Somer, E. & Ruvio, A. (2013). The Going Gets Tough So Let's Go Shopping: On Materialism, Coping and Consumer Behaviors Under Traumatic Stress. Journal of Loss and Trauma: International Perspectives on Stress & Coping, DOI:10.1080/15325024.2013.794670.

Journal of Loss and Trauma, 19:426–441, 2014
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ISSN: 1532-5024 print/1532-5032 online
DOI: 10.1080/15325024.2013.794670

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The Going Gets Tough, So Let's Go Shopping: On Materialism, Coping, and Consumer Behaviors Under Traumatic Stress

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This study investigated the way in which exposure to traumatic stress, posttraumatic reactions, and materialistic values impact coping and maladaptive consumption behaviors in a real-life traumatic situation. One hundred thirty-nine Israelis were sampled from a town under constant rocket fire (a high-stress environment), and 187 comparison respondents were sampled from a low-stress location. Our data show a main effect for materialism for all of the distress and maladaptive consumer behaviors under study, as well as for most coping behaviors with the exception of interpersonal expressive coping. In the high-stress group, interpersonal expressive coping, reflecting an inclination to utilize social support, was highest among mildly materialistic individuals. Highly materialistic persons were, presumably, more oriented to objects than humans, rendering a more support-seeking way of coping less relevant for them. Highly materialistic participants in the high-stress group reported the highest levels of posttraumatic stress symptoms. The results of this study also suggest that the pleasures of shopping cannot attenuate posttraumatic distress and that maladaptive shopping behaviors increase with the level of traumatic exposure.

KEYWORDS trauma, Israel, civilians, war, terror

Received 11 February 2013; accepted 7 April 2013.

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A review of the literature on traumatic stress indicates that over the course of their lives, most Americans will experience at least one traumatic event. According to recent estimates, 5% of men and 10% to 12% of women will suffer from posttraumatic stress disorder (PTSD) sometime in their lives, and for victims of traumas such as rape or war, the rate may be as high as 60% to 80% (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). While the study of coping with traumatic stress is well developed, recently it has been suggested that a person's materialistic values could affect his or her way of coping with traumatic stress (Burroughs & Rindfleisch, 2002). According to terror management theory (TMT), people's awareness of their mortality affects their beliefs, decision making, and behaviors (e.g., Burke, Martens, & Faucher, 2010). The fear of death motivates individuals to engage in coping behaviors in order to reduce the stress and anxiety that accompany such fearful feelings. Guided by the TMT, scholars have theorized that materialistic behaviors may serve as a mechanism for coping with stress (Arndt, Solomon, Kasser, & Kennon, 2004; Mandel & Smeesters, 2008). Others have suggested that materialism contributes to the exacerbation of stress (e.g., Burroughs & Rindfleisch, 2002; Kasser & Ryan, 1993, 1996). Regardless, very little empirical support has been provided for these theoretical arguments, and in most studies the methodological procedures entailed the induction of mortality salience among participants in well-controlled laboratory settings (e.g., Mandel & Smeesters, 2008; Rindfleisch, Burroughs, & Wong, 2009). Thus, although there is a pioneering body of literature that highlights the potential contribution of materialism to the study of coping, it has also left some unresolved theoretical and methodological issues.

The literature on traumatic stress provides us with little understanding about the interrelationships among materialism, consumer behavior, and psychological outcomes under traumatic stress. For example, Dube and Black (2010) showed that consumer ethnocentrism and patriotism changed following the 9/11 attacks on America (showing preference for American products), but they did not assess shopping behaviors or measure psychological distress and coping. Based on Tauber's (1972) classification of shopping motives, Hama (2001) examined diversion buying and showed that 49.2% of his respondents reported that they went shopping when they felt stressed, and that diversion buying was, generally, effective for stress release. However, Hama did not measure exposure to stress or assess stress reactions or psychological outcomes.

To address some of the lacunae in the traumatic stress and consumer behavior research literature, we investigated the way in which exposure to traumatic stress, posttraumatic reactions, and materialistic values impact coping and consumption behaviors in real-life traumatic conditions. We collected data in two Israeli towns during a prolonged period of hostilities along the Gaza-Israel border. Israeli and Palestinian civilians on both sides

of the border were exposed to an ongoing conflict involving countless civilian casualties (Besser & Neria, 2009), culminating in the 2009 war between Hamas-led military organizations and the Israel defense forces. Our respondents were sampled in Sderot, a western Negev Israeli community located 2 miles east of Gaza, which had been subjected to attacks by thousands of mortar shells and rockets in 2007 and 2008, and in Kfar Yona, a comparison town in the Sharon district in central Israel.

STRESS AND MATERIALISM

We regard materialism as a stable value formed over an individual's life span, through a socialization process, and we espouse Richins, Mick, and Monroe's (2004) definition of the variable as "the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states" (p. 210). Materialism, a value entailing pressure towards financial achievements, seems to be a significant correlate of anxiety (Kasser & Ryan, 1993) and was considered an antecedent to stress (Burroughs & Rindfleisch, 2002). It has also been speculated that materialism may be a potential outcome of existential stress, as material possessions tend to ease existential fears by the distraction and comfort they can offer (Mandel & Smeesters, 2008) and could, therefore, be conceived as a coping mechanism (Arndt et al., 2004). Nevertheless, published research on the relationship between materialism and stress is scarce, and to the best of our knowledge no pervious study has looked at the relationship between materialism and coping with traumatic stress. In this study, we explore the role of materialism as an independent variable and its impact on distress, coping, and consumer behaviors among individuals under life-threatening conditions.

STRESS AND CONSUMER BEHAVIORS

Stress seems to engender consumption behaviors that are mostly of a maladaptive nature (e.g., impulsive shopping), with a clear correlation between the level of reported distress and the propensity to buy (Mano, 1999). Drawing upon terror management theory (TMT), Mandel and Smeesters (2008) showed that awareness of imminent mortality tended to increase consumption. If purchased products promise a degree of distraction and comfort to stressed individuals, then maladaptive consuming could be in line with other stress-related dysfunctional behaviors such as abuse of alcohol (e.g., Jakupcak et al., 2010) or increased cigarette smoking (e.g., Amstadter, Broman-Fulks, Zinzow, Ruggiero, & Cercone, 2009). In light of this empirical evidence, in this study we focus on two maladaptive consumption behaviors: shopping escapism and hedonic shopping.

EXTENDED TRAUMATIC STRESS AND COPING

Terr (1991) defined Type I and Type II stressor events. Type I stressors are unanticipated single events beyond the range of normal daily stress and are traumatic in their effects, potentially leading to PTSD. Type II stressors, such as chronic spouse or child abuse, are enduring or repetitive in nature and lead to PTSD, as well as to dissociative symptoms and unremitting sadness. Berk (1992) suggested a Type III stressor paradigm to describe chaotic environments that include anxiety-inducing intrafamilial or interpersonal relationships with high levels of inconsistency and unpredictability. Wilson (1994) proposed a fourth category of stressor events. Type IV stressors constitute an alteration in a person's basic relation to the biosphere. Type IV events are anomalous, producing high levels of uncertainty and profound adaptational dilemmas as victims are uncertain about effective ways to protect themselves. For example, they do not know what the effects of exposure may be (e.g., in biological or chemical attacks) or how to save themselves and their families from harm (e.g., in communities under random terrorist attacks). The present study investigates the responses of a community exposed to Type IV events: repetitive, unpredictable, and potentially mortal bombardments.

The coping-outcome relationship may vary with the intensity of exposure. As demonstrated by Suvak, Vogt, Savarese, King, and King (2002), problem-focused coping may be effective at moderate levels, unnecessary at low levels, and irrelevant at high levels of exposure. Previous studies on the coping of civilians under Type IV trauma have shown that all coping strategies, except for acceptance of the uncontrollable threats, were ineffective. At the peak of a violent campaign of random terror, most ways of coping employed by Israelis failed to shield them from posttraumatic distress (Somer, Ruvio, Soref, & Sever, 2005). In fact, Somer and his colleagues (Ruvio, Sever, & Soref, 2007) have shown that coping with the strain of Type IV traumas among targeted Israelis was practically synonymous with posttraumatic distress and was, possibly, a manifestation thereof. In the current study, we also regarded ways of coping as dependent variables to be potentially influenced by exposure to trauma, posttraumatic distress, and materialism.

We predicted that compared to a group exposed to low levels of stress, respondents residing in a Type IV trauma environment would report higher levels of posttraumatic distress and maladaptive coping and consumption behaviors. We also predicted that materialism would be a significant risk factor for the study's dependent variables, particularly under the duress of Type IV trauma.

METHOD

Participants and Procedures

Our sample consisted of 326 civilians from two communities: 139 participants were sampled from a high-stress environment, and 187 were residents of a

low-stress location. The first group lived in Sderot, a town in the southern part of Israel 3.7 km east of the Gaza Strip. Data were collected during the second half of 2007, when this area was subjected to extensive mortar shell and rocket attacks from the Gaza Strip. The constant bombardments led to the disruption of normal everyday life to the extent that schools were often closed, many people moved to live in bomb shelters, and some families chose to leave town and seek temporary refuge in safer parts of the country. In both towns, we collected data over a period of 1 month from people who had visited the town's sole community center. A total of 200 survey forms were distributed to consecutive consenting visitors in each locality. Under the chaotic circumstances of the time, participants in Sderot were given the option of taking the questionnaires with them to their shelters to be completed under safer conditions. Despite these unfavorable circumstances, the return rate was 75%. Of the distributed questionnaires, we were unable to contact 40 individuals who did not return their questionnaires. Ten respondents reported feeling too distressed to complete our research questions. The same number of surveys were excluded due to a great deal of missing data. In the final group of participants, 59% were women, their mean age was 38, and approximately a third reported having an above-average income.

Participants in the low-stress group attended activities in community centers in a town that was not threatened by rocket attacks. Nonetheless, the participants in our comparison group had been exposed to sights and sounds of continuous shelling via the news media. Out of 200 surveys distributed in the comparison locality, 179 completed forms were returned (a return rate of about 90%). The main reason given for not completing the forms was lack of time. Five surveys were eliminated due to missing data. In this group, 52% were women, their mean age was 36.5, and almost half the sample reported an above-average salary. The two groups were similar in terms of age, sex distribution, and marital status, but the low-stress group reported a higher income level ($t = 3.45$, $p < .001$).

We decided to adopt a 2×2 between-subject factorial study design, with exposure to stress (low or high, determined by the two different groups we sampled) as the first factor and materialism (we used the median score for all 326 participants to mark the line separating highly and mildly materialistic individuals) as the second factor.

Measures

Our constructs were measured, in most cases, using well-known, published, multi-item scales previously validated in the Israeli context. Therefore, no translation procedures were needed.

Materialism

We used Richins et al.'s (2004) nine-item Material Values Scale (MVS) to measure materialism. This scale reflects the value consumers place on the

acquisition of material objects and includes items (rated on a 5-point Likert scale) such as "I like to own things that impress other people" and "Buying things gives me a lot of pleasure." This scale has been widely used in consumer research in different cultural settings (e.g., in Israel; Ram et al., 2012) and consistently displays strong psychometric properties. A high level of reliability was also established in this study ($\alpha = .84$).

Posttraumatic distress

Posttraumatic distress refers to the level of psychological distress experienced by an individual following a traumatic event. Posttraumatic stress symptoms were assessed with the 17-item self-report PTSD Symptom Scale (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993), which corresponds to the DSM-IV diagnostic criteria for PTSD. The participants rated each item on a 4-point scale (0 = not at all, 1 = once per week or less/a little, 2 = two to four times per week/somewhat, 3 = five or more times per week/very much) based on their experiences in the preceding month. A total PTSD symptoms score was calculated by summing the responses to the items. This scale has been widely used in different populations and cultures (including Israel; see Hobfoll, Canetti-Nisim, & Johnson, 2006) and has consistently exhibited good psychometric properties. The reliability of the scale (α) in the current study was .95.

Coping

The Brief COPE (Carver, 1997), an abbreviated 28-item version of the COPE inventory (Carver, Scheier, & Weintraub, 1989), was used. To determine higher-order factors among the instrument items, we performed a factor analysis and decided to remove items with a loading lower than .25 and items that loaded equally on more than one factor. Based on these criteria, 17 Brief COPE items (Brief COPE-Revised; BCR) were utilized in our final data analyses (see Results section). The alpha coefficient for the final instrument was .85.

Shopping escapism

We used Mathwick, Malhotra, and Rigdon's (2001) three-item, 5-point Likert scale to assess the tendency of our participants to use shopping as a means of escape from the demands of the day-to-day world. We generalized their scale from online shopping to a regular retail-shopping context. As such, our items were: (a) "Shopping "gets me away from it all,'" (b) "Shopping makes me feel like I am in another world," and (c) "I get so involved when I shop that I forget everything." The internal consistency (α) of this scale was .92.

Hedonic shopping

We used the three-item, 5-point Likert "gratification shopping" factor of Arnold and Reynolds's (2003) hedonic shopping motivation scale. This factor

reflects one's motivation to shop in order to relieve stress, alleviate a negative mood, and treat oneself. As such, our items were (a) "When I'm in a down mood, I go shopping to make me feel better"; (b) "To me, shopping is a way to relieve stress"; and (c) "I go shopping when I want to treat myself to something special." The internal consistency (α) of this scale was .90.

RESULTS

Factor Analysis of the BCR

A principal component factor analysis with varimax rotation and Kaiser normalization was performed on the 17-item BCR. The analysis yielded four factors explaining 73% of the variance with an eigenvalue over 1. Factor 1 was named *direct active coping* (Items 2, 7, 14, 24, and 25 of the Brief COPE; 20% of explained variance). This factor describes efforts to plan various ways of action. Factor 2 was labeled *interpersonal expressive coping* (Items 5, 9, 10, 21, and 23 of the Brief COPE; 21% of explained variance), and it relates to coping through emotional sharing within supportive social interactions. Factor 3 was labeled *avoidance/distancing*. This cluster (Items 1, 16, and 19; 14% of explained variance) represents attempts to cope indirectly, mainly by diverting attention from the stressful situation. The last factor (Brief COPE Items 12, 17, 18, and 28; 18% of explained variance) is characterized by attempts to construe the stressful situation as positive and was labeled *positive restructuring*.

Differences Between Stress Levels and Levels of Materialism

To test the interaction between materialism and traumatic stress and its effect on all of the variables under study, we performed a MANCOVA procedure. In this analysis, we used the median score for all 318 participants to create high versus low materialism groups. Exposure to stress was determined by group affiliation, and age and gender were entered as covariates. A main effect for exposure to traumatic stress was found with regard to PTSD symptoms ($F = 53.31$, $p < .001$), avoidance/distancing coping ($F = 11.62$, $p < .001$), positive restructuring coping ($F = 15.49$, $p < .001$), and shopping escapism ($F = 20.39$, $p < .001$). Participants in the high-stress group scored significantly higher on all variables, with the exception of positive restructuring coping.

A main effect for materialism was found for all distress (direct active coping $F = 12.41$, $p < .001$; avoidance distracting coping $F = 9.77$, $p < .001$; positive restructuring coping $F = 6.95$, $p < .001$), coping ($F = 6.74$, $p < .05$), and consumer behaviors under study (hedonic shopping $F = 25.48$, $p < .001$; shopping escapism $F = 19.31$, $p < .001$), with the exception of interpersonal expressive coping. Highly materialistic individuals showed significantly higher levels of posttraumatic distress, greater coping efforts, and more consumption behavior.

Finally, our findings revealed a significant ($p < .01$) interaction between materialism and exposure to traumatic stress with regard to posttraumatic stress symptoms ($F = 5.66$, $p < .05$), direct active coping ($F = 4.57$, $p < .05$), and interpersonal expressive coping ($F = 7.92$, $p < .001$). Highly materialistic participants in the high-stress group reported the highest level of posttraumatic stress symptoms. In terms of coping, highly materialistic participants reported using the highest level of direct active coping in comparison to mildly materialistic participants, as well as in comparison to highly materialistic participants in the low-stress group. The level of direct active coping for mildly materialistic respondents in the high-stress group was lower than the level in the low-stress group. Interpersonal expressive coping, on the other hand, demonstrated an inverse pattern, being highest among mildly materialistic individuals in the high-stress group and lowest among the mildly materialistic in the low-stress group.

Relationships Between Stress, Materialism, and Coping

We then calculated correlations between the constructs under study for each of the stress conditions. In the low-stress condition, there was a signification association between posttraumatic distress and direct active ($r = .21$), interpersonal expressive ($r = .32$), and avoidance/distancing ($r = .24$) coping strategies, as well as with materialism ($r = .30$), hedonic shopping ($r = .34$), and shopping escapism ($r = .21$). No significant associations were found between posttraumatic distress and positive restructuring coping. Interpersonal expressive coping was significantly associated with the consumption behaviors (hedonic shopping $r = .28$; shopping escapism $r = .25$), and avoidance/distancing was significantly associated with hedonic shopping ($r = .20$) and shopping escapism ($r = .23$). As expected, strong significant associations were found between materialism and the consumption behavior constructs.

In the high-stress group, we found stronger associations between posttraumatic distress and the reported intensity of use of the various coping strategies (direct active coping $r = .64$; interpersonal coping $r = .35$; avoidance/distancing coping $r = .41$). Posttraumatic distress was also significantly associated with materialism ($r = .27$) and shopping escapism ($r = .30$). In this group, direct active coping was significantly associated with materialism ($r = .34$), hedonic shopping ($r = .28$), and shopping escapism ($r = .29$). A similar pattern was found with regard to interpersonal expressive coping and avoidance/distancing, even though there was a negative association between interpersonal expressive coping and materialism ($r = -.27$).

Moderation Analysis

The associations between posttraumatic stress symptoms, coping strategies, materialism, and the consumption behavior constructs led us to test materialism

as a moderator between posttraumatic distress and coping strategies, as well as between posttraumatic distress and the consumption behaviors constructs. We tested the role of materialism as a moderator using linear regression. We followed Aiken and West's (1991) procedure, centering the constructs by subtracting the mean score from each individual score and then multiplying the moderator by the independent variable to create interaction terms. We then entered the independent variable, the moderators, and the interaction term into regression analyses.

In the low-stress group, only posttraumatic distress was found to be a significant contributor to the variance of the coping strategies: direct active coping $\beta = .20$, $t = 2.79$, $p < .001$, $R^2 = .05$, $F(3, 183) = 3.12$, $p < .05$; interpersonal expressive coping $\beta = .31$, $t = 4.37$, $p < .001$, $R^2 = .11$, $F(3, 183) = 7.82$, $p < .001$; and avoidance/distancing coping $\beta = .22$, $t = 3.11$, $p < .001$, $R^2 = .09$, $F(3, 183) = 5.57$, $p < .05$. However, in the high-stress group, both posttraumatic distress and materialism were significant predictors of the intensity of use of the various coping strategies: for direct active coping, $\beta_{PTSD} = .59$, $t = 8.78$, $p < .001$, $\beta_{Materialism} = .18$, $t = 2.70$, $p < .001$, $R^2 = .44$, $F(3, 135) = 35.15$, $p < .001$; for interpersonal expressive coping, $\beta_{PTSD} = .46$, $t = 6.04$, $p < .001$, $\beta_{Materialism} = .39$, $t = 5.12$, $p < .001$, $R^2 = .27$, $F(3, 135) = 16.65$, $p < .001$; and for avoidance/distancing coping, $\beta_{PTSD} = .35$, $t = 4.59$, $p < .001$, $\beta_{Materialism} = .31$, $t = 4.13$, $p < .001$, $R^2 = .29$, $F(3, 135) = 17.96$, $p < .001$. In addition, the interaction between posttraumatic distress and materialism was also significant with regard to avoidance/distancing ($\beta = -.19$, $t = -2.60$, $p < .05$). Our data indicate that materialism moderates the relationship between posttraumatic distress and avoidance/distancing. Highly materialistic people with high levels of posttraumatic distress are less likely to use avoidance/distancing as a coping strategy.

With regard to the consumption behavior constructs in the low-stress group, both posttraumatic distress and materialism were significant contributors to the variance in shopping escapism, $\beta_{PTSD} = .16$, $t = 2.39$, $p < .05$, $\beta_{Materialism} = .37$, $t = 5.45$, $p < .001$, $R^2 = .19$, $F(3, 183) = 14.50$, $p < .001$, and hedonic shopping, $\beta_{PTSD} = .29$, $t = 4.57$, $p < .001$, $\beta_{Materialism} = .44$, $t = 7.00$, $p < .001$, $R^2 = .30$, $F(3, 183) = 26.47$, $p < .001$. In the high-stress group, materialism and the interaction between posttraumatic distress and materialism were significant predictors of shopping escapism, $\beta_{Materialism} = .22$, $t = 2.69$, $p < .001$, $\beta_{Interaction} = .16$, $t = 2.00$, $p < .05$, $R^2 = .16$, $F(3, 135) = 8.34$, $p < .001$, and hedonic shopping, $\beta_{Materialism} = .32$, $t = 3.78$, $p < .001$, $\beta_{Interaction} = .23$, $t = 2.08$, $p < .05$, $R^2 = .12$, $F(3, 135) = 6.23$, $p < .001$. In addition, posttraumatic distress was a significant predictor of shopping escapism ($\beta = .26$, $t = 3.19$, $p < .001$).

DISCUSSION

Our data show a main effect for exposure to traumatic stress with regard to PTSD symptoms, avoidance/distancing coping, positive restructuring coping,

and shopping escapism. As previously demonstrated, exposure to traumatic stress triggers emotional distress (Somer et al., 2009) and psychological coping behaviors, which are often seen as a manifestation of, rather than a buffer against, posttraumatic distress (Somer et al., 2007). Rather than representing effective attenuating behaviors (expected to reduce distress), psychological coping seems to signify distress or be a response to psychological suffering. Under normal, low-stress conditions, only posttraumatic distress was found to be a significant contributor to the variance in coping strategies (with the exception of positive restructuring coping). However, under traumatic stress, both posttraumatic distress and materialism were significant predictors of the intensity of use of the various coping strategies (with the exception of positive restructuring), providing further evidence that most psychological coping strategies could actually represent expressions of, or reactions to, distress. Positive restructuring was not affected by posttraumatic distress and materialism, perhaps because it is a personality resource akin to optimism, a known protective factor in traumatic stress (e.g., Frazier et al., 2011).

Participants in the extreme-stress group scored significantly higher on all variables with the exception of positive restructuring coping. The more intense psychological coping activities and posttraumatic suffering of civilians subjected to repeated shelling also confirm that posttraumatic distress is dose-responsive to the level of exposure to traumatic events (Kaysen, Rosen, Bowman, & Resick, 2010). The results of this study suggest as well that the pleasures of shopping cannot attenuate posttraumatic distress and that escapist shopping increases with the level of traumatic exposure. While our respondents tended to increase their positive restructuring of stressful circumstances in a normal environment, civilians under bombardments were less likely to look at the positive aspects of their experience. Arguably, the employment of positive restructuring under continuous mortal threat would entail a flaw in judgment, from which the citizens of Sderot were unlikely to suffer.

To shed further light on the interconnectedness of exposure to stress, coping, consumer behavior, and posttraumatic distress, we also investigated the role of materialistic values in this matrix. A main effect for materialism was found for all of the distress, coping, and consumer behaviors under study with the exception of interpersonal expressive coping. Highly materialistic individuals under duress tended not to intensify interpersonal expressive coping. These respondents, presumably, were more oriented to objects rather than humans, rendering a more support-seeking way of coping less relevant for them. These findings are aligned with the main premise of materialism, which places a high premium on possessions rather than social relationships (Richins & Dawson, 1992). It appears that even in times of upheaval, highly materialistic individuals tend to seek solace in material possessions rather than social relationships.

Our data also show a significant interaction between materialism and exposure to traumatic stress with regard to posttraumatic stress symptoms,

direct active coping, interpersonal expressive coping, and avoidance and distancing coping. When exposed to severe psychological stress, highly materialistic individuals reported the highest level of posttraumatic distress. These findings support previous literature that demonstrated the detrimental effect of materialism on an individual's well-being (Burroughs & Rindfleisch, 2002; Kasser & Ryan, 1993). Nevertheless, the mechanism causing materialistic individuals to be more vulnerable to posttraumatic stress symptoms requires further investigation. Values have been documented to be relevant to the experience of stress (Bouckenooghe, Buelens, Fontaine, & Vanderheyden, 2005). Kishon-Barash, Midlarsky, & Johnson (1999) demonstrated that individuals reporting high levels of other-directedness, as measured by altruism, were less likely to suffer from PTSD symptoms. The attraction of highly materialistic persons to money and objects is in line with and could be incompatible with their ability to benefit from social support, a known moderator of stress in general (e.g., Chao, 2011) and posttraumatic stress disorder in particular (e.g., Haden, Scarpa, Russell, & Ollendick, 2007; Scarpa, Haden, & Hurley, 2006). In line with this conceptualization are our other data showing that in the high-stress group interpersonal expressive coping, reflecting an inclination to utilize social support, was highest among mildly materialistic individuals.

Under regular conditions, people who had been upset by adverse life events were more likely to endorse materialistic values and more inclined to react with a range of maladaptive consumer behaviors. However, under extreme and prolonged duress, posttraumatic distress did not appear to be associated with hedonic shopping, but appeared to have been significantly associated with shopping escapism. In other words, to cope with their distress, civilians living under continuous shelling shopped to escape from the hardships of their threatening milieu, but were not more likely to engage in spendthrift purchases or to react with indulgent, extravagant shopping. Escapist shopping was probably motivated by the need to capture attention resources and offer a distraction from the bleak environment, rather than to satisfy materialistic values and the need to own objects. Again, in line with TMT, these findings imply that materialistic individuals who are exposed to traumatic stress associated with exposure to mortal threats invest further in their value system to imbue their lives with meaning. They experience shopping as a temporary means to alleviate distress when higher-level psychological coping skills are unavailable.

Our data analysis indicates a significant association between materialism and the consumer behaviors we measured, regardless of the level of stress in the environment. However, in the high-stress group materialism and the interaction between posttraumatic distress and materialism were significant predictors of the three measured consumption behavior constructs. That is, under extremely stressful conditions, posttraumatic distress tended to exacerbate the effect of materialism on elevating maladaptive shopping patterns.

Study Implications

Materialism was shown to be associated with less effective peri- and posttraumatic coping and with an increased risk for posttraumatic distress. Further research is required to confirm that materialism is actually a risk factor for poorer quality coping with traumatic stress. However, we believe that secondary PTSD prevention programs could benefit from early identification of trauma-exposed individuals who are highly materialistic. Once identified, such individuals could benefit from a specifically tailored coping training program.

Study Limitations

We wish to acknowledge three limitations associated with this study. First, we collected data from our participants at a singular point in time. While materialistic values are regarded as a fairly stable construct, both the experience of traumatic stress and the preferred ways of coping can change over time (e.g., Neria, DiGrande, & Ben, 2011). While a longitudinal approach might have provided us with broader knowledge regarding our dependent variables, budgetary constraints dictated the chosen methodology.

Second, we focused on traumatic stress conditions that represented a national crisis and were, therefore, more collective in nature. Arguably, results obtained under such circumstances could not be well generalized to traumatic stress experienced by a single individual deprived of the validating collective experience and the meaning systems of community solidarity, ideology, and heroism in the face of existential threat and loss (e.g., Possick, 2006). Future studies might benefit from exploring the role of materialistic values under a wider variety of traumatic stressors.

The third limitation to be considered while evaluating the outcomes of this study is the fact that all of the study measures were self-reported. We believe that the outcomes of future studies could be strengthened if self-reported data are substantiated with more objective measures, for example purchase receipts and credit card and bank statements to gauge consumer behavior or physiological indices of psychological stress, such as cortisol levels, heart rate, or galvanic skin response (e.g., Oldehinkel et al., 2011).

Future Directions

The literature on stress demonstrates the power of social support in buffering the harmful effects of stress (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003; Thoits, 1995). The sense of support that is typically extended by friends and family has been shown to be an important psychological resource in reducing the risk for psychopathology among individuals exposed to adversity (Lawrence & Fauerbach, 2003; Thabet, Ibraheem, Shivram, Winter, & Vostanis, 2009). Since materialistic people are regarded as valuing "possessions and their acquisition more than other life goals and more than

their relationships with other people" (Richins & Dawson, 1992, p. 308), we posit they also have weaker social support networks. This relative social isolation might be associated with the higher levels of distress measured among materialistic respondents under duress. We believe our findings provide a tentative indication for such an effect. However, the association between materialistic and social values, and their effect on individuals' ability to cope with traumatic stress, is still far from unequivocal. The literature on materialism has demonstrated that material values conflict with socially oriented values, such as family and religious values (Burroughs & Rindfleisch, 2002). This conflict can be emotionally detrimental, particularly when coping resources are challenged by adversity. Further research is needed to fully explore the relationship between materialistic values, social values, and coping strategies.

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