



## Receiving Social Support Motivates Proximal and Distant Prosocial Behaviors

Chiara Trombini

Luiss Business School, [chiara.trombini@luissbusinessschool.it](mailto:chiara.trombini@luissbusinessschool.it)

Winnie Jiang

INSEAD, [winnie.jiang@insead.edu](mailto:winnie.jiang@insead.edu)

Zoe Kinias

INSEAD, [zoe.kinias@insead.edu](mailto:zoe.kinias@insead.edu)

Prosocial behaviors –actions aimed to benefit other individuals, groups, or communities– are important for promoting and maintaining a healthy society. Extant research on the contextual factors that make individuals more likely to engage in prosocial behaviors has mainly looked at their short-term effects taking place in the immediate environment, potentially overlooking their impact in more distant domains. Building on attachment theory, we theorize that an interpersonal factor—receiving social support—can foster prosocial behaviors both in the short- and in the long-term. Moreover, receiving social support can have spillover effects beyond the environment in which the support was received. Receiving social support increases felt security—a sense of care, esteem, love, and safety—which in turn increases motivation to engage in behaviors that benefit others. We test our hypotheses with cross-sectional, longitudinal, and experimental data. In Study 1, data from a sample of international business school alumni show a significant positive relationship between receiving social support and engaging in prosocial behaviors both within and beyond the environment in which support was received. Study 2 leverages data of US adults in a multi-wave study to show that receiving social support predicts prosocial activities several years later. Study 3 experimentally manipulates social support with a sample of working US adults and finds that receiving social support fosters prosocial behaviors through boosting felt security which in turn increases prosocial motivation. Overall, our findings show that receiving social support can affect short- and long-term prosocial behaviors with spillover effect beyond the immediate environment.

**Key Words:** Social Support; Prosocial Behavior; Felt Security; Prosocial Motivation; Societal Impact

Electronic copy available at: <http://ssrn.com/abstract=4400974>

Working Paper is the author's intellectual property. It is intended as a means to promote research to interested readers. Its content should not be copied or hosted on any server without written permission from [publications.fb@insead.edu](mailto:publications.fb@insead.edu)

Find more INSEAD papers at <https://www.insead.edu/faculty-research/research>

Copyright © 2023 INSEAD

Prosocial behaviors—actions aiming to help, benefit, and contribute to other people, any collective groups, or society as a whole—are critical to facilitating and maintaining healthy societal dynamics (Grant & Dutton, 2012; Penner et al., 2005). Prosocial behaviors can directly benefit others in need by providing them resources including financial support, healthcare, education, and employment (Brief & Motowidlo, 1986). Further, contributing to broader societal benefits including diversity, equity, and inclusion, and environmental sustainability are also prosocial (Bolino & Grant, 2016). In short, behaving prosocially plays an important role in enhancing others’ wellbeing, strengthening group cohesiveness, and advancing collective progress, all of which constitute the backbone of a thriving society (Penner et al., 2005).

Research through the past four decades has highlighted the importance of prosocial behaviors and examined when, why, and how individuals engage in them. In addition to examining individuals’ innate characteristics as antecedents of prosocial behaviors (Meglino & Korsgaard, 2004; Penner et al., 1995), prior research has also studied *proximal* contextual factors (i.e., in one’s organization) and how they predict prosociality, though mostly within a *short* period of time (De Dreu & Nauta, 2009; Grant, 2008a). Given the societal benefits of prosocial behaviors, it is important to understand what makes people contribute to the wellbeing of more distant others and how this engagement can be sustained over time. Building on attachment theory we theorize that an interpersonal factor, receiving social support, would motivate individuals’ *sustained* engagement in prosocial behaviors both in the proximal context in which the support was received (e.g., in the organization) and in more distant contexts (e.g., societal contributions).

Receiving social support, defined as “any process through which social relationships might promote health and wellbeing” (Cohen et al., 2000: 4), has been shown to covary with helping others (Johnson et al., 1989; see Taylor, 2011). In this paper, we propose that receiving social

support from others can foster engagement in a wide array of prosocial behaviors that benefit *both* the immediate context *and* the broader society. We theorize that individuals who have received social support, across diverse forms and sources, would experience a greater felt security which, in turn, would increase their prosocial motivation, defined as the desire to protect, promote and benefit the wellbeing of others (Batson, 1987; Grant, 2007; Grant & Berg, 2011; Mikulincer et al., 2005). Prosocial motivation, in turn, leads individuals to engage more in behaviors that benefit other people, communities, and society as a whole. In examining prosocial behaviors, we specifically focus on attitudes or actions that aim to benefit others both within the immediate context (e.g., contributing to organizational diversity efforts), and in more distant ones (e.g., contributing to economic development and societal impact practices, or joining non-profit boards). By doing so, we address Bolino and Grant's (2016) call to distinguish prosocial behaviors based on their target to enrich our understanding of their antecedents. Furthermore, we theorize that receiving varied forms of social support from others in both personal and professional relationships lead to engaging in prosocial behaviors over a long period of time.

## **Theoretical Background**

### **Attachment Theory**

Grounded in developmental psychology, attachment theory (Ainsworth, 1978; Bowlby, 1969) originally posited that infants are born with a tendency to seek proximity to others in times of distress and as a protection from threats and when supportive others (e.g., parents or caregivers) are available and responsive, infants develop a *secure* attachment style. Knowing that attachment figure will be present and available in times of need provides a "secure base" to explore the environment confidently, and it shapes the beliefs and expectations that individuals hold about themselves and others, which is reflected in *felt security* (Mikulincer & Shaver, 2005). Although

the attachment system was first identified and investigated in children, it continues to be shaped and relevant throughout adulthood. Specifically, adult attachment research has shown that attachment styles extend into the adult years (Hazan & Shaver, 1990). Attachment figures shift from parents to romantic partners and other meaningful figures in life, such as colleagues and supervisors. That is, the availability of supportive others in times of hardship and distress develops and shapes attachment styles through life.

Secure attachment in adults leads to a greater sense of felt security, allowing people to shift mental resources from a defensive mode to other behavioral systems, including empathy, openness to others, trust, and helping (for reviews, see Mikulincer & Shaver, 2007; Steele & Steele, 2008). For example, Little et al. (2011) found that secure attachment enables a positive affective state (e.g., vigor) that leads to prosocial behavior *at work* in the form of Organizational Citizenship Behaviors (OCBs), including helping coworkers. Similarly, secure attachment predicts the functioning of workgroups, altruism, and civic virtue *within* a group or an organization (Luke et al., 2020; Huffmeier et al., 2014; Richards & Schat, 2011; Rom & Mikulincer, 2003), suggesting a connection between adults' experiences with their social relationships and how they approach working relationships.

Building on attachment theory, we theorize that experiencing support from others increases individuals' motivation and engagement in prosocial behaviors beyond proximal relationships or contexts in which the support has been received, but extends to the broader society.

### **Prosocial Behaviors**

Our research considers prosocial behaviors broadly as “actions that promote or protect the welfare of individuals, groups, or organizations” (Bolino & Grant, 2016: 5). Organizational psychologists and management scholars have mostly focused on prosocial behaviors occurring

inside organizations, including but not limited to OCBs, or voluntary behaviors that contribute to organizational effectiveness but are not recognized by the formal reward system (Organ, 1988; Podsakoff et al., 2000). However, the broader definition of prosocial behaviors encompasses any act people undertake that benefits the welfare of others with whom one has direct interaction or not, a group or community, society, or even future generations (Bolino & Grant, 2016). Based on this broad conceptualization, superficially different actions, such as helping a coworker, a friend, or a stranger (Schroeder et al., 1995) or participating in a corporate social initiative or gender-parity initiatives (Bode & Singh, 2018; Sherf et al., 2017), are considered prosocial behaviors when they contribute to the welfare of some individual, group of people, organization, community, or society. Here we review research on the antecedents of broadly defined prosocial behaviors, integrating often-isolated literatures.

Past research has largely focused on individual traits as predictors of prosocial behaviors, suggesting that prosocial tendencies (both the *desire* to contribute to other people's wellbeing and the *engagement* in activities that benefit others) are innate and stable over time, such that some individuals are consistently more likely to act prosocially than others (Brief & Motowidlo, 1986; Penner, et al., 2005). Engaging in prosocial behaviors has been associated with a prosocial personality (e.g., Eisenberg et al., 2002), concern for others (Korsgaard et al., 1997; McNeely & Meglino, 1994), and prosocial values (e.g., Grant, 2008b). Substantial research has also examined the impact of social value orientation—the weight people place on the collective vs. individual interests on decision processes (Messick & McClintock, 1968). Having a stronger collective orientation predicts higher engagement in collectively beneficial behaviors including helping others (McClintock & Allison, 1989), using public transportation (Van Lange et al., 1998), and protecting the environment (Garling et al., 2003).

A smaller but growing research body has investigated contextual factors influencing prosociality. Some research shows that job and leader characteristics can influence employees' engagement in prosocial behaviors within their organizations. For example, employees are more likely to help others within their organizations when their work is clearly defined, when they have autonomy and task variety, and when they receive timely feedback (e.g., Grant, 2008a). Consistent with our thinking on the potential impact of interpersonal relationships, employees who report to more transformational, supportive, trustworthy, or grateful leaders are more helpful to colleagues at work (e.g., Podsakoff et al., 2000). Moreover, some organizational characteristics predict prosocial behaviors at work (e.g., Moorman et al., 1998). Specifically, employees perceiving that their organization values them and cares about their wellbeing were more likely to help coworkers and engage in tasks beyond requirements (Moorman et al., 1998), suggesting that receiving organizational support leads employees to increase prosocial behaviors inside their organization.

Prior research has also examined the effects of interventions aimed to promote prosocial behaviors. For example, receiving help from a fellow student in response to a request led to helping another student on the same online platform (Baker & Bulkley, 2014). Receiving gratitude from their managers also led fundraisers to make more voluntary calls (Grant & Gino, 2010), and individuals who reflected on their recent experiences of giving contributed more money to their own university and donated more to an earthquake relief fund (Grant & Dutton, 2012). Mindfulness meditation interventions also led individuals to feel and behave more prosocially during days in which they meditated in the morning, and to be more financially generous with others *immediately* following the interventions (Hafenbrack et al., 2020).

Our review of past studies on the contextual predictors of prosocial behaviors reveals a shared pattern. They have mainly focused on *short-term* effects of situational drivers of prosocial

behaviors and they occurred within the *same* context, leaving open questions of what might increase engagement in prosocial behaviors in the long-term, *beyond* the immediate context, and why. We propose that one such factor lies in the *interpersonal* domain and concerns the social support people receive from others.

### **Social Support, Felt Security, Prosocial Motivation, and Prosocial Behaviors**

Substantial literatures have established that social support leads to beneficial outcomes for the individuals receiving the support (see Cohen et al., 2000; Taylor, 2011). In brief, although it is not a panacea, there is ample evidence that receiving social support from varied sources can buffer stress and improve healthy behaviors and physical, emotional, and psychological wellbeing. Social support has been studied in different forms, including instrumental (practical actions or provisions), emotional (warmth and nurturance), informational (knowledge, advice, or feedback), and companionate (activities with others) support (Cohen et al., 2000). In fact, the subjective experience of being socially supported can lead individuals to reap positive psychological and physical benefits (e.g., Taylor, 2011).

Sources of social support include family, friends, supervisors, mentors, coworkers, and organizations, with positive effects of social support received in the workplace on outcomes that benefit both organizations and employee wellbeing. For example, receiving social support from direct supervisors positively predicts health and workplace wellbeing and buffers against turnover intentions (Hammig, 2017; Rugulies et al., 2006). Informal mentorship, sponsorship, and support from peers and supervisors positively predict global women leaders' workplace wellbeing (Cortland & Kinias, 2019), and receiving social support can enable employees to successfully navigate work-family conflict (Carlson & Perrewé, 1999; Kossek, et al., 2011). Thus, prior research suggests direct benefits of receiving social support for individuals and their organizations.

Given the above, we propose that the sense of security resulting from receiving social support increases people's motivation and willingness to help others. Building on attachment theory, we propose that across its forms (instrumental, emotional, informational, and companionate) and sources (proximal and distant outcomes), receiving social support increases felt security, which in turn boosts prosocial motivation and encourages more prosocial behaviors. While prosocial behaviors refer to individuals' *engagement* in activities that protect, promote, and benefit the wellbeing of others, prosocial motivation concerns people's *desire* to do so out of their care for others (Batson, 1987; Grant, 2007; Grant & Berg, 2011). Receiving social support leads to feeling accepted and cared for by others, by strengthening individuals' sense of felt security (Isen et al., 1976; Mikulincer et al., 2005; for a review, see Carlson et al., 1988). The resulting felt security following receiving social support would, in turn, lower defensiveness toward others (Mikulincer & Shaver, 2005), increasing motivation and willingness to behave in ways that benefit others as is the result of having a secure attachment style (Mikulincer et al., 2005). We further propose that the sense of security resulting from receiving social support motivates individuals to engage in a broad range of prosocial behaviors. Given the reasons explicated above, we hypothesize:

*Hypothesis 1:* Receiving social support leads to increased prosocial motivation.

*Hypothesis 2:* The effect of receiving social support on individual prosocial motivation is mediated by felt security.

Prior research examining the relationship between receiving social support and prosocial behaviors has mainly assumed that the prosocial actions would be directed toward the same people or within the group that provided the social support. However, research on generalized exchange and on prosocial actions *beyond* specific others suggest that prosocial behaviors resulting from social support could span more broadly (e.g., Cojoharencu et al., 2016). For example, Cojoharencu

and colleagues (2016) experimentally manipulated individuals' sense of social connectedness by asking them to write about an instance when they bought a friend or family member a present. Despite the instruction to write about generosity toward a specific person, this manipulation boosted participants' sense of connectedness with others in general and their community at large, which led them to *immediately afterward* exert greater efforts on socially responsible behaviors including recycling, making environmentally conscious purchases, and financially contributing to an NGO that promotes ethical business trade. Given that receiving social support can meaningfully contribute to a stronger connection with others through felt security, it may encourage prosocial behaviors beyond the specific context where it is received.

Receiving social support is likely to facilitate *lasting* increases in prosocial behaviors. Although management research has identified ways to increase short-term prosocial behaviors, it remains inscrutable whether established effects, such as increasing direct contact with beneficiaries, can result in increase in prosocial behaviors that last over significant time periods (Grant, 2009). However, because receiving social support serves to *replenish*, rather than to deplete psychological resources, we propose these effects can be sustained over significant time periods. Through receiving social support, individuals *gain* resources that they can invest in different domains and at a later time. This transfer of resources across contexts has been demonstrated in the work-family interface literature, which demonstrates that resources gained in the work (family) domain can positively impact the family (work) domain (e.g., ten Brummelhuis & Bakker, 2012). As an example, Tang et al. (2021) showed that service providers who received expressions of gratitude at work reported an increase in relational energy, which in turn benefitted their family at the end of the workday. Other studies have shown the long-term effects of resource transfer between work and home and viceversa (e.g., Du et al., 2018). Relatedly, attachment theory

suggests that felt security generated by having a secure support base can have lasting effects (Mikulincer & Shaver, 2007). Therefore, we hypothesize that receiving social support predicts a lasting increase in prosocial behaviors.

*Hypothesis 3:* Receiving social support leads to increased individual engagement in prosocial behaviors: (a) both within and beyond the immediate context; (b) with long-term effects.

A strong prosocial motivation naturally leads individuals to find and engage in opportunities to benefit others, especially those in need (Batson, 1987; Grant, 2007), and this has been well documented in the literature (e.g., Caillier, 2016; Grant, 2008b; Grant & Berg, 2011). For example, research focusing on the workplace has found that prosocial motivation increases persistence in tasks that benefit others (Grant et al., 2007), and drives employees to voluntarily undertake tasks beyond their formal responsibilities, help colleagues solve work-related problems, and serve and protect the reputation of their organization (De Dreu & Nauta, 2009). We thus expect that across forms and contexts, receiving social support increases prosocial behaviors through an increase in felt security, which in turn boosts prosocial motivation.

*Hypothesis 4:* The effect of receiving social support on engagement in prosocial behaviors is serially mediated by an increase in felt security, which in turn increases prosocial motivation.

## **Overview of Studies**

We tested our hypotheses through analyses of three datasets that complement each other in important ways. Study 1 utilized a large dataset from a global business school alumni survey with significant representation of participants in Asia, Europe, and North America. Study 2 examined the relationship between receiving social support and prosocial organization involvement over a nineteen-year time period using a large longitudinal dataset of American adults. Study 3 tested our proposed mediators—felt security and prosocial motivation—in an

experiment with a sample of working American adults. Table 1 summarizes the measures of social support and prosocial behaviors for each of the studies. The authors have obtained institutional review board approval for their research. Informed consent was obtained from the participants at the start of the studies.

-----  
Insert Table 1 about here  
-----

### **Study 1**

Study 1 leveraged survey data to test Hypothesis 3a, concerning the positive relationship between receiving social support and engaging in prosocial behavior. In this study, we measure social support as workplace social support, and prosocial behaviors both in the immediate context (e.g., workplace) and in more distant ones (e.g., community or society).

#### **Sample and Procedure**

Alumni of masters-level or executive education programs from an international graduate business school with campuses in Europe, Asia, and the Middle East participated in an online survey about their work experiences, roles and identities, and contributions. Alumni received email invitations from the dean to participate with unique identifier survey links through a survey management company that administered the survey, and a total of 5,715 alumni completed the survey (response rate = 10.5%). Cortland and Kinias (2019) used a subset of this dataset to test hypotheses about social support leading to work satisfaction through reducing the experience of stereotype threat using the female alumnae responses only. Here, we use the entire sample with social support predicting prosocial behaviors and control for work satisfaction to isolate our hypothesized relationship between social support and prosocial behavior.

Although all participants had advanced business education, they were diverse in terms of

degree (70% MBA), age (59% Generation X: age 37-52 at time of data collection), seniority (35% held C-Suite or CEO/President positions), gender (77% men), and the country and continent in which they lived and worked. Participants represented 119 countries (no more than 13% of the sample from any one country), with 60% of participants located in Europe, 15% in Asia, 9% in North America, 15% in all other regions combined.<sup>1</sup>

## **Measures**

### ***Social Support***

This study used the same measure of workplace social support as Cortland and Kinias (2019), which examined the role of social support in women's experiences of stereotype threat and work satisfaction. Participants indicated (1=yes, 0=no) whether they have received the following sources of social support during their careers: "formally assigned mentors/sponsors" (formal mentors/sponsors); "mentors/sponsors not formally assigned" (informal mentors/sponsors); "supportive supervisors" (supervisors); "strong peer support" (peers), and "seeing people like you succeed in senior management positions" (role models). The five responses were summed to create a composite measure of social support. The final score ranges from 0 (if the participant received no social support at all) to 5 (if the participant received all five forms of social support).

### ***Prosocial Behaviors in the Proximal Context: Workplace***

To assess prosocial behaviors within the organization, participants indicated their contribution to *diversity and wellbeing enhancing practices*. Specifically, participants indicated the extent to which they personally created or contributed to five specific initiatives focused on enhancing diversity (a formal employee diversity and inclusion program; developing and identifying female talent for leadership positions; developing and identifying talent from group(s)

---

<sup>1</sup> We also examined gender and national cultural context (Asia versus Europe versus North America versus all other continents) as potential moderators.

under-represented in leadership positions; supportive work arrangements that enable employees to meet work and family responsibilities; providing parental leave opportunities beyond legal mandates). Responses were recorded on a scale from 0 = not at all to 3 = I created or co-created. The items formed a reliable ( $\alpha = .84$ ) scale, so were averaged to form a composite.

### ***Prosocial Behaviors in Distant Contexts: Community and Society***

Participants indicated their individual prosocial behaviors beyond the proximal context (organization) in two ways: (1) economic development and societal impact, and (2) non-profit board membership. *Economic development and societal impact practices*<sup>2</sup>. Participants indicated the extent to which they personally created or contributed to five initiatives focused on economic development and societal impact (economic development in your region, identifying and increasing sourcing from local suppliers; protecting the environment/sustainability; protecting or promoting human rights; charitable giving). Responses were on a scale ranging from 0 = not at all to 3 = I created or co-created, and because they formed a reliable measure ( $\alpha = .73$ ), they were averaged to form a composite. *Non-profit board membership*. Participants indicated their service in response to the question, “On how many non-profit boards of directors do you serve?”. Given a positively skewed distribution (78% zero, 15% one, 7% two or more), we dichotomized the responses as follows: 0 = zero non-profit boards of directors, 1 = one or more non-profit board of directors.

### ***Control Variables***

To reduce concerns about potential confounding demographic and job-relevant factors, age, job status, participant gender, degree program, company size, and job scope served as control

---

<sup>2</sup> A factor analysis identified two factors aligned with the scope of prosocial behavior in proximal and distant contexts: (1) diversity and wellbeing enhancing practices, and (2) economic development and societal impact. Note: we excluded items that loaded above .40 on more than one factor. Results are robust when all items (including those excluded from the reported scales) are combined to form one scale.

variables. Further, to isolate the relationship between receiving social support and engaging in prosocial behavior from a generally positive attitude and positivity toward work (Cohen et al., 2000; Moorman et al., 1998), we also controlled for the single item of the Diener et al. (1985) scale included in the survey (“All things considered, how satisfied are you with your life as a whole these days?”; 1=completely dissatisfied, 5=completely satisfied) and Cortland and Kinias’ (2019) work satisfaction scale. The three-item work satisfaction scale (“At this stage in your life, how satisfied are you with the following: (1) Work that is meaningful and satisfying, (2) Opportunities for career growth and development, and (3) Professional accomplishments; 1=not at all satisfied, 5=extremely satisfied) was reliable in this sample ( $\alpha = .83$ ), so was averaged to form a composite control variable.

## Results

Table 2 contains the means, standard deviations, and bivariate correlations for all Study 1 variables.

-----  
 Insert Table 2 about here  
 -----

## *Analytic Approach*

To test Hypothesis 3a, we analyzed social support predicting prosocial behaviors in proximal and distant contexts using a series of Ordinary Least Square (OLS) regression analyses with social support as the predictor variable and prosocial behaviors (diversity and wellbeing enhancing practices, economic and societal development practices) as outcomes. Binary Logistic regression tested the relationship between social support and non-profit board membership. Covariates were included in each model<sup>3</sup>. To test for gender and cultural variance in the

---

<sup>3</sup> As a robustness check, we also ran these regressions without the covariates and found that social support predicted diversity and wellbeing enhancing practices ( $b = .061, p < .001$ ), and economic development and societal impact practices ( $b = .033, p < .001$ ), but it did not predict non-profit board membership ( $b = -.007, p = .771$ ). We interpret

relationship between receiving social support and engaging in prosocial behavior, the series of OLS and Binary Logistic regressions were rerun to test for interactions of social support with the gender and culture codes included in models. In these models, each of the prosocial behaviors was included as an outcome in its own regression. Covariates were entered in Step 1, and social support and gender or culture codes were entered in Step 2.

### ***Hypothesis Test***

Consistent with Hypothesis 3a, social support significantly predicted prosocial behaviors in proximal and distant contexts on all three measures. Specifically, social support predicted diversity and wellbeing enhancing practices ( $b = .070, p < .001$ ), economic development and societal impact initiatives ( $b = .038, p < .001$ ), and non-profit board membership ( $b = .061, p = .039$ ).<sup>4</sup> See Table 3 for results of Study 1.

-----  
Insert Table 3 about here  
-----

### **Discussion**

Study 1 supports Hypothesis 3a by showing the positive relationship between workplace social support and prosocial behaviors both in proximal context (within the organization) and in more distant ones (community and broader society). One outcome reflecting participants' individual behaviors captured prosocial behaviors within the organization (diversity and wellbeing enhancing practices) and two captured prosocial behaviors outside the organization (economic development and societal impact practices; non-profit board membership).

---

the nonsignificant effect on non-profit board membership when covariates are excluded as logical, as the covariates account for qualifications to be a member of non-profit boards (e.g., age and job status). Social support therefore facilitates non-profit board membership only above and beyond qualifications (i.e., among those with required experience).

<sup>4</sup> We found no evidence of gender or cultural context as boundary conditions for the relationship between receiving social support and engaging in prosocial behavior.

Supporting internal validity, the effects are robust controlling for age, gender, and seniority. Particularly important given that participants self-reported on the variables of primary interest, the results were robust with the inclusion of life satisfaction and work satisfaction measures in models. This helps to alleviate concerns about potential alternative explanations connected to response bias.

Although the Study 1 sample included respondents across geographic locations, it is less educationally and economically diverse than ideal (see Henrich et al., 2010; Noor et al., 2021). Specifically, given all participants had studied advanced business, questions of generalizability to populations with different educational backgrounds and earning potential remain. Thus, Studies 2 and 3, while geographically less diverse (both drawn from US populations), utilize samples with substantially more educational and employment diversity.

## Study 2

Building upon the results of Study 1, Study 2 tested whether receiving social support predicts engagement in prosocial behaviors *over time* using an archival dataset with survey responses relevant to our hypotheses at three time points over a nineteen-year period. Study 2 aims to examine the predictive power of people receiving social support on their prosocial behaviors (Hypothesis 3a), over time (Hypothesis 3b), while also controlling for potential confounding variables. By testing prosocial behaviors as predicted by receiving social support at earlier time periods, this disentangles our findings from potential reverse causation and enables the understanding of longevity of the impact of social support on prosocial behavior.

We used data from the Wisconsin Longitudinal Study (WLS)<sup>5</sup>, a multi-wave study of a random sample of people who graduated from high schools in Wisconsin, US in 1957 (Herd et al.,

---

<sup>5</sup> Study 2 data were derived from the following resources available in the public domain:  
<https://www.ssc.wisc.edu/wlsresearch/>

2014). It allowed us to test Hypotheses 3a and 3b with measures of social support and prosocial behaviors. Analyses focus on the years in which participants answered questions relevant to our hypotheses, specifically 1992, 2004, and 2011. After excluding respondents with missing data on the independent, dependent, and control variables using case-wise exclusion, the total number of observations in our analyses ranged from 3646 to 4225. Relevant to participant diversity, the sample was 52% women, and education ranges from less than one year of college to postdoctoral studies, with a mean of less than two years of college (note that the WLS dataset does not include participant ethnicity).

## **Measures**

### ***Social Support***

To assess social support, we adapted the emotional support measure that Piliavin and Siegl (2007) used as a covariate in their study of the health benefits of volunteering using the WLS dataset. These questions were: “Is there a person in your family, with whom you can really share your very private feelings and concerns?”, “Is there a friend outside your family with whom you can really share your very private feelings and concerns?”, “During the past month, have you received advice, encouragement, moral or emotional support from parents?”, “During the past month, have you received advice, encouragement, moral or emotional support from friends, neighbors, co-workers?”. Participants indicated 1=yes or 0=no to each, and we computed a composite measure of social support for every year of interest (1992, 2004, and 2011) by summing the four responses. Therefore, this measure ranges from 0 (if the participant received no social support at all) to 4 (if the participant received all four sources of social support), which reflects emotional and to some extent informational support.

### ***Prosocial Behaviors in the Community***

We adapted Piliavin and Siegl (2007)’s volunteering scale to measure prosocial behaviors. Piliavin and Siegl (2007: 454) defined volunteering as “taking actions, within an institutional framework, that potentially *provide some service to one or more other people or the community at large*”, which fits our interest of prosocial behaviors well because the focus is on activities that *benefit others*. Specifically, the prosocial behavior measure is composed of questions assessing respondents’ level of involvement with community centers (“What is your level of involvement with community centers?”), neighborhood improvement organizations (“What is your level of involvement with neighborhood improvement organizations?”), and charity organizations (“What is your level of involvement with charity or welfare organizations?”). Responses ranged from 0 (not involved) to 4 (a great deal) and we averaged the responses to form a composite score.

### ***Control Variables***

We included as control variables factors that might be associated with receiving social support and/or prosocial behaviors: gender, education, household income (log transformed), and marital status as these factors can predict prosocial organization involvement (Piliavin & Siegl, 2007). We ran the analyses both including and excluding the control variables.

### **Results**

Table 4 contains the means, standard deviations, and correlations for all Study 2 variables.

-----  
Insert Table 4 about here  
-----

### ***Analytic Approach***

We examined whether social support predicts prosocial organization involvement in subsequent years using OLS regression analyses. Specifically, in Model 1, prosocial organization involvement in 2004 was regressed on social support in 1992, controlling for social support in

2004. In Model 2, prosocial organizational involvement in 2011 was regressed on social support in 1992 and social support in 2004, controlling for social support in 2011. All reported analyses include the covariates in models.<sup>6</sup>

### ***Hypothesis Tests***

Table 5 contains results of the regression analyses. Consistent with Hypothesis 3a and Hypothesis 3b, social support was a significant predictor of prosocial behaviors, operationalized as prosocial organizational involvement, years later. Social support in 1992 ( $b = .051, p < .001$ ) and social support in 2004 ( $b = .095, p < .001$ ) both predicted prosocial organization involvement in 2004. Social support in 1992 ( $b = .022, p = .050$ ), social support in 2004 ( $b = .050, p < .001$ ) and social support in 2011 ( $b = .065, p < .001$ ) predicted prosocial organizational involvement in 2011.

-----  
Insert Table 5 about here  
-----

### **Discussion**

Study 2 provides evidence for the long lasting relationship between receiving social support and engagement in prosocial behaviors up to nineteen years later. Consistent with Hypothesis 3a, individuals who received social support are more likely to contribute to organizations aimed at benefiting others and society. More importantly, we found support for Hypothesis 3b, as receiving social support positively predicts engagement in prosocial behaviors many years later. To our knowledge, this is the first study measuring the longevity of the effect of a driver of prosocial behaviors.

While Study 2 demonstrated the relationship in time sequence – receiving social support occurring before engaging in prosocial behavior – and includes many relevant control variables, it

---

<sup>6</sup> All statistically significant hypothesis tests remain so without covariates in the models.

did not directly test the causal nature of the relationship. Thus, the next step is to investigate causality and the mechanisms explaining the effect.

### **Study 3**

In Study 3, we randomly assigned participants to experimental conditions of social support or control. Moreover, we tested the indirect relationship between receiving social support and engaging in prosocial behaviors, as serially mediated by felt security and prosocial motivation (Hypotheses 1, 2, and 4) through a preregistered<sup>7</sup> experiment with working Americans.

#### **Sample and Procedure**

Four hundred working adults (47% women; 86% White) participated in an online study in exchange for \$.50 payment. Participants were 30 years old or older ( $M = 45.33$ ,  $SD = 10.15$ ), recruited from Prolific Academic to complete a study about social and work-related perceptions and behaviors. After excluding six participants who did not complete the study or failed the attention check, we analyzed a final sample of 394 complete responses. Data are available at: <http://surl.li/cswrc>.

#### ***Social Support vs. Control Condition***

Participants were randomly assigned to one of two experimental conditions: social support versus control. In both conditions, participants recalled a recent event and then wrote about it in a text box<sup>8</sup>. Specifically, in the social support condition, the instructions to the recall and writing task read:

Please think about a situation that happened during the past few months in which you received support from a friend, family member, co-worker, or other social contact. This support might include practically doing something to help you, providing emotional support or useful advice, or keeping you company. Please try to focus on one specific

---

<sup>7</sup> Preregistration link: <https://osf.io/a9gxx>

<sup>8</sup> Although not communicated in the instructions, participants were required to type 300 characters in the text box and were prompted to do so if they did not at first.

situation in which you felt supported by this other person and describe: (1) the situation, (2) who helped/supported you, (3) how this person helped/supported you, and (4) how you felt when they helped/supported you.

In the control condition, the instructions read:

Please think about what you did last Tuesday. Please describe: (1) the things you did during the day, (2) any people with whom you interacted, (3) what happened in any such interaction(s), and (4) how were you feeling that day.

## **Measures**

### ***Felt Security***

Following the experimental manipulation, participants indicated their feelings of security by responding to the Luke, Sedikides, and Carnelley (2012) scale, which assesses the extent to which participants felt secure and cared for in the situation they recalled (sample items: “secure”, “safe”, “looked after”:  $\alpha = .97$ ).

### ***Prosocial Motivation***

Participants indicated their prosocial motivation by responding to Grant’s (2008b) scale: “I care about benefiting others”, “I want to help others”, “I want to have a positive impact on others”, and “It is important to me to do good for others”. Response options were anchored on a 1 (strongly disagree) to 7 (strongly agree) scale, and averaged to form a composite ( $\alpha = .95$ ).

### ***Prosocial Behavioral Intentions: Workplace, Community, and Society***

We measured prosocial behavior intentions with the same measures we used in Study 1 adapted to reflect intentions rather than prior behaviors: diversity and wellbeing enhancing practices and economic development and societal impact practices<sup>9</sup>. For *diversity and wellbeing enhancing practices*, participants indicated the extent to which they would be interested in

---

<sup>9</sup> We a-priori decided not to include non-profit board membership given the characteristics of this sample. Whereas Study 1 participants were business school alumni, all with masters or executive level education and professional careers, the educational and employment diversity of the sample for Study 3 limited the proportion of participants qualified for nonprofit board service.

engaging in seven specific behaviors in their careers (supporting colleagues' ability to meet both their work and family responsibilities; emotionally supporting colleagues after they become parents; formal employee diversity and inclusion program; practically supporting colleagues after they become parents; making sure you give voice to women in meetings; making sure you give voice to underrepresented minorities in meetings; organizing practices to ensure women have the opportunity to thrive; organizing practices to ensure underrepresented minorities have the opportunity to thrive). Responses were recorded on a scale from 0 = not at all to 3 = a great amount. The items formed a reliable ( $\alpha = .92$ ) scale, so were averaged to form a composite. For *economic development and societal impact practices*, participants indicated the extent to which they would be interested in engaging in five specific behaviors (protecting or promoting human rights; charitable giving; protecting environmental sustainability; contributing to the economic development of your region; identifying and increasing sourcing from local suppliers). Responses were recorded on a scale from 0 = not at all to 3 = a great amount. The *economic development and societal impact practices* scale was again reliable in this sample ( $\alpha = .86$ ).

### ***Control Variables***

Reported analyses control for age, gender, education, race/ethnicity, and number of subordinates participants supervise as a proxy for job status, as these variables can both correlate with receiving social support and impact the extent to which individuals contribute to prosocial practices.

### ***Alternative Potential Mediators***

To rule out alternative potential mechanisms explaining the effect of social support on prosocial motivation, we measured gratitude ( $\alpha = .94$ ) (adapted from Bartlett & DeSteno, 2006), and positive ( $\alpha = .92$ ) and negative affect ( $\alpha = .89$ ; PANAS; Watson et al., 1988).

## Results

Table 6 contains the means, standard deviations, and correlations for all Study 3 variables.

-----  
Insert Table 6 about here  
-----

### *Analytic Approach*

To test the indirect effect of received social support on prosocial behaviors through felt security and prosocial motivation, we employed the PROCESS macro by Andrew Hayes (Model 6 in Hayes, 2017). Social support was the predictor, felt security was the first mediating variable, prosocial motivation the second mediating variable, and prosocial behaviors the outcomes. This command was run separately for each continuous outcome measure of prosocial behavior with 10,000 bootstraps. We report analyses controlling for age, gender, education, race/ethnicity, and job status<sup>10</sup>.

### *Hypothesis Tests*

Table 7 contains all direct effects and confidence intervals of the mediation models predicting prosocial behaviors from social support through felt security and prosocial motivation.

-----  
Insert Table 7 about here  
-----

**Model 1: Social Support → Felt Security → Prosocial Motivation → Diversity and Wellbeing Enhancing Practices.** The indirect effect of social support on diversity and wellbeing enhancing practices through felt security and prosocial motivation was 0.084. The 95% bootstrap

---

<sup>10</sup> Demonstrating robustness, hypotheses were fully supported in the absence of covariates.

confidence interval for this indirect effect did not include zero (.047 to .128), indicating that this effect was statistically significant.

**Model 2: Social Support → Felt Security → Prosocial Motivation → Economic Development and Societal Impact Practices.** The indirect effect of social support on economic development and societal impact practices through felt security and prosocial motivation was 0.074, and the 95% bootstrap confidence interval for this indirect effect did not include zero (.042 to .115).

To examine potential alternative mechanisms explaining the indirect effect of social support on prosocial behaviors through prosocial motivation, we ran multiple mediation models to compare and contrast mediators (Model 6 in Hayes, 2017). Social support was the predictor, either felt security, gratitude, positive affect, or negative affect, was the first mediating variable, prosocial motivation was the second mediating variable, and prosocial behaviors were the outcomes. This command was run separately for each continuous outcome measure of prosocial behavior with 10,000 bootstraps. Results show that the social support manipulation influenced felt security ( $b = .570, p < .001$ ), gratitude ( $b = .957, p < .001$ ), and negative affect ( $b = .308, p = .044$ ), but did not predict positive affect ( $b = .090, p = .550$ ). When examining the indirect effects of the social support manipulation on prosocial behaviors, felt security was a significant first stage mediator for both outcomes (as reported above). Gratitude was also a significant first stage mediator for diversity and wellbeing enhancing practices (95% CI [.056, .158]); and for economic development and societal impact practices (95% CI [.049, .138]). Positive affect and negative affect were non-significant first stage mediators (all 95% CIs included zero). However, when both felt security and gratitude were in the equation, the only significant indirect effect was the one we hypothesized. Specifically, social support indirectly predicted both diversity and wellbeing enhancing practices (95% CI [.034, .118]), and economic development and societal impact practices (95% CI [.030,

.106]). Importantly, the indirect effects through gratitude were not significant for diversity and wellbeing enhancing practices (95% CI [-.009, .040]) or for economic development and societal impact practices (95% CI [-.008, .035]). These results demonstrate that felt security is a key part of the process through which receiving social support leads to prosocial motivation and behavior that goes above and beyond the other potential alternative mechanisms.<sup>11</sup>

## **Discussion**

Study 3 findings are consistent with Hypotheses 1 and 2 with the social support manipulation increasing prosocial motivation relative to the control condition, and felt security mediating this effect. Moreover, findings support Hypothesis 3a and 4 with felt security and prosocial motivation serially mediating the indirect effect of receiving social support on prosocial behavioral intentions within and beyond the immediate context (from organization to society). Further suggesting internal validity, the effects are robust controlling for age, gender, seniority, education, race/ethnicity, and job status. Results are not moderated by gender, with the same effects for men and for women.

## **General Discussion**

Three studies tested and found support for hypotheses that receiving social support boosts prosocial behavior through increased felt security, which in turn leads to increased prosocial motivation. Evidence emerged across different datasets including cross-sectional, longitudinal, and experimental data, with diverse samples (i.e., global business school alumni, adults around retirement age from the state of Wisconsin, and US working adults), both with and without important demographic, contextual, and psychological control variables. We found that receiving different forms of social support (emotional, instrumental, informational, and/or companionate)

---

<sup>11</sup> We found no evidence of gender or race/ethnicity as boundary conditions.

from various sources (e.g., peers, mentors and managers at work, friends and family outside work) leads people to engage in prosocial behaviors in the short- and long-term. And the range of prosocial behaviors included those directed toward targets both inside one's organizations (i.e., diversity and wellbeing enhancing practices) and well beyond it (i.e., taking part in economic development and societal impact initiatives, serving on non-profit boards, volunteering in the local community).

### **Theoretical Contributions**

The present research advances our knowledge of prosocial behaviors in multiple ways. First and foremost, it adds to the literature that focuses on contextual factors influencing prosocial behavior, which in itself moves beyond dispositional explanations for prosociality. We theorize and find that receiving social support boosts people's felt security, leading to greater prosocial motivation and prosocial behaviors. Our research thus suggests that interpersonal factors might have the potential to spark prosocial motivation and promote prosocial behaviors.

Second, our research contributes to attachment theory by providing evidence that the availability of supportive others increases motivation and engagement in prosocial behaviors *beyond* the context in which the support has been received, extending to *broader society*. Specifically, building beyond modern theorizing on adult attachment both with romantic partners (e.g., Collins, 1996) and in organizational contexts (e.g., Yip et al., 2017), our findings suggest that receiving social support may have the power to foster prosocial behaviors at a larger scope than where previous research has focused. While extant research has mostly examined prosocial behaviors directed toward others in one's immediate community (such as in their organization: Bolino & Grant, 2016; Bolino & Tunley, 2003; Baker & Bulkley, 2014), we find that receiving

social support can motivate people to engage in behaviors that aim to benefit someone they do not know, and the society as a whole.

Third, Study 2's findings suggest that the effect of receiving social support on prosocial behaviors can persist over long time periods. The impact of receiving social support on prosocial behaviors does not only exist in the short-term, one-time exchange, as its *replenishing* effect could last over years, sustaining itself once developed. While past studies have suggested that prosocial behaviors can be encouraged more when individuals experience a stronger need to reciprocate or a stronger self-efficacy to make changes, they nevertheless have found this positive effect to last only within a short timeframe (Grant et al., 2008; Rhoades Eisenberger, 2002). Our research suggests that receiving social support, given its various sources and forms, as well as its effects on resources and perceived connection with others in general, can have a long-term boosting effect on engagement in prosocial behaviors because it builds feelings of attachment related security that can persist over time.

Fourth, we contribute to research on the antecedents of prosocial behavior by answering calls for greater attention to the antecedents of prosociality (Bolino & Grant, 2016). We identified felt security as the mediating variable between receiving social support and prosocial motivation. Importantly, this effect was clear beyond potential alternative processes of gratitude, positive affect, and negative affect (e.g., Bartlett & DeSteno, 2006; Sawyer et al., 2021), none of which explained the effect of social support on prosociality in our findings.

Importantly, through our set of studies we address the argument that there is potential "value in distinguishing prosocial behaviors that are based on their target" (Bolino & Grant, 2016: 635). Prior research combines and studies prosocial behaviors as a composite measure, an approach that risks overlooking the nuances of different types of prosocial behaviors and their

antecedents, We addressed this issue by distinguishing separately prosocial behaviors directed toward different targets, and relatedly, those occurring in the proximal context (e.g., workplace diversity practices) and beyond it (e.g., economic development and societal impact practices).

### **Limitations and Future Research**

Our research has several limitations. We sought to examine a variety of different prosocial behaviors individuals could engage both in the same or proximal context in which the support was received (e.g., workplace) or beyond it (e.g. community or society), yet these measures remain a limited set. Other types of prosocial behaviors beyond the ones examined in this research will be worth researchers' attention. Some prosocial behaviors such as whistleblowing not only require a desire to do good but also a tremendous amount of courage as they may involve risks that can hurt one's career or, in some extreme cases, even life. Suggestive of such effects, women who see themselves as central in their networks are more likely to confront sexism when they encounter it (Brands & Rattan, 2020). But can social support also promote other prosocial behaviors, and if so, how? Future research may investigate which kinds of prosocial behaviors social support could be more effective in facilitating, and more broadly, which interpersonal or contextual factor is most effective in fostering which kind of prosocial behaviors.

Further, we measured prosocial behaviors through self-reported engagement in those activities, and we encourage using more objective measures of prosocial behaviors in future research. Finally, we did not differentiate among the different forms and sources of social support, as we are interested in social support as broadly understood. Future work could tease apart potential variance in relationships between types of social support and types of prosocial behaviors and contextual amplifiers.

### **Practical Implications**

Our research provides practical guidance for organizations that are interested in an intervention to encourage more prosocial behaviors among their employees (Brockner & Sherman, 2020). Specifically, our findings suggest that creating opportunities for employees to receive ample support from their colleagues and/or supervisors is effective, and it is also relatively easy to implement. Organizations striving to increase OCBs (see Parke et al., 2020) or corporate social responsibility output through employee volunteering might consider strengthening the social support system for their employees. In addition, beyond organizational contexts, our research suggests that to encourage individuals to engage in more prosocial behaviors, family, friends, and community members or others can provide social support.

## **Conclusions**

This work identifies social support as a key factor that bolsters individuals' felt security which in turn boosts prosocial motivation and engagement in prosocial behaviors directed toward targets both in the proximal and in more distant environments. Most strikingly, receiving social support can have a long-lasting impact on increasing prosocial behaviors that could span over a decade. In short, providing social support seems a simple, yet effective, way to stimulate long-term prosocial behaviors in organizations and society.

## References

- Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). *Patterns of Attachment*. Hillsdale, NJ: Erlbaum
- Baker, W.E., & Bulkley N 2014. Paying It Forward vs. Rewarding Reputation: Mechanisms of Generalized Reciprocity. *Organization Science*, 25, 1493–1510.
- Bartlett, M. Y., & DeSteno, D. (2006). Gratitude and prosocial behavior: Helping when it costs you. *Psychological Science*, 17(4), 319-325.
- Batson, C. D. (1987). Prosocial motivation: Is it ever truly altruistic?. *Advances in Experimental Social Psychology*, 20, 65-122.
- Bode, C., & Singh, J. (2018). Taking a hit to save the world? Employee participation in a corporate social initiative. *Strategic Management Journal*, 39(4), 1003-1030.
- Bolino, M. C., & Grant, A. M. (2016). The Bright Side of Being Prosocial at Work, and the Dark Side, Too: A Review and Agenda for Research on Other-Oriented Motives, Behavior, and Impact in Organizations. *Academy of Management Annals*, 10(1), 599-670.
- Bolino, M. C. and Tunley, W. H. (2003). More than one way to make an impression: Exploring profiles of impression management. *Journal of Management*, 29: 141-160.
- Bowlby, J. (1969). *Attachment and loss: Attachment*. New York: Basic Books.
- Brands, R. A., & Rattan, A. (2020). Perceived Centrality in Social Networks Increases Women’s Expectations of Confronting Sexism. *Personality and Social Psychology Bulletin*, 46(12), 1682-1701.
- Brief, A. P., & Motowidlo, S. J. (1986). Prosocial Organizational Behaviors. *Academy of Management Review*, 11(4), 710-725.
- Brockner, J., & Sherman, D. K. (2020). Wise interventions in organizations. *Research in Organizational Behavior*, 100125.
- Caillier, J. G. (2016). Does Public Service Motivation Mediate the Relationship between Goal Clarity and both Organizational Commitment and Extra-Role Behaviours? *Public Management Review*, 18(2), 300-318.
- Carlson, D. S., & Perrewe, P. L. (1999). The Role of Social Support in the Stressor-Strain Relationship: An Examination of Work-Family Conflict. *Journal of Management*, 25(4), 513-540.
- Carlson, M., Charlin, V., & Miller, N. (1988). Positive mood and helping behavior: A test of six hypotheses. *Journal of Personality and Social Psychology*, 55(2), 211-229.
- Cohen, S., Underwood, L. G., & Gottlieb, B. H. (Eds.). (2000). *Social support measurement and intervention: A guide for health and social scientists*. Oxford University Press.
- Cojuharenco, I., Cornelissen, G., & Karelaia, N. (2016). Yes, I can: Feeling connected to others increases perceived effectiveness and socially responsible behavior. *Journal of Environmental Psychology*, 48, 75-86.
- Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology*, 71(4), 810-832.
- Cortland, C., & Kinias, Z (2019). Stereotype threat and women’s work satisfaction: The importance of role models. *APA Archives of Scientific Psychology, Special Section: Advancing Gender Equality in the Workplace*, 7(1), 81-89.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900.

- De Dreu, C. K. W., & Nauta, A. (2009). Self-interest and other-orientation in organizational behavior: Implications for job performance, prosocial behavior, and personal initiative. *Journal of Applied Psychology*, 94(4), 913-926.
- Du, D., Derks, D., Bakker, A. B., and Lu, C. Q. (2018). Does homesickness undermine the potential of job resources? A perspective from the work-home resources model. *Journal of Organizational Behavior*, 39(1), 96-112.
- Eagly, A. H. (2009). The his and hers of prosocial behavior: An examination of the social psychology of gender. *American Psychologist*, 64(8), 644-658.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin*, 108(2), 233-256 .
- Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, 129(4), 569-591.
- Eisenberg, N., Guthrie, I. K., Cumberland, A., Murphy, B. C., Shepard, S. A., Zhou, Q., & Carlo, G. (2002). Prosocial development in early adulthood: A longitudinal study. *Journal of Personality and Social Psychology*, 82(6), 993-1006.
- Flynn, F. J. (2005). Identity orientations and forms of social exchange in organizations. *Academy of Management Review*, 30(4), 737-750.
- Gärling, T., Fujii, S., Gärling, A., & Jakobsson, C. (2003). Moderating effects of social value orientation on determinants of proenvironmental behavior intention. *Journal of Environmental Psychology*, 23(1), 1-9.
- George, G., Howard-Grenville, J., Joshi, A., & Tihanyi, L. (2016). Understanding and tackling societal grand challenges through management research. *Academy of Management Journal*, 59(6), 1880-1895.
- Grant, A. M. (2007). Relational Job Design and the Motivation to Make a Prosocial Difference. *The Academy of Management Review*, 32(2), 393-417.
- Grant, A. M. (2008a). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology*, 93(1), 108-124.
- Grant, A. M. (2008b). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology*, 93(1), 48-58.
- Grant, A. M. (2009). Putting self-interest out of business? Contributions and unanswered questions from use-inspired research on prosocial motivation. *Industrial and Organizational Psychology*, 2, 94-98.
- Grant, A. M., & Berg, J. M. (2011). Prosocial motivation at work: When, why, and how making a difference makes a difference. In K. Cameron & G. Spreitzer (Eds.), *Oxford handbook of positive organizational scholarship* (pp. 28-44). New York: Oxford University Press.
- Grant, A. M., & Gino, F. (2010). A little thanks goes a long way: Explaining why gratitude expressions motivate prosocial behavior. *Journal of Personality and Social Psychology*, 98(6), 946-955.
- Grant, A. M., Dutton, J. E., & Rosso, B. D. (2008). Giving Commitment: Employee Support Programs and The Prosocial Sensemaking Process. *Academy of Management Journal*, 51(5), 898-918.
- Grant, A., & Dutton, J. (2012). Beneficiary or Benefactor: Are People More Prosocial When They Reflect on Receiving or Giving? *Psychological Science*, 23(9), 1033-1039.

- Hafenbrack, A. C., Cameron, L. D., Spreitzer, G. M., Zhang, C., Noval, L. J., & Shaffakat, S. (2020). Helping People by Being in the Present: Mindfulness Increases Prosocial Behavior. *Organizational Behavior and Human Decision Processes*, 159, 21–38.
- Hämmig, O. (2017). Health and well-being at work: The key role of supervisor support. *SSM - Population Health*, 3, 393–402.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Hazan, C., & Shaver, P. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, 59, 270–280.
- Henrich, J., Heine, S., & Norenzayan, A. (2010). Beyond WEIRD: Towards a broad-based behavioral science. *Behavioral and Brain Sciences*, 33(2-3), 111-135.
- Herd, P., Carr, D., & Roan, C. (2014). Cohort profile: Wisconsin longitudinal study (WLS). *International Journal of Epidemiology*, 43(1), 34-41.
- Hüffmeier, J., Wessolowski, K., Van Randenborgh, A., Bothin, J., Schmid-Loertzer, N., & Hertel, G. (2014). Social support from fellow group members triggers additional effort in groups. *European Journal of Social Psychology*, 44(4), 287-296.
- Ibarra, H. (1992). Homophily and differential returns: Sex differences in network structure and access in an advertising firm. *Administrative Science Quarterly*, 422-447.
- Isen, A. M., Clark, M., & Schwartz, M. F. (1976). Duration of the effect of good mood on helping: "Footprints on the sands of time.". *Journal of Personality and Social Psychology*, 34(3), 385-393.
- Johnson, R. C., Danko, G. P., Darvill, T. J., Bochner, S., Bowers, J. K., Huang, Y.-H., Park, J. Y., Pecjak, V., Rahim, A. R. A., & Pennington, D. (1989). Cross-cultural assessment of altruism and its correlates. *Personality and Individual Differences*, 10(8), 855-868.
- Kim, H. S., Sherman, D. K., & Taylor, S. E. (2008). Culture and social support. *American Psychologist*, 63(6), 518-526.
- Kitayama, S., Park, H., Sevincer, A. T., Karasawa, M., & Uskul, A. K. (2009). A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology*, 97(2), 236–255.
- Klebanov, P. K., Brooks-Gunn, J., & Duncan, G. J. (1994). Does neighborhood and family poverty affect mothers' parenting, mental health, and social support?. *Journal of Marriage and the Family*, 441-455.
- Korsgaard, M., Meglino, B., & Lester, S. (1997). Beyond Helping: Do Other-Oriented Values Have Broader Implications in Organizations? *Journal of Applied Psychology*, 82, 160–177.
- Kossek, E. E., Pichler, S., Bodner, T., & Hammer, L. B. (2011). Workplace Social Support and Work–Family Conflict: A Meta-Analysis Clarifying the Influence of General and Work–Family-Specific Supervisor and Organizational Support. *Personnel Psychology*, 64(2), 289-313.
- Lee, M., & Huang, L. (2018). Gender bias, social impact framing, and evaluation of entrepreneurial ventures. *Organization Science*, 29(1), 1-16.
- Lipsky, M. (1980). *Street Level Bureaucracy: Dilemmas of the Individual in Public Services*. Russell Sage Foundation.
- Little, L. M., Nelson, D. L., Wallace, J. C., & Johnson, P. D. (2011). Integrating attachment style, vigor at work, and extra-role performance. *Journal of Organizational Behavior*, 32(3), 464-484.
- Luke, M. A., Carnelley, K. B., & Sedikides, C. (2020). Attachments in the workplace: How attachment security in the workplace benefits the organisation. *European Journal of Social Psychology*, 50(5), 1046-1064.

- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job Burnout. *Annual Review of Psychology*, 52(1), 397-422.
- McClintock, C. G., & Allison, S. T. (1989). Social Value Orientation and Helping Behavior1. *Journal of Applied Social Psychology*, 19(4), 353-362.
- McNeely, B. L., & Meglino, B. M. (1994). The role of dispositional and situational antecedents in prosocial organizational behavior: An examination of the intended beneficiaries of prosocial behavior. *Journal of Applied Psychology*, 79(6), 836-844.
- Meglino, B. M., & Korsgaard, A. (2004). Considering Rational Self-Interest as a Disposition: Organizational Implications of Other Orientation. *Journal of Applied Psychology*, 89(6), 946-959.
- Messick, D. M., & McClintock, C. G. (1968). Motivational bases of choice in experimental games. *Journal of Experimental Social Psychology*, 4(1), 1-25.
- Mikulincer, M., & Shaver, P. R. (2005). Attachment security, compassion, and altruism. *Current Directions in Psychological Science*, 14(1), 34-38.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.
- Mikulincer, M., Shaver, P. R., Gillath, O., & Nitzberg, R. A. (2005). Attachment, Caregiving, and Altruism: Boosting Attachment Security Increases Compassion and Helping. *Journal of Personality and Social Psychology*, 89(5), 817-839.
- Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does Perceived Organizational Support Mediate the Relationship Between Procedural Justice and Organizational Citizenship Behavior? *Academy of Management Journal*, 351-357.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington Books/DC Heath and Com.
- Parke, M. R., Tangirala, S., & Hussain, I. (2020). Creating organizational citizens: How and when supervisor- versus peer-led role interventions change organizational citizenship behavior. *Journal of Applied Psychology*. Advance online publication.
- Penner, L. A., Fritzsche, B. A., Craiger, J. P., & Freifeld, T. R. 1995. Measuring the prosocial personality. *Advances in Personality Assessment*, 10, 147-163.
- Penner., L. A., Dovidio., J. F., Piliavin., J. A., & Schroeder., D. A. (2005). Prosocial Behavior: Multilevel Perspectives. *Annual Review of Psychology*, 56(1), 365-392.
- Piff, P. K., & Robinson, A. R. (2017). Social class and prosocial behavior: Current evidence, caveats, and questions. *Current Opinion in Psychology*, 18, 6-10.
- Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, 99(5), 771-784.
- Piliavin, J. A., & Siegl, E. (2007). Health Benefits of Volunteering in the Wisconsin Longitudinal Study. *Journal of Health and Social Behavior*, 48(4), 450-464.
- Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational Citizenship Behaviors: A Critical Review of the Theoretical and Empirical Literature and Suggestions for Future Research. *Journal of Management*, 26(3), 513-563.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of Applied Psychology*, 87(4), 698-714.
- Richards, D. A., & Schat, A. C. (2011). Attachment at (not to) work: applying attachment theory to explain individual behavior in organizations. *Journal of Applied Psychology*, 96(1), 169-182.

- Rom, E., & Mikulincer, M. (2003). Attachment theory and group processes: The association between attachment style and group-related representations, goals, memories, and functioning. *Journal of Personality and Social Psychology*, 84(6), 1220–1235.
- Rugulies, R., Bültmann, U., Aust, B., & Burr, H. (2006). Psychosocial work environment and incidence of severe depressive symptoms: prospective findings from a 5-year follow-up of the Danish work environment cohort study. *American Journal of Epidemiology*, 163(10), 877-887.
- Sawyer, K. B., Thoroughgood, C. N., Stillwell, E. E., Duffy, M. K., Scott, K. L., & Adair, E. A. (2021). Being present and thankful: A multi-study investigation of mindfulness, gratitude, and employee helping behavior. *Journal of Applied Psychology*.
- Schroeder, D. A., Penner, L., Dovidio, J. F., & Piliavin, J. A. (1995). *The Psychology of Helping and Altruism: Problems and Puzzles*. New York, NY: McGraw-Hill.
- Shaver, P. R., Mikulincer, M., Gross, J. T., Stern, J. A., & Cassidy, J. A. (2016). A lifespan perspective on attachment and care for others: Empathy, altruism, and prosocial behavior. Cassidy, J.; Shaver, PR (ed.), *Handbook of attachment: Theory, research, and clinical applications* (3rd ed.), 878-916.
- Stephens, N. M., Cameron, J. S., & Townsend, S. S. (2014). Lower social class does not (always) mean greater interdependence: Women in poverty have fewer social resources than working-class women. *Journal of Cross-Cultural Psychology*, 45(7), 1061-1073.
- Sherf, E. N., Tangirala, S., & Weber, K. C. (2017). It is not my place! Psychological standing and men's voice and participation in gender-parity initiatives. *Organization Science*, 28(2), 193-210.
- Steele, H., & Steele, M. (Eds.). (2008). *Clinical applications of the adult attachment interview*. Guilford Press.
- Stringhini, S., Berkman, L., Dugravot, A., Ferrie, J. E., Marmot, M., Kivimaki, M., & Singh-Manoux, A. (2012). Socioeconomic status, structural and functional measures of social support, and mortality: The British Whitehall II Cohort Study, 1985–2009. *American Journal of Epidemiology*, 175(12), 1275-1283.
- Tang, P. M., Ilies, R., Aw, S. S. Y., Lin, K. J., Lee, R., and Trombini, C. (2021). How and when service beneficiaries' gratitude enriches employees' daily lives. *Journal of Applied Psychology*, 107(6), 987-1008.
- Taylor, S. E. (2011). *Social support: A review*. Oxford University Press.
- Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., et al. (2004). Culture and Social Support: Who Seeks It and Why? *Journal of Personality and Social Psychology*, 87(3), 354–362.
- Uchida, Y., Kitayama, S., Mesquita, B., Reyes, J. A. S., & Morling, B. (2008). Is Perceived Emotional Support Beneficial? Well-Being and Health in Independent and Interdependent Cultures. *Personality and Social Psychology Bulletin*, 34(6), 741-754.
- Van Lange, P. A., Vugt, M. V., Meertens, R. M., & Ruiter, R. A. (1998). A Social Dilemma Analysis of Commuting Preferences: The Roles of Social Value Orientation and Trust. *Journal of Applied Social Psychology*, 28(9), 796-820.
- Yip, J., Ehrhardt, K., Black, H., & Walker, D. O. (2018). Attachment theory at work: A review and directions for future research. *Journal of Organizational Behavior*, 39(2), 185–198.

## Tables

**Table 1**

*Summary of Variables and Measures*

Study	Predictor	Processes	Outcomes
Study 1	Workplace Social Support (Cortland and Kinias, 2019): <ul style="list-style-type: none"> <li>- Mentors/sponsors formally assigned</li> <li>- Mentors/sponsors not formally assigned</li> <li>- Supportive supervisors</li> <li>- Strong peer support</li> <li>- Seeing people like you succeed in senior management positions (e.g., role models)</li> </ul>		Proximal Prosocial Behaviors: <ul style="list-style-type: none"> <li>- Diversity and wellbeing enhancing practices</li> </ul> Distant Prosocial Behaviors: <ul style="list-style-type: none"> <li>- Economic development and societal impact practices</li> <li>- Non-profit board membership</li> </ul>
Study 2	Emotional Support: <ul style="list-style-type: none"> <li>- Inside the family</li> <li>- Outside the family</li> </ul>		Prosocial Organization Involvement: <ul style="list-style-type: none"> <li>- Community centers</li> <li>- Neighborhood improvement organizations</li> <li>- Charity organizations</li> </ul>
Study 3	Social Support vs. Control Manipulation <ul style="list-style-type: none"> <li>- Social support prompt includes opportunity to write about receiving instrumental, emotional, informational, and companionate support from a friend, family member, co-worker, or other social contact</li> <li>- Control prompt includes opportunity to write about what participants did last Tuesday</li> </ul>	Felt Security (Luke et al., 2012) "Thinking about the situation you recalled, please rate the extent to which you feel: (e.g., secure, safe, looked after)"  Prosocial Motivation (Grant, 2008) "Why are you motivated to do your work? Because: (e.g., I care about benefiting others through my work, I want to help others through my work)"	Proximal Prosocial Behaviors: <ul style="list-style-type: none"> <li>- Diversity and wellbeing enhancing practices</li> </ul> Distant Prosocial Behaviors: <ul style="list-style-type: none"> <li>- Economic development and societal impact practices</li> </ul>

**Table 2***Study 1 Descriptive Statistics and Bivariate Correlations*

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1	Social support	3.520	1.280											
2	Diversity and wellbeing enhancing practices	1.068	0.748	.101**										
3	Economic development and societal impact practices	1.018	0.621	.067**	.552**									
4	Non-profit board membership	0.212	0.409	-.004	.151**	.241**								
5	Male	0.770	0.418	.089**	.007	.081**	.000							
6	Age	5.110	2.451	-.182**	.222**	.242**	.232**	.198**						
7	Job status	4.690	1.868	.006	.318**	.303**	.191**	.168**	.262**					
8	Company size	8.220	3.811	.093**	-.098**	-.126**	-.115**	-.029*	-.156**	-.285**				
9	Job scope	3.070	0.941	.018	.071**	.060**	.037**	.040**	.070**	.097**	-.007			
10	Degree program	0.700	0.459	.012	-.220**	-.176**	-.036**	-.059**	-.147**	-.104**	-.053**	.045**		
11	Life satisfaction	3.960	1.122	.050**	.050**	.038**	.042**	-.009	.095**	.073**	-.002	.033*	.017	
12	Work satisfaction	3.454	0.875	.208**	.207**	.188**	.109**	.060**	.099**	.224**	-.054**	.056**	-.033**	.335**

*Note.* Covariates were Male (coded 0=female, 1=male), Age (1=25-29, 2=30-34, 3=35-39, 4=40-44, 5=45-49, 6=50-54, 7=55-59, 8=60-64, 9=65-69, 10=70-74, 11= 75 or older), Job Status (coded 1=individual contributor, 2=team leader or project manager, 3=mid-level manager, 4=report to general management, 5=other general management responsibilities, 6= other c-suite or similar, 7= CEO, President, or similar), Company Size (number of employees: 1=fewer than 5, 2=5-9, 3=10-19, 4= 20-49, 5=50-99, 6=100-249, 7=250-499, 8=500-999, 9=1000-2499, 10=2500-4999, 11=5000-9999, 12=10000 or more), Job Scope (coded 1=local, 2=national, 3=regional, 4=global), Degree Program (coded 0=executive, 1=MBA).

+  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 3***Study 1 Regression Analyses Results*

Outcomes:	Diversity and Wellbeing Enhancing Practices (1)	Economic Development and Societal Impact Practices (2)	Non-Profit Boards (3)
Social Support	.070*** (.008)	.038*** (.007)	.061* (.029)
Male	-.150*** (.025)	-.002 (.021)	-.484*** (.088)
Age	.044*** (.005)	.038*** (.004)	.242*** (.016)
Job Status	.100*** (.007)	.070*** (.005)	.177*** (.022)
Company Size	-.001 (.003)	-.007** (.002)	-.037*** (.009)
Job Scope	.033** (.011)	.020* (.009)	.035 (.038)
Degree Program	-.272*** (.022)	-.176*** (.019)	-.035 (.076)
Life Satisfaction	-.009 (.010)	-.011 (.008)	-.029 (.033)
Work Satisfaction	.106*** (.013)	.083*** (.011)	.185 (.046)
Observations	4488	4537	5279
R <sup>2</sup>	.18***	.15***	.09***

*Note.* Models 1 and 2 utilize ordinary least squares regression and Model 3 binary logistic regression, in which the forms of Prosocial Behavior (1-3) are regressed on Social Support. The reported coefficients are unstandardized and standard errors are in parentheses. Covariates were Male (0=female, 1=male), Age (1=25-29, 2=30-34, 3=35-39, 4=40-44, 5=45-49, 6=50-54, 7=55-59, 8=60-64, 9=65-69, 10=70-74, 11= 75 or older), Job Status (coded 1=individual contributor, 2=team leader or project manager, 3=mid-level manager, 4=report to general management, 5=other general management responsibilities, 6=other c-suite or similar, 7=CEO, President, or similar), Company Size (number of employees: 1=fewer than 5, 2=5-9, 3=10-19, 4= 20-49, 5=50-99, 6=100-249, 7=250-499, 8=500-999, 9=1000-2499, 10=2500-4999, 11=5000-9999, 12=10000 or more), Job Scope (coded 1=local, 2=national, 3=regional, 4=global), Degree Program (coded 0=executive degree, 1=MBA).

+  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 4***Study 2 Descriptive Statistics and Correlations*

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Social Support 1992	2.307	0.937										
2 Social Support 2004	1.925	0.838	.396***									
3 Social Support 2011	1.704	0.822	.358***	.431**								
4 Prosocial Organization Involvement 2004	0.447	0.616	.157***	.170***	.162***							
5 Prosocial Organization Involvement 2011	0.429	0.607	.131***	.145***	.161***	.494***						
6 Male	0.480	0.500	-.206***	-.234**	-.264***	-.077***	-.061***					
7 Education	2.786	2.359	.120***	.040**	.099***	.159***	.182***	.157***				
8 Marital Status 2004	0.781	0.414	-.041**	-.071***	-.072***	-.002	-.011	.150***	.012			
9 Household Income (log) 2004	10.732	0.960	.038**	-.011	.036**	.071***	.101***	.216***	.312***	.224***		
10 Marital Status 2011	0.722	0.448	-.027 <sup>+</sup>	-.076***	-.010***	-.005	-.012	.207***	.039**	.791***	.222***	
11 Household Income (log) 2011	10.438	1.054	.038*	-.014	.005	.020	.054***	.181***	.256***	.170***	.392***	.202***

*Note.* Covariates were Male (coded 0=female, 1=male), Education (coded 1=less than one year of college, 2=one year of college, 3=two years of college, 4=three or more years of college, 5=bachelor degree, 6=master degree, 7=two-year master degree, 8=professional degree, 9=PhD, 10=PostDoc), Marital Status in 2004 and in 2011 (coded 0=not currently married, 1= currently married), Household Income in USD (log transformed) in 2004 and 2011, and Prosocial Organization Involvement in 1992 and 2004.

<sup>+</sup>  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 5***Study 2 Regression Analyses Results*

	Prosocial Organization Involvement 2004 (1)	Prosocial Organization Involvement 2011 (2)
Social Support 1992	.051*** (.011)	.022* (.011)
Social Support 2004	.095*** (.012)	.050*** (.013)
Social Support 2011		.065*** (.013)
Male	-.061** (.020)	-.038+ (.021)
Education	.035*** (.004)	.042*** (.004)
Marital Status 2004	-.130 (.110)	
Household Income (log) 2004	.031** (.011)	
Marital Status 2011		-.217 (.236)
Household Income (log) 2011		.010* (.010)
Observations	4225	3646
R <sup>2</sup>	.06***	.06***

*Note.* Coefficients are unstandardized and standard errors are in parentheses. Ordinary Least Squares models investigating Prosocial Organization Involvement in 2004 and in 2011 regressed on Social Support in 1992, 2004, and 2011 are reported. Covariates were Male (coded 0=female, 1=male), Education (coded 1=less than one year of college, 2=one year of college, 3=two years of college, 4=three or more years of college, 5=bachelor degree, 6=master degree, 7=two-year master degree, 8=professional degree, 9=PhD, 10=PostDoc), Marital Status in 2004 and in 2011 (coded 0=not currently married, 1= currently married), Household Income in USD (log transformed) in 2004 and 2011.

+  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 6***Study 3 Descriptive Statistics and Bivariate Correlations*

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1 Social Support	0.490	0.501												
2 Felt Security	5.230	1.266	.245**											
3 Prosocial Motivation	6.018	0.988	.068	.420**										
4 Diversity and Wellbeing Enhancing Practices	1.956	0.814	.023	.294**	.534**									
5 Economic Development and Societal Impact Practices	1.917	0.737	-.006	.285**	.516**	.706**								
6 Male	0.510	0.501	-.010	-.061	-.096	-.081	-.032							
7 Age	45.340	10.133	.060	.024	-.028	-.058	-.022	-.099*						
8 Education	4.570	1.281	.039	.128*	.009	.098	.054	.031	-.041					
9 White	0.860	0.347	-.030	-.086	.082	.044	.004	-.104*	.078	-.045				
10 Job Status	4.310	11.641	.005	.094	.029	.018	.117*	.179**	-.097	.126*	.018			
<i>Alternative mechanisms:</i>														
11 Gratitude	5.749	1.494	.326**	.744**	.345**	.194**	.194**	-.076	.068	.016	-.063	.041		
12 Positive Affect	4.615	1.517	.041	.766**	.391**	.283**	.276**	-.007	.095	.079	-.109*	.135**	.678**	
13 Negative Affect	2.469	1.520	.096	-.348**	-.081	-.019	.018	.020	-.077	-.105*	-.008	-.045	-.312**	-.415**

*Note.* Covariates were Male (coded 0=female, 1=male), Age, Education (coded 1=less than high school degree, 2=high school degree or equivalent, 3=some college but no degree, 4=associate degree, 5=bachelor degree, 6=graduate degree), White (coded 0=African, Asian, Latinx, Native American, and mixed ethnic descent; 1=White), and Job Status (number of subordinates).

+  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$

**Table 7***Study 3 Direct Effects on Felt Security, Prosocial Motivation and Prosocial Behaviors*

	Felt Security	Prosocial Motivation	Diversity and Wellbeing Enhancing Practices	Economic Development and Societal Impact Practices
Social Support	.060*** (.123)	-.064 (.093)	-.051 (.072)	-.090 (.066)
Felt Security		.334*** (.037)	.054 (.032)	.047 (.029)
Prosocial Motivation			.408*** (.039)	.362*** (.036)
<i>Covariates:</i>				
Male	-.219 <sup>+</sup> (.126)	-.120 (.093)	-.051 (.072)	-.002 (.065)
Age	.003 (.006)	-.005 (.005)	-.004 (.004)	.000 (.003)
Education	.105* (.048)	-.032 (.036)	.054* (.028)	.016 (.025)
White	-.315 <sup>+</sup> (.178)	.326** (.132)	.033 (.102)	-.066 (.094)
Job Status	.011* (.005)	-.000 (.004)	-.001 (.003)	.006* (.003)
R <sup>2</sup>	.094***	.199***	.302***	.286***

*Note.* Coefficients are unstandardized, and standard errors are in parentheses. Covariates were Male (coded 0=female, 1=male), Age, Education (coded 1=less than high school degree, 2=high school degree or equivalent, 3=some college but no degree, 4=associate degree, 5=bachelor degree, 6= graduate degree), White (coded 0=African, Asian, Latinx, Native American, and mixed ethnic descent; 1=White) and Job Status (number of subordinates).

<sup>+</sup>  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$