You Seem Tired, But So Am I:
Willpower Theories and Intention to Provide Support in Romantic Relationships

Zoë Francis¹*, Vanda Seiber², & Veronika Job³

¹ University of Toronto
² University of Zurich
³ Technische Universität Dresden

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Corresponding Author: Zoë Francis, zoe.francis@mail.utoronto.
Abstract

Although providing support in romantic relationships is important for the well-being of both partners, providing support can be effortful. People have varying implicit theories about the exertion of effort; limited willpower theorists believe that mental resources become exhausted with use, while nonlimited willpower theorists believe that exerting effort can even prepare you for future exertion. While limited willpower theorists are more likely to experience depletion and limitations themselves, they may also be more likely to perceive and empathize with the depletion and limitations of their romantic partner. We conducted a daily diary study (N = 363; 1429 obs.) to examine how willpower theories relate to participants’ intentions to support their romantic partners in the evenings. We find that limited theorists report their partners as more tired (predicting more intention to support) – however, limited theorists also report more fatigue and lower mood themselves (predicting less intention to support). Overall, limited willpower beliefs were associated with less, not more, intent to support one’s partner during the rest of the evening. Even if limited willpower theories improve people’s abilities to perceive to their partner’s fatigue, at the end of the day, they may not feel they have the mental resources to support their romantic partners.
INTRODUCTION

Providing social support is an important part of a happy and healthy relationship. Social support improves health and well-being for both the provider and the receiver (Brown, Nesse, Vinokur, & Smith, 2003; Reblin & Uchino, 2008), as well as improves relationship satisfaction (Brunstein, Dangelmayer, & Schultheiss, 1996; Pasch & Bradbury, 1998). But not everyone is equally likely to provide support – for instance, people are more likely to provide support if they have higher trait empathy (Devoldre, Davis, Verhofstadt, & Buysse, 2010), more autonomous motivation to support (Pavey, Greitemeyer, & Sparks, 2012) or feel more self-efficacious about their support (Macgeorge, Clark, & Gillihan, 2002). People also respond to their partner’s state, and are more likely to provide support when their partner is distressed or unhappy (Collins et al., 2014; Iida, Seidman, Shrout, Fujita, & Bolger, 2008). But the provision of social support can be difficult and costly.

One factor that might affect one’s willingness to provide support is one’s implicit beliefs about willpower (Job, Dweck, & Walton, 2010; Mukhopadhyay & Johar, 2005). Limited willpower theorists believe that difficult mental work depletes their resources, and that they are unable to continue doing more mental work until after they take a break to recharge. Nonlimited willpower theorists instead believe that mental work is energizing and can prepare them for more work. Non-limited willpower theories are known to correlate positively with a variety of personal outcomes, such as goal pursuit (Bernecker & Job, 2015b), adherence to health programs (Bernecker & Job, 2015a), and subjective well-being (Bernecker, Herrmann, Brandstätter, & Job, 2015). Experimental research suggests a bidirectional relationship between willpower theories and outcome measures, where both willpower theories can causally affect behaviours (Job, Bernecker, Miketta, & Friese, 2015; Job et al., 2010) and experiences can causally affect willpower theories (Klinger, Scholer, Hui, & Molden, 2018; Sieber, Flückiger, Mata, Bernecker, & Job, 2019). Existing research on willpower theories, however, has neglected how willpower theories might affect interpersonal dynamics. In particular, willpower theories might relate to how people provide support to their romantic partners.

Willpower theories might affect people’s willingness to support their partners in two opposing ways: (1) Limited willpower theorists are more likely to experience fatigue and lower mood themselves, and thus may feel that they do not have the mental resources necessary to support their partners. If this is true, holding a more limited willpower theory may be associated with less intention to provide support. (2) However, limited theorists are more likely to anticipate and relate to other people’s experiences of depletion (Francis, Job, & Inzlicht, under review; Smith, Young, & Crum, under review) – if limited theorists are more likely to see their partner as fatigued or unhappy, they may be more motivated and willing to provide support for their partner. If this is true, a more limited willpower theory may be associated with more intention to provide support.

Why Limited Willpower Theorists Might Provide Less Support

Providing support can seem to take something out of you. The process of deciding whether to provide support and what support to provide, often with incomplete information, can be complex and difficult (Verhofstadt, Buysse, Ickes, Davis, & Devoldre, 2008). Providing emotional support, including feeling empathy (Cameron et al., 2017), is often experienced as draining and difficult. Providing instrumental social support, like helping with a task or sacrificing for your partner, can also be effortful and costly (Day & Impett, 2017; Righetti & Impett, 2017). Experimental and daily diary evidence both suggest that providing support can even be depleting (Gosnell & Gable, 2017; Lanaj, Johnson, & Wang, 2016).
Some people may not believe they have the mental resources available to help their partner, particularly when they already feel fatigued or depleted. People who believe that their willpower is limited and exhaustible are more likely to perceive their resources as depleted, which can result in feelings of fatigue, lower mood, and a lack of self-efficacy (Bernecker et al., 2015; Collins et al., 2014; Chow, Hui, & Lau, 2015). Lower self-efficacy, as well as lower mood and higher levels of stress, are all related to less provision of support (Iida et al., 2008; Macgeorge et al., 2015; Chow, Hui, & Lau, 2015). As a result, limited willpower theorists may report being more tired, unhappy, or less self-efficacious, and may thus be less likely to try to support their partners, particularly after experiencing other demands. Conversely, nonlimited willpower theorists, who instead believe willpower does not run out, might be more likely to perceive themselves as ready and able to support their partners.

**Why Limited Willpower Theorists Might Provide More Support**

Another factor that affects people’s intention to provide support, however, is their perception of their partner’s current state, including their mood or fatigue. People are generally perceptive of their partners, and provide more support when their partner is unhappy, anxious, or distressed, regardless of whether or not their partner directly asks for support (Collins et al., 2014; Iida et al., 2008; Iida, Stephens, Rook, Franks, & Salem, 2010). Interestingly, limited willpower theorists may be more likely to anticipate their partner’s fatigue. Limited theorists are more likely to perceive other people as depleted (Francis, Inzlicht, & Job, *under review*) and, in a study of hypothetical scenarios, were even relatively more likely to believe they would be understanding towards their partner’s irritating behaviours when they believed their partner was fatigued (Study 3a; Francis et al., *under review*). Thus, if limited theorists are more likely to see that their partner is fatigued or unhappy, they may be more likely to provide that support. This potential benefit of limited willpower theories is especially intriguing because these theories are generally correlated with less favorable outcomes for the individual. Limited theorists show less goal-persistence, have higher BMIs, and lower subjective well-being (for review, see Francis & Job, 2018). But early evidence suggests that limited willpower beliefs might have some positive interpersonal consequences – for instance, in a sample of Navy SEALs, nonlimited willpower theorists were rated more negatively by their peers and instructors than their limited theorist counterparts, potentially due to nonlimited theorists having higher standards and less empathy for their peers (Smith, Yonge, & Crum, *under review*). If limited theorists are more likely to anticipate and empathize with other people’s fatigue, then they might have an advantage when supporting their romantic partners – if, that is, they can overcome their own feelings of depletion.

**Potential Third Variables**

Other individual differences and personality traits have already been associated with the provision of support. People are more likely to provide more support to their partners, or support more effectively, if they have higher relationship satisfaction (Iida et al., 2008; Van Lange et al., 1997), higher empathic accuracy or trait empathy (Pavey et al., 2012; Verhofstadt et al., 2008), and if they have a secure, less anxious attachment style (Collins & Ford, 2010; Mclure et al., 2014). Because willpower theories have not been studied in relationship contexts, correlations between these variables and willpower theories are not yet known.

Trait self-control is also related to relationship satisfaction and interpersonal outcomes, and might be positively linked to providing support (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012; Findley, Carvallo, & Bartak, 2014; c.f. Righetti, Finkenauer, & Finkel, 2013). Other personality traits may also be related to support provision (e.g. neuroticism $r=$
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These variables may be especially important to consider because they are known to be weakly to moderately associated with willpower theories (e.g., self-control \( r = .17 \) to .40; Francis & Job, 2018). This study thus aims to determine how willpower theories relate to support provision over and above these other individual differences.

Study Overview

To determine whether willpower beliefs are helpful or detrimental to providing social support to romantic partners, we conducted an online daily diary study across six days. During the first session, participants learned about the study and completed a series of questionnaires. For each of the following six days, participants completed short online surveys each evening between 5:30 pm and 7:30 pm. We focused on support provision in the evenings because (i) more people see their partners in-person during evenings compared to during the day, and thus more participants would have the opportunity to support their partners, and (ii) willpower theories tend to be most impactful after experiencing demands (e.g., Bernecker & Job, 2015), which tend to accumulate over the course of a day. Our conclusions are thus restricted to people’s intentions to support their partners in the evenings.

To understand how willpower theories might relate to intentions to provide support, this study has three aims:

**Aim 1.** Replicate previously established relationships between daily support provision and measures of one’s own state and perceptions of one’s partner’s state, in order to validate a new *Intention to Provide Support* scale.

**Aim 2.** Determine whether a more limited willpower theory is associated with more or less intention to provide social support to one’s partner in the evening, over and above other individual differences.

**Aim 3.** Investigate potential mediators of any relationship between willpower theory and the intention to provide support, focusing on how willpower theory might affect both one’s own state (mood, energy, and/or self-efficacy) and perceptions of one’s partner’s state (mood, energy). Given that limited theorists might be more tired or unhappy themselves (predicting less intention to provide support) or might see their partners’ as more tired or unhappy (perceiving more intention to provide support), any of these state variables might mediate or suppress the direct association between willpower theory and support intentions.

**METHODS**

**Participants**

Participants – who were living in the Eastern time zone of the United States and were cohabiting with a romantic partner – were recruited from Amazon Mechanical Turk (N = 363; an additional 127 participants completed the initial session but did not complete any daily surveys). The sample included 137 men, 222 women, 4 other-identified, and 1 unspecified, who were an average of 35.67 years old (SD = 9.81 y, range from 19 y to 74 y). Participants’ relationship lengths varied from 2 months to 43 years (M = 9.53 years, SD = 8.14), and 89.5% of participants were in relationships with opposite sex partners. Most participants were married to their partners (54.8%) or dating exclusively (27.8%), with some engaged (9.6%), common-law (6.1%), or other/unspecified (1.7%).

Over half of participants completed at least five of the six daily surveys (53.7%), the threshold to earn a bonus payment, with 22.0% of participants completing three or four surveys, 8.8% completing two, and 15.4% completing only one. In total, our analyses included 1,478 daily surveys.

On 88% of the daily surveys, participants indicated that they would spend at least some time that evening with their partners. The below analyses include all daily diaries, regardless of whether or not participants indicated that they would spend time with their partners, but most
findings only hold on those days on which participants had an opportunity to provide support (with results either attenuated or absent on the 12% of days where participants would not have an opportunity to provide support their partner).

Procedure
During the first online session (the day before the daily surveys began), participants completed a set of questionnaires that measured their willpower theories, relationship satisfaction, and other related measures described below (see Initial Survey Measures).

Daily evening surveys started the following day, and continued for six days. Each evening at 5:30pm, participants received a link to the daily survey. Participants were able to complete the survey at any time between 5:30pm and 7:00pm, at which point the online survey closed for the day. The daily surveys contained a number of brief measures, including intention to provide support and participant’s own mood and energy, and participant’s perception of their partner’s mood and energy (see Daily Survey Measures).

Initial Survey Measures

Willpower Theories. Participants completed the Willpower Theory scale twice. Once for one’s own willpower (Job et al., 2010) and again for perceptions of one’s partner’s willpower. For the current hypotheses, we only examine one’s own willpower theories ($\alpha = .90$). The six items include, “After a strenuous mental activity, my energy is depleted and I must rest to get it refueled again” and “After a strenuous mental activity, I feel energized for further challenging activities”. Items were summed for analysis.

Relationship Satisfaction. We measured relationship satisfaction using the relationship satisfaction facet of the Investment Model scale (Rusbult, Martz, & Agnew, 1998). Participants responded to five items, including “our relationship makes me very happy”, using a scale from 1 (do not agree at all) to 9 (agree completely). The five items had high internal reliability ($\alpha = 0.96$), and participants were generally high in satisfaction (M = 7.14, SD = 1.71).

Attachment Style. Participants completed the Experiences in Close Relationship Scale – Short Form to measure both anxious ($\alpha = .78$) and avoidant ($\alpha = .85$) attachment styles (Wei, Russell, Mallinckrodt, & Vogel, 2007). Attachment anxiety items include, “My desire to be very close sometimes scares people away” (M = 3.62, SD = 0.75, on 1-7 scale), while attachment avoidance items include, “I try to avoid getting too close to my partner” (M = 2.31, SD = 1.15, on 1-7 scale).

Trait Self-Control. Participants completed the 13-item brief trait Self-Control Scale ($\alpha = .88$; M = 5.99, SD = 1.45, Tangney, Baumeister, & Boone, 2004). Items include, “People would say that I have iron self-discipline” and “I am good at resisting temptation”. Participants responded on a 1-7 scale, from “strongly disagree” to “strongly agree”.

Big Five Personality. The brief version of the Big Five Inventory (BFI-10; Rammstedt & John, 2007) has two items for each of the following traits: conscientiousness, agreeableness, neuroticism, openness, and extraversion (scale from 1–“strongly disagree” to 7–“strongly agree”).

Empathy. As a measure of partner-specific empathy, participants completed the 13-item Interpersonal Reactivity Index for Couples. This measure has two subscales, to measure both perspective-taking ($\alpha = .87$) and empathic concern ($\alpha = 0.81$) for one’s partner (Péloquin & Lafontaine, 2010). The subscales had 6 and 7 items, respectively, which participants responded to on scales from 1 (does not describe me well) to 4 (describes me very well). Participants were generally high in both subscales (empathic
concern M = 3.47, SD = 0.54 and perspective-taking M = 3.09, SD = 0.68).

Demographics/Other. Participants finally indicated their self-partner overlap from a set of seven pictures of increasingly overlapping circles labelled “self” and “other” (Aron, Aron, & Smollan, 1992); relationship length and cohabitation length; their age, gender, employment status, and education level; their partner’s gender, employment status, and education level; how many children they had living with them, the ages of those children; and finally, whether they or their partner tended to do seven different household activities (7-point scale from “always me” to “always my partner”, items selected from Shelton, 1990).

Daily Survey Measures

Day and Perceptions of Partner’s Day. Each day, participants were first asked three items about how their own day had gone so far: how busy their day was from (7) very busy to (1) very relaxing, how stressful it was from (1) not at all to (6) extremely, and how enjoyable it was from (1) not at all, to (6) extremely. They then were asked to briefly write at least three things that their partner did today. Following that, they indicated their perception of their partner’s day as busy/relaxing, stressful, and enjoyable, using the same measures as above.

Intention to Provide Support. We created twelve items (min \( \alpha = .86 \) on Day 2, max \( \alpha = .92 \) on Days 5 and 6) to measure participants’ intentions to support their partner for the remainder of the evening, three items each about instrumental support (e.g. “I am going to do more than my fair share of the household duties”), emotional support (e.g. “I am going to try to ‘be there’ for my partner”), responses to partner’s negative actions (e.g. “Even if I am irritated by something my partner does, I will make sure to be kind”); and receiving support (e.g. “I will ask my partner to do some extra work tonight, so that I can take a break”, reverse-scored). Responses were on seven-point scales from much more than normal (+3) to much less than normal (-3), and summed for analysis. All items, as well as factor loadings for each item, are available in the Appendix.

Own Mood, Energy, and Self-Efficacy. Participants indicated how they were feeling right now, for four items. Own Mood was measured in a single item from (7) in a very good mood to (1) in a very bad mood. Own Energy was measured in a single item from (7) very energetic to (1) very tired. Own Self-Efficacy was measured by averaging the following two items: “Right now, I am in control of how my life is going”, and “I feel capable and able to succeed at upcoming tasks” (semi-partial \( r = .69, t(1261) = 33.63, p < .001 \)).

Mood and Perception of Partner Mood. Participants then indicated how they thought their partner was probably feeling right now, using one mood item (from (7) in a very good mood to (1) in a very bad mood) and one energy item (from (7) very energetic to (1) very tired).

Source of Information about Partner Mood. Participants indicated what sources of information they used for these judgements, from a list of six options: “my partner just told me how he/she was feeling” (20.5%), “my partner just told me how his/her day went” (29.1%), “based on how my partner is acting” (34.6%), “based on how my partner looks” (46.9%), “my partner previously told me how he/she expected his/her day to go” (11.0%), or “just my best guess” (22.1%).

Perceptions of Partner’s Need for Support. Participants completed six items about their perception of how much their partner needed their support, on a scale from “much more than normal” (+3) to “much less than normal” (-3). Items included, “My partner will need me to be kind and supportive” and “My partner will be useful around the house” (reversed). These items had quite low inter-item reliability (min \( \alpha = 0.66 \) Day 1 to max \( \alpha = 0.75 \) on Day 2), and a cluster analysis found a multifactorial structure, reducing the usefulness of this novel scale. All
items, and item-level scale analyses, are available at osf.io/[blinded for review].

**Relationship Quality.** The final item, on relationship quality, was “Right now, I think my relationship is . . .”. Participants used a 6-point scale to respond, from terrific to terrible (Joel, Gordon, Impett, Macdonald, & Keltner, 2013).

**Opportunity to Support.** Participants also indicated how much time they would spend with their partner for the rest of the evening: most or all of the evening (N = 1014), an hour or two (N = 286), briefly (e.g. less than an hour) (N = 103), or not at all (N = 75).

**Analysis**

Analyses were conducted using hierarchical models, with observations nested within participant (random intercept for participant), using the lmer and lmerTest functions in R. We tested for both within- and between- person effects of day-level variables (e.g. mood, perception of partner’s energy): day-level predictors were person-centered to look at within-person effects, and participants’ averages across days (subsequently grand-mean centered) were used to look at between-subject effects (Aiken & West, 1991; Curran & Bauer, 2011). Individual difference variables (e.g. willpower theory, personality traits) were also grand-mean centered. We used the same person-centering process (xij - $\bar{x}$) to calculate Pearson’s correlations between the within-subject variability of different day-level variables (seen in Table 2).

The aims of our research were to test the relationships between intentions to provide support (day-level variable) and willpower theory over and above other person-level variables like personality. Given the number of possible individual difference and demographic predictors and weak to moderate collinearity between these variables (Table 1, mean $|r| = .17$), we conducted automatic backward elimination model selection, using the step function in lmerTest, to determine which variables were most predictive (Derksen & Keselman, 1992). We present results from both single-predictor models (e.g. the isolated effect of willpower theory on the dependent variable) and the results from the final model after automated reduction of predictor variables (e.g. the effect of willpower theory above and beyond the effects of all other remaining significant predictors). These backward elimination models began with all sixteen demographic and trait variables presented in Table 1.

Mediations on our multi-level data were performed using recommendations by Zhang, Zyphur, and Preacher (2009). The indirect effects were calculated using Monte Carlo bootstrapping (Preacher & Selig, 2010) with 100 000 simulations. For estimated effect sizes from the multi-level models, we report semi-partial $r$, equivalent to the square root of semi-partial $R^2$ (Edwards, Muller, Wolfinger, Qaqish, & Schabenberger, 2008; calculated as in Kashdan & Steger, 2006).

Materials (including Qualtrics files), raw data, R analysis files are available at https://osf.io/e46mu/?view_only=4bf3a2332d4f4d92a73b9694b84a72b5. We report all measures, materials, and exclusions (if any).

**RESULTS**

**Descriptives**

Willpower theory varied widely across the sample, with participants ranging from the scale minimum, an entirely nonlimited theory, to the scale maximum, an entirely limited theory. On average, participants held slightly limited willpower views ($M = 3.75, SD = 1.75$, scale midpoint = 3.5). Willpower theories weakly to moderately correlated with other individual differences, most strongly with neuroticism ($r = .27$, see Table 1) and trait self-control ($r = -.21$).

[Table 1: correlations between individual differences]

Day-level variables – such as participant’s mood, energy levels, the stress of the day, and
perceptions of one’s partner’s mood – also correlated, sometimes quite highly (Table 2). Throughout our analyses, we attempt to account for these covariations by testing partial correlations, controlling for related variables. Participants generally reported that they intended to help their partner slightly more than normal (M= 4.60, scale midpoint = 4) – people may be less likely to admit to themselves (or to a survey) that they intend to be worse than average, and more willing to admit when they intend to be better than average.

Despite this positivity bias, the day-level variables had good within-subject and between-subject variability. For example, 57.6% of the variation in intention to provide support was within-subject, while between-subject person-mean ranges from 2.56 to 6.75 on the 1-7 scale. Similarly, 62.6% of variability in partner’s energy was within-subject variation, as was 70.4% of partner’s mood, 59.8% of one’s own energy, and 61.6% of one’s own mood.

[Table 2: correlations of day-level variables]

**Aim 1: Do Daily States (and Perceptions of Partner’s States) Predict Support Intentions?**

To replicate previous findings and validate our ‘intention to provide support’ measure, we next tested whether participant’s state (mood, energy, self-efficacy) or participant’s perception of their partner’s state (mood, energy) were related to their intention to support their partner. We report the coefficients from when all variables are entered simultaneously (Table 3, Model 1).

In line with previous research, intention to provide support was positively predicted by participants’ self-reported mood and self-reported energy. Within-subject variation in both mood and energy predicted daily fluctuations in support intentions \( (b_{\text{mood}} = 1.91, SE = 0.29, t(1090) = 6.46, p < .001, r = .19; b_{\text{energy}} = 0.81, SE = 0.22, t(1089) = -3.72, p < .001, r = .11) \). Self-efficacy was also related to support intentions \( (b = 0.49, SE = 0.18, t(1106) = 2.68, p = .008, r = .08) \), although not when entered into the model simultaneously with mood and energy \( (p = .951, r = .00) \). On the between-subject level, only participants’ average mood predicted intended support \( (b = 1.69, SE = 0.69, t(395) = 2.45, p = .015, r = .12) \).

Perceptions of one’s partner’s mood and energy also predicted intentions to provide support, in the opposite direction to the effects of one’s own mood and energy. Daily fluctuations in partner’s mood and energy predicted daily support intentions (within-subject \( b_{\text{mood}} = -1.15, SE = 0.28, t(1089) = 4.19, p < .001, r = .13; b_{\text{energy}} = -1.59, SE = 0.20, t(1090) = 7.76, p < .001, r = .23 \), as did average perceptions of partners’ energy level (between-subject \( b = -1.37, SE = 0.45, t(385) = 3.00, p = .003, r = .15) \).

**Aim 2: Do Willpower Theories Predict Support Intentions?**

Our primary analysis compares the two competing hypotheses: are intentions to support one’s partner overall associated with a more limited willpower theory, or a more non-limited willpower theory? We also test whether any relationship between willpower theory and support intentions is better explained by a different individual difference variable, by conducting a backwards elimination model (Table 3, Model 2).

[Table 3: models predicting support intentions]

Ultimately, more limited willpower theories were associated with weaker intentions to provide support (single predictor, \( b_{\text{willpower theory}} = -0.18, SE = 0.06, t(331) = -2.90, p = .004, r = .16 \)). Willpower theory remained a significant predictor after backwards elimination from the full model with all potential individual difference predictors (elimination model \( b_{\text{willpower theory}} = -0.12, SE = 0.06, t(318) = -2.11, p = .035, r = .12 \); Table 3). Intention to provide support was also predicted by more empathic concern towards one’s partner, more perspective taking towards one’s partner, and older age (Table 3).

**Aim 3: Mediation**
The result supports the hypothesis that limited theorists tend to intend to provide less support for their partners in the evenings. However, the negative relationship between limited willpower theory and support intentions does not mean that limited theories do not also increase perceptions of one’s partner being fatigued. Before conducting mediation analyses, we establish the relationships between willpower theories and these day-level predictors (own state, perceived partner’s state\(^1\)), which might function as mediators or suppressors of the above negative relationship.

**Selection of Mediators.** As hypothesized, willpower theories predicted participants’ self-reported mood and energy levels, such that those with more limited theories reported being less happy, more fatigued, and less self-efficacious in the evenings \((b_{\text{mood}} = -0.03, SE = 0.007, t(336) = 3.96, p < .001, r = .21; b_{\text{energy}} = -0.05, SE = 0.009, t(330) = 6.12, p < .001, r = .32; b_{\text{efficacy}} = -0.07, SE = 0.02, t(346) = -4.60, p < .001, r = .24)\).

Willpower theories also predicted perceptions of one’s partner’s mood and energy, in the same direction, such that more limited theorists reported their partners being less happy and more fatigued in the evenings \((b_{\text{mood}} = -0.01, SE = 0.006, t(338) = 2.19, p = .029, r = .12; b_{\text{energy}} = -0.04, SE = 0.009, t(339) = 4.01, p < .001, r = .21)\).

**Mediation Models.** We conducted multi-level mediation analyses to determine whether the negative effects of limited willpower theory on participants’ intention to provide support could be explained by willpower theory’s effects on participants’ own state. We also tested whether there was a significant indirect suppression effect of this association, through participants’ perception of their partner’s state (Figure 1). We focused on the two measures which predicted 0.38, \(p = .704, r = .02\). It is difficult to interpret this null result, as it may have arisen from problems with the scale’s validity or internal reliability.

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\(^1\) We originally planned to examine the novel six-item “perceptions of partner’s need for support” scale as another potential mediator. This summed scale did not relate to willpower theory, either as a single predictor or alongside other predictors (without covariates, \(b = 0.009, t(328) = -0.071, SE = 0.009, p = .944, r = .01\)).
support intention at the between-subject level: subjective mood and perception of one’s partner’s energy level. Because these two variables themselves covaried, we analyzed the mediation and suppression pathways simultaneously (e.g. tested the effect of negative mood on support intention while controlling for partner fatigue, and examined the effect of partner fatigue on support intention while controlling for partner mood).

The relationship between willpower theory on intention to provide support was partially mediated by decreases in self-reported mood (Figure 1, upper pathway). Participants with a more limited willpower theory generally had lower mood, which in turn predicted lower intentions to support one’s partner. The indirect effects of willpower theory on support provision was significant (95% CI [-0.114, -.030]), although the direct effect of willpower theory on intention was still significant after accounting for the negative mood ($b = -0.13, SE = 0.06, t(333) = -2.07, p = .040, r = .11$), indicating partial mediation.

There was also a significant positive indirect effect of willpower theory on intended support provision (Figure 1, lower pathway). More limited willpower theorists tended to see their partners as more fatigued, which in turn related to increased intentions to support their partners. The indirect effect was significant (95% CI [.018, .152]), and accounting for perceived partner fatigue resulted in an even larger direct effect of willpower theory on support intentions ($b’ = -0.21, SE = 0.06, t(331) = -3.36, p < .001, r = .18$).

**DISCUSSION**

Participants with a more limited theory of willpower were indeed more likely to be fatigued, less happy, and less self-efficacious during the early evening surveys – and these state feelings were associated with less intended provision of support. Simultaneously, limited theorists were more likely to report their romantic partners as being more fatigued and less happy; these perceptions of partner state were both associated with more intentions to provide support. Hence, the present data provide support for both competing hypotheses. A limited willpower theory is associated with less and, simultaneously, with more intentions to support one’s partner. However, the perceptions of one’s partner being fatigued did not outweigh limited willpower theorists’ own feelings of fatigue: Overall, a more limited willpower theory was associated with less intended support provision.

After accounting for both the indirect effects of willpower theory through both partner’s fatigue and one’s own energy, there was still a significant negative effect of willpower theory on intention to provide support. This could potentially reflect limited theorists’ reluctance to engage in mental work broadly, even when they feel like they have mental resources available – they may be conserving the resources they do have, and saving these perceived resources for other purposes (e.g. Janssen, Fennis, & Pruyn, 2010).

**Limitations and Future Directions**

Because this study did not include a manipulation of willpower theories, these results cannot establish whether or not willpower theories have a causal effect on the intention to support romantic partners. Our models suggest that willpower theory was a strong predictor of intention to provide support, above and beyond the big five personality traits, trait self-control, empathy for one’s partner, attachment style, and demographic information. However, it is possible that another unmeasured construct might be a more proximal reason why some participants are more likely to be fatigued, see their partners as fatigued, and be less willing to provide support. It is also possible that the causal direction of the willpower theory-support provision relationship goes the other way. Willpower theories themselves are affected by experiences (Job, Sieber, Rothermund, & Nikitin, 2018; Klinger et al., 2018; Sieber et al.,
2019); potentially, people who provide support to their partners may feel more connected to others and self-efficacious, leading to higher moods and energy levels in the evenings, and resulting in more nonlimited theories of willpower. Future intervention studies should examine the causal direction of these relationships by testing whether encouraging more nonlimited willpower beliefs increases people’s willingness to support their relationship partners.

This study also focused only on the perspective of the individual providing support: their subjective perceptions of their partner’s mood and their intentions to provide support. Because we did not collect dyadic data, we cannot examine the accuracy of the participant’s judgements of their partner’s fatigue. Examining the accuracy of these judgements is an important avenue for future research, as empathic accuracy improves the quality of support provided (Verhofstadt et al., 2008). Furthermore, participants only reported their intentions to support their partners for the remainder of the evening. Neither participant nor their partners reported objective behavioral measures of support provision; actual support behaviours might differ from intentions to provide support for the rest of the evening (e.g. Webb & Sheeran, 2006). However, since enacting intentions can require self-control (Gollwitzer & Sheeran, 2006), limited theorists may be even less likely to actually support their partners than more nonlimited theorists, even when they do intend to provide support.

Finally, this study only examined the intentions to provide social support in the evenings. While evenings may be one important time for the provision of support, people also support their partners through other times of the day (including not in person, via phone or text). Earlier in the day, before demands have accumulated, limited willpower theorists may feel that they have the resources to support others, while also being especially able to relate to others’ feelings of depletion. Therefore, it is possible that assessing intentions of partner support in the morning might flip the relationship between willpower theory and partner support around with limited theorists providing more support.

Conclusion

Providing social support in intimate relationships is beneficial for people’s overall adjustment. Ideally, the provision of social support adjusts to match the recipients’ requirements for support during stressful times (Iida et al., 2010). The present research shows that intentions to provide support, however, vary based on a personal characteristic: people’s beliefs about willpower as a limited or nonlimited resource. Even though limited willpower theorists perceive their partners’ fatigue and poorer mood on stressful days, their own feeling of not having enough resources available undermines their intentions, and possibly the provision of support to their partner. Even though people with a nonlimited theory might be less receptive of their partner’s fatigue, they still more strongly intend to support their romantic partner, which, if actually enacted, should be a positive predictor of long term relationship satisfaction and stability. Willpower theories do not only affect the individual, but have consequences across relationships.

References


WILLPOWER THEORIES AND PROVISION OF SUPPORT

http://doi.org/10.1111/spc3.12342


## Appendix

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (SD)</th>
<th>Promax Factor Loading (Day 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am going to do more than my fair share of the household duties.</td>
<td>4.53 (1.23)</td>
<td>0.429</td>
</tr>
<tr>
<td>I am going to ask my partner if there is anything I can do to help him/her.</td>
<td>4.49 (1.26)</td>
<td>0.725</td>
</tr>
<tr>
<td>I am going to make sure that my partner can relax tonight.</td>
<td>4.72 (1.27)</td>
<td>0.814</td>
</tr>
<tr>
<td>I will ask my partner to do some extra work tonight, so that I can take a break. (R)</td>
<td>4.86 (1.45)</td>
<td>0.347</td>
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<tr>
<td>If I have any tasks to do (e.g. cleaning, finances), I expect my partner to help me with them. (R)</td>
<td>4.34 (1.38)</td>
<td>0.109</td>
</tr>
<tr>
<td>If someone else needs help tonight (e.g. a child or a neighbor), my partner should help so that I don’t have to. (R)</td>
<td>4.60 (1.42)</td>
<td>0.369</td>
</tr>
<tr>
<td>I am going to try to “be there” for my partner.</td>
<td>4.73 (1.21)</td>
<td>0.826</td>
</tr>
<tr>
<td>I am going to make sure to show my partner that I am there to support him/her. I am going to be understanding towards my partner, putting my own needs aside. Even if I am irritated by something my partner says or does, I will make sure to be kind. Tonight, I am going to be forgiving of any mistakes (e.g. forgetting to do the dishes) that my partner may make. If my partner lets me down in some way tonight, I will be disappointed. (R)</td>
<td>4.73 (1.18)</td>
<td>0.797</td>
</tr>
<tr>
<td>I am going to be understanding towards my partner, putting my own needs aside. Even if I am irritated by something my partner says or does, I will make sure to be kind. Tonight, I am going to be forgiving of any mistakes (e.g. forgetting to do the dishes) that my partner may make. If my partner lets me down in some way tonight, I will be disappointed. (R)</td>
<td>4.56 (1.18)</td>
<td>0.788</td>
</tr>
<tr>
<td>I am going to make sure to show my partner that I am there to support him/her.</td>
<td>4.64 (1.17)</td>
<td>0.725</td>
</tr>
<tr>
<td>I am going to try to “be there” for my partner.</td>
<td>4.73 (1.21)</td>
<td>0.826</td>
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<tr>
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<td>0.797</td>
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<td>0.725</td>
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<td>4.56 (1.18)</td>
<td>0.788</td>
</tr>
</tbody>
</table>

**Intention to Provide Support Questionnaire.** Participants were given the following instructions: “For each statement, think about whether or not it is especially true or not today, compared to an average evening. Considering tonight, indicate how true each statement feels for you.” Responses were indicated on a 1-7 scale, where -3 = Much less than normal; 0 = As much as normal; +3 = Much more than normal.
Table 1. Zero-Order Correlations for all Individual Difference and Demographic Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
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<td>1. Limited willpower theory</td>
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<td>2. Trait self-control</td>
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<td>7. Extraversion</td>
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<td>-.08</td>
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<td>.01</td>
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<td>.05</td>
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</table>

Note. Correlations between individual differences measures completed the day prior to the first daily survey. Higher values indicate more of the given trait (e.g. more self-control, more anxiety, more neuroticism) or measure. Correlations larger than \( r = |.10| \) are significant at \( p < .05 \), and correlations larger than \( |.18| \) are significant at \( p < .001 \) (df = 363).
Table 2. Zero-order Pearson’s correlations between daily variation in evening survey variables (person-centered, $x_{ij} - \bar{x}_j$).

<table>
<thead>
<tr>
<th>Daily Variable</th>
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<tr>
<td>1. Intent to Support</td>
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<td>2. Mood</td>
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<td>3. Energy</td>
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<td>4. Self-Efficacy</td>
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<td>5. Day’s Stress</td>
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<td>.34</td>
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<td>6. Day’s Busy-ness</td>
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<td>7. Day’s Enjoyment</td>
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<td>-.32</td>
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<td>10. Perceived Partner’s Day’s Stress</td>
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<td>12. Perceived Partner’s Day’s Enjoyment</td>
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<td>.25</td>
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<td>-.53</td>
<td>-.38</td>
<td>-.49</td>
<td>.52</td>
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<tr>
<td>13. Perceived Partner’s Need</td>
<td>.49</td>
<td>-.02</td>
<td>-.03</td>
<td>-.01</td>
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<td>-.01</td>
<td>-.29</td>
<td>-.30</td>
<td>.35</td>
<td>.25</td>
<td>-.26</td>
</tr>
</tbody>
</table>

*Note.* Correlations larger than $r = |.06|$ are significant at $p < .05$, and correlations larger than $|.09|$ are significant at $p < .001$ (df = 1420).
Table 3. Model coefficients predicting intentions to provide support.

<table>
<thead>
<tr>
<th>Model 1. State Predictors of Support Intentions</th>
<th>B (SE)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood (w-s)</td>
<td>1.90 (0.29)</td>
<td>6.46***</td>
</tr>
<tr>
<td>Energy (w-s)</td>
<td>0.81 (0.22)</td>
<td>3.72***</td>
</tr>
<tr>
<td>Self-Efficacy (w-s)</td>
<td>0.01 (0.19)</td>
<td>0.061 n.s.</td>
</tr>
<tr>
<td>Perceived Partner’s Mood (w-s)</td>
<td>-1.15 (0.28)</td>
<td>4.19***</td>
</tr>
<tr>
<td>Perceived Partner’s Energy (w-s)</td>
<td>-1.59 (0.20)</td>
<td>7.76***</td>
</tr>
<tr>
<td>Mood (b-s)</td>
<td>1.69 (0.69)</td>
<td>2.45*</td>
</tr>
<tr>
<td>Energy (b-s)</td>
<td>0.77 (0.51)</td>
<td>1.52 n.s.</td>
</tr>
<tr>
<td>Self-Efficacy (b-s)</td>
<td>0.24 (0.22)</td>
<td>1.08 n.s.</td>
</tr>
<tr>
<td>Perceived Partner’s Mood (b-s)</td>
<td>0.28 (0.65)</td>
<td>0.43 n.s.</td>
</tr>
<tr>
<td>Perceived Partner’s Energy (b-s)</td>
<td>1.37 (0.45)</td>
<td>3.00**</td>
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</table>

*R^2 fixed factors = 0.115
Model R^2 = 0.510

<table>
<thead>
<tr>
<th>Model 2. Individual Difference Predictors of Support Intentions</th>
<th>B (SE)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lim. Willpower</td>
<td>-0.122 (0.058)</td>
<td>2.11*</td>
</tr>
<tr>
<td>IRIC Emp Concer</td>
<td>0.318 (0.138)</td>
<td>2.30*</td>
</tr>
<tr>
<td>IRIC Persp. Take</td>
<td>0.291 (0.124)</td>
<td>2.34*</td>
</tr>
<tr>
<td>Age</td>
<td>0.129 (0.042)</td>
<td>3.05**</td>
</tr>
</tbody>
</table>

*R^2 fixed factors = 0.074
Model R^2 = 0.418

Note. Model 1 coefficients for the within-subject variability of state predictors (w-s; x_{ij} - \bar{x}_j) and the between-subject variability of the state predictors (b-s; \bar{x}_j) were tested simultaneously. For within-subject predictors, df = 1089. For between-subject predictors, df > 362. Model 2 presents coefficients for the remaining individual difference predictors of support intentions, after conducting a backwards elimination model starting with all 16 of the individual differences presented in Table 1. * = .01 < p < .05, ** = .01 < p < .001; *** = p < .001.