

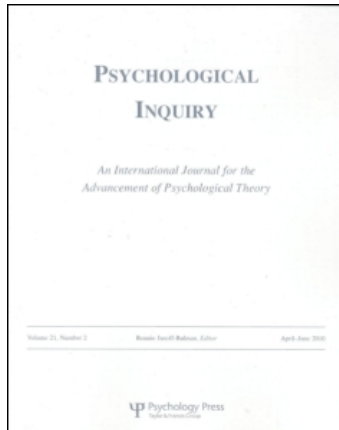
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Social Support and Money as Double-Edged Swords: Primary Soothers and Precipitants of Pain

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Typically, a flourishing science is incomplete. At any time, it raised more questions than it can currently answer. But incompleteness is not vice. On the contrary, incompleteness is the mother of fecundity. (Kitcher, 1982, p. 48)

Zhao and Gao (this issue) put forward a pain-buffering theory whose central tenet is that social support is a primary pain buffer and money is a secondary pain buffer. As we went over their thought-provoking article, a number of questions inevitably came to mind: What does social support mean? Is a pain buffer the same as a pain soother? Do social support and money always play a protective role? Does social support always play a primary role while money always plays a secondary role? In the present commentary, we attempt to address each of these questions with our own views and cite relevant theories and findings to substantiate our views. Recommendations are made in an attempt to refine the hypotheses to make their theory a relatively more fecund one.

What Is Social Support? Social Support as a “Metaconstruct”

In the proposed pain-buffering theory, social support is an important ingredient that plays a role in palliating pain. However, Zhao and Gao (this issue) did not provide any definitions of social support in the article. In the existing literature, the scope of social support is so broad that it is often regarded as a “metaconstruct” (cf. Cook & Campbell, 1979), which constitutes a system of structural and functional properties (see, e.g., Barrera, 2000; Pierce, Lakey, Sarason, & Sarason, 1997). The structural properties, generally labeled as network support, reflect the link between an individual and members within a particular group (see Knipscheer & Antonucci, 1990). Conversely, the functional properties are typically classified into four major types (see, e.g., S. Cohen & Syme, 1985; Wills, 1985): (a) instrumental support, which refers to the provision of tangible resources such as money and childcare; (b) informational support, which refers to the giving of knowledge or advice necessary for tackling a problem;

(c) emotional support, which refers to the expression of feelings of being respected, loved, and cared for; and (d) social companionship, which refers to the presence of network members. These four types of social support are subsumed under the category of enacted support.

Influenced by the phenomenological approach to personality (Lewin, 1935), some psychologists (e.g., Dunkel-Schetter & Bennett, 1990; Wills & Shinar, 2000) advocated the need to further elucidate the distinctions between the objective aspect of social support (i.e., network support and enacted support) and its subjective aspect. A major indicator of the quality of social support is perceived support, which refers to subjective appraisals of the extent to which one’s social network or network members are supportive or helpful (see, e.g., Haden, Scarpa, Jones, & Ollendick, 2007; Prezza & Pacilli, 2002). Previous studies (e.g., Cheng, 1998a; Kaul & Lakey, 2003; Knowlton & Latkin, 2007; Sagrestano, Feldman, Killingsworth-Rini, Woo, & Dunkel-Schetter, 1999) provided empirical evidence that the three domains of support—network, enacted, and perceived support—are relatively independent.

Taking into account the conceptual distinctness of the three domains of support, we propose that the various domains may not be equally effective in pain relief. For instance, if money is postulated as a secondary pain buffer, would tangible support play a more important role in pain relief than the other types of support such as emotional or informational support? If tangible support is proposed to play a significant pain-alleviating role, would the availability of money and the provision of tangible support have a conjoint effect on pain relief? If perceived support is postulated to play a significant role, would perceived support and money influence the experience of pain via different pathways? All these examples illustrate that a variety of hypotheses can be generated if the particular domains of social support are specified. As we will discuss in the following sections, acknowledging the multidimensional nature of social support and utilizing this approach to refine the hypotheses may foster a better understanding of the role of social support.

What Is a Buffer? Buffering Versus Direct Effects of Social Support

A major premise of the proposed pain-buffering theory is that social support is a “buffer” against pain. Zhao and Gao (this issue) provided support for their assertion by citing empirical evidence that revealed the “buffering” effect of pain. Throughout their article, the term *buffer* has been used as if it were a synonym with words such as *relief* or *reduction*. These terms are, however, not identical. In order for social support to function as a stress buffer, its “stress moderation” or “stress conditioning” characteristics should be present (see, e.g., Barrera, 2000, for a discussion). Specifically, a stress buffer should protect individuals from the potentially detrimental effects of highly disturbing conditions (e.g., an overwhelming amount of stress, excessive pain) rather than less disturbing ones (e.g., a small amount of stress, mild pain). However, such buffering qualities of social support were not discussed in the target article.

In our opinion, this issue of conceptual ambiguity may be addressed by pitting the buffering effect of social support against an equally plausible effect, namely, the direct effect. In the current literature, two major models—the main-effect and the buffering models—have been proposed to explain the beneficial role of social support (see S. Cohen & Wills, 1985; Terry, 1989, for reviews). The main-effect model puts forward a direct ameliorating effect of social support on stress-induced distress. This model received empirical support that revealed a generalized stress-reducing effect of social support regardless of stress level (e.g., Leerkes & Burney, 2007; Marin & Garcia-Ramirez, 2005; Park, Wilson, & Lee, 2004; Stroebe, Zech, Stroebe, & Abakoumkin, 2005).

The buffering model hypothesizes an interaction between levels of stressful event and social support such that the stress-mitigating function of social support is stronger in situations of high stress than those of low stress. Evidence congruent with the buffering model was also obtained (e.g., Bates & Toro, 1999; Cheng, 1997; Morinaga & Yamauchi, 2003; Varona, Saito, Takahashi, & Kai, 2007). Because the main-effect and the buffering models both received empirical support, the two oft-cited hypotheses are regarded as equally pervasive. Emphasizing any of the effects while ignoring the other may limit the explanatory and predictive power of hypotheses regarding the beneficial role of social support.

Attempting to substantiate their assertion of social support as a pain buffer, Zhao and Gao (this issue) cited studies that documented an inverse association between social support and the experience of pain (e.g., Bockian, Meager, & Millon, 2000; Chalmers, Wolman,

Nikodem, Gulmezoglu, & Hofmeyer, 1995; Lidderdale & Walsh, 1998; Phillips & Gatchel, 2000). Because the cited studies are correlational in nature, it is possible that higher levels of social support lead to an alleviation of pain and vice versa, thus suggesting a generalized direct (main) effect rather than a buffering effect. It is equally possible, at least from the statistical point of view, that the experience of greater pain leads to a decrease in the amount of social support and vice versa. The latter possibility may contradict the hypothesized role of social support as a pain buffer. Such bidirectional associations thus cannot tell whether more social support results in greater pain relief or whether the experience of greater pain contributes to a greater tendency to avoid seeking support.

Zhao and Gao (this issue) attempted to clarify the causal link between social support and pain relief by describing an experiment designed by Brown and colleagues (Brown, Sheffield, Leary, & Robinson, 2003). In this study, perception of pain induced by an experimental task was compared among participants who (a) received social support, (b) merely interacted with each other, and (c) were by themselves. Results revealed that the group of participants who received social support reported less pain than those in the other two groups. Although it is tempting to conclude that social support serves as a pain buffer, the buffering role remains largely unknown because the level of experienced pain has not been manipulated in the experiment. To establish the pain-buffering effect of social support, relevant evidence should be cited to demonstrate that social support exerts a greater ameliorating effect on strong pain that induces pathogenic outcomes than mild pain without such undesirable outcomes. If social support is equally effective in palliating strong and mild pain, the direct effect rather than buffering effect model will be supported.

In summary, the pain-buffering theory puts forward social support as a pain buffer. The empirical evidence cited in the target article seems to provide some support for this assertion, but such evidence is deemed weak or incomplete. We would recommend efforts to distinguish between the pain-buffering quality and the mere pain-relieving quality of social support in light of the buffering and the main-effect models. Moreover, as pointed out in the previous section, social support is a metaconstruct that encompasses a number of domains and types of support. The multidimensional conceptualization of social support may shed additional light on the refinement of the hypotheses proposed in the new theory. Specifically, it is possible to infer that social support may function as a pain buffer for certain domains or types of support but not others. Specifying the domains and types of support may help to further clarify its potential pain-buffering role.

Can Social Support Be a “Negative Buffer”? Social Support as a Double-Edged Sword

The postulation of social support as a pain buffer is consistent with the traditional perspective of the exclusive beneficial role of social support. According to this perspective adopted by the majority of psychologists, a high level of social support is regarded as the perceived or actual availability of abundant assistance that bolsters individuals' well-being. In our view, the assumption of social support as always conducive seems more like a fallacy than an accurate reflection of real-life psychosocial phenomena. We contend that a potentially important dimension—the “cost” of social support—may have been omitted in the proposed pain-buffering theory. As we will point out below, it is possible that social support is not only a pain soother but also a precipitant of social pain.

The potential stressfulness of social support has been unveiled in a small yet significant body of studies. For instance, some studies (e.g., DiMatteo & Hays, 1981; Wortman, 1984) have shown that even when social support was provided with care and positive intentions, the recipients would regard it as an additional psychological burden if it was delivered at an improper time, by an inappropriate provider, or both. Fiore, Becker, and Coppel (1983) also found that participants who experienced the highest level of depression were those who actively sought support from others but eventually failed to obtain it. These findings indicate that social support can constitute a source of stress, thus suggesting the need to differentiate between the positive and the negative aspects of social support.

Another body of studies (e.g., Cheng, 1998b; Lowery & Stokes, 2005; Redman & Snape, 2006; White et al., 2003) has illustrated that social support is a “negative buffer.” A negative or reverse stress-buffering effect is obtained when high levels of social support magnify, instead of mitigate, the devastating effects of excessive stress and vice versa. To account for these “counterintuitive” findings, Cummins (1988) maintained that different buffering roles of social support may be related to one's ability to utilize distinct types of support. As shown in previous studies (see, e.g., Cheng, 2001, 2003; Petito & Cummins, 2000), social support utilization is influenced by individuals' perceived control, which refers to the appraisal of one's actual or potential ability to perform actions that may alter an undesirable consequence (see, e.g., Lefcourt, 1992; Skinner, 1995).

To test this notion, Cummins (1988) explored both the positive and negative buffering effects of social support by including locus of control as an individual difference variable. Results showed that social support was a stress buffer among participants with an

internal locus of control but not those with an external locus of control. By contrast, another type of support—perceived support—was found to be a negative buffer of stress only among participants with an internal locus of control. Because individuals with an internal locus of control tend to believe that they can tackle hassling problems through seeking social support (e.g., Meehan, Durlak, & Bryant, 1993; Sinha, Nayyar, & Sinha, 2002), it is not surprising that receiving enacted support is beneficial to them. Ironically, these individuals—who have a strong need for autonomy—may be vulnerable to high levels of stress when they perceive their support providers as “too supportive.” Specifically, when these recipients perceive their support providers as overly involved or protective, they may feel overwhelmed or restricted due to a perceived deprivation of freedom, strong indebtedness feelings, and/or a loss of self-esteem (see, e.g., Barrera, 2000; Fisher, Nadler, & DePaulo, 1983, for reviews). Such findings point to the possible stress or ego threat that social support can create and suggest that different domains of social support play different roles in mitigating or magnifying stress-induced distress.

Taking these findings into consideration, we propose that social support may be a double-edged sword. On the one hand, social support can act as a buffer that protects individuals from the deleterious effects of excessive stress. On the other hand, it can also act as a negative buffer that potentiates such deleterious effects. Our notion stems from the social exchange theories (e.g., Gouldner, 1960; Thibaut & Kelley, 1959), which postulate the dual nature of social relations. These theories postulate that individuals constantly evaluate the quality of their social relations in terms of both benefits and costs. According to the norm of reciprocity (Gouldner, 1960), individuals tend to feel obliged to requite benefits offered by network members. They may even decline the offer if they consider the incurred costs outweigh the perceived benefits.

In light of the social exchange theories, we encourage the adoption of a balanced approach (see Cheng, Wong, & Tsang, 2006) when making predictions about social support. Specifically, predictions focusing on both the benefits and costs of social support are deemed more comprehensive in describing the role of social support on the experience of pain. It is worth noting that the positive and negative aspects of social relations do not necessarily represent two opposite poles within the same continuum. Rather, these two aspects of social support may represent relatively independent aspects and may be associated with distinct domains or types of social support. It is also worth noting that the benefits and costs of social support do not necessarily carry equal weight, and the proportions may vary among distinct domains or types of support.

Can Money Be a Double-Edged Sword? Short- and Long-Term Impact of Money

Apart from postulating social support as a pain buffer, Zhao and Gao (this issue) further hypothesized money as another pain buffer. Utilizing Lea and Webley's (2006) theory of money, Zhao and Gao contend that money may serve as a pain buffer as both a pain-killer (drug) and a shield (tool). Specifically, money can itself palliate pain by mimicking the experience of a soothing phenomenon without the phenomenon actually being present (i.e., money as a drug). Money can also palliate pain by being traded for items that have direct pain-relieving properties (i.e., money as a tool). Though we find several aspects of their argument compelling, their discussion heavily emphasizes the positive aspects of money—an approach that fails to fully explore its potential long-term costs, as we will point out later in this section.

To provide evidence to support their postulation of money as a drug, Zhao and Gao (this issue) cite an experiment (Zhou, Vohs, & Baumeister, in press) that explored the role of money on pain soothing. Compared with their counterparts who had counted neutral objects (i.e., papers), participants who had counted money felt less pain during a hot water immersion task. Such a finding indicates that money itself, not any object purchased by it, produces the beneficial effects.

Johnson and Krueger (2006) provided support for the pain-soothing function of money as a tool by examining the influence of wealth on life satisfaction among a large sample of twin pairs. Their findings indicate that environmental changes exert greater effects on life satisfaction for individuals with less financial resources compared with those with more of such resources. Johnson and Krueger interpreted these findings by suggesting that abundant financial resources can minimize the impact of adverse events on life satisfaction. For instance, when an undesirable event (e.g., car accident) happens, individuals with more financial resources may be less distressed because they can mobilize their pool of resources to tackle the problem, such as having their broken car repaired or buying a new car. Conversely, carrying out the same acts may create an additional amount of distress among those with scant financial resources. Such findings suggest that money can serve as a tool that reduces individuals' sensitivity to pain.

Although money and materialism may have short-term desirable effects, there are other studies that reveal possible long-term adverse consequences on important life outcomes. A possible undesirable effect of money is the creation of social distance. Zhou and Gao (this issue) cited another study (Vohs, Mead, & Goode, 2006) to support their postulation of money as a pain buffer. In this experiment, various experimental tasks (e.g., unscrambling money-related words, reading an essay

about money) were designed to induce participants to think about the concept of money. Participants primed with money preferred to play and work alone, as well as created distance between themselves and others. In our opinion, such findings can also be interpreted as evidence revealing the "dark side" of money. Our notion stems from the self-determination theory (Ryan & Deci, 2002), which postulates that higher levels of well-being are associated with intrinsic goals. According to this oft-cited theory, affiliation with others is an important intrinsic goal that individuals strive for. In this light, the study by Vohs and colleagues (2006) suggests that a greater desire for money can dissociate individuals from others. Such social isolation, which implies a failure to gratify the important intrinsic goal of social affiliation, may elicit low levels of psychological well-being (e.g., Chappell & Badger, 1989; Thompson & Heller, 1990).

Consistent with this line of thinking, the existing literature suggests that materialism is inversely associated with some important life outcomes, such as life satisfaction (e.g., Belk, 1984, 1985; Chang & Arkin, 2002; Richins & Dawson, 1992) as well as fun, enjoyment, and relationship with friends (Ahuvia & Wong, 1995). Moreover, materialism was also found to be positively related to anxiety, depression, and unhappiness (Richins & Dawson, 1992; Wachtel & Blatt, 1990). In a more subtle test of the materialism-life satisfaction link, Fourier and Guiry (1993) found that the number of items participants listed on their consumer wish-list was inversely correlated with life satisfaction.

To explicate this body of seemingly "counterintuitive" findings, Burroughs and Rindfleisch (2002) contended that materialism can influence individuals' subjective well-being through standing in conflict with collective values and thus creating tension within the individual. Their notion is predicated on Schwartz's (1992, 1994) Circumplex Model of Values, which puts forward that the basic general-value types can be mapped onto two dimensions: (a) self-enhancement versus self-transcendence and (b) openness to change versus conservatism. Values that are on opposite poles of a dimension have the highest chance of being in conflict. Such a conflict creates tension within the individual, thus resulting in a decrease in subjective well-being. Burroughs and Rindfleisch focused on the first dimension, asserting that materialistic values are implicitly self-centered (self-enhancing) and thus are on the opposite end of more collective values (self-transcending).

The link between materialism and undesirable life outcomes was obtained among not only adults but also adolescents. Specifically, P. Cohen and Cohen (1996) found that materialism predicted higher risks for attention deficit disorder and conduct disorder for young participants. Adolescents having these disorders manifest deficits in interpersonal functioning, which

are related to poor peer relationships and low levels of subjective well-being (e.g., Biederman, 2007; Burke, Loeber, & Lahey, 2007). In short, this body of studies pointed to the relationship between materialism and undesirable outcomes in life, thus suggesting that money may be an effective coping strategy in the short run, but it can elicit more pain and stress in the long run.

Compared to the extensive literature on social support, the scope of the money literature is rather limited. The small but significant body of studies indicates that money can protect individuals from the adverse impact of pain, but it is also related to undesirable outcomes that may directly or indirectly elicit greater pain and distress. In light of these inconsistent findings, we propose that money, similar to social support, may be a double-edged sword. Specifically, money may be concurrently viewed as a protective agent and a precipitant of pain. The beneficial role of money has been extensively discussed in the pain-buffering theory, but not much attention has been paid to its potentially devastating long-term effects. We thus recommend the adoption of a balanced perspective that takes into account both desirable and undesirable effects to provide a more extensive discussion on the role of money on the experience of pain.

Does Social Support (Money) Always Play a Primary (Secondary) Role?

We have discussed the possible “dark side” of social support and money in the previous sections, but it is important to reiterate that the beneficial role of these two pain-soothing agents should be recognized rather than neglected altogether. In addition, the nature of their pain-relieving role may be more complex than what has been proposed by the pain-buffering theory. In this section, we attempt to address the complexity issue by providing an alternative view that both social support and money can be primary soothers of pain. Instead of arguing *which* factor—social support or money—is the primary source, it seems more important to explore *when* individuals rely on social support or money as a primary strategy to cope with pain and stress.

To fill this knowledge gap, we utilize Williams’s (2001, 2007) need-threat/need-fortification framework as an attempt to specify conditions that may influence individuals’ choices of their primary strategy. Within this framework, ostracism or social exclusion constitutes a source of threat to four fundamental needs: (a) the need to belong, (b) the need to maintain high self-esteem or positive self-evaluation, (c) the need to perceive control over the social milieu, and (d) the need to regard one’s existence as meaningful. Threats to these fundamental needs may account for the deployment of

copied responses as an attempt to mitigate the distress elicited by social exclusion.

In light of this framework, we propose that when a sense of belonging and self-esteem is thwarted, individuals are more likely to seek social support by trying to please others and displaying pro-social behaviors (see Williams, 2007). Although money may also be functional in boosting self-esteem and a sense of belonging, we consider that social support may be more effective in this particular condition. This notion is consistent with the evidence cited by Zhao and Gao (this issue) that individuals tend to seek social support as a primary pain soother (e.g., Maner, DeWall, Baumeister, & Schaller, 2007; Wildschut, Sedikides, Arndt, & Routledge, 2006).

We further propose that social support and money may play different roles in other conditions in which desires for control and meaningful existence are the dominant motives. Our notion stems from a body of studies, which suggested that participants who had a weaker sense of control were more likely to display greater materialistic values. For example, Kasser and Sheldon (2000) asked participants to write about their own deaths or about listening to music. People who wrote about their own mortality expressed greater endorsement of materialistic values than those who wrote about listening to music. Christopher and colleagues (Christopher, Drummond, Jones, Marek, & Theriault, 2006) showed that such an effect of death-related thoughts on materialism was partially mediated by perceived insecurity. Chang and Arkin (2002) further indicated that insecurity or uncertainty about oneself or one’s social environment increased endorsement of materialistic values. Such findings imply that money and material possessions can function to reduce individuals’ perceived insecurity and uncertainty, thus strengthening their sense of control. Hence, it is reasonable to infer that when control and meaningful existence are threatened, individuals may seek money as a primary means to cope with their distress.

Instead of seeking social support, it is even possible that individuals may behave aggressively toward others in order to restore control (see Gerber & Wheeler, in press; Tedeschi, 2001). Such a possibility was revealed in the study by Warburton and colleagues (Warburton, Williams, & Cairns, 2006). In this study, participants were instructed that they would play an online ball-tossing game (i.e., Cyberball, see Williams, Cheung, & Choi, 2000) with two other players. The number of balls they received was in fact programmed by a computer. Participants in the social-inclusion condition received one third of the total tosses, whereas those in the social-exclusion condition received only two to three tosses at the beginning but never received any again. Then participants were exposed to blasts of aversive noise, and they had either control or no control over the onset of the noise.

At the end of the experiment, participants were given an opportunity to allocate an amount of hot sauce to a stranger. All participants were informed in advance that the stranger did not like spicy food but would have to consume the entire amount of hot sauce allocated to them. Findings showed that in the controllable condition, participants who were socially excluded and those who were socially included did not differ in the amount of hot sauce allocated to the stranger. In the uncontrollable condition, however, participants who were socially excluded tended to allocate reliably more hot sauce than their counterparts who were socially included. These findings suggest that instead of turning to others for support, individuals may even act aggressively toward others when their need for control is threatened. Under these circumstances, money but not social support may be used as a primary coping strategy.

Zhou and Gao (this issue) cited a study (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007) to substantiate their hypothesis that money is the secondary pain buffer. As shown in this study, participants who were socially excluded tended to donate less money to a student fund. Zhou and Gao suggested that participants in this study donated less money because their primary pain buffer (i.e., social support) failed and they turned to money as the secondary pain buffer. It is worth noting that a recent study by Carter-Sowell, Chen, and Williams (2008) yielded an opposite pattern of findings, which documented that socially excluded participants donated *more* money to a student organization. Carter-Sowell and colleagues interpreted their findings by suggesting that socially excluded individuals are willing to donate more money to restore their threatened need for belonging. These conflicting findings pose a challenge to the hypothesized role of money as a secondary buffer of pain.

We adopt the need-threat/need-fortification framework as an attempt to reconcile such inconsistencies. Specifically, the discrepant findings yielded by the two studies may be attributed to variations in the type of basic needs that were threatened. Carter-Sowell and colleagues (2008) manipulated social exclusion via the Cyberball paradigm (see Williams et al., 2000). However, Twenge and colleagues (2007) manipulated social exclusion using the life-alone paradigm. In this study, participants were told that they would live alone later in life after a personality test had been administered. Although no attempts have been made for a direct comparison between the two studies, the life-alone manipulation implies inescapability of long-term social exclusion and is thus more likely to thwart a sense of personal control than the temporary social exclusion induced by the Cyberball game. It is reasonable to infer that the study by Twenge and colleagues (2007) implies that money can be the primary strategy when individuals' perceived control is threatened. The study

by Carter-Sowell and colleagues (2008) indicates that when the need to belong is thwarted, individuals are willing to sacrifice personal resources (e.g., money) and strive for social support to mitigate pain induced by social exclusion.

In summary, these findings imply that the adoption of a primary strategy for coping with pain may be influenced by the particular type of threatened social needs. When a sense of belonging and self-esteem is threatened, individuals may have greater propensity to utilize social support as their primary pain-soothing strategy. Conversely, when a sense of control is threatened, individuals may have a greater propensity for using money as their primary pain-soothing strategy. Thus, we propose that both social support and money may act as primary pain soothers, and that threatened social needs may influence the choice of the primary strategy.

Conclusion

As the Chinese saying goes, "The sea of learning has no boundaries." Yet, it is worthwhile to expand the current "boundary" of our pool of knowledge. The present analyses endeavor to broaden the boundary of the new pain-buffering theory by providing some recommendations and alternative perspectives. To recapitulate, we suggest that the multidimensional conceptualization of social support should be considered for hypotheses refinement, and its buffering (vs. direct) effects should be discussed in greater depths. These measures may clarify further the beneficial role of social support. In addition, we advocate exploring the complex role of both social support and money on the experience of pain. To address this unknown but important issue, one possible way is to adopt a balanced approach that acknowledges their benefits as well as possible "dark sides." Another possible way is to examine situational variations in the deployment of social support or money as a primary strategy. In light of the need-threat/need-fortification framework, we propose that the relative importance of social support and money in pain relief may be influenced by the type of threatened fundamental needs.

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Note

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References

- Ahuvia, A. C., & Wong, N. (1995). Materialism: Origins and implications for personal well-being. In F. Hansen (Ed.), *European advances in consumer research* (Vol. 2, pp. 172–178). Copenhagen: Association for Consumer Research.
- Barrera, M., Jr. (2000). Social support research in community psychology. In J. Rappaport & E. Seidman (Eds.), *Handbook of community psychology* (pp. 215–245). Dordrecht, The Netherlands: Kluwer Academic.
- Bates, D. S., & Toro, P. A. (1999). Developing measures to assess social support among homeless and poor people. *Journal of Community Psychology, 27*, 137–156.
- Belk, R. W. (1984). Three scales to measure constructs related to materialism: Reliability, validity, and relationships to measures of happiness. In T. C. Kinnear (Ed.), *Advances in consumer research* (Vol. 11, pp. 291–297). Provo, UT: Association for Consumer Research.
- Belk, R. W. (1985). Materialism: Trait aspects of living in the material world. *Journal of Consumer Research, 12*, 265–280.
- Biederman, J. (2007). Advances in the neurobiology of ADHD. *Primary Psychiatry, 14*, 6–7.
- Bockian, N., Meager, S., & Millon, T. (2000). Assessing personality with the Millon Behavioral Health Inventory, the Millon Behavioral Medicine Diagnostic, and the Millon Clinical Multiaxial Inventory: Locus of control in the patient with chronic pain. In R. Gatchel & J. Weisberg (Eds.), *Personality characteristics of patients with pain* (pp. 61–88). Washington, DC: American Psychological Association.
- Brown, J. L., Sheffield, D., Leary, M. R., & Robinson, M. E. (2003). Social support and experimental pain. *Psychosomatic Medicine, 65*, 276–283.
- Burke, J. D., Loeber, R., & Lahey, B. B. (2007). Adolescent conduct disorder and interpersonal callousness as predictors of psychopathy in young adults. *Journal of Clinical Child and Adolescent Psychology, 36*, 334–346.
- Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research, 29*, 348–370.
- Carter-Sowell, A. R., Chen, Z., & Williams, K. D. (2008). Ostracism increases social susceptibility. *Social Influence, 3*, 143–153.
- Chalmers, B., Wolman, W. L., Nikodem, V. C., Gulmezoglu, A. M., & Hofmeyer, G. J. (1995). Companionship in labour: Do the personality characteristics of labour supporters influence their effectiveness? *Curatonia, 18*, 77–80.
- Chang, L., & Arkin, R. M. (2002). Materialism as an attempt to cope with uncertainty. *Psychology & Marketing, 19*, 389–406.
- Chappell, N. L., & Badger, M. (1989). Social isolation and well-being. *Journals of Gerontology, 44*, S169–S176.
- Cheng, C. (1997). Role of perceived social support on depression of Chinese adolescents: A prospective study examining the buffering model. *Journal of Applied Social Psychology, 27*, 800–820.
- Cheng, C. (1998a). Getting the right kind of support: Functional differences in the types of social support on depression for Chinese adolescents. *Journal of Clinical Psychology, 54*, 845–849.
- Cheng, C. (1998b). Psychometric properties of the Social-Conflict Scales for Chinese adolescents. *Journal of Social Psychology, 138*, 211–216.
- Cheng, C. (2001). Assessing coping flexibility in real-life and laboratory settings: A multimethod approach. *Journal of Personality and Social Psychology, 80*, 814–833.
- Cheng, C. (2003). Cognitive and motivational processes underlying coping flexibility: A dual-process model. *Journal of Personality and Social Psychology, 84*, 425–438.
- Cheng, C., Wong, W., & Tsang, K. W. (2006). Perception of benefits and costs during SARS outbreak: An 18-month prospective study. *Journal of Consulting and Clinical Psychology, 74*, 870–879.
- Christopher, A. N., Drummond, K., Jones, J. R., Marek, P., & Theriault, K. M. (2006). Beliefs about one's own death, personal insecurity, and materialism. *Personality and Individual Differences, 40*, 441–451.
- Cohen, P., & Cohen, J. (1996). *Life values and adolescent mental health*. Hillsdale, NJ: Lawrence Erlbaum.
- Cohen, S., & Syme, S. L. (1985). *Social support and health*. New York: Academic Press.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Chicago: Rand McNally.
- Cummins, R. C. (1988). Perceptions of social support, receipt of supportive behaviors, and locus of control as moderators of the effects of chronic stress. *American Journal of Community Psychology, 16*, 685–700.
- DiMatteo, M. R., & Hays, R. (1981). *Social support and serious illness*. Beverly Hills, CA: Sage.
- Dunkel-Schetter, C., & Bennett, T. L. (1990). Differentiating the cognitive and behavioral aspects of social support. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 267–296). Oxford, England: John Wiley & Sons.
- Fiore, J., Becker, J., & Coppel, D. B. (1983). Social network interactions: A buffer or a stress. *American Journal of Community Psychology, 11*, 423–439.
- Fisher, J. D., Nadler, A., & DePaulo, B. M. (1983). *New directions in helping: Vol. 1. Recipient reactions to aid*. New York: Academic Press.
- Fourier, S., & Guiry, M. (1993). An emerald green jaguar, a house on Nantucket, and an African Safari: Wish lists and consumption dreams in materialist society. In L. McAlister & M. L. Rothschild (Eds.), *Advances in consumer research* (Vol. 20, pp. 352–358). Provo, UT: Association for Consumer Research.
- Gerber, J., & Wheeler, L. (in press). On being-rejected: A meta-analysis of experimental rejection research. *Perspectives on Psychological Science*.
- Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review, 25*, 161–178.
- Haden, S. C., Scarpa, A., Jones, R. T., & Ollendick, T. H. (2007). Posttraumatic stress disorder symptoms and injury: The moderating role of perceived social support and coping for young adults. *Personality and Individual Differences, 42*, 1187–1198.
- Johnson, W., & Krueger, R. F. (2006). How money buys happiness: Genetic and environmental processes linking finances and life satisfaction. *Journal of Personality and Social Psychology, 90*, 680–691.
- Kasser, T., & Sheldon, K. M. (2000). Of wealth and death: Materialism, mortality salience, and consumption behavior. *Psychological Science, 11*, 348–351.
- Kaul, M., & Lakey, B. (2003). Where is the support in perceived support? The role of generic relationship satisfaction and enacted support in perceived support's relation to low distress. *Journal of Social & Clinical Psychology, 22*, 59–78.
- Kitcher, P. (1982). *Abusing science: The case against creationism*. Cambridge, MA: MIT.
- Knipscheer, C. P. M., & Antonucci, T. C. (1990). *Social network research: Substantive issues and methodological questions*. Rockland, MA: Swets & Zeitlinger.
- Knowlton, A. R., & Latkin, C. A. (2007). Network financial support and conflict as predictors of depressive symptoms among a highly disadvantaged population. *Journal of Community Psychology, 35*, 13–28.
- Lea, S. E. G., & Webley, P. (2006). Money as tool, money as drug: The biological psychology of a strong incentive. *Behavioral and Brain Sciences, 29*, 161–209.

- Leerkes, E. M., & Burney, R. V. (2007). The development of parenting efficacy among new mothers and fathers. *Infancy, 12*, 45–67.
- Lefcourt, H. M. (1992). Perceived control, personal effectiveness, and emotional states. In B. N. Carpenter (Ed.), *Personal coping: Theory, research, application* (pp. 111–131). Westport, CT: Praeger.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw-Hill.
- Lidderdale, J. M., & Walsh, J. J. (1998). The effects of social support on cardiovascular reactivity and perinatal outcome. *Psychology & Health, 13*, 1061–1070.
- Lowery, K., & Stokes, M. A. (2005). Role of peer support and emotional expression on posttraumatic stress disorder in student paramedics. *Journal of Traumatic Stress, 18*, 171–179.
- Maner, J. K., DeWall, C. N., Baumeister, R. F., & Schaller, M. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the “porcupine problem.” *Journal of Personality and Social Psychology, 92*, 42–55.
- Marin, M. J. A., & Garcia-Ramirez, M. (2005). Social support and emotional exhaustion among hospital nursing staff. *European Journal of Psychiatry, 19*, 96–106.
- Meehan, M. P., Durlak, J. A., & Bryant, F. B. (1993). The relationship of social support to perceived control and subjective mental health in adolescents. *Journal of Community Psychology, 21*, 49–55.
- Morinaga, K., & Yamauchi, T. (2003). Childbirth and changes of women’s social support network and mental health. *Japanese Journal of Psychology, 74*, 412–419.
- Park, K., Wilson, M. G., & Lee, M. S. (2004). Effects of social support at work on depression and organizational productivity. *American Journal of Health Behavior, 28*, 444–455.
- Petito, F., & Cummins, R. A. (2000). Quality of life in adolescence: The role of perceived control, parenting style, and social support. *Behaviour Change, 17*, 196–207.
- Phillips, J. M., & Gatchel, R. J. (2000). Extraversion-introversion and chronic pain: Locus of control in the patient with chronic pain. In R. Gatchel & J. Weisberg (Eds.), *Personality characteristics of patients with pain* (pp. 181–202). Washington, DC: American Psychological Association.
- Pierce, G. R., Lakey, B., Sarason, I. G., & Sarason, B. R. (1997). *Sourcebook of social support and personality*. New York: Plenum.
- Prezza, M., & Pacilli, M. G. (2002). Perceived social support from significant others, family and friends and several socio-demographic characteristics. *Journal of Community & Applied Social Psychology, 12*, 422–429.
- Redman, T., & Snape, E. (2006). The consequences of perceived age discrimination amongst older police officers: Is social support a buffer? *British Journal of Management, 17*, 167–175.
- Richins, M. L., & Dawson, S. (1992). A consumer values orientation for materialism and its measurement: Scale development and validation. *Journal of Consumer Research, 19*, 303–316.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic-dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). Rochester, NY: University of Rochester.
- Sagrestano, L. M., Feldman, P., Killingsworth-Rini, C., Woo, G., & Dunkel-Schetter, C. (1999). Ethnicity and social support during pregnancy. *American Journal of Community Psychology, 27*, 869–898.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). San Diego, CA: Academic.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues, 50*, 19–45.
- Sinha, S. P., Nayyar, P., & Sinha, S. P. (2002). Social support and self-control as variables in attitude toward life and perceived control among older people in India. *Journal of Social Psychology, 142*, 527–540.
- Skinner, E. A. (1995). *Perceived control, motivation, and coping*. Thousand Oaks, CA: Sage.
- Stroebe, W., Zech, E., Stroebe, M. S., & Abakoumkin, G. (2005). Does social support help in bereavement? *Journal of Social & Clinical Psychology, 24*, 1030–1050.
- Tedeschi, J. T. (2001). Social power, influence, and aggression. In J. P. Forgas & K. D. Williams (Eds.), *Social influence: Direct and indirect process* (pp. 109–128). New York: Psychology Press.
- Terry, D. J. (1989). Coping resources and adaptation: Main or buffering effects? *Australian Journal of Psychology, 41*, 159–173.
- Thibaut, J., & Kelley, H. H. (1959). *The social psychology of groups*. New York: Wiley.
- Thompson, M. G., & Heller, K. (1990). Facets of support related to well-being: Quantitative social isolation and perceived family support in a sample of elderly women. *Psychology and Aging, 5*, 535–544.
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology, 92*, 56–66.
- Varona, R., Saito, T., Takahashi, M., & Kai, I. (2007). Caregiving in the Philippines: A quantitative survey on adult-child caregivers’ perceptions of burden, stressors, and social support. *Archives of Gerontology and Geriatrics, 45*, 27–41.
- Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science, 314*, 1154–1156.
- Wachtel, P. L., & Blatt, S. J. (1990). Perceptions of economic needs and of anticipated future income. *Journal of Economic Psychology, 11*, 403–415.
- Warburton, W. A., Williams, K. D., & Cairns, D. R. (2006). When ostracism leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology, 42*, 213–220.
- White, S. A., McKay, K., Jackson, H., Park, J., Martin, B. J., & Taylor, L. C. (2003). Christians and depression: Attributions as mediators of the depression-buffering role of Christian social support. *Journal of Psychology and Christianity, 22*, 49–58.
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology, 91*, 975–993.
- Williams, K. D. (2001). *Ostracism: The power of silence*. New York: Guilford.
- Williams, K. D. (2007). Ostracism. *Annual Review of Psychology, 58*, 425–452.
- Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology, 79*, 748–762.
- Wills, T. A. (1985). Supportive functions of interpersonal relationships. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 61–82). New York: Academic Press.
- Wills, T. A., & Shinar, O. (2000). Measuring perceived and received social support. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention: A guide for health and social scientists* (pp. 86–135). New York: Oxford University.
- Wortman, C. B. (1984). Social support and the cancer patient: Conceptual and methodological issues. *Cancer, 53*(Suppl.), 2339–2360.
- Zhou, X., Vohs, K. D., & Baumeister, R. F. (in press). The symbolic power of money: Reminders of money alter social distress and physical pain. *Psychological Science*.