52$ and $r = .53$, respectively) showing that the importance given to money (AI) and the multifaceted measure of MVS are strongly correlated. Moreover, there was a negative correlation between MVS and the participant's preference for experiential consumption at both T1 and T2 ($r = -.38$, $r = -.35$, respectively), supporting prior work that showed a negative link between materialism and the experiential consumption preference scale (Howell, Pchelin, & 2012).

Method

We conducted a content analysis on Twitter of Tweets containing the hashtag “#retailtherapy”. We chose this hashtag, because it reflects shopping behaviours for the purpose of “lifting oneself up” (Atalay & Meloy, 2011). We deemed this hashtag relevant to capturing any changes in shopping behaviours in the context of a global pandemic (Donthu & Gustafsson, 2020), and because a single unit for data retrieval and analysis ensures consistency in data interpretations (Humphreys & Wang, 2018; Kassarian, 1977). The data were collected during two time periods each accounting for 462 days of Tweets: January 2018 to March 2020, when COVID-19 was officially declared a global pandemic (WHO, 2020), and March 2020 to June 2021. This allowed us to detect and compare any changes in consumption as a coping mechanism displayed by Twitter accounts in both the pre-pandemic period versus during the COVID-19 pandemic.

Data analysis

Using Twitter’s advanced search function, 163 Tweets in English were manually downloaded containing the hashtag “#retailtherapy”. Given that the purpose of this study was to uncover any trends or changes in how people use consumption communicated via Twitter, the Tweets were pre-screened for those containing a consumption object of discussion (e.g., a satisfactory shopping experience, purchasing a new item, promoting retailer discounts). A total of 10 Tweets did not meet this eligibility criterion and were excluded from further analysis leading to a final dataset of 153 Tweets: 97 Tweets in the pre-COVID-19 pandemic period and 56 Tweets in the during-COVID-19 pandemic period.

A codebook was developed inductively (see Table 2), following Krippendorff’s (2018) prescriptions on developing a coding manual. In other words, the Tweets were analysed systematically to generate preliminary data-driven codes across the entire dataset based on

identifying a feature in the data that related to a consumption object. Once the full dataset was coded, unifying features and similarities between codes began to emerge and these patterns were collated into the final codes. To ensure internal homogeneity within the constructed codes and consistency in data analysis, a second researcher coded 50% of the dataset independently using the codebook. The independent data analyses were subsequently compared, and any differences were discussed until a satisfactory level of agreement was reached. The inter-rater reliability index ($I_r = .94$) calculated using proportional agreement (Rust & Cooil, 1994) suggested an acceptable level of agreement and reliability. The final codes contained a code label, a description, the account that posted the Tweet, and an illustrative data excerpt, as shown in Table 3.

Results and Discussion

From the content analysis, we were able to construct five distinctive codes relating to the hashtag “#retailtherapy” and to corresponding changes in the use of consumption: *shopping experience*, *brand promotion*, *shopping as a coping mechanism*, *over-shopping/over-spending*, and *social shopping* (see Table 3). Most of these codes were derived from personal Twitter accounts (i.e., shopping experience, over-shopping/over-spending, and social shopping), one code was obtained from Tweets shared by both brand and personal accounts, (i.e., shopping as a coping mechanism), and one code was derived from brand Twitter accounts exclusively (i.e., brand promotion).

The results from the content analysis suggested an overall decrease in the use of the hashtag “#retailtherapy” in during the COVID-19 pandemic. These findings were corroborated by an examination of the phrase “retail therapy” on Google Trends³ from both before and during the COVID-19 pandemic periods. These data indicated that in the pre-pandemic period there were

³ <https://trends.google.com/trends/explore?date=2018-05-01%202021-06-17&geo=GB&q=retail%20therapy>

2,019 searches on Google for this phrase, with an average of 4.37 searches per day, while during the pandemic the searches decreased to 1,170 with an average of 3.21 searches per day, suggesting a downward trend.

The analyses revealed that the two most frequently occurring codes were related to users' shopping experiences and brand promotion on Twitter, both of which are comprised of online and offline sub-categories. Shopping as a coping mechanism represented another distinctive code whereby users and brands Tweet about shopping as a way to manage stress or improve one's well-being. Over-shopping/over-spending referred to Twitter users engaging in their own reported self-indulgent shopping behaviours and spending. The final and least frequently occurring code was social shopping, which is used by Twitter users to communicate the relational aspect of retail shopping (see Table 4).

When looking at the different uses of the hashtag "#retailtherapy", we observed that Tweets referring to "shopping as a coping mechanism" by both individual and brand accounts increased during the COVID-19 pandemic period, and this slight increase was more noticeable for well-known brands. This observation suggests that brands increasingly engaged in promoting shopping as a way to improve one's emotional well-being or to reduce stress. In relation, it is worth noting that recent research suggests that consumers are prioritising more time for well-being (Accenture, 2020), and brands appear to reflect this trend in their online promotional communications (Balis, 2020). However, the results indicated that Tweets about over-spending and/or over-shopping decreased. Moreover, the results from the content analysis also showed a decrease in user Tweets about offline shopping experiences in the second period (during-COVID-19 pandemic). Arguably, this downward trend in offline consumption observed in fewer Tweets was due to store closures during the COVID-19 pandemic, thus preventing consumers from engaging in offline shopping experiences (Donthu & Gustafsson, 2020). By contrast, online shopping experiences remained

unrestricted, which may have led to an upward trend in brand promotion Tweets about these (Forbes, 2020). Relatedly, the findings revealed that in the second period brands promoting their offline channels decreased, while the promotion of their online shopping channels increased. We also observed minor downward trends in users Tweeting about their online shopping experiences and social shopping during the COVID-19 pandemic period. These trends are consistent with recent research findings that highlight consumers increasingly moving away from in-store to online shopping, while brands are prioritising online sales and communication channels over offline ones (Knowles et al., 2020).

General Discussion

In this paper, we challenge the underlying assumptions of the materialistic values literature by examining how changes in its antecedents provoked by a naturally occurring disruptive context have affected its endorsement. Therefore, the present research examines changes in attitudes towards money and consumption during the COVID-19 pandemic and identifies the role and weight that different alterations in these underlying factors have had. This work contributes to the literature on materialistic values by determining how contextual effects altering its antecedents affect its advocacy. We also elicit new avenues for further research by seeking to identify factors that could be used in future interventions aiming to reduce the advocacy of materialism. Overall, our results suggest that contextual effects due to a global health crisis that have altered the roots of materialism only account for small variations in its advocacy. In fact, and contrary to our expectations, we observe a decrease in the importance individuals place on money, suggesting that the COVID-19 outbreak has triggered changes in people's values in the opposite direction to that predicted by theory.

The results from a holistic model containing the factors identified by prior literature as facilitators of materialism (Study 1) shows that increases in media consumption and stress and anxiety due to the pandemic were associated with higher materialistic values. These findings are consistent with prior literature showing that materialism is facilitated by higher media consumption and stress and anxiety (e.g., Burroughs, & Rindfleisch, 2002; Kasser, Ryan, Couchman, & Sheldon, 2004; Niemiec, Ryan, & Deci, 2009; Shrum, Burroughs, & Rindfleisch, 2005). Nevertheless, despite the fact that increases in social isolation and negative emotions were found to be positively correlated with the advocacy of materialism, these factors were not found to be significant as predictors of materialism when tested along with other elements. These findings suggest that changes in these factors due to a disruptive situational context may have limited influence in affecting an individual's advocacy of materialistic values. Furthermore, the perception of COVID-19 as a life-threatening illness does not show any effect on the current levels of materialism. These results contrast with recent research examining the impact of COVID-19 on materialism in China, which used a composite measure including perceived risk of contracting the virus, fear about the virus, and perceived social isolation (Song, Jin, Gao, & Zhao, 2020), plus prior work looking at general feelings of death-anxiety and fear (e.g., Fransen, Fennis, Pruyn, & Das, 2008; Longmire, Chan, & Lawry, 2021; Zaleskiewicz, Gasiorowska, & Kesebir, 2015). However, our results are aligned with research that does not find a link between a mortality threat induced by a COVID-19 MS and a person's intention to engage in unhealthy compensatory eating (Ulqinaku, Sarial-Abi, & Kinsella, 2020). Therefore, there is a need to further examine the effects of a global health crisis as a cause of MS: it is possible that a pandemic situational death threat such as COVID-19 may also evoke group identities and social norms, such as common faith or collective solidarity found in emergency and disaster scenarios (Drury, 2018). This, therefore, counteracts the effects that would have been expected after a traditional MS induction.

Moreover, contrary to our expectations, Study 2 shows that there has been a decrease in the importance that individuals have placed on economic resources during the COVID-19 outbreak, despite an increase in the factors that facilitate the endorsement of materialism. These results suggest that it is possible that other forces, such as a higher prioritising of personal health and well-being (Accenture, 2020), or the emergence of collective social identities that promote social solidarity and cooperation previously observed in emergency crises and environmental disasters (Drury, 2018) may be diminishing the focus on material and economic resources. These results demonstrate a need to explore further potential moderators, such as health appreciation or social cooperation, in the relationship between the factors identified as facilitators of materialism and its endorsement, as this could support the development of future interventions aimed at tackling dysfunctional or excessive consumption patterns. Furthermore, even though lockdown restrictions and “stay-at-home” recommendations limited consumer spending choices and shifted habits towards material consumption,⁴ we do not find a change in the preference for material spending over experiential consumption. In fact, it is possible that the increase in negative affect may partially be a consequence of frustrated experiential spending due to lockdown restrictions, given that experiential consumption has been found to bring more happiness (Van Boven & Gilovich, 2003) and to improve one’s self-esteem, sense of uniqueness, and relatedness (Moldes et al., 2019) than material purchases.

Finally, Study 3 shows that there has been an overall downward trend in consumption and overspending reported by users in social media providing further support to the claim that materialism may have decreased during the pandemic. Nevertheless, we observed an increase in

⁴UK consumers spent less in activities such as travel, going out, or beauty services (Statista, 2020a), but more on tangible material items such as home entertainment, hobbies, or household items (Statista, 2020b), because hospitality venues, beauty salons, movie theatres, and most live entertainment were closed in the UK from March 2020 to July 2020 and again from December 2020 to April 2021.

brands promoting shopping as a coping mechanism and consumption via their online channels (as opposed to promoting offline channels in the pre-pandemic period). This suggests a continued sales and marketing push during the COVID-19 pandemic and an increase in media portrayals of consumption as a way to achieve well-being.

Our work suggests that the COVID-19 pandemic has altered people's attitudes towards money in ways that could lead to deeper societal changes in a post-pandemic world. For example, aligned with our findings, an increase in job resignations in the US and the UK has been observed, potentially fuelled by people's reflections on their life priorities during the COVID-19 outbreak (Christian, 2021; Ku, 2021; ONS, 2021b). Moreover, this reconsideration of priorities might be also manifested in other ways, for example in lessened consumer demand for conspicuous consumption or luxury goods. In addition, the disruptive nature of the COVID-19 pandemic required retailers to transition their service and product provision to online channels, while forcing consumers to transform their consumption habits and patterns (McKinsey, 2020). Given the significant nature of these operational and behavioural transformations, it is likely that they will stay in effect in a post-pandemic world. Finally, we observed more frequent posts on social media encouraging shopping and spending behaviours as a way to relieve stress or improve one's mood. Over time, this could lead to an increase in materialistic attitudes and contribute to lower well-being because higher exposure to messages promoting consumption as a coping mechanism predicts a higher internalization of materialistic attitudes, leading to lower individual and societal well-being (Moldes & Ku, 2020).

Limitations and Further Research

Study 1 highlights that out of the antecedents examined, media consumption is the most relevant factor in predicting people's current levels of materialism, which also works in

combination with other elements to facilitate the advocacy of materialistic values. Therefore, future research seeking to develop interventions should examine the long term effects of reducing media consumption on diminishing materialistic focus. Study 2 and Study 3 compared data collected before and during the COVID-19 pandemic. However, we are unable to determine the permanence of the changes observed in people's values and in brands' online marketing strategies. Future research can expand on our findings by examining the perpetuation and consequences of the changes observed here. Furthermore, it is worth noting that Studies 1 and 2 were conducted in the UK. Therefore, further cross-cultural research is needed, as it is possible that the findings reported could have been affected by country-specific social discourses (e.g., around health, family, well-being, etc.) in the media and/or society. Along the same lines, future studies should examine other factors that were introduced or changed during the pandemic, such as a higher focus on health, or cooperation and solidarity that often surface during emergency situations. These elements may have counterbalanced the effects that a rise in the factors previously found to facilitate materialism would have predicted outside of a health crisis.

Finally, further research could also investigate the long-term effects of the COVID-19 pandemic and lockdown restrictions on the advocacy of materialism in younger populations, since research suggests that higher material expenditure in childhood/adolescence is linked to higher materialism in adulthood (Richins & Chaplin, 2015). Therefore, it is possible that children may not have only increased their TV consumption during the pandemic, but have had fewer opportunities to spend money on experiential treats (e.g., theme parks, cinema, sport events, etc.); thus, it is likely that parents may have raised their expenditure on material gifts in order to keep their children entertained during lockdown.

Conclusion

The findings of this report suggest that during the COVID-19 pandemic, individuals have lessened the importance given to money despite a rise in the factors that have been found to facilitate the endorsement of materialism. We observe that changes in media consumption and stress and anxiety due to the pandemic predicted people's current levels of materialism. However, contextual alterations to these factors due to the COVID-19 outbreak show a limited influence in the advocacy of materialistic values. We also find an overall decrease in reported shopping behaviours during the pandemic but a higher occurrence of purchasing as a way to cope with negative emotions and to seek well-being.

Open Science

The data, syntax, and supplementary materials for this report are available on its Open Science Framework page: <https://osf.io/bn4dm/>

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Table 1.

Regression results for Study 1 data (N = 741) predicting materialistic value orientations (y) with bias corrected and accelerated 95% bootstrapped confidence intervals.

Predictor (x)	B	SE	β	LCI	UCI					
Step 1		$R^2 = .103; p > .001$								
Intercept	3.702***	.149		3.379	3.980					
Subjective economic status	.015	.029	.018	-.046	.080					
Age	-.020***	.002	-.320	-.025	-.016					
Gender	.100	.059	.060	-.016	.224					
Step 2		$\Delta R^2 = .021; p > .001$								
Intercept	3.299***	.176		2.936	3.632					
Subjective economic status	.056	.031	.067	-.007	.123					
Age	-.020***	.002	-.320	-.024	-.016					
Gender	.099	.058	.059	-.017	.219					
Financial impact of COVID-19	.070***	.017	.154	.038	.104					
Step 3		$\Delta R^2 = .041; p > .001$								
						Unique	Common	Total	% Total	% of R ²
Intercept	2.816***	.210		2.409	3.227					
Subjective economic status	.048	.030	.058	-.012	.110	.003	-.003	.000	1.79%	0.00%
Age	-.017***	.002	-.263	-.021	-.012	.062	.037	.099	37.35%	59.50%
Gender	.039	.059	.023	-.080	.149	.001	.001	.001	0.31%	0.60%
Financial impact of COVID-19	.060***	.017	.132	.028	.091	.015	.004	.019	8.93%	11.42%
Changes in media consumption	.122***	.028	.154	.060	.181	.022	.039	.060	12.93%	36.06%
Social isolation due to COVID-19	.028	.022	.054	-.021	.066	.002	.027	.029	1.15%	17.43%
Negative affect due to COVID-19	-.029	.033	-.062	-.091	.036	.001	.037	.038	0.54%	22.84%
Stress and anxiety due to COVID-19	.062*	.031	.136	.000	.130	.005	.040	.044	2.82%	26.44%
Perception of COVID-19 as a life threat	.008	.028	.010	-.047	.063	.000	.002	.002	0.06%	1.20%

Note—Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$; % of R² = Total/R².

Table 2. *Content analysis codebook and codes frequencies in Study 3.*

Code	Description	Posted by	Frequency	Example
Shopping Experience	A Tweet about an offline/online shopping experience.	User	30%	"Can't wait for all my orders to arrive lol #retailtherapy" "Scored \$79 jeans for \$15 at my favourite store @Maurices !! #retailtherapy plus pink scrunch shoes #myfavouriteshoes #myfavouritestore"
Brand Promotion	A Tweet promoting brand products and/or shopping behaviours in store/online.	Brand	49%	"It's the weekend! Visit Cave Shepherd this weekend between the 15th and 17th March, and receive 20% off discount on Designer shoes, Menswear and also at Pages Bookstore. #weekendsale #ilovesale #caveshepherd #retailtherapy" "Did we say Free shipping? Yes, We Did! jbgreenocean.com #jbgreenocean #shopjbgreenocean #retailtherapy"
Shopping as a Coping Mechanism	A Tweet about engaging in shopping behaviours to relieve stress or improve one's mood.	User or Brand	11%	"There's something about a new outfit that can make your day! (smiling face with heart-eyes emoji) (sun emoji) Shop online backwardssaddle.com #retailtherapy" "it's just satisfying...spending on myself, relieving stress #retailtherapy"
Over-shopping/ Over-spending	A Tweet about engaging in over-shopping or over-spending behaviours.	User	7%	"i have zero money's and just spent 100\$ #retailTHERAPY" "I have been shopping online for 5 days straight (weary face emoji)(weary face emoji) My husband has the nerve to ask me if I want to go shopping today. (flushed face emoji) I don't think he has realized the damage I have already done (loudly crying face emoji)(face with tears of joy emoji) #shoppingaddict #retailtherapy"
Social Shopping	A Tweet about shopping with friends.	User	3%	"Friyay with these lovelies (shopping bags emoji) (smiling face with hearts emoji) #retailtherapy #ilove4eversisterhood @Bishop Arts District, Dallas"

"Morning you lovely people. I'm up...which only means one thing, @miss_delbridge got her way and we're going shopping. (zany face emoji) #retailtherapy #bluewater #misguided (face palm emoji)"

Table 3. *A comparison of codes frequencies between the two time periods in Study 3.*

		Pre-COVID-19		During-COVID-19	
		Brand	User	Brand	User
Shopping experience	Online experience	0%	2%	0%	1%
	Offline experience	0%	20%	0%	3%
Brand promotion	Online channel	11%	0%	14%	0%
	Offline channel	15%	0%	4%	0%
Shopping as a coping mechanism		1%	3%	4%	4%
Over-shopping/Over-spending		0%	7%	0%	1%
Social shopping		0%	2%	0%	1%

Figure 1. Model to test in Study 1 predicting current levels of materialism with the factors identified by prior literature as facilitators that have been affected by the pandemic as predictors.

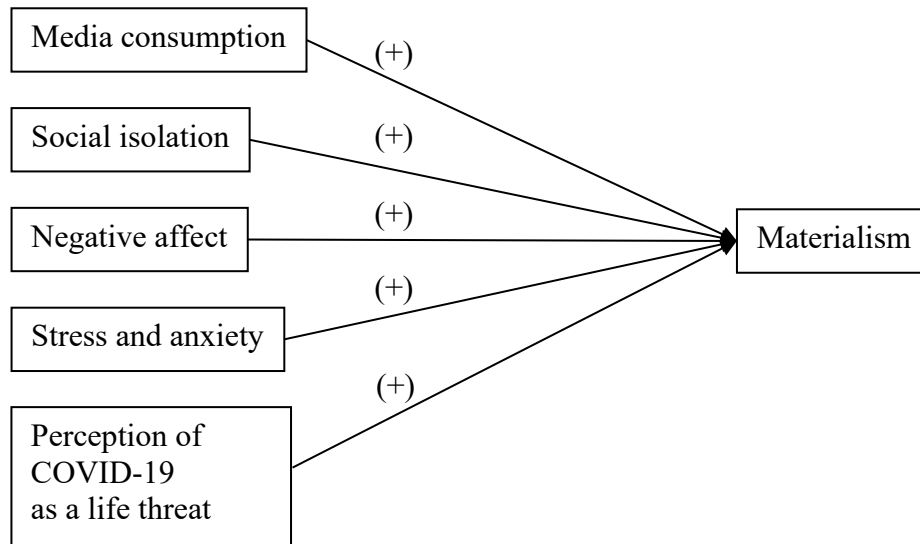


Figure 2. Bar chart showing the participant's means on importance given to the life goal of money at Time 1 (before the Covid-19 health crisis, $M = 5.41$, $SE = 1.34$) and Time 2 (during the Covid-19 health crisis, $M = 4.99$, $SE = 1.27$) in Study 2, $t(86) = 4.21$, $p < .001$, Hedges' $g = .32$, bootstrapped 95% CI [.21, .61].

