Cultivating Effective Social Support Through Abstraction: Reframing Social Support Promotes Goal-Pursuit

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Abstract

Social support, in theory, should promote individual goal-pursuit. However, a growing number of studies shows that receiving support can undermine goal-pursuit. Addressing this paradox, we investigated a novel idea of the effects of how people think about their social support on their goal-pursuit. Four experiments showed that participants who were led to think abstractly (vs. concretely) about their social support showed higher intent to pursue their goal (Studies 1-3) and worked harder toward their goal (Study 4). The benefits of abstracting one's social support occurred over a variety of personal goals, support types, and support-providers, indicating the generalizability and robustness of our findings. These results demonstrate that how people think about their social support influences goal-pursuit and suggest ways in which support-recipients can maximize their social support.

Keywords

social support, goal-pursuit, motivation, close relationships

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Decades of research indicate that social support plays a vital role in human flourishing. For instance, people who have more supportive relationships with others have better mental and physical health, higher levels of subjective well-being, and lower rates of morbidity and mortality (e.g., Cohen, 2004; Cohen & Wills, 1985; House, Landis, & Umberson, 1988; Thoits, 1995; Uchino, 2004). A recent meta-analysis (Holt-Lunstad, Smith, & Layton, 2010) showed that being socially integrated in a supportive social network predicts mortality more strongly than "classic" risk factors such as obesity. However, despite the plethora of compelling evidence, many researchers have pointed out that the mechanisms linking supportive relationships to positive outcomes are not well understood. Researchers have noted, for example,

> Future work needs to be based on clear theoretical models of mediating processes in support-well-being relationships. (Cohen & Wills, 1985)

> Attention to intervening mechanisms seems a crucial next step if we wish to truly understand how social support influences psychological well-being. (Thoits, 1995)

> The need to test the proposed theoretical mechanisms is one of the most pressing issues in this [social relationships and physical health] literature. (Uchino, 2004)

> Unfortunately, the mechanisms linking relationships to health, and the specific features of relationships that should be cultivated, are not well understood. (Feeney & Collins, 2015)

To help close the above knowledge gap, the present research examines how social support influences an important and ubiquitous life domain—goal-pursuit.

Social Support: A Mixed Blessing in Goal-Pursuit

By definition, social support promotes goal-pursuit by providing people with instrumental and emotional resources (Cohen, Gottlieb, & Underwood, 2000). Indeed, much research has shown that social support is instrumental to successful goal-pursuit and thriving (Brunstein, Dangelmayer, & Schultheiss, 1996; Feeney, 2004; Feeney & Collins, 2015; Rusbult, Finkel, & Kumashiro, 2009). However, studies also have found receiving social support to be unrelated to positive outcomes or at times to be associated with negative ones

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(Barrera, 1986; Bolger, Zuckerman, & Kessler, 2000; Helgeson, 1993; Kaul & Lakey, 2003). A growing number of studies has begun to champion the notion that the receipt of support may be a "mixed blessing" (Gleason, Iida, Shrout, & Bolger, 2008; Rafaeli & Gleason, 2009). Moreover, the impact of social support may vary by factors such as the recipient's distress level or self-esteem (Girme, Overall, & Simpson, 2013; Marigold, Cavallo, Holmes, & Wood, 2014).

Why do certain support provisions fail to help support-recipients? Most of the extant research has investigated this question from the perspective of the *support-providers* (e.g., their characteristics, the type of support they provide). For instance, receiving help on an ego-relevant task led to negative affect and poor self-evaluation when the help came from a good friend (vs. a stranger) or a high-status (vs. low status) outgroup member (Nadler, Fisher, & Itzhak, 1983; Nadler & Halabi, 2006). Sometimes, support-providers may have a "partner-achievement goal," or a personal goal for recipients' successful achievement, which can lead them to offer unhelpful support that undermines recipients' goal-pursuit (Kappes & Shrout, 2011). Other studies have focused on *the type of support* being provided to the recipient. For example, research on invisible support shows that providing *visible* support can damage recipients' self-esteem and undermine goal-pursuit by drawing attention to the recipients' incompetence (Bolger & Amarel, 2007; Bolger et al., 2000).

In the present research, we offer an additional perspective to help understand the apparent paradox of social support in goal-pursuit. Specifically, we examine whether support-recipients can actively shape their support outcomes, independent of who the support-provider is or what type of support they receive. We ask, what are the mechanisms by which support-recipients can cultivate effective support that promotes their goal-pursuit?

Investigating the role of support-recipients is critical for several reasons. First, most of the extant research has considered support-recipients as relatively passive agents (e.g., vulnerable to the deleterious effects of visible support), as if they have no control in shaping their own support outcomes (cf. Feeney & Collins, 2015). To our knowledge, no research exists on how support-recipients can protect themselves from the possible adverse effects of certain types of support. Second, unless support-recipients preemptively express their needs to the support-provider, they are likely to have limited control over the type of support they receive or how they receive it. Thus, focusing on what they *can* do to maximize their support is important. Finally, research on social support has consistently shown the importance of the recipients' subjective *perception* of social support (relative to actual received support) on outcomes (Haber, Cohen, Lucas, & Baltes, 2007; Helgeson, 1993; Hofmann, Finkel, & Fitzsimons, 2015; Maisel & Gable, 2009). For instance, Maisel and Gable (2009) showed that even when social support is provided effectively (i.e., invisible support), recipients benefited only when they *perceived* their support-providers to be responsive. Thus, given the highly subjective nature of social support (Cutrona, 1986), the support-recipients' role—particularly their perception or construal of the support—should play a critical role in shaping support outcomes.

Benefits of Abstracting One's Social Support

The present research examines the novel idea that how support-recipients *think about* the support they receive influences important goal-related outcomes. Prior work on action identification theory (Vallacher & Wegner, 1987, 1989) and construal level theory (Trope & Liberman, 2003, 2010) indicates that actions can be represented at varying levels of abstraction, from concrete and low levels with the focus on *how* actions are performed, to abstract and high levels with the focus on *why* actions are performed. For example, one's representations of "tooth brushing" as "moving a brush around in one's mouth" (low-level, concrete, focus on the process) or "preventing tooth decay" (high-level, abstract, focus on the purpose) can have varying psychological and behavioral consequences (Trope & Liberman, 2010).

Likewise, we propose that the way support-recipients mentally represent their support (e.g., help with cleaning) should influence goal-relevant outcomes. A low-level, how-related, concrete representation of a supportive act would involve focusing on the *process* of social support, namely, *how* the support-provider can help them (e.g., my partner can vacuum the floor for me). On the contrary, a high-level, why-related, abstract construal of the same supportive act would involve thinking about the *purpose and meaning* of social support, namely, *why* the support-provider would like to help them (e.g., my partner would vacuum the floor for me because she or he cares about me). This should allow the recipients to generalize the supportive act to a supportive inference about their support-provider (e.g., my partner is supportive, responsive; for example, Fujita, Eyal, Chaiken, Trope, & Liberman, 2008).

Why should abstracting one's social support promote goal-pursuit? We propose that both cognitive and affective processes are likely to play complementary roles. In terms of the former, the process of abstracting one's social support should enable people to *perceive* their support-provider (or the supportive act) to be more supportive. Given the highly subjective nature of social support and much empirical evidence showing that *perceiving* the support-provider to be supportive (vs. receiving support) is more consistently linked to beneficial support outcomes, recipients are likely to benefit from supportive acts when they *perceive* them as supportive (Cutrona, 1986; Haber et al., 2007; Hofmann et al., 2015; Kaul & Lakey, 2003). Consistent with this notion, Brunstein and colleagues (1996) found that whether people met their personal goals depended on the extent to which they perceived their partners to be supportive. Maisel and Gable (2009) demonstrated that receiving support was beneficial

(i.e., reducing anxiety and sadness) when the support-recipients *perceived* their support-providers to be responsive.

In terms of more affective processes, making supportive inferences about the support-provider (facilitated by abstraction of one's social support) should make people feel more secure in their relationship (Collins & Feeney, 2000, 2004). Studies have shown that priming people with secure relationships boosts energy (independent of general positive mood) necessary to explore their environment (Feeney, 2004; Luke, Sedikides, & Carnelley, 2012). Moreover, feelings of security from close others provide people with a "secure base" from which they can strive for goals, as well as a "safe haven" to which people can retreat in times of adversity to obtain comfort, reassurance, and assistance (Bowlby, 1988; Collins & Feeney, 2000; Feeney, 2004, 2007; Feeney & Collins, 2015; Feeney & Thrush, 2010; Hazan & Shaver, 1990). Thus, we reasoned that those who are encouraged to generalize a supportive act to supportive inferences about their support-providers will be more motivated and have higher intent to pursue their goal.

Overview of Experiments

The present research examines how thinking differently about one's social support influences goal-pursuit. Particularly, we were interested in the effects of abstract (vs. concrete) representations of social support on people's motivation to pursue important goals. To facilitate abstract (vs. concrete) representations of social support, we led participants to write about *why* their close others would like to help them achieve a particular goal (abstract) or *how* their close others could help them achieve the goal (concrete).[1] Among the variety of manipulations used in previous research (see Burgoon, Henderson, & Markman, 2013, for a review), studies have successfully facilitated abstraction (vs. concretion) of actions by having people contemplate why (vs. how) the action occurred (e.g., Freitas, Gollwitzer, & Trope, 2004; Fujita, Trope, Liberman, & Levin-Sagi, 2006; Henderson, 2013). We expected the why (vs. how) manipulation to induce people to form more supportive inferences about their social support. Given the benefits associated with making supportive inferences about one's social support (e.g., Feeney, 2004; Maisel & Gable, 2009), we predicted that participants in the why (vs. how) condition would show greater intent to pursue their goals. Moreover, although our focus was on the comparison between the two social support conditions (why vs. how), across the studies we included various types of control conditions to provide additional information for interpreting and understanding our results.

In pursuing these research goals, we used different methods and samples to maximize the generalizability of our results. Study 1 examined participants' intent to pursue an important goal as a function of thinking about one's social support concretely versus abstractly. Studies 2 and 3 enhanced the robustness of our findings by testing our effects across diverse goals and social support contexts, and by ruling out potential alternative explanations. Finally, in Study 4, we investigated the effects of thinking about social support concretely versus abstractly on actual goal-pursuit behavior.

Study 1

The aim of Study 1 was to examine how thinking differently about social support influences goal-pursuit. We recruited college students 1 week before their Finals and assessed their motivation to study for their exams as a function of thinking differently about their social support. We expected that thinking about why a close other would like to (vs. how a close other can) help them would induce people to form more supportive inferences about their social support. Given the benefits associated with such representations (e.g., Feeney, 2004), we hypothesized that participants in the why (vs. how) condition would show higher intent to spend time and effort studying for their exam.

Method

Participants and design. We approached 137 University of Michigan students (72 female; M_{age} = 19.92 years; 10% African American, 23% Asian American, 61% White, 6% Other) around campus during the week preceding finals week and invited them to participate in the study in exchange for candy. Participants were randomly assigned to one of three conditions: how (n = 43), why (n = 45), and control (n = 50). For this initial study, we determined our sample size based on Fitzsimons and Finkel (2011), who used measures similar to ours. Thus, we sought at least 35 participants per condition. However, because we expected some participants to not fully complete the survey or to not have final exams, our research assistants (blind to experimental manipulations) were instructed to collect data until each condition had at least 40 participants. Four participants did not have a single Final exam, and six participants failed to complete the survey; these participants were excluded from the analyses, leaving a total of 127 participants (how n = 38, why n = 41, and control n = 48) in the analyses.

Experimental manipulations and procedure. As a cover story, the experimenter told participants they were interested in documenting students' study habits as part of an alleged class project. Participants first listed the subject of an exam for which they were currently studying. If they had multiple exams to study for, they were instructed to list the one they considered to be the most important. Participants were then asked to think about a close other (e.g., family, close friend, romantic partner) and indicate who the person was. Participants in the *how* condition were instructed to provide one example of how this person can help them study for their exam. Some example responses included "my girlfriend can help me by encouraging me, helping me to relax, and keeping

me on task with studying" and "my mother, by giving me advice on how and when to study as well as managing my time." Participants in the *why* condition were instructed to provide one reason this person would like to help them study for their exam. Some examples included "my romantic partner would like to help me because she loves me . . ." and "he wants me to succeed! He is committed to me doing well and knows that this class will help me with my future." Participants in the control condition were not given a writing portion to complete.

Next, participants rated how much time and effort they planned to spend studying for the exam during the weekend before their finals. These items were modified from Fitzsimons and Finkel (2011), and the rating scale ranged from 1 (*much less than usual*) to 5 (*much more than usual*). The two items were highly correlated (r = .87), so we averaged them to create a *planned goal-pursuit* variable, with higher scores reflecting higher motivation to study for the exam. Participants then completed a measure of goal-commitment ("Doing well on this exam is important to me") and a measure of perceived goal progress ("I feel satisfied with how prepared I am for this exam so far") using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*). Finally, to control for potential activities that might interfere with studying over the weekend, we asked participants to indicate how busy they expected to be on the weekend, besides studying for the exam (1 = *not at all busy*, 5 = *very busy*).

Results and Discussion

Manipulation check. To examine whether thinking about why a close other would like to help (vs. how a close other could help) promoted a more abstract construal of social support, two coders blind to experimental conditions content-coded participants' responses using coding schemes developed for the linguistic categorization model (Semin & Fiedler, 1988). For each response, raters coded each predicate into one of four linguistic categories: descriptive action verb (DAV; for example, *say*), interpretive action verb (IAV; for example, *help*), state verb (SV; for example, *care*), or adjective (e.g., *kind*). These four categories are organized along a dimension of concreteness to abstractness, with DAVs being the most concrete and adjectives being the most abstract. To capture the different levels of abstraction, we used a weighting scheme based on 1, 2, 3, and 4 to weight DAVs, IAVs, SVs, and adjectives, respectively (Semin & Smith, 1999). For example, participants received 2 (4) points each time they used an IAV (adjective). After summing up the total points, we divided them by the number of predicates so that each participant ended up with a degree of abstraction that ranged from 1 to 4. The scores from the two judges' ratings were highly correlated, r = .90. Discrepancies in codes were resolved through discussion.

Because 31 participants (18 in the why condition) did not write enough words for the raters to code, they were excluded from this analysis. Nevertheless, as expected, participants in the why condition (M = 2.40, SD = .62) used more abstract language to describe their social support than those in the how condition (M = 2.01, SD = .51), $t(46) = 2.39$, $p < .001$, d = .69.

Main analysis. We first performed an ANOVA on the planned goal-pursuit measure with condition as a between-participants factor. No main effect of condition emerged, $F(2, 123) = 2.24$, p = .111. However, more pertinent to our central hypothesis, a planned comparison revealed that participants in the why condition (M = 4.00, SD = .90) planned to spend more time and effort studying for their exam compared with those in the how condition (M = 3.55, SD = .91), $t(123) = 2.10$, p = .038, d = .50, 95% confidence interval (CI) = [0.03, 0.87]. Planned goal-pursuit for participants in the control condition (M = 3.83, SD = 1.01) was not significantly different from those in either the why or the how condition, ps > .18. Additional analyses revealed that participants did not differ in how important they thought the exam was, $F(2, 124) = .53$, $p > .59$), how satisfied they were with how prepared they were for the exam, $F(2, 124) = 2.09$, $p > .12$, and how busy they expected to be over the weekend, $F(2, 122) = .31$, $p > .73$.[2] No specific comparisons on these variables reached significance.

Our findings provide initial evidence that how people think about their social support can influence planned goal-pursuit. Specifically, students who were led to think about the meaning and purpose ("why") behind their support demonstrated higher intent to study for their exam than those who thought about the means and process ("how") of their support. We believe these results provide a conservative test of our hypothesis, given that students tend to be highly motivated to study for final exams (only 8% of the sample scored below the midpoint, "about the same as usual").

Although our main focus revolves around the comparison between the why and how social support conditions, it is interesting to consider planned goal-pursuit in the control condition in this study, which did not differ significantly from the why or the how conditions. One possible explanation is that students' higher motivation to study shortly before their Finals led to a ceiling effect, making it difficult for us detect variability in their responses. Another possibility is that our study may be underpowered to detect potential significant differences. We sought to address these issues in Study 2.

Study 2

Study 2 had two goals. First, we sought to replicate Study 1's findings using a larger sample. Second, we wanted to test the generalizability of our findings by having participants recall an important goal of their own, thus helping induce more variety in the goals participants considered. Specifically, we asked participants to think about an important goal they are

currently pursuing, and measured their motivation to put in the time and effort toward achieving it. As in Study 1, we expected participants in the why (vs. how) condition to demonstrate greater intent in their goal-pursuit.

Method

Participants and design. We recruited 198 participants (95 females, M_{age} = 33.92 years; 8% African American, 11% Asian American, 76% White, 5% Other) from Amazon.com's Mechanical Turk. Participants were monetarily compensated for their responses to an online survey. Given the small to medium effect size observed in Study 1, we sought to recruit about 65 participants in each condition.

Procedure and materials. Each participant was asked to first describe an important goal that they are currently pursuing. Some examples included losing weight, getting a job, and paying off debt. Because these goals are likely to differ on many dimensions, participants also responded to the following questions: "How important is this goal to you?" "how difficult to achieve is this goal?" (1 = *not at all*, 5 = *very much*), and "where are you currently in terms of your progress toward this goal" (1 = *have not started pursuing the goal yet*, 5 = *very close to completing the goal*).[3] Then, as in Study 1, participants were randomly assigned to one of three conditions: how (n = 69), why (n = 64), and control (n = 65). The experimental manipulation paralleled that of Study 1, except for the control condition. We used a new control condition to keep its structure equivalent to the two experimental conditions. Specifically, participants wrote about a recent small talk event they had with someone. Thus, similar to participants in the how and the why conditions, they wrote about a social event; however, critically, they did not write about receiving social support. Five participants who did not complete the writing portion or who wrote about topics irrelevant to our instructions were excluded from the analyses, leaving a total of 193 participants (how n = 67, why n = 61, and control n = 65) in the analyses. Similar to Study 1, participants then rated how much time and how much effort they planned to spend working toward their goal (*planned goal-pursuit,* r = .73). Subsequently, participants responded to a one-item mood measure using a scale from 1 (*negative, sad, upset*) to 5 (*positive, happy, joyful*). After completing demographic questions, we compensated the participants.

Results and Discussion

Manipulation check. As in Study 1, two coders blind to experimental conditions content-coded participants' responses, using the same coding schemes as in Study 1 (Semin & Fiedler, 1988). The index scores from the two judges' ratings were significantly correlated, r = .69. Discrepancies in codes were resolved through discussion to form a single index. One participant (in the why condition) who did not generate enough words for us to code was excluded from this analysis. As expected, participants in the why condition (M = 2.62, SD = .70) used more abstract language to describe their social support than those in the how condition (M = 2.07, SD = .40), $t(125) = -5.60$, $p < .001$, $d = .95$.[4]

Main analysis. We performed a one-way ANOVA on the planned goal-pursuit measure with condition as a between-participants factor. No main effect of condition emerged, $F(2, 190) = 2.22$, $p = .11$. However, more pertinent to our main hypothesis, a planned comparison revealed that participants in the why condition (M = 3.71, SD = .70) planned to spend more time and effort working toward their goal compared with those in the how condition (M = 3.43, SD = .79), $t(190) = -2.07$, $p = .04$, $d = .38$, 95% CI = [−0.56, −0.01]. As in Study 1, planned goal-pursuit for participants in the control condition (M = 3.52, SD = .86) did not differ from those in the why or the how conditions, ps > .16. Mood did not differ significantly across condition (p = .74), nor did its inclusion as a covariate in the analyses influence the results.

To test for alternative explanations for the difference in goal-pursuit between the why and the how conditions, we also asked participants to indicate how helpful they thought their close other would be with the goal, how close they are with this person, how much they think this person cares about them, how much they care about this person, and how difficult it was to follow our manipulation, using 5-point scales (1 = *not at all*, 5 = *extremely*). None of these variables differed between the two conditions nor did they significantly moderate the effects.

Consistent with Study 1, participants who thought about why their close other would like to help them (vs. how their supportive other could help them) achieve their goal planned to spend more time and effort pursuing an important goal. That the effects were evident with a variety of goals the participants recalled further adds to the generalizability of the benefits of abstracting social support. Collectively, these results highlight that receiving support on a goal can have varying effects on goal-pursuit depending on how the support-recipient thinks about the support. In Study 3, we sought to examine the robustness of our phenomena by testing whether the benefits of abstracting social support extend to how people deal with receiving social support that involves negative feedback.

Study 3

Goal-pursuit is difficult. Dieters often fail to stick to their diet plans. Students often regret having gone out to party when they should have stayed in and studied for their exam. Sometimes, providing "good" social support involves providing negative feedback. Although research shows that receiving negative feedback is instrumental to successful goal-pursuit (Fishbach, Eyal, & Finkelstein, 2010), one problem is that it can undermine recipients' goal-pursuit by

eliciting defensiveness or reactance (Brehm, 1966; Podsakoff & Farh, 1989) or by damaging the recipients' self-esteem (Dweck & Leggett, 1988).

Building on our earlier studies, we examined whether encouraging recipients to think about negative feedback abstractly (e.g., focus on the reasons behind the negative feedback) promotes goal-pursuit. To do this, we recruited participants whose goal was to exercise regularly. Participants recalled a time when their partner gave them a lecture for failing to stick to their exercise goal.[5] Because thinking about the reasons (i.e., why, abstract) behind social support encourages people to make supportive inferences about a supportive act (even lecturing), we expected participants in the why (vs. how) condition to show higher intent to exercise. In addition, we included a no-writing control condition and an additional control condition in which participants thought about receiving social support in a nonexercise domain (Fitzsimons & Finkel, 2011) to provide more perspective for our findings.

Participants and Design

We recruited 263 participants (123 females, M_{age} = 35.76 years; 6% African American, 9% Asian American, 78% White, 7% Other) from Amazon.com's Mechanical Turk, whose goal was to exercise regularly. Participants were monetarily compensated for their responses to an online survey. As in Study 2, we sought to recruit about 65 participants in each condition.

Procedure and Materials

Participants were randomly assigned to one of four conditions: how (n = 64), why (n = 67), no-writing control (n = 65), and career-goal support condition (n = 67). Participants in the how (why) condition were instructed to take a moment to think about how (why) their partner lectured them. Then they wrote about "what did he/she exactly say and what were you doing at the time?" ("what might be some reasons behind his/her action?") and "when and where did this happen?" ("what did his/her action mean to you and for your relationship with him/her?"). Participants in the no-writing control condition had no writing portion before indicating goal-pursuit intentions. We also included a career-goal support condition, in which participants wrote about one example of how their partner helped them with a *career goal* (taken from Fitzsimons & Finkel, 2011). Previous research has shown that thinking about a partner's instrumentality to a focal goal (i.e., exercise) can lead one to outsource one's effort toward that goal (but not on other goals) to the partner (Fitzsimons & Finkel, 2011). Including this condition allows us to test for an alternative explanation that the lower intent for goal-pursuit in the how (vs. why) condition can be due to the higher salience of partner instrumentality, therefore resulting in more outsourcing in the how (vs. why and control) conditions.

Six participants who reported that their partner had never lectured them and five participants who either did not complete the writing portion or wrote about topics irrelevant to our instructions were excluded from the analyses, leaving a total of 252 participants in the analyses (how n = 59, why n = 63, no-writing control n = 65, career-goal support n = 65). Similar to the previous studies, participants then rated how much time and how much effort they planned to devote to exercise in the upcoming week (*planned goal-pursuit,* r = .86). To account for potential differences in how participants viewed their partner, we assessed participants' perceived responsiveness of their partner using three items adapted from Reis (2012): "My partner understands me," "My partner makes me feel like he/she values my abilities and opinions," and "My partner makes me feel cared for" (α = .95). Subsequently, participants responded to a one-item mood measure using a scale from 1 (*negative, sad, upset*) to 5 (*positive, happy, joyful*). After completing demographic questions, we compensated the participants.

Results and discussion

Manipulation Check. To examine whether thinking about the reasons and meaning behind a partner's negative feedback promoted a more abstract construal of received support, two coders blind to experimental conditions content-coded participants' responses using the same coding schemes as in Studies 1 and 2 (Semin & Fiedler, 1988). The scores from the two judges' ratings were highly correlated, r = .86. Discrepancies in codes were resolved through discussion to form a single index.

Because three participants in the why condition did not generate enough words for us to code, they were excluded from this analysis (including them in the analysis did not alter the results). As expected, participants in the why condition (M = 2.26, SD = .43) used more abstract language to describe their social support than those in the how condition (M = 1.70, SD = .41), $t(117) = 7.26$, $p < .001$, d = 1.33.[6]

Main Analysis

As in previous studies, we first performed a one-way ANOVA on the planned goal-pursuit measure with condition as a between-participants factor. A main effect of condition emerged, $F(3, 190) = 7.38$, $p < .001$, $\eta_p^2 = .08$. However, more pertinent to our central hypothesis, participants in the why condition (M = 3.75, SD = 1.15) planned to spend more time and effort exercising compared with those in the how condition (M = 3.20, SD = 1.07), $t(248) = 2.62$, $p < .009$, d = .50, 95% CI = [0.14, 0.97], the no-writing control condition (M = 3.05, SD = 1.21), $t(248) = 3.38$, $p = .001$, d = .59, 95% CI = [0.29, 1.10], and the career-goal support condition (M = 2.82, SD = 1.19), $t(248) = 4.54$, $p < .001$, d = .79, 95% CI = [0.53, 1.33]. Planned goal-pursuit for participants in the how condition was marginally higher than those in the career-goal

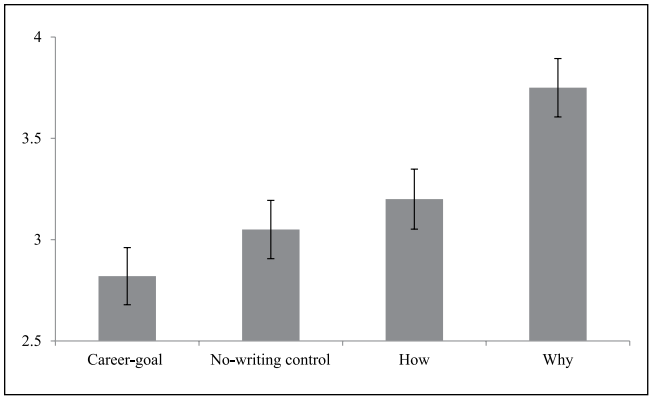

Figure 1. Planned goal-pursuit (exercise) as a function of condition in Study 3.

support condition, $p = .07$, but no different from those in the no-writing condition ($p = .50$; see Figure 1). Controlling for mood[7] or perceived responsiveness[8] did not substantively influence the results.

Consistent with our previous studies, participants who thought about their social support abstractly (vs. concretely) demonstrated higher intent to pursue their goal. Interestingly, the benefits of abstraction extended to a type of support (i.e., negative feedback) that has been shown to backfire at times. From these results, it appears that support-recipients can maximize such support by focusing on the reasons behind the support and the support-provider's good intentions, rather than thinking about how the support provision unfolded. Moreover, participants in the career-goal support condition reported lower intent to exercise compared with those in the why condition and how condition (marginally significant). These results help rule out an alternative explanation that the lower planned goal-pursuit in the how (vs. why) condition is due to participants' outsourcing their effort to their partner, due to higher salience of partner instrumentality (Fitzsimons & Finkel, 2011).

Over three studies, we have shown consistent benefits of thinking abstractly (vs. concretely) about social support on a variety of goals with different samples. However, one limitation of these studies is that they relied on self-report measures. We next investigate how our effects influence actual behaviors related to goal-pursuit.

Study 4

Building on the previous studies, which relied on self-report measures, Study 4 examined whether the different ways of thinking about one's social support influence another indicator of motivation—actual amount of effort put into the task at hand. Participants were led to believe they would be studying a new language with a study partner and that they would be tested individually. Prior to studying with their partner, though, they were given "optional" study materials that supposedly would not be on the test but could help their performance on it later. To gauge their motivation to do well on the test, we assessed how much participants studied the optional study materials. We hypothesized that participants who thought about why their study partner would help them (vs. how their study partner could help them) would show higher motivation to perform well on the test they thought they would take. This would be demonstrated in performance differences on a pop quiz based on the optional materials.

Method

Participants and design. Forty-six University of Michigan students (23 female; $M_{age} = 19.04$ years; 7% African American, 15% Asian American, 65% White, 13% Other) participated in this study on "how people acquire a new language" for course credit. Participants were told they would be working together with a partner to learn a new language and would be tested on their performance individually. Participants were randomly assigned to one of the two conditions: how ($n = 22$) and why ($n = 24$). We utilized a time-based stop-rule, collecting as much data until the end of the semester, with the goal (determined prior to data collection) of collecting at least 20 participants per condition (minimum recommended by Simmons, Nelson, & Simonsohn, 2011). No data were analyzed prior to the end of the semester.

Procedure and materials

Phase 1: Cover story and rapport building. Each experimental session consisted of two participants and two female experimenters who were blind to study hypotheses. Participants were told they would be learning an artificial language with another student and would be individually quizzed on it later. To give them a sense of what they would be learning, the experimenter showed participants a sample list of artificial words and explained that one of the later tasks would involve memorizing new artificial words and their English translations. To build rapport with the study partner before studying together (second part of interaction, which never occurred), participants interacted for 7 min in a different room. During this time, they were instructed to get to know each other. Previous studies have shown that this paradigm is effective in getting strangers acquainted and developing rapport (Ybarra, Winkielman, Yeh, Burnstein, & Kavanagh, 2011). The gender make-up of the pair (11 opposite-gender pairings) occurred naturally and did not influence our results.

Phase 2: Experimental manipulation. After the rapport session, participants returned to their individual laboratory room and completed a brief questionnaire about their upcoming study session with their partner. Participants were randomly assigned to write about either 1) *how* their partner can help them on the quiz they will take later (e.g., "My partner can help me by studying and quizzing me on the new vocabulary") or 2) why their partner would like to help them on the

quiz they will take later (e.g., "My partner would love to help me because we got along well when we were getting to know each other in the other room."). To assess perceived difficulty of the task, we asked participants to indicate how much time they thought they would need to memorize 20 new words (1 = *about 1 to 3 minutes*, 5 = *about 13 to 15 minutes*) and how difficult it would be to do so (1 = *not difficult at all*, 5 = *very difficult*). In addition, to measure how motivated participants would be to study with their partner, participants indicated how much effort they would put into memorizing 20 new words (1 = *not very much*, 5 = *very much*).

Phase 3: Assessing motivation. Immediately after the questionnaire, the experimenter provided participants with a vocabulary list that contained 15 new, artificial language words and their English translations—for example, "Sted" (means "blanket" in English); "Proter" (means "stapler" in English). The experimenter said,

> I need to go set up for the next part of the study, so I will be back in a few minutes. While I am gone, here are some materials you can look at if you'd like in the meantime. These are in a different language from what you will be working on but its structure has some similarities, so you might find it useful later on. I will be back soon!

The purpose of this setup was to assess participants' motivation regarding the upcoming task (which never took place). We reasoned that if participants were motivated to perform well, they would put more effort into studying the optional list they were told would help them later (though they would not be tested on it directly). However, if participants were not highly motivated, they should not put as much effort into studying a word list they were told would not directly overlap with material to be tested later. When the experimenter returned (after 2 min), we measured participants' motivation by presenting participants with an unexpected quiz on the 15 presented words. The quiz had two parts: For the first part, participants were to select (out of a 50-word list) the 15 artificial language words from the optional study materials. They were given 1 min to select as many as possible (M = 8.83, SD = 3.63). For the second part, they were given the list of 15 artificial language words and asked to write the matching English words (M = 4.02, SD = 3.76). For both parts, participants received one point for each correct answer. Scores on the two parts were significantly correlated (r = .63), so we combined them to create an overall quiz performance score (M = 12.85, SD = 6.67).

Phase 4: Control variables and debrief. Given that amount of self-regulatory resources can influence goal-pursuit (Fitzsimons & Finkel, 2011), we measured and controlled for a central element of self-regulation resources—level of executive functioning—with the Trail Making Test (Reitan & Wolfson, 1993). Moreover, to account for any potential effects of study partners or the quality of their interaction, we asked participants four questions dealing with how motivated they were to interact with their partner on a scale from 1 (*not at all*) to 7 (*very much*) (e.g., "how much did you pay attention to this person during the interaction?"; α = .82,) and five questions dealing with their evaluation of the quality of their interaction on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*) (e.g., "The conversation went very smoothly"; α = .94). Finally, participants provided demographic information. At this point, we used a funnel debriefing procedure (Chartrand & Bargh, 1996) to inform participants the study was complete and that the subsequent interaction with the other participant would not take place. No participants reported that they expected a pop quiz on the optional study materials or that they were suspicious of our cover story and procedure.

Results

Manipulation check. Two coders blind to experimental conditions content-coded participants' responses, using the same coding schemes as in the previous studies (Semin & Fiedler, 1988). The index scores from the two judges' ratings were highly correlated, r = .84. Discrepancies in codes were resolved through discussion to form a single index. As expected, participants in the why condition (M = 2.50, SD = .41) used more abstract language to describe their social support than those in the how condition (M = 2.10, SD = .44), $t(44) = -3.20$, $p = .003$, $d = .94$.

Main analysis. The goal of Study 4 was to examine whether different ways of thinking about one's social support influences actual behaviors related to motivation and goal-pursuit. Consistent with the pattern of results from the previous studies, participants in the why condition (M = 15.17, SD = 6.91) scored higher on the quiz than those in the how condition (M = 10.32, SD = 5.49), $t(44) = -2.62$, $p = .012$, $d = .78$, 95% CI = [−8.68, −1.12]. More specifically, participants in the why condition outperformed those in the how condition in both the vocabulary recognition quiz, Ms = 10.00, 7.55; SDs = 3.43, 3.47, $t(44) = -2.45$, $p = .02$, $d = .71$, and the vocabulary matching quiz, Ms = 5.17, 2.77; SDs = 4.27, 2.67, $t(44) = -2.26$, $p = .029$, $d = .67$, as predicted. The results indicate that participants who thought about *why* their partner would help them compared with those who thought about *how* their partner would help them had higher motivation to do well on the anticipated test.

Additional analyses revealed that participants in the two conditions did not differ on how much time they thought they would need memorizing the words in the ostensibly upcoming study session, $t(44) = .54$, $p > .59$, or how difficult they expected the task to be, $t(44) = 1.47$, $p > .14$. Thus, these findings suggest that our manipulation did not have a significant impact on participants' confidence or perception of task difficulty. Furthermore, participants in the two conditions did not differ in their self-reported anticipated effort in

memorizing the words with their partner, $t(44) = -.05$, $p = .96$. In addition, there were no differences across conditions in the amount of cognitive resources as measured with the Trail Making Test, $t(43) = 1.45$, $p > .15$ (degrees of freedom are lower because one participant failed to complete this task). Finally, participants in the two conditions did not differ in their motivation to interact with their partner, $t(44) = -1.00$, $p > .32$, or in their assessment of interaction quality, $t(44) = .29$, $p > .77$. Controlling for the above covariates did not alter any of our results. In addition, none of these covariates was significantly correlated with vocabulary quiz performance. Collectively, the additional analyses help rule out potential alternative explanations (e.g., participants in the how vs. why condition were less likely to study the optional materials because they predicted the task to be easier).

General Discussion

Four experiments demonstrated that how people think about their social support can influence important goal-related outcomes. Specifically, participants who thought about their social support abstractly (vs. concretely) reported higher intention to put effort and time into their goals (Studies 1-3). Showing a behavioral implication of these effects, Study 4 demonstrated that participants who thought about why their partner would help (abstract) compared with those who thought about how their partner could help (concrete) studied harder to prepare for an upcoming task, reflecting higher motivation. Collectively, the benefits of abstracting one's social support occurred across a variety of personal goals, support types (e.g., negative feedback, instrumental support), and support-providers (e.g., partner, acquaintances). One strength of the current research is the use of varied methods across four studies to increase the generalizability of the results.

Our findings contribute to the current debate regarding the role of received support in goal-pursuit. On one hand, much research suggests that supportive others promote goal-pursuit (e.g., Brunstein et al., 1996; Feeney, 2004; Rusbult et al., 2009); on the other, studies have begun to show that receiving support can undermine goal-pursuit for a variety of reasons (e.g., Bolger & Amarel, 2007; Fitzsimons & Finkel, 2011). By showing that how people think about their support also influences important goal-related outcomes, we provide insight into the seemingly divergent effects of social support on goal-pursuit. Moreover, by demonstrating the consequence of one's thoughts about or construals of the support, we shed light on one mechanism through which social support affects individuals—an understudied endeavor—despite much evidence on the benefits of social support (cf. Cohen & Janicki-Deverts, 2009).

Broadly, our results align with other work that emphasizes the importance of studying *interpersonal* factors in goal-pursuit (e.g., Feeney & Collins, 2015; Fitzsimons & Finkel, 2010; Fitzsimons, Finkel, & vanDellen, 2015). Much recent psychological research has approached the topic of goal-pursuit as an outcome of *intrapersonal* processes. For instance, people are likely to achieve their goals if they are motivated or can delay gratification (e.g., Deci & Ryan, 1985; Mischel, Shoda, & Rodriguez, 1989). However, we contribute to the available evidence by showing that these critical skills and individual qualities (often thought as intrapersonal) can also be influenced by interpersonal factors such as social support. Because much of striving toward goals is closely tied to a person's social environment (e.g., receiving help and advice from others), it is important to consider the *interpersonal* factors that allow people to work toward their goals.

Limitations and Future Directions

Because much of goal-pursuit occurs over time, future research should examine whether these findings generalize to long-term outcomes such as motivation over time or the likelihood of goal-attainment. Moreover, at times, the "why" mind-set might have negative implications, for example, if people make attributions detrimental to their self-esteem or self-efficacy (e.g., I'm receiving help because I'm incompetent). Indeed, such maladaptive attributions are likely among individuals with low self-esteem (Marigold et al., 2014). Furthermore, sometimes people may have difficulty generating the meaning and purpose behind their social support, which can make them feel worse about themselves (cf. Schwarz et al., 1991). Nevertheless, in our studies, participants did not find abstracting their support more difficult than making it concrete.

Our work mainly draws from construal level theory (Trope & Liberman, 2010) and action identification theory (Vallacher & Wegner, 1987) in that any actions can be construed at varying levels of abstraction with different consequences. We believe our unique contribution comes from applying this cognitive process (i.e., abstraction) to thinking about support behaviors and examining its implications for goal-pursuit. At the same time, we also acknowledge the possibility that our "why" manipulation could have promoted goal-pursuit by inducing a high-level or abstract mind-set in general (Freitas et al., 2004; Fujita et al., 2006). However, because abstraction alone can be positive (e.g., my partner is helping me because he loves me) or negative (e.g., I am receiving help because I am incompetent), at times it may not be sufficient to produce supportive inferences about the support-provider, a critical process that influences the effectiveness of social support (e.g., Maisel & Gable, 2009). Because of this, the intent of our manipulation was to have participants think about their social support abstractly (vs. concretely), rather than inducing general abstract (vs. concrete) mind-sets. Consistent with this approach, previous studies (Marigold, Holmes, & Ross, 2007, 2010; Zunick, Fazio, & Vasey, 2015) have instructed participants to engage in "directed" abstraction, in which they focus on specific aspects of an event (e.g., thinking abstractly about a

compliment received from one's partner, thinking about "why" one was able to achieve success), rather than inducing in them general abstract mind-sets.

Finally, we included a variety of control conditions in our studies as a "reference point" to provide more information to help interpret our findings. Although we were able to rule out some alternative explanations (e.g., outsourcing self-regulatory resources, Study 3), future studies could use additional control conditions (e.g., recalling of a supportive other without elaborating on "how" or "why") to further shed light on the mechanisms underlying the benefits of abstracting one's social support. In addition, comparing goal-pursuit with and without social support seems to be a fruitful endeavor, especially given the current debate on the role of received support in goal-pursuit.

Conclusion

People receive many benefits from supportive relationships. However, it is unclear how they can leverage these benefits to pursue their goals and thrive. One mechanism by which support-recipients can positively shape their support outcomes is by thinking abstractly about one's social support, focusing on the purpose and meaning behind the support. Our findings shed light on the link between social support and goal-pursuit by demonstrating that the manner in which people think about social support influences goal-pursuit.

Authors' Note

David S. Lee has moved and is now at the Ohio State University.

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Notes

1. There are multiple versions of this manipulation. For example, Freitas, Gollwitzer, and Trope (2004) asked participants to describe how (why) they might want to engage in an action first and then subsequently to explain how (why) they might accomplish that action repeatedly. Others have simply asked participants to list one how or why statement per a specific action (e.g., Henderson, 2013). Both methods have been shown to be effective. For our purposes, we chose the latter method to make the procedure feel more natural for the participants.
2. Degrees of freedom differed slightly due to missing responses from some participants.
3. Responses to these items did not differ significantly across conditions, $p > .37$.
4. Participants in the control condition ($M = 1.53$, $SD = .47$) used fewer abstract words in their responses compared with those in the why condition or the how condition, ps $< .001$.
5. A separate pilot study revealed that one of the most common types of support people receive when they pursue their exercise goals is others' helping them stick to their goals (e.g., through monitoring and reminders).
6. Participants in the career-goal support condition ($M = 2.23$, $SD = .53$) used more abstract words in their responses compared with those in the how condition, $p < .001$, but no more than those in the why condition, $p = .73$.
7. Participants in the how condition reported feeling worse than those in the why, career-goal support, and control conditions, ps $< .035$. Also, the significant difference in mood between the why versus how condition mediated the link between condition and goal-pursuit. These analyses suggest the potential role of affective processes behind our effects. However, because we did not find this pattern in Study 2, and because we only measured general mood (one item), we hesitate to offer stronger interpretations of this finding.
8. We found a main effect of condition on perceived responsiveness, $F(3, 248) = 2.80$, $p = .04$. However, this effect was mostly driven by the lower responsiveness score in the no-writing condition versus the career-goal support condition, $p = .011$, and versus the why condition, $p = .046$. Controlling for this variable did not change our results.

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