**Supplementary Information**

**for**

**TO GIVE A FISH OR TO TEACH HOW TO FISH:**

**EXAMINING LEADERS’ AUTONOMY AND DEPENDENCY HELPING BEHAVIORS**

Additional information and study materials available at: <https://osf.io/s5c7d/>

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# STUDY 1A CFA

We conducted a confirmatory factor analysis to verify that there was a distinction between the two leader orientations – dominance and prestige. The resulting CFA demonstrated an acceptable fit for the two-factor model, *χ2* (118) = 300.34, *p* < .001, *RMSEA* = .088, *CFI* = .92, *TLI* = .91, *SRMR* = .064. We compared the two-factor model to a one-factor model to see whether the dominance and prestige items are better represented as a single construct. The resulting model displayed a poor fit, *χ2*(119) = 1028.55, *p* < .001, *RMSEA* = .195, *CFI* = .615, *TLI* = .560, *SRMR* = .221, and was significantly inferior to the two-factor model, *χ2* (1) = 728.21, *p* < .001. Overall, the CFA results supported the distinctiveness of our core measures. See Table S4 for factor loadings.

# STUDY 2 SCALE DEVELOPMENT

In line with Aquino and Reed’s (2002) sample sizes ranging from 53 participants to 138 participants, we recruited between 50 and 200 participants per phase.

## **Phase 1: Behavior Identification**

To measure dependency and autonomy help, we first wanted to identify a set of behaviors that could reliably represent these constructs in the workplace. Accordingly, we surveyed working professionals in CloudResearch panels to generate examples of workplace behaviors based on definitions of dependency and autonomy help.

**Method**

***Participants.*** 50 MTurk workers were recruited from CloudResearch panels to complete the study online (race and years of job experience information not collected due to experimenter error). We recruited mid-level US managers belonging to various professions such as administrative workers, computer scientists, engineers, firefighters, nurses, physicians, police officers, and sales, with at least one year of work experience. We recruited people who were employed full time in a supervisory position or higher where people directly report to them. No participants were excluded from our analyses.

***Procedure and materials.*** Participants were asked to generate five examples of behaviors that reflect what we told them was “help-giving type A,” which we told them consists of “teaching the person how to fix a problem. This entails giving the tools necessary for the person to learn to solve the problem by themselves. This equips the help receiver with the tools to solve similar problems in the future.” Then, they were also asked to generate five examples of behaviors that reflect what we told them was “help-giving type B,” which we told them consists of “fixing the problem on behalf of the person. This entails providing or handing over a full solution of the problem to the person. This meets the help receiver’s immediate needs to fix the problem but might not contribute to their future independence in solving this problem.” The order of these questions was counterbalanced.

**Results and Discussion**

This procedure resulted in a total of 500 behavioral observations, 250 for “help-giving type A” and 250 for “help-giving type B”. The following statements were some behaviors that the participants wrote. For example, participants wrote that dependency help in the workplace looks like “Answering a client on behalf of an employee” or “Creating Macros [in Excel] to accomplish a task but not explaining.” On the other hand, autonomy help in the workplace looks like “Letting somebody sit with me as I set up advertising campaigns” or “Letting the person control the mouse while you explain where to point and what to do.”

A coder blind to the hypothesis identified recurring themes in the 500 observations. This procedure reduced the list to around 16 distinct behaviors for dependency helping and 16 behaviors for autonomy helping. Some examples of preliminary themes that the coder identified were “Being uninterested in teaching others” or “Solving a problem on behalf of someone” for dependency helping, and “Guiding an employee through a problem-solving process” or “Giving constructive feedback” for autonomy helping. Using this deductive item-generation approach (Hinkin, 1998), we generated 12 dependency-helping items and 12 autonomy-helping items. The response scale ranged from 1 (*Strongly disagree*) to 7 (*Strongly agree*). An example item from this scale for dependency help was, “I directly take over employees’ problems,” and for autonomy help was, “I explain my thought process on how to complete tasks.” We next conducted an exploratory factor analysis to examine if these 24 items mapped onto two factors (dependency and autonomy helping).

## **Phase 2: Instrument Development (EFA)**

We next investigated the psychometric properties of these items using exploratory factor analysis (EFA) by examining their underlying factor structure.

**Method**

***Participants***.The sample consisted of 101 working professionals recruited from CloudResearch panels. No participants were excluded for having non-US IP addresses. The final sample consisted of 101 participants (56 men, 45 women; *MAge* = 43.49, *SD* = 11.68). Of those reporting demographic data, 83 were White/Caucasian-American, 10 were Black/African American, 5 were Hispanic/Latinx/Hispanic-American, 1 was Asian/Asian-American, and 2 were Other: Mixed background. They had an average of 16.07 years of work experience (*SD* = 5.55). 92 participants were full-time workers, 2 were part-time workers, 6 were self-employed, and 1 was unemployed.

***Procedure and materials***. The 24 items (12 dependency-helping items and 12 autonomy-helping items) assessed participants’ tendencies to provide dependency and autonomy help on a 7-point Likert scale (1 = *Strongly disagree*; 7 = *Strongly agree*). The stem, “When it comes to helping my subordinates, I…” was used. The order in which the items were presented was randomized.

**Results and Discussion**

The responses on these 24 scale items were subjected to a principal component analysis with varimax rotation. The eigenvalues, scree plot, and factor loadings demonstrated that five factors underlay these items. Following the methodology used by Aquino and Reed (2002), we used the following two criteria to determine whether an item reliably loaded onto its underlying factor: (1) The item had a factor loading of .65 or better on one factor, and (2) the item had to have a loading of less than .40 on alternative factors. Of the 24 items, a total of 12 items met the criteria and mapped onto two factors (see Table 4 in the manuscript for items and factor loadings). The first factor consisted of six items capturing behaviors associated with dependency helping. The second factor consisted of six items tapping into autonomy helping. These items showed good internal reliabilities of .94 and .86, respectively. Next, this two-factor model was cross-validated using a new sample.

## **Phase 3: Instrument Development (CFA)**

We cross-validated the resulting factor structure in a second sample using confirmatory factor analysis (CFA).

**Method**

***Participants.*** The sample for this CFA consisted of a new batch of US working professionals recruited via CloudResearch panels. The final sample consisted of 100 participants (64 men, 36 women; *MAge* = 41.03, *SD* = 9.89).Of those reporting demographic data, 77 were White/Caucasian-American, 6 were Black/African American, 4 were Hispanic/Latinx/Hispanic-American, 5 were Asian/Asian-American, and 8 were Other: Mixed background. They had an average of 15.99 years of work experience (*SD* = 5.29). 89 participants were full-time workers, 4 were part-time workers, 6 were self-employed, and 1 was unemployed.

***Procedure and Materials.*** Participants responded to 12 items (six dependency-helping items and six autonomy-helping items), indicating their tendency to engage in such behaviors on a 7-point Likert scale, ranging from 1 (*Strongly Disagree*) to 7 (*Strongly agree*).

**Results and Discussion**

All 12 items met the criteria we previously used for EFA (Aquino & Reed, 2002). This resulted in a final scale comprising six dependency-helping items and six autonomy-helping items (see Table 4 in the manuscript for items and factor loadings). These scales showed good internal reliabilities (i.e., dependency helping scale: α = .94; autonomy helping scale: α = .95).

The resulting CFA demonstrated a good fit for the two-factor model, *χ2*(50) = 70.06, *p* = .032, *RMSEA* = .06, *CFI* = .98, *TLI* = .98, *SRMR* = .07. We compared the two-factor model to a one-factor model to see whether the dependency and autonomy helping items were better represented as a single general helping construct. The resulting model displayed a poor fit, *χ2*(51) = 456.78, *p* < .001, *RMSEA* = .28, *CFI* = .64, *TLI* = .53, *SRMR* = .29, and was significantly inferior to the two-factor model, *χ2*(1) = 386.72, *p* < .001. The two scales were not correlated (*r* = -.06, *p* = .548) and showed good internal consistencies (αDep\_Help= .94; αAut\_Help= .95). The CFA results corroborated our findings from the EFA and supported a two-factor structure. Next, we examined the convergent and discriminant validity of the scale by comparing it to similar constructs.

## **Phase 4: Establishing Construct Validity**

We next aimed to establish construct validity. Construct validity entails demonstrating both convergent validity and discriminant validity. A scale demonstrates convergent validity if it is related to other similar constructs (Campbell & Fiske, 1959). Additionally, a scale demonstrates discriminant validity if it is unrelated to conceptually dissimilar constructs. Although the following list is not an exhaustive list of all measures, we selected measures that were conceptually similar but not identical to our two constructs. Accordingly, we included a list of measures that fall under the broader umbrella of interpersonal helping, organizational citizenship behaviors (OCBs), or leadership behaviors. Examining the patterns of relationships with these measures allowed us to assess the construct validity of our workplace dependency and autonomy helping scale.

**Method**

***Participants.*** The sample consisted of 200 US workers from Prolific Academic (101 men, 99 women; *MAge* = 40.86, *SD* = 12.72).Of those reporting demographic data, 161 were White/Caucasian-American, 10 were Black/African American, 5 were Hispanic/Latinx/Hispanic-American, 12 were Asian/Asian-American, and 12 were Other: Mixed background. They had an average of 15.41 years of work experience (*SD* = 6.23). 188 participants were full-time workers, 1 was a part-time worker, 10 were self-employed, and 1 was a student.

***Procedure and materials.*** Apart from responding to the dependency and autonomy helping scale items (presented in random order), participants also reported on measures of general helping, perceived supervisor support, interpersonal deviance, in-role behavior, civic virtue, coaching, individualized consideration (supportive leadership dimension), servant leadership, directive leadership, and empowering leadership (also presented in random order). All items were measured on a 1 (*Strongly disagree*) to 7 (*Strongly agree*) scale unless noted otherwise, and all items were modified to refer to the participant enacting the following behaviors rather than, for example, an employee’s perception of how much a leader enacts these behaviors.

***Dependency and autonomy help.*** We used the same items from Phase 3 to measure dependency helping (α = .95) and autonomy helping (α = .90).

***General helping.*** We measured generalized helping behaviors among employees with the seven-item helping scale (α = .86; e.g., “I volunteer to do things for my work group”; Van Dyne & Lepine, 1998; adapted from Organ & Konovsky, 1989 and Smith, Organ, & Near, 1983).

***Perceived supervisor support.*** To assess participants’ perceptions that they valued their employees’ contribution and cared about their well-being, we adapted the shortened version of the nine-item perceived organizational support scale (Eisenberger et al., 1990). Adapting the perceived organizational support scale by replacing the word *organization* with the term *supervisor* is a common way to measure employees’ perceptions of how much their supervisor values them (Hutchison, 1997; Rhoades et al., 2001). Since we measured supervisors’ perceptions of how much they deployed such behaviors, we replaced the word *organization* with the term *I* (α = .84; e.g., “I really care about the employee’s well-being”).

***Interpersonal deviance.*** Interpersonal deviance is the extent to which employees engage in deviant behaviors that harm other individuals within the organization. We used the seven-item interpersonal deviance scale (Bennett & Robinson, 2000) to measure this construct (α = .86; e.g., “Please indicate the extent to which you engaged in each of the following behaviors in the last year: Acted rudely toward an employee at work”; 1 = *Never*, 7 = *Daily*).

***In-role behavior.*** We used a four-item scale (Williams & Anderson, 1991) to capture people’s tendencies to perform their duties as per their role expectations (α = .94; e.g., “I fulfill the responsibilities specified in my job description”).

***Civic virtue.*** We used the four-item civic virtue–information scale (Graham & Van Dyne, 2006) to measure employees’ responsible participation in affiliative-promotive behaviors (α = .84). These cooperative behaviors involve gathering information and keeping oneself informed to help the workgroup and bring about positive organizational change (e.g., “I attend meetings that are not mandatory, but that are considered important”).

***Coaching.*** We used a three-item coaching scale (Ragins & Cotton, 1999) to measure how much participants offer their employees tailored learning and development opportunities (α = .89; e.g., “I suggest specific strategies to employees for achieving greater career aspirations”).

***Individualized consideration – supportive leadership.*** Individualized consideration involves leaders caring, nurturing, and supporting employees’ personal development (Bass & Avolio, 1994). Using a three-item scale that captures the supportive leadership dimension of individualized consideration, which primarily involves providing emotional, instrumental, and informational support to employees (Rafferty & Griffin, 2006), we measured individualized consideration and supportive leadership (α = .94; e.g., “I consider my employees’ personal feelings when implementing actions that will affect them”).

***Servant leadership.*** Servant leadership refers to when the leader’s priority is to serve. This construct consists of a variety of subfactors (Barbuto & Wheeler, 2006). The most relevant subfactor to dependency and autonomy helping is altruistic calling. Altruistic calling refers to a leader’s desire to make a positive difference in employees’ lives. We used this four-item altruistic calling subscale of the Servant Leadership Questionnaire (Barbuto & Wheeler, 2006) to measure this construct (α = .90; e.g., “I do everything I can to serve my employees”).

***Directive leadership.*** Directive leaders establish structure for their employees by giving specific guidance on what needs to be done and how it should be done (House, 1996). To measure this behavior, we used a four-item scale (α = .48; Li, Liu, & Luo, 2018). A sample item was, “I tell my employees how to accomplish tasks without giving reasons.”

***Empowering leadership.*** Empowering leadership refers to behaviors that involve delegating responsibilities, authority, and decision-making power to employees (Conger & Kanungo, 1988). In essence, it involves sharing power with subordinates (Vecchio et al., 2010). To measure empowering leadership, we used the 18-item Empowering Leadership Scale (α = .92; Amundsen & Martinsen, 2014). A sample item was, “I encourage employees to take initiative.”

**Results and Discussion**

The dependency and autonomy helping scales showed good internal consistency reliabilities (αDep\_Help= .95; αAut\_Help= .90, see Table 4 in the manuscript for factor loading scores).

We evaluated the distinctiveness of the 12 separate scales through a series of confirmatory factor analyses. The factor model with 12 distinct constructs—dependency help, autonomy help, general helping, perceived supervisor support, interpersonal deviance, in-role behavior, civic virtue, coaching, individualized consideration (supportive leadership dimension), servant leadership, directive leadership, and empowering leadership— warrants caution and further examination, as model fit indices indicated mixed support for the 12-factor model, *χ2*(2556) = 4323.06, *p* < .001, *RMSEA* = .063, *CFI* = .83, *TLI* = .81, *SRMR* = .079. However, comparison with alternative models indicated that the 12-factor model provided a superior fit (*p* < .001; Table S6).

***Convergent and Discriminant Validity.*** The means, standard deviations, and reliability estimates (i.e., correlation values) for the variables are displayed in Table S7. As expected, dependency helping positively correlated with interpersonal deviance (*r* = .19, *p* = .006), servant leadership (*r* = .17, *p* = .017), and directive leadership (*r* = .24, *p* < .001), and negatively correlated with perceived supervisor support (*r* = -.19, *p* = .006) and in-role behavior (*r* = -.17, *p* = .014). Additionally, autonomy helping positively correlated with general helping (*r* = .55, *p* < .001), perceived supervisor support (*r* = .53, *p* < .001), in-role behavior (*r* = .59, *p* < .001), civic virtue (*r* = .30, *p* < .001), coaching (*r* = .53, *p* < .001), supportive leadership (*r* = .45, *p* < .001), servant leadership (*r* = .28, *p* < .001), and empowering leadership (*r* = .67, *p* < .001), and negatively correlated with interpersonal deviance (*r* = -.20, *p* = .005).

All correlations were significant, with low to modest effect sizes in the expected directions, indicating that our construct demonstrated both convergent and discriminant validity. However, some correlations between autonomy helping and existing leadership measures were notably high, above .50 (i.e., *r* = .67 with empowering leadership, *r* = .59 with in-role behavior, *r* = .55 with general helping, *r* = .53 with perceived supervisor support, and *r* = .53 with coaching; all *p* < .001). Given these strong correlations, we recommend further research to explore the unique conceptual space and nomological network of autonomy helping behaviors relative to other leadership constructs.

We next examined the predictive validity of our two constructs—dependency and autonomy helping.

## **Phase 5: Establishing Predictive Validity**

We examined the predictive validity of the scale by correlating participants’ responses to these scale items with the type of help they chose to offer in the same six hypothetical help-seeking scenarios used in Study 1a, and the number of times they gave dependency or autonomy help to their employees in the past two weeks. We predicted that their ratings on the dependency-helping scale would predict a greater tendency to offer dependency help. In contrast, their ratings on the autonomy helping scale would predict a greater tendency to provide autonomy help.

**Method**

***Participants.*** 200 participants (102 men, 98 women; *MAge* = 38.25, *SD* = 10.25) were recruited from Prolific Academic. All participants had U.S. IP addresses. Reporting of demographic information was optional. Of those reporting demographic data, 146 were White/Caucasian-American, 15 were Black/African American, 9 were Hispanic/Latinx/Hispanic-American, 16 were Asian/Asian-American, and 14 were Other: Mixed background. They had an average of 17.76 years of work experience (*SD* = 10.16). 194 participants were full-time workers, one was a part-time worker, and five were self-employed.

***Procedure and materials.*** After providing informed consent, participants self-reported their tendencies to engage in dependency and autonomy helping in the workplace using our scale. Afterward, participants indicated how likely they were to provide no help, dependency help, or autonomy help in response to hypothetical help-seeking requests from a subordinate. Then, they reported on how many times they gave their employees dependency or autonomy help in the past two weeks.

***Dependency and autonomy help.*** We measured this construct using our newly developed scale. Six items measured dependency helping (α = .93) and six captured autonomy helping (α = .91).

***Type of help offered.*** We used the same measure as in Study 1a. Participants read six hypothetical scenarios where a subordinate asked for help, and they chose how they would like to help (i.e., ignore the request, do the task for the subordinate, or teach and explain how to do it so that the subordinate could do it by himself/herself in the future). Participants were allowed to choose multiple options.

***Count of help offered.*** Participants were asked to think back to the last two weeks and “list the number of times you fixed a problem on behalf of your employee. This entails providing or handing over a full solution of the problem to your employee. This meets your employee’s immediate needs to fix the problem, but might not contribute to their future independence in solving this problem” (dependency helping) and “list the number of times you taught an employee how to fix a problem at work. This entails giving your employee the tools necessary for them to learn to solve the problem by themselves. This equips your employee with the tools to solve similar problems in the future” (autonomy helping). Participants were allowed to type in a number for each question freely.

**Results**

***Type of help offered.*** Similar to Study 1a, this variable was operationalized as a ratio: The number of times each help option was chosen was divided by 18 since participants could choose any or all of three options for the six scenarios.[[1]](#footnote-1) A fractional logit analysis, controlling for gender, age, income, and job experience, revealed a significant positive effect of self-reported dependency helping on participants’ tendencies to choose dependency help, *b* = .25, *SE* = .08, *z* = 3.29, *p* = .001, *95% CI* [.10, .40] (Table S8, Model 6). In contrast, we found dependency help to negatively predict the proportion of times they offered autonomy help, *b* = -.03, *SE* = .01, *z* = -2.06, *p* = .039, *95% CI* [-.06, -.001] (Table S9, Model 6).

Ratings on the autonomy help scale positively predicted the proportion of times they offered autonomy help, *b* = .15, *SE* = .05, *z* = 3.14, *p* = .002, *95% CI* [.06, .25] (Table S9, Model 6). However, autonomy helping did not predict a tendency to choose less dependency help, *b* = -.14, *SE* = .11, *z* = -1.31, *p* = .190, *95% CI* [-.35, .07] (Table S8, Model 6).[[2]](#footnote-2)

Although we had no a priori hypothesis regarding provision of no help, results revealed that self-reported dependency help did not predict offering no help, *b =* -.22*, SE* = .27, *z* = -.81, *p* = .416, *95% CI* [-.74, .31] (Table S10, Model 6), while self-reported autonomy helping negatively predicted offering no help, *b =* -1.42*, SE* = .38, *z* = -3.70, *p* < .001, *95% CI* [-2.17, -.67] (Table S10, Model 6).

***Count of help offered.*** Data were analyzed using Poisson regression, as this dependent variable was a count variable. Results including all covariates revealed a significant positive effect of self-reported dependency helping on the number of times they offered dependency help in the last two weeks, *b =* .23*, SE* = .04, *z* = 5.33, *p* < .001, *95% CI* [.14, .31] (Table S11, Model 7). In contrast, we found dependency help to negatively predict the number of times they offered autonomy help in the last two weeks, *b =* -.07*, SE* = .03, *z* = -2.70, *p* = .007, *95% CI* [-.12, -.02] (Table S12, Model 7).

Ratings on the autonomy help scale positively predicted the number of times they offered autonomy help in the last two weeks, *b =* .16*, SE* = .05, *z* = 2.98, *p* = .003, *95% CI* [.06, .27] (Table S12, Model 7). However, autonomy helping did not predict the number of times they offered dependency help in the last two weeks, *b =* -.13*, SE* = .08, *z* = -1.57, *p* = .117, *95% CI* [-.29, .03] (Table S11, Model 7).[[3]](#footnote-3)

**Results and Discussion**

When self-reported dependency helping was included in the model, self-reported autonomy helping did not significantly predict dependency-helping behavior, either in terms of proportion or count. This indicates that self-reported dependency helping (versus self-reported autonomy helping) is a stronger predictor of dependency helping behavior.

Overall, these results offered evidence of predictive validity by demonstrating significant relationships between our newly developed dependency and autonomy helping workplace scale and the type of help participants were willing to offer in workplace scenarios and their recalled help in count format.

## **Phase 6a: Establishing Incremental Validity**

We next examined the incremental validity of our scale. We aimed to test if our scale predicted a critical outcome variable of giving help, absenteeism (Podsakoff et al., 2009), above and beyond other established scales that tap into autonomy and dependency helping (Komissarouk et al., 2017; Maki et al., 2017). Research has shown that performing OCBs is negatively related to absenteeism (Podsakoff et al., 2009). Therefore, we hypothesized that our scale would add more nuance when predicting absenteeism, over and above existing scales. Unlike the existing scales that measure preferences in autonomy or dependency help-seeking style (Komissarouk et al., 2017) or the belief that offering one type of help or another is good for the betterment of society (Maki et al., 2017), our scale explicitly measures contrasting types of helping behaviors at work. We predicted that dependency helping would negatively predict absenteeism, as giving dependency help limits efficient delegation, making the leader less able to be absent. In contrast, we expected autonomy helping to positively predict absenteeism, as it enables delegation, allowing the leader to be absent.

**Method**

***Participants.*** 200 participants (103 men, 97 women; *MAge* = 41.94, *SD* = 12.19) were recruited from CloudResearch. All participants had US IP addresses. Of those reporting demographic data, 153 were White/Caucasian-American, 14 were Black/African American, 6 were Hispanic/Latinx/Hispanic-American, 15 were Asian/Asian-American, and 12 were Other: Mixed background. They had an average of 20.94 years of work experience (*SD* = 11.94). 193 participants were full-time workers, and 7 were self-employed.

***Procedure and materials.*** After providing informed consent, participants self-reported their tendency to engage in dependency and autonomy helping in the workplace using (1) our scale, (2) the helping orientations inventory (Maki et al., 2017), and (3) a modified measure of autonomous and dependent help-seeking styles to reflect help-giving styles (Komissarouk et al., 2017). The order in which these scales were presented was randomized. Afterwards, participants reported on their absenteeism (Johns, 1994).

***Dependency and autonomy help.*** We measured this construct using our newly developed scale. Six items measured dependency helping (α = .95) and six items captured autonomy helping (α = .90).

***Helping orientations inventory (HOI).*** Participants responded to an established 8-item measure of dependency orientation (e.g., “In general, solving other people’s problems for them is good for society because it helps meet immediate needs”; α = .87) and an 8-item measure of autonomy orientation (e.g., “Teaching people to take care of themselves is good for society because it makes them independent”; α = .91) on a scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*).

***Modified dependent and autonomous help-giving style scale.*** Participants also responded to a modified 5-item measure of dependency orientation (e.g., “I often help my subordinate resolve a problem, even if they can deal with it on their own”; α = .89) and a modified 4-item measure of autonomy orientation (e.g., “When my subordinate encounters a problem, I offer similar experiences of having the problem and how I solved it to help them learn from my experience”; α = .88) on a scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). We modified the scale wording to reflect help-giving rather than help-seeking styles.

***Absenteeism.*** We used an established single-item measure to assess absenteeism. Participants answered the question, “In a typical year, how many days do you personally miss work due to absenteeism?” (*1 day or less, 2 days, 3 days, …, 29 days, 30 days or more*).

**Results**

***Absenteeism.*** Data were analyzed using Poisson regression, as this dependent variable was a count variable. As reported in Tables S13 and S14, our dependency and autonomy scale demonstrated significant incremental validity in the prediction of absenteeism. As shown in Table S13, giving more dependency help as measured by our scale negatively predicted individuals’ absenteeism, *β* = -.08, *SE* = .04, *p* = .020, Δ *Deviance* = 5.37. Since dependency helping limits delegation, it is logical that greater dependency helping predicts lower absenteeism, as leaders cannot afford to be absent. Also, as shown in Table S14, giving more autonomy help, as measured by our scale, positively predicted individuals’ absenteeism, *β* = .38, *SE* = .07, *p* < .001, Δ *Deviance* = 30.26. Since autonomy helping facilitates delegation, greater autonomy helping predicts higher absenteeism, as leaders can afford to be absent.

**Results and Discussion**

This study found evidence of the incremental validity of our newly developed dependency and autonomy scales in predicting organizational outcomes above and beyond existing measures.

## **Phase 6b: Establishing Additional Incremental Validity**

We further examined the incremental validity of our scale by conducting an additional study on a broader range of workplace-relevant employee outcomes. We aimed to examine if our dependency and autonomy helping scales predict critical outcomes of employee performance, job mastery, impact, belongingness, and occupational self-efficacy, above and beyond the Maki et al. (2017) scale. These are all critical outcome variables of receiving help from leaders. Indeed, research has shown that receiving help can increase employees’ job performance (Geller & Bamberger, 2012; Kim et al., 2021), mastery, sense of impact, belongingness (Nadler, 2014), and occupational self-efficacy (Eden & Aviram, 1993). Therefore, we hypothesized that our scale would predict these outcome variables over and above existing scales since our scale zeroes in explicitly on measuring contrasting types of helping behaviors at work.

Additionally, unlike in Phase 6a, we chose to focus just on the Maki et al. (2017) scale, which captures individuals’ belief in what type of help-giving is better, rather than the Kommissarouk et al. (2017) scale, which focuses on autonomy and dependency help-seeking style preferences. Maki et al.’s (2017) scale frames both dependency and autonomy as socially beneficial through positively valenced wording (e.g., dependency orientation: “Solving others’ problems is good for society as it meets immediate needs”; autonomy orientation: “Teaching self-reliance is beneficial as it fosters independence”). While both orientations, based on Maki et al.’s (2017) inventory, may positively predict our outcome variables—as positively framed help can enhance performance, mastery, impact, belongingness, and occupational self-efficacy—we propose that our scale offers greater incremental validity by capturing both the costs and benefits of receiving different types of leader help on these outcomes. While autonomy help, as measured by our scale, may positively influence employees’ job performance, mastery, perceived impact, belongingness, and occupational self-efficacy beyond Maki et al.’s (2017) autonomy orientation scale, dependency help, as measured by our scale, may have a negative impact on these employee outcomes since it leads to greater reliance for employees.

**Method**

***Participants.*** 206 participants (105 men, 101 women; *MAge* = 40.71, *SD* = 11.36) were recruited from Prolific. All participants had US IP addresses. Of those reporting demographic data, 147 were White/Caucasian-American, 21 were Black/African American, 9 were Hispanic/Latinx/Hispanic-American, 16 were Asian/Asian-American, and 13 were Other: Mixed background. They had an average of 19.23 years of work experience (*SD* = 11.10). 168 participants were full-time workers, 3 were students, 18 were self-employed, 15 were part-time workers, and two were unemployed.

***Procedure and materials.*** After providing informed consent, participants self-reported their tendency to give dependency and autonomy help in the workplace using (1) our scale and (2) the helping orientations inventory (Maki et al., 2017). The order in which these scales were presented was randomized. Afterward, participants reported employees’ job performance, mastery, impact, belongingness, and occupational efficacy after receiving their help. Once again, the order in which these scales were presented was randomized.

***Dependency and autonomy help.*** We measured this construct using our newly developed scale. Six items measured dependency (α = .95), and six items autonomy helping (α = .88).

***Helping orientations inventory (HOI).*** Participants responded to the same 8-item measure of dependency orientation (α = .87) and 8-item measure of autonomy orientation (α = .94) as in Phase 6a.

***Employee job performance.*** We used an established 5-item measure of job performance (Janssen, 2001). A sample item was, “After receiving help from me, my employees fulfilled all responsibilities required by their job” (α = .83; 1 = *Strongly disagree*; 7 = *Strongly agree*).

***Employee job mastery.*** We used a 3-item scale to measure job mastery. A sample item was, “After receiving help from me, my employees developed a firm grasp of the skills needed for their work tasks” (α = .86; 1 = *Strongly disagree*; 7 = *Strongly agree*).

***Employee perceived impact.*** Participants reported perceptions of their employees’ impact after receiving help using a modified version of an existing scale (Spreitzer, 1995). A sample item from our three-item scale was, “After receiving help from me, my employees felt that they had a significant influence over their work” (α = .86; 1 = *Strongly disagree*; 7 = *Strongly agree*).

***Employee sense of belongingness.*** An existing three-item instrument (Den Hartog et al., 2007) captured participants’ perceptions of their employees’ sense of belongingness (e.g., “After receiving help from me, my employee really felt like they belonged to this job.”; α = .71; 1 = *Strongly disagree*; 7 = *Strongly agree*).

***Employee occupational self-efficacy.*** Participants reported the extent to which they perceived their employees as feeling efficacious at work using an existing six-item scale (Rigotti et al., 2008). A sample item was, “After receiving help from me, my employees felt that whatever comes their way during this task, they can usually handle it” (α = .86; 1 = *Strongly disagree*; 7 = *Strongly agree*).

**Results**

***Employee job performance.*** For dependency helping, in Step 1, a linear regression analysis showed that dependency HOI positively predicted employee performance (β = .22, *SE* = .07, *t*(204) = 3.30, *p* = .001). In Step 2, adding our newly created dependency style improved the model, with both dependency HOI (β = .33, *SE* = .07, *t*(203) = 4.53, *p* < .001) and our dependency helping scale (*β* = -.16, *SE* = .05, *t*(203) = -3.29, *p* = .001) as significant predictors. The nested model comparison confirmed that adding our dependency helping scale significantly enhanced the model (*F*(1, 203) = 10.81, *p* = .001). The change in R2 was .048, indicating a small to medium effect size for the additional variance explained.

For autonomy helping, in Step 1, a linear regression analysis showed that autonomy HOI positively predicted employee performance (β = .43, *SE* = .08, *t*(204) = 5.62, *p* < .001). In Step 2, adding our newly created autonomy style improved the model, with both autonomy HOI (β = .23, *SE* = .09, *t*(203) = 2.53, *p* = .012) and our autonomy helping scale (*β* = .40, *SE* = .11, *t*(203) = 3.74, *p* < .001) as significant predictors. The nested model comparison confirmed that adding our autonomy helping scale significantly enhanced the model (*F*(1, 203) = 14.02, *p* < .001). The change in R2 was .056, indicating a small to medium effect size for the additional variance explained.

***Employee job mastery.*** For dependency helping, in Step 1, a linear regression analysis showed that dependency HOI positively predicted employee job mastery (β = .14, *SE* = .06, *t*(204) = 2.40, *p* = .017). In Step 2, adding our newly created dependency style improved the model, with both dependency HOI (β = .23, *SE* = .07, *t*(203) = 3.44, *p* < .001) and our dependency helping scale (*β* = -.12, *SE* = .04, *t*(203) = -2.74, *p* = .007) as significant predictors. The nested model comparison confirmed that adding our dependency helping scale significantly enhanced the model (*F*(1, 203) = 7.62, *p* = .007). The change in R2 was .035, indicating a small to medium effect size for the additional variance explained.

For autonomy helping, in Step 1, a linear regression analysis showed that autonomy HOI positively predicted employee job mastery (β = .43, *SE* = .07, *t*(204) = 6.36, *p* < .001). In Step 2, adding our newly created autonomy style improved the model, with both autonomy HOI (β = .19, *SE* = .08, *t*(203) = 2.40, *p* = .017) and our autonomy helping scale (*β* = .48, *SE* = .09, *t*(203) = 5.32, *p* < .001) as significant predictors. The nested model comparison confirmed that the addition of our autonomy helping scale significantly enhanced the model (*F*(1, 203) = 28.27, *p* < .001). The change in R2 was .10, indicating a medium effect size for the additional variance explained.

***Employee perceived impact.*** For dependency helping, in Step 1, a linear regression analysis showed that dependency HOI positively predicted employees’ perceived impact (β = .24, *SE* = .06, *t*(204) = 3.69, *p* < .001). In Step 2, adding our newly created dependency style improved the model, with both dependency HOI (β = .33, *SE* = .07, *t*(203) = 4.69, *p* < .001) and our dependency helping scale (*β* = -.14, *SE* = .05, *t*(203) = -2.91, *p* = .004) as significant predictors. The nested model comparison confirmed that adding our dependency helping scale significantly enhanced the model (*F*(1, 203) = 8.47, *p* = .004). The change in R2 was .037, indicating a small to medium effect size for the additional variance explained.

For autonomy helping, in Step 1, a linear regression analysis showed that autonomy HOI positively predicted employee’s perceived impact (β = .32, *SE* = .08, *t*(204) = 4.13, *p* < .001). In Step 2, adding our newly created autonomy style improved the model, with both autonomy HOI (β = .16, *SE* = .09, *t*(203) = 1.72, *p* = .088) and our autonomy helping scale (*β* = .32, *SE* = .11, *t*(203) = 2.91, *p* = .004) as significant predictors. The nested model comparison confirmed that adding our autonomy helping scale significantly enhanced the model (*F*(1, 203) = 8.48, *p* = .004). The change in R2 was .037, indicating a medium effect size for the additional variance explained.

***Employee sense of belongingness.*** For dependency helping, in Step 1, a linear regression analysis showed that dependency HOI marginally predicted employees’ sense of belongingness (β = -.14, *SE* = .08, *t*(204) = -1.82, *p* = .07). In Step 2, adding our newly created dependency style improved the model, with both dependency HOI no longer being significant (β = .05, *SE* = .09, *t*(203) = .59, *p* = .556), and our dependency helping scale (*β* = -.28, *SE* = .06, *t*(203) = -4.86, *p* < .001) emerging as a significant predictor. The nested model comparison confirmed that the addition of our dependency helping scale significantly enhanced the model (*F*(1, 203) = 23.59, *p* < .001). The change in R2 was .102, indicating a medium effect size for the additional variance explained.

For autonomy helping, in Step 1, a linear regression analysis showed that autonomy HOI positively predicted employee’s sense of belongingness (β = .66, *SE* = .09, *t*(204) = 7.65, *p* < .001). In Step 2, adding our newly created autonomy style improved the model, with both autonomy HOI (β = .47, *SE* = .10, *t*(203) = 4.53, *p* < .001) and our autonomy helping scale (*β* = .37, *SE* = .12, *t*(203) = 3.11, *p* = .002) as significant predictors. The nested model comparison confirmed that adding our autonomy helping scale significantly enhanced the model (*F*(1, 203) = 9.66, *p* = .002). The change in R2 was .035, indicating a medium effect size for the additional variance explained.

***Employee occupational self-efficacy.*** For dependency helping, in Step 1, a linear regression analysis showed that dependency HOI positively predicted employees’ occupational self-efficacy (β = .17, *SE* = .05, *t*(204) = 3.35, *p* < .001). In Step 2, adding our newly created dependency style improved the model, with both dependency HOI (β = .29, *SE* = .06, *t*(203) = 5.25, *p* < .001) and our dependency helping scale (*β* = -.17, *SE* = .04, *t*(203) = -4.58, *p* < .001) as significant predictors. The nested model comparison confirmed that the addition of our dependency helping scale significantly enhanced the model (*F*(1, 203) = 20.96, *p* < .001). The change in R2 was .089, indicating a small to medium effect size for the additional variance explained.

For autonomy helping, in Step 1, a linear regression analysis showed that autonomy HOI positively predicted employee’s occupational self-efficacy (β = .48, *SE* = .05, *t*(204) = 8.81, *p* < .001). In Step 2, adding our newly created autonomy style improved the model, with both autonomy HOI (β = .30, *SE* = .06, *t*(203) = 4.76, *p* < .001) and our autonomy helping scale (*β* = .35, *SE* = .07, *t*(203) = 4.73, *p* < .001) as significant predictors. The nested model comparison confirmed that the addition of our autonomy helping scale significantly enhanced the model (*F*(1, 203) = 22.38, *p* < .001). The change in R2 was .072, indicating a medium effect size for the additional variance explained.

**Results and Discussion**

This study provided further evidence of the incremental validity of our newly developed dependency and autonomy scales in predicting employee-relevant organizational outcomes of employee performance, job mastery, impact, belongingness, and occupational self-efficacy, above and beyond the measure in the existing literature. It also highlights the nuanced effects of different help types provided by leaders over and above the existing Maki et al. (2017) Helping Orientations Inventory.

# STUDY 3A CODING INSTRUCTIONS

The following are verbatim coding instructions that were given to two research assistants.

Instructions

There are two types of help that employees can receive in the workplace.

1. When receiving help type A, the employee’s **LEADER:**
   1. Completes the employee’s task
   2. Asks the employee to forward his/her task over to the leader
   3. Fixes the employee’s problems himself/herself
   4. Directly takes over the employee’s problems
   5. Performs the employee’s tasks himself/herself
   6. Resolves problems on the employee’s behalf
2. When receiving help type B, the employee’s **LEADER**:
   1. Shows the employee ways to solve problems
   2. Demonstrates how to fix problems
   3. Teaches the employee what methods to use to solve the problem
   4. Provides guidance to the employee’s question
   5. Offers feedback as the employee practices solving work tasks
   6. Shows the employee new techniques to streamline the employee’s work

With these helping types A and B in mind, please read the excel sheet. In the excel sheet, each participant (each row) reported three instances of help that they received from their leader. For example, participant 1 (row 2) wrote instance 1 in cell B2, instance 2 in cell E2, and instance 3 in cell H2. For each of these instances, rate on a scale of 1 to 7 (you can type 1, 2, 3, 4, 5, 6, or 7) how much you believe what the participant wrote reflects help type A (in column C2) and help type B (in column D2).

# STUDY 3B LEADER-LEVEL ANALYSIS

The following results are based on data aggregated at the employee team level (i.e., leader level).

***Dependency and autonomy help.*** The following results present dominance and prestige as simultaneous predictors, including all control variables. Higher dominance positively predicted more dependency helping in time 2, *b* = .25, *SE* = .08, *t* = 3.09, *p* = .003, *95% CI* [.09, .41](Table S17, Model 13). Higher dominance negatively predicted autonomy helping reported in time 2, *b* = -.23, *SE* = .11, *t* = -2.16, *p* = .033, *95% CI* [-.44, -.02] (Table S18, Model 13).

We found that prestige marginally predicted autonomy helping, *b* = .17, *SE* = .10, *t* = 1.71, *p* = .090, *95% CI* [-.03, .37] (Table S18, Model 13).[[4]](#footnote-4) Additionally, prestige negatively predicted dependency helping, *b* = -.35, *SE* = .08, *t* = -4.56, *p* < .001, *95% CI* [-.50, -.20] (Table S17, Model 13).

***The mediating role of zero-sum mindset.*** We analyzed whether a zero-sum mindset mediated the direct effect of dominance and prestige on dependency and autonomy helping. We first ran a regression to check if our proposed mediator predicted helping behaviors. Consistent with our theoretical logic, we found that zero-sum mindset positively predicted dependency helping, *b* = .39, *SE* = .07, *t* = 5.23, *p* < .001, *95% CI* [.24, .53] (Table S17, Model 14) and negatively predicted autonomy helping, *b* = -.45, *SE* = .08, *t* = -5.48, *p* < .001, *95% CI* [-.61, -.29] (Table S18, Model 14). Additionally, dominance positively predicted zero-sum mindset, *b* = .24, *SE* = .12, *t* = 2.08, *p* = .040, *95% CI* [.01, .47] (Table S19, Model 11), whereas prestige did not predict zero-sum mindset, *b* = -.13, *SE* = .11, *t* = -1.19, *p* = .236, *95% CI* [-.35, .09] (Table S19, Model 11).[[5]](#footnote-5)

To test the mediating effect of a zero-sum mindset, the indirect effects were bootstrapped 5,000 times using a Monte Carlo simulation to compute 95% bias-corrected confidence intervals. We also included all the control variables and allowed the two forms of helping to covary in our model. The resulting revealed significant positive indirect effects of dominance via zero-sum mindset on dependency helping (*b* = .07, *SE* = .04, *95% CI* [.01, .18]), and a significant negative indirect effect of dominance via zero-sum mindset on autonomy helping (*b* = -.09, *SE* = .05, *95% CI* [-.23, -.02]). The resulting analysis did not reveal significant indirect effects of prestige via zero-sum mindset on autonomy helping (*b* = .05, *SE* = .06, *95% CI* [-.06, .17]), nor on dependency helping (*b* = -.04, *SE* = .04, *95% CI* [-.15, .03]).

These insignificant results for the mediating effects may be due to a smaller sample size since examining this phenomenon at the leader level caused us to reduce the number of observations from 420 to 105. Further research should examine this effect at the leader level.

***The moderating role of status threat on zero-sum mindset.*** Next, we examined whether status threat (higher vs. lower) interacted with dominance and prestige predict zero-sum mindset. The interaction between dominance and status threat was marginally significant, *b* = .11, *SE* = .06, *t* = 1.81, *p* = .074, *95% CI* [-.01, .23] (Table S19, Model 14). The interaction of prestige and status threat on zero-sum mindset was not significant, *b* = -.06, *SE* = .04, *t* = -1.33, *p* = .187, *95% CI* [-.14, .03] (Table S19, Model 15). Once again, the marginal to insignificant moderating effects may be due to the smaller sample size, as aggregating data at the leader level reduced the number of observations from 420 to 105.

***The moderating role of status threat on dependency and autonomy help (exploratory).*** Next, we analyzed whether status threat (higher vs. lower) interacted with leaders’ hierarchical orientations to predict their helping behaviors. The interaction effect of dominance and threat on dependency helping was positive and significant, *b* = .11, *SE* = .05, *t* = 2.30, *p* = .024, *95% CI* [.01, .20] (Table S17, Model 18): Simple slopes analysis revealed that under lower status threat (-1 SD), higher dominance did not predict dependency helping, *b* = .06, *SE* = .09, *t* = .68, *p* = .500, *95% CI* [-.12, .24]; but under higher status threat (+1 SD), higher dominance significantly predicted more dependency helping, *b* = .30, *SE* = .09, *t* = 3.30, *p* = .001, *95% CI* [.12, .48] (see Figure S1). In contrast, the interaction effect of dominance and threat on autonomy helping was negative and significant, *b* = -.14, *SE* = .06, *t* = -2.41, *p* = .018, *95% CI* [-.25, -.02] (Table S18, Model 18): Simple slopes analysis revealed that under lower status threat (-1 SD), higher dominance did not predict autonomy helping, *b* = -.007, *SE* = .11, *t* = -.06, *p* = .953, *95% CI* [-.23, .22]; but under higher status threat (+1 SD), high dominance significantly predicted less autonomy helping, *b* = -.31, *SE* = .11, *t* = -2.80, *p* = .006, *95% CI* [-.53, -.09] (see Figure S2).

For prestige, the interaction effect of prestige and threat on autonomy helping was positive and significant, *b* = .08, *SE* = .04, *t* = 2.00, *p* = .048, *95% CI* [.0006, .16] (Table S18, Model 19): Simple slopes analysis revealed that higher prestige did not predict autonomy helping both under lower status threat (-1 SD), *b* = -.08, *SE* = .13, *t* = -.63, *p* = .532, *95% CI* [-.35, .18], and higher status threat (+1 SD), *b* = .09, *SE* = .09, *t* = 1.06, *p* = .293, *95% CI* [-.08, .27]. However, the difference in the slopes was significant such that the slope was more positive under higher status threat (see Figure S3). In contrast, the interaction effect of prestige and threat on dependency helping was not significant, *b* = .005, *SE* = .03, *t* = .16, *p* = .870, *95% CI* [-.06, .07] (Table S17, Model 19).

***Moderated mediation.*** We also examined if status threat moderated the mediation effect of leader status via a zero-sum mindset on helping behaviors. We performed a bootstrap analysis resampled 5,000 times. The resulting analysis revealed a significant indirect effect of higher dominance on dependency helping via a zero-sum mindset when the threat was higher (*b* = .09, *SE* = .06, *95% CI* [.007, .24]) but not when it was lower (*b* = .01, *SE* = .03, *95% CI* [-.04, .10]). However, the difference in the two indirect effects was not significant (*b* = .07, *SE* = .05, *95% CI* [-.002, .22]). Additionally, the resulting analysis revealed a significant indirect effect of higher dominance on autonomy helping via a zero-sum mindset when the threat was higher (*b* = -.07, *SE* = .06, *95% CI* [-.21, -.0004]) but not when it was lower (*b* = -.01, *SE* = .03, *95% CI* [-.08, .05]). However, the difference in the two indirect effects was not significant (*b* = -.06, *SE* = .06, *95% CI* [-.22, .009]).

The indirect effect of higher prestige on autonomy helping via a zero-sum mindset was not significant, neither when the threat was higher (*b* = .02, *SE* = .04, *95% CI* [-.05, .10]) nor lower (*b* = .02, *SE* = .04, *95% CI* [-.05, .13]), and the difference in the two indirect effects was not significant (*b* = -.006, *SE* = .03, *95% CI* [-.07, .03]). Furthermore, the indirect effect of higher prestige on dependency helping via zero-sum mindset was not significant either when the threat was higher (*b* = -.02, *SE* = .04, *95% CI* [-.11, .04]) nor lower (*b* = -.03, *SE* = .04, *95% CI* [-.14, .04]), and the difference in the two indirect effects was not significant (*b* = .007, *SE* = .02, *95% CI* [-.03, .08]).

These nonsignificant mediation and moderated mediation results showed similar coefficients to the results in our manuscript but with larger standard errors and wider confidence intervals. This suggests that the reduction in our sample size from 420 to 105 likely explains this insignificance.

# STUDY 3B EXPLORATORY ANALYSIS OF THE MODERATING ROLE OF STATUS THREAT ON DEPENDENCY AND AUTONOMY HELP

As an exploratory analysis, we examined if status threat interacted with leaders’ hierarchical orientations to predict helping. The interaction between dominance and status threat on dependency helping was positive and significant, *b* = .11, *SE* = .04, *z* = 2.63, *p* = .009, *95% CI* [.03, .19] (Table 11, Model 18). A simple slopes analysis revealed that when status threat was lower (-1 SD), higher dominance did not predict dependency helping, *b* = .06, *SE* = .09, *z* = .66, *p* = .509, *95% CI* [-.11, .22]. However, under higher status threat (+1 SD), higher dominance significantly predicted more dependency helping, *b* = .30, *SE* = .08, *z* = 3.64, *p* < .001, *95% CI* [.14, .47] (see Figure S4). In contrast, the interaction between dominance and status threat on autonomy helping was negative and significant, *b* = -.12, *SE* = .05, *z* = -2.26, *p* = .024, *95% CI* [-.22, -.02] (Table 12, Model 18). When status threat was lower (-1 SD), higher dominance did not predict less autonomy helping, *b* = -.02, *SE* = .11, *z* = -.21, *p* = .831, *95% CI* [-.23, .19]. However, under higher status threat (+1 SD), higher dominance significantly predicted less autonomy helping, *b* = -.29, *SE* = .10, *z* = -2.76, *p* = .006, *95% CI* [-.49, -.08] (Figure S5).

The interaction between prestige and status threat on autonomy helping was positive and significant, *b* = .07, *SE* = .04, *z* = 2.00, *p* = .046, *95% CI* [.001, .15] (Table 12, Model 19). Higher prestige did not predict more autonomy helping under lower status threat (-1 SD), *b* = -.11, *SE* = .12, *z* = -.88, *p* = .379, *95% CI* [-.35, .13], or higher status threat (+1 SD), *b* = .06, *SE* = .08, *z* = .70, *p* = .485, *95% CI* [-.10, .21]. However, the slope difference was significant, indicating a more positive slope under higher status threat (Figure S6). In contrast, the interaction between prestige and status threat on dependency helping was nonsignificant, *b* = .003, *SE* = .03, *z* = .09, *p* = .929, *95% CI* [-.06, .06] (Table 11, Model 19).

# STUDY S1

The objective of Study S1 was to test Hypotheses 1 and 2. Study S1 was similar to Study 1a of the main manuscript, except that participants were required to choose only one helping option per scenario.

**Method**

***Participants.*** 202 participants were recruited from CloudResearch panels, an online participant pool, for a study titled “Personality in the Workplace.” Participants were paid $1.80 for their participation. We recruited mid-level U.S. managers from various professions, such as admin workers, computer scientists, engineers, firefighters, nurses, physicians, police officers, and sales, with a minimum of one year of work experience. Two participants were excluded for having non-U.S. IP addresses. The final sample consisted of 200 participants (104 men, 96 women; *MAge* = 36.05, *SD* = 10.29). Using the average effect size, a post-hoc power analysis using G\*Power indicated that this sample size provided over 83.9% power to detect a significant effect size (z-test; logistic regression; post hoc; *odds ratio* = 1.47; α error prob = .05, total sample size = 200).

***Procedure and materials***. After providing informed consent, participants self-reported their tendencies to influence others in the workplace using a validated dominance-prestige scale. Participants then indicated how likely they were to provide no help, dependency help, or autonomy help in response to various hypothetical help-seeking requests from a subordinate.

***Dominance and Prestige.*** We used the same 17-item validated scale as in Study 1a to measure dominance and prestige (Cheng et al., 2010). On a scale ranging from 1 (*Not at all*) to 7 (*Very much*), eight items measured dominance (e.g., “I would prefer to be a leader who enjoys having authority over other people”; α = .96), and nine items captured prestige (e.g., “I would prefer to be a leader who is held in high esteem by other members.”*;* α = .86).

***Type of help offered.*** Participants responded to the same dependent variable as in Study 1a, except they were forced to choose only one of the three options.

**Results**

Table S20 presents means, standard deviations, and intercorrelations among the variables.

We counted the number of times participants chose each option (i.e., no help, dependency help, and autonomy help) and divided it by the total number of scenarios, six. We ran a fractional logit because this analysis method is appropriate when the dependent variable is a proportion or a percentage that ranges between 0 and 1, inclusive. Tables S21, S22, and S23 report fractional logit results of dependency help, autonomy help, and no help, respectively. Below, we report the results of the most comprehensive model, which included dominance and prestige, and control for demographic covariates (Model 6).

***Type of help offered.*** As predicted, fractional logit analysis revealed that dominance positively predicted dependency helping, *b* = .33, *SE* = .06, *z* = 5.28, *p* < .001, *95% CI* [.21, .46] (Table S21, Model 6), and negatively predicted providing autonomy help, *b =* -.38*, SE* = .07, *z* = -5.39, *p* < .001, *95% CI* [*-.*52, -.24] (Table S22, Model 6).

Also, as predicted, prestige positively predicted providing autonomy help, *b =* .47*, SE* = .15, *z* = 3.08, *p* = .002, *95% CI* [.17, .78], (Table S22, Model 6) and negatively predicted dependency helping *b* = -.43, *SE* = .15, *z* = -2.79, *p* = .005, *95% CI* [-.73, -.13] (Table S21, Model 6). Overall, Hypotheses 1 and 2 were supported.

Although we had no a priori hypothesis regarding provision of no help, results revealed that dominance positively predicted offering no help, *b =* .38*, SE* = .13, *z* = 2.90, *p* = .004, *95% CI* [.12, .63] (Table S23, Model 6), and prestige did not predict offering no help, *b =* -.43*, SE* = .29, *z* = -1.52, *p* = .130, *95% CI* [-.99, .13] (Table S23, Model 6).

**Discussion**

Study S1 provided further evidence in support of our hypotheses that dominance (prestige) positively (negatively) predicts providing dependency help and negatively (positively) predicts offering autonomy help. Further, dominance positively predicted offering no help, but prestige did not predict offering no help.

# STUDY S2

Study S2 tested the effect of manipulating low and high dominance and prestige on the same dependent variables as in Study 1a. The study was preregistered on AsPredicted, including details on the study design, sample size, and data analysis (<https://aspredicted.org/M1F_MVP>).

**Method**

***Participants*.** 596 participants were recruited from the Prolific Academic panel to complete the study. Four participants’ duplicate responses were deleted, and 41 participants were dropped for failing an attention check. This left a total sample of 551 participants (277 men, 274 women; *MAge* = 39.40, *SD* = 11.93; 3.63% East Asian, 9.98% Black, 2.54% South Asian, 0.54% Middle Eastern, 5.08% Mixed background, 55.54% White, 22.69% White British; years of job experience *M* = 13.72, *SD* = 6.41). Using the average effect size (*ηp2* = .172), a post-hoc power analysis using G\*Power indicated that this sample size provided over 99% power to detect a small-to-medium effect size (f-test; ANOVA: fixed effects, special, main effects and interactions; post hoc; *f* = .46; α error prob = .05, total sample size = 551; numerator df = 3; number of groups = 4).

***Procedure and materials*.** Using the same manipulation as in Study 1b, we randomly assigned participants to either the low dominance (*N* = 139), high dominance (*N* = 135), low prestige (*N* = 139), or high prestige condition (*N* = 138).

***Manipulation check.*** Using the same scale as in Study 1a, participants reported their tendency to behave in a dominance- or prestige-oriented manner (dominance: α = .98; prestige: α = .98).

***Type of help offered.*** We used the same measure from Study 1a. Participants indicated how likely they are to provide no help, dependency help, or autonomy help in response to six hypothetical help-seeking requests from a subordinate. Participants were able to select multiple options per scenario.[[6]](#footnote-6) As in Study 1a, we counted the number of times participants chose each option (i.e., no help, dependency help, and autonomy help) and divided it by the maximum potential number of choices they could make, 18 (i.e., selecting all three choices for all six scenarios).[[7]](#footnote-7)

**Results**

Table S24 presents means, standard deviations, and intercorrelations among the variables.

***Manipulation check.*** As predicted, a one-way ANOVA showed that there was a significant effect of low vs. high dominance condition on dominance, *F*(1,272) = 683.25, *p* < .001, *ηp2* = .715: Participants in the high-dominance condition reported being more dominance-oriented (*M* = 5.35, *SD* = 1.49) than those in the low-dominance condition (*M* = 1.51, *SD* = .87). There was also a significant effect of low vs. high prestige condition on prestige, *F*(1,275) = 701.07, *p* < .001, *ηp2* = .718: Participants in the high-prestige condition reported being more prestige-oriented (*M* = 6.08, *SD* = .83) than those in the low-prestige condition (*M* = 2.37, *SD* = 1.42).[[8]](#footnote-8)

***Type of help offered.*** There was no significant effect of low vs. high dominance condition on dependency help, *F*(1,272) = .08, *p* = .783, *ηp2* = .0003: Participants in the high dominance condition did not choose to offer more dependency help (*M* = .05, *SD* = .08) than those in the low dominance condition (*M* = .05, *SD* = .09). However, as predicted, there was a significant effect of low vs. high dominance condition on autonomy help, *F*(1,272) = 22.28, *p* < .001, *ηp2* = .076: Participants in the high dominance condition chose to offer less autonomy help (*M* = .23, *SD* = .12) than those in the low dominance condition (*M* = .29, *SD* = .08).

Furthermore, as predicted, there was a significant effect of low vs. high prestige condition on autonomy help, *F*(1,275) = 290.83, *p* < .001, *ηp2* = .514: Participants in the high prestige condition chose to offer more autonomy help (*M* = .30, *SD* = .06) than those in the low prestige condition (*M* = .10, *SD* = .13). There was also a significant effect of low vs. high prestige condition on dependency help, *F*(1,275) = 4.76, *p* = .030, *ηp2* = .017: Participants in the high prestige condition chose to offer less dependency help (*M* = .04, *SD* = .07) than those in the low prestige condition (*M* = .07, *SD* = .10).

Although we had no a priori hypothesis, results revealed that participants in the high dominance condition chose to offer no help more (*M* = .06, *SD* = .10) than those in the low dominance condition (*M* = .01, *SD* = .05). *F*(1,272) = 29.91, *p* < .001, *ηp2* = .099. Results also revealed that participants in the high prestige condition were significantly less likely to offer no help (*M* = .008, *SD* = .03) than those in the low prestige condition (*M* = .19, *SD* = .13). *F*(1,275) = 241.55, *p* < .001, *ηp2* = .468.

**Discussion**

Study S2 revealed that dominance negatively predicted autonomy help, while prestige positively predicted autonomy help and negatively predicted dependency help. Contrary to our hypothesis, dominance did not predict dependency help. This may be due to the overall mean proportion of dependency help being very low (*M* = 0.05) across both conditions. This low base rate could limit the variability in responses, making it harder to detect a significant effect of dominance on this type of help.

# STUDY S3

Study S3 tested the manipulated effect of low and high dominance and prestige on the dependent variables from Study 1a, excluding the ‘no help’ option. The study was preregistered, including details on the study design, sample size, and data analysis (<https://aspredicted.org/JG2_F7W>).

**Method**

***Participants*.** 596 participants were recruited from the Prolific Academic. One participant’s duplicate response was deleted, and 45 participants were excluded for failing an attention check. This left a total sample of 550 participants (277 men, 273 women; *MAge* = 41.45, *SD* = 13.66; 4.01% East Asian, 7.83% Black, 1.82% South Asian, 0.18% Middle Eastern, 6.74% Mixed background, 57.56% White, 21.86% White British; years of job experience *M* = 14.30, *SD* = 6.42). Using the average effect size (*ηp2* = .190), a post-hoc power analysis using G\*Power indicated that this sample size provided over 99% power to detect a small-to-medium effect size (f-test; ANOVA: fixed effects, special, main effects and interactions; post hoc; *f* = .48; α error prob = .05, total sample size = 550; numerator df = 3; number of groups = 4).

***Procedure and materials*.** Just as in Study 1b, we randomly assigned participants to either the low dominance (*N* = 136), high dominance (*N* = 138), low prestige (*N* = 138), or high prestige condition (*N* = 138).

***Manipulation check.*** Using the same scale as in Study 1a, participants reported their tendency to behave in a dominance- or prestige-oriented manner (dominance: α = .98; prestige: α = .98).

***Type of help offered.*** We used the same measure from Study 1a but removed the “no help” choice, as we did not have an a priori hypothesis for this choice. Participants indicated how likely they are to provide dependency help or autonomy help in response to six hypothetical help-seeking requests from a subordinate. Participants were able to choose multiple options for each scenario. As in Study 1a, we counted the number of times participants chose each option (i.e., dependency help and autonomy help) and divided it by the maximum potential number of choices they could make, 12 (i.e., both choices for all six scenarios).[[9]](#footnote-9)

**Results**

Table S26 presents means, standard deviations, and intercorrelations among the variables.

***Manipulation check.*** As predicted, a one-way ANOVA showed that there was a significant effect of low vs. high dominance condition on dominance, *F*(1,272) = 483.83, *p* < .001, *ηp2* = .640: Participants in the high-dominance condition self-reported being more dominance-oriented (*M* = 5.38, *SD* = 1.52) than those in the low-dominance condition (*M* = 1.70, *SD* = 1.24). There was also a significant effect of low vs. high prestige condition on prestige, *F*(1,274) = 865.72, *p* < .001, *ηp2* = .759: Participants in the high-prestige condition self-reported being more prestige-oriented (*M* = 6.24, *SD* = .70) than those in the low-prestige condition (*M* = 2.28, *SD* = 1.41).[[10]](#footnote-10)

***Type of help offered.*** As predicted, there was a significant effect of low vs. high dominance condition on dependency help, *F*(1,272) = 10.41, *p* = .001, *ηp2* = .037: Participants in the high dominance condition chose to offer more dependency help (*M* = .12, *SD* = .16) than those in the low dominance condition (*M* = .06, *SD* = .11). There was also a significant effect of low vs. high dominance condition on autonomy help, *F*(1,272) = 9.95, *p* = .002, *ηp2* = .035: Participants in the high dominance condition chose to offer less autonomy help (*M* = .40, *SD* = .14) than those in the low dominance condition (*M* = .45, *SD* = .10).

Furthermore, as predicted, there was a significant effect of low vs. high prestige condition autonomy help, *F*(1,274) = 144.02, *p* < .001, *ηp2* = .344: Participants in the high prestige condition chose to offer more autonomy help (*M* = .47, *SD* = .08) than those in the low prestige condition (*M* = .24, *SD* = .22). There was also a significant effect of low vs. high prestige condition on dependency help, *F*(1,274) = 143.67, *p* < .001, *ηp2* = .344: Participants in the high prestige condition chose to offer less dependency help (*M* = .04, *SD* = .08) than those in the low prestige condition (*M* = .28, *SD* = .22).

**Discussion**

Study S3 offers further support to H1 and H2 that dominance (prestige) positively (negatively) predicts dependency help and negatively (positively) predicts autonomy help.

# STUDY S4

Study S4 manipulated leaders’ high and low dominance or prestige using a between-subjects design. We also tested for the mediating role of a zero-sum mindset. We pre-registered the sample size, study design, and analysis plan here: <https://aspredicted.org/N7K_QNT>.

**Method**

***Participants*.** 601 participants were recruited from CloudResearch. Following our pre-registration, we removed 30 participants who failed the attention checks[[11]](#footnote-11), leaving a final sample of 571 participants (275 men, 296 women; *MAge* = 41.64, *SD* = 12.86; 78.99% White/Caucasian-American, 10.33% Black/African-American, 5.25% East Asian, 1.23% South Asian, 0.35% Middle Eastern, 3.85% Other/Mixed background; years of job experience *M* = 14.79, *SD* = 5.94). Using the effect size of condition on helping behavior (*ηp2* = .192), a post-hoc power analysis using G\*Power indicated that this sample size provided over 99% power to detect a large effect size (f-test; ANOVA: fixed effects, special, main effects and interactions; post hoc; *f* = .49; α error prob = .05, total sample size = 571; numerator df = 3; number of groups = 4).

***Procedure and materials*.** Just as in Study 1b, we randomly assigned participants to either the low dominance (*N* = 151), high dominance (*N* = 146), low prestige (*N* = 135), or high prestige condition (*N* = 139).

***Manipulation check.*** Using the same scale as before, participants reported their tendency to behave in a dominance- or prestige-oriented manner (dominance: α = .98; prestige: α = .97).

***Zero-sum mindset.*** Participants rated their zero-sum mindset using the same scale as in Study 1b.

***Degree of autonomy help offered.*** Afterwards, participants read:

“In the hedge fund of which you are a manager, all the managers and employees on their teams need to have a good amount of advanced mathematical skills in order to engage in algorithmic trading. You have been working in this hedge fund for several years alongside Alex, an employee in your team. In the next portion of this study, Alex will solve five math problems and have the chance to ask you questions about those math problems. Because you are the current manager, you have the solution guide to math problems that have a difficulty level of medium to hard. Please respond to the questions that Alex asked you, keeping in mind the kind of leader you are expected to be based on what you initially read.”

Then, participants saw that Alex asked five questions. The five questions involved calculating the volume of a triangular prism, cylinder, cube, pyramid, and cone. For each question, participants had the option of giving one of five answers. For example, for the question on how to calculate the volume of the triangular prism that had a base length of 7 inches, a base height of 7 inches, and a height of 8 inches, the five options that participants could choose from were: (1) Don’t explain and give the answer – The answer is 196, (2) Explain partially – Calculate 7 x 7 x 8 / 2, (3) Explain more thoroughly – Multiply the area of the triangle with the height of the prism, (4) Explain more comprehensively – Multiple the triangle base by triangle height by prism height and divide by 2, and (5) Explain fully how to solve the problem – Multiply the triangle base (7) by triangle height (7) by prism height (8) and divide by 2. This dependent variable allowed us to capture participant’s help using a concrete behavioral choice measure. We averaged the five choices participants made (α = .80), such that higher scores indicated more autonomy help.[[12]](#footnote-12)

**Results**

Table S28 reports means, standard deviations, and intercorrelations among the variables.

***Manipulation check.*** As predicted, a one-way ANOVA showed that there was a significant effect of condition on dominance, *F*(3,567) = 173.46, *p* < .001, *ηp2* = .479: Bonferroni post-hoc tests showed that participants in the high-dominance condition self-reported being more dominance-oriented (*M* = 5.49, *SD* = 1.29) than those in the low-dominance condition (*M* = 1.69, *SD* = 1.06), *bdiff* = 3.80, *SE* = .17, *p* < .001, *95% CI* [3.34, 4.25], Cohen’s *d* = 3.22. There was also a significant effect of condition on prestige, *F*(3,567) = 213.54, *p* < .001, *ηp2* = .530: Bonferroni post-hoc tests showed that participants in the high-prestige condition self-reported being more prestige-oriented (*M* = 6.12, *SD* = .81) than those in the low-prestige condition (*M* = 2.64, *SD* = 1.60), *bdiff* = 3.48, *SE* = .15, *p* < .001, *95% CI* [3.09, 3.87], Cohen’s *d* = 2.75.[[13]](#footnote-13)

***Degree of autonomy help offered.*** As predicted, there was a significant effect of condition on the degree of autonomy help offered, *F*(3,567) = 44.79, *p* < .001, *ηp2* = .192. Bonferroni post-hoc tests showed that participants in the high-dominance condition gave less autonomy help (*M* = 3.33*, SD* = 1.24) than those in the low-dominance condition (*M* = 4.12*, SD* = .88), *bdiff* = .79, *SE* = .13, *p* < .001, *95% CI* [.45, 1.12], Cohen’s *d* = .73. In contrast, participants in the high-prestige condition offered more autonomy help (*M* = 4.04*, SD* = .89) than those in the low-prestige condition (*M* = 2.81*, SD* = 1.32), *bdiff* = 1.23, *SE* = .13, *p* < .001, *95% CI* [.487 1.58], Cohen’s *d* = 1.09.

***The mediating role of zero-sum mindset.*** We first checked if conditions predicted a zero-sum mindset. Consistent with our logic, there was a significant effect of condition on the degree of autonomy help offered, *F*(3,567) = 55.63, *p* < .001, *ηp2* = .227. Bonferroni post-hoc tests showed that participants in the high-dominance condition showed higher zero-sum mindset (*M* = 4.60, *SD* = 1.24) than those in the low-dominance condition (*M* = 3.28, *SD* = 1.13), *bdiff* = 1.32, *SE* = .14, *p* < .001, *95% CI* [.94, 1.70], Cohen’s *d* = 1.11. In contrast, participants in the high-prestige condition showed a lower zero-sum mindset (*M* = 3.37, *SD* = 1.27) than those in the low-prestige condition (*M* = 4.69, *SD* = 1.26), *bdiff* = -1.32, *SE* = .15, *p* < .001, *95% CI* [-1.72, -.93], Cohen’s *d* = 1.04. We also checked using regression analyses if our proposed mediator predicted autonomy help. Consistent with our theoretical logic, we found that zero-sum mindset negatively predicted more autonomy helping, *b* = -.33, *SE* = .03, *t*(569) = -9.66, *p* < .001, *95% CI* [-.40, -.26].

To test the mediating effect of a zero-sum mindset, we ran a bootstrap analysis with 5,000 iterations. As predicted, results revealed a negative indirect effect of high (vs. low) dominance on autonomy helping via a zero-sum mindset (*b* = -.26, *SE* = .06, *95% CI* [-.38, -.16]). Also, as predicted, results revealed a positive indirect effect of low to high prestige on autonomy helping via a zero-sum mindset (*b* = .26, *SE* = .06, *95% CI* [.15, .38]).

**Discussion**

In sum, Study S4 found that dominance (prestige) negatively (positively) predicts autonomy helping. In addition, this effect is explained by leaders’ zero-sum mindset. However, given that dependency and autonomy helping were measured on a single continuum rather than as separate, orthogonal constructs, we caution readers in interpreting the results.

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# TABLES

## **Table S1: Fractional logit results for dependency help offered (Study 1a)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PROPORTION OF DEPENDENCY HELP OFFERED** | | | | | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** | ***Model 7*** | ***Model 8*** | ***Model 9*** | ***Model 10*** |
| Dominance | .240\*\*\* |  | .204\*\* | .202\*\* | .209\*\* | .207\*\* | .210\*\* | .210\*\* |  | .169† |
|  | (.072) |  | (.077) | (.076) | (.078) | (.077) | (.078) | (.081) |  | (.087) |
| Prestige |  | -.430\*\*\* | -.338\*\* | -.370\*\* | -.274† | -.336\*\* | -.326\* |  | -.425\*\*\* | -.342\*\* |
|  |  | (.123) | (.122) | (.131) | (.140) | (.122) | (.134) |  | (.126) | (.131) |
| Long-term orientation |  |  |  | .052 |  |  | .158 | .045 | .123 | .125 |
|  |  |  |  | (.091) |  |  | (.117) | (.129) | (.123) | (.127) |
| Patience |  |  |  |  | -.123 |  | -.215† | -.281\* | -.217† | -.218† |
|  |  |  |  |  | (.088) |  | (.118) | (.118) | (.125) | (.124) |
| Perceived time investment |  |  |  |  |  | -.042 | -.015 | -.042 | -.039 | -.052 |
|  |  |  |  |  |  | (.069) | (.070) | (.073) | (.075) | (.072) |
| Gender a |  |  |  |  |  |  |  | .040 | .054 | .072 |
|  |  |  |  |  |  |  |  | (.238) | (.235) | (.238) |
| Age |  |  |  |  |  |  |  | .014 | .011 | .012 |
|  |  |  |  |  |  |  |  | (.014) | (.014) | (.014) |
| Income |  |  |  |  |  |  |  | .052 | .077 | .048 |
|  |  |  |  |  |  |  |  | (.106) | (.102) | (.107) |
| Job experience |  |  |  |  |  |  |  | -.045\*\* | -.047\*\* | -.043\*\* |
|  |  |  |  |  |  |  |  | (.015) | (.015) | (.014) |
| Constant | -3.615\*\*\* | -.444 | -1.496† | -1.600† | -1.226 | -1.354† | -1.268 | -2.197\*\* | .062 | -.729 |
|  | (.215) | (.704) | (.802) | (.834) | (.782) | (.793) | (.802) | (.790) | (.884) | (1.014) |
| *N* | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| *AIC* | 78.43 | 78.47 | 79.77 | 81.75 | 81.66 | 81.74 | 85.50 | 90.96 | 90.88 | 92.46 |
| *BIC* | 85.04 | 85.08 | 89.68 | 94.96 | 94.87 | 94.96 | 105.3 | 120.7 | 120.6 | 125.5 |
| *Log likelihood* | -37.22 | -37.24 | -36.89 | -36.87 | -36.83 | -36.87 | -36.75 | -36.48 | -36.44 | -36.23 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S2:Fractional logit for autonomy help offered (Study 1a)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PROPORTION OF AUTONOMY HELP OFFERED** | | | | | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** | ***Model 7*** | ***Model 8*** | ***Model 9*** | ***Model 10*** |
| Dominance | -.081\*\*\* |  | -.062\*\* | -.062\*\* | -.062\*\* | -.062\*\* | -.062\*\* | -.073\*\*\* |  | -.057\*\* |
|  | (.022) |  | (.020) | (.020) | (.019) | (.019) | (.019) | (.021) |  | (.020) |
| Prestige |  | .169\*\*\* | .144\*\*\* | .139\*\*\* | .132\*\*\* | .141\*\*\* | .132\*\*\* |  | .160\*\*\* | .136\*\*\* |
|  |  | (.031) | (.030) | (.031) | (.032) | (.030) | (.033) |  | (.034) | (.033) |
| Long-term orientation |  |  |  | .009 |  |  | .001 | .027 | .005 | .006 |
|  |  |  |  | (.015) |  |  | (.017) | (.019) | (.018) | (.017) |
| Patience |  |  |  |  | .024 |  | .017 | .040† | .015 | .015 |
|  |  |  |  |  | (.022) |  | (.024) | (.024) | (.026) | (.024) |
| Perceived time investment |  |  |  |  |  | -.023\* | -.021\* | -.025\* | -.022\* | -.023\* |
|  |  |  |  |  |  | (.011) | (.011) | (.011) | (.011) | (.011) |
| Gender a |  |  |  |  |  |  |  | .054 | .050 | .045 |
|  |  |  |  |  |  |  |  | (.037) | (.036) | (.035) |
| Age |  |  |  |  |  |  |  | -.003 | -.003 | -.003 |
|  |  |  |  |  |  |  |  | (.003) | (.003) | (.002) |
| Income |  |  |  |  |  |  |  | -.000 | -.013 | -.003 |
|  |  |  |  |  |  |  |  | (.015) | (.015) | (.015) |
| Job experience |  |  |  |  |  |  |  | .005† | .007\*\* | .006\* |
|  |  |  |  |  |  |  |  | (.003) | (.003) | (.002) |
| Constant | -.680\*\*\* | -1.894\*\*\* | -1.608\*\*\* | -1.626\*\*\* | -1.665\*\*\* | -1.473\*\*\* | -1.526\*\*\* | -.939\*\*\* | -1.799\*\*\* | -1.560\*\*\* |
|  | (.041) | (.201) | (.199) | (.200) | (.202) | (.218) | (.223) | (.182) | (.240) | (.240) |
| *N* | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| *AIC* | 248.2 | 248.0 | 249.8 | 251.8 | 251.8 | 251.7 | 255.7 | 261.9 | 261.8 | 263.6 |
| *BIC* | 254.8 | 254.6 | 259.7 | 265.0 | 265.0 | 264.9 | 275.5 | 291.7 | 291.6 | 296.7 |
| *Log likelihood* | -122.1 | -122.0 | -121.9 | -121.9 | -121.9 | -121.9 | -121.9 | -122.0 | -121.9 | -121.8 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S3: Fractional logit for no help offered (Study 1a)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PROPORTION OF NO HELP OFFERED** | | | | | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** | ***Model 7*** | ***Model 8*** | ***Model 9*** | ***Model 10*** |
| Dominance | .430\*\*\* |  | .370\*\* | .372\*\* | .391\*\* | .427\*\* | .433\*\* | .520\*\*\* |  | .486\*\*\* |
|  | (.098) |  | (.116) | (.118) | (.136) | (.144) | (.152) | (.118) |  | (.139) |
| Prestige |  | -.928\*\*\* | -.740\*\*\* | -.656\* | -.549† | -.728\*\*\* | -.611\* |  | -.837\*\* | -.666\* |
|  |  | (.203) | (.206) | (.270) | (.296) | (.218) | (.290) |  | (.288) | (.285) |
| Long-term orientation |  |  |  | -.127 |  |  | .117 | -.013 | .194 | .212 |
|  |  |  |  | (.181) |  |  | (.238) | (.249) | (.298) | (.288) |
| Patience |  |  |  |  | -.337 |  | -.369 | -.301 | -.330 | -.226 |
|  |  |  |  |  | (.229) |  | (.267) | (.275) | (.326) | (.290) |
| Perceived time investment |  |  |  |  |  | -.190 | -.163 | -.139 | -.122 | -.182 |
|  |  |  |  |  |  | (.179) | (.172) | (.138) | (.154) | (.145) |
| Gender a |  |  |  |  |  |  |  | -.975\* | -.998\* | -.978\* |
|  |  |  |  |  |  |  |  | (.446) | (.416) | (.417) |
| Age |  |  |  |  |  |  |  | -.082\* | -.074\* | -.080\* |
|  |  |  |  |  |  |  |  | (.039) | (.034) | (.037) |
| Income |  |  |  |  |  |  |  | -.269† | -.188 | -.307† |
|  |  |  |  |  |  |  |  | (.148) | (.193) | (.174) |
| Job experience |  |  |  |  |  |  |  | .068† | .048 | .066† |
|  |  |  |  |  |  |  |  | (.041) | (.037) | (.037) |
| Constant | -5.681\*\*\* | .882 | -1.218 | -1.006 | -.603 | -1.010 | -.468 | -.258 | 4.626\* | 2.299 |
|  | (.350) | (1.110) | (1.295) | (1.288) | (1.336) | (1.336) | (1.379) | (1.227) | (2.148) | (1.889) |
| *N* | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 | 201 |
| *AIC* | 26.95 | 26.57 | 28.02 | 29.98 | 29.77 | 29.87 | 33.66 | 38.91 | 39.12 | 40.41 |
| *BIC* | 33.56 | 33.18 | 37.93 | 43.19 | 42.99 | 43.08 | 53.48 | 68.64 | 68.85 | 73.44 |
| *Log likelihood* | -11.48 | -11.29 | -11.01 | -10.99 | -10.89 | -10.93 | -10.83 | -10.45 | -10.56 | -10.21 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S4: Confirmatory factor analysis of dominance and prestige items (Study 1a)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | Factor loading | |
| Item | | | |  | Dominance | Prestige |
| **Dominance**  *I would prefer to be a leader…* | | | | |  |  |
| 1. …who enjoys control over other members. | | | | | **.831** | -.078 |
| 2. …who often tries to get his/her own way regardless of what others may want. | | | | | **.852** | -.157 |
| 3. …who is willing to use aggressive tactics to get his/her way. | | | | | **.849** | -.118 |
| 4. …who tries to control other members rather than permit them to control him/her. | | | | | **.922** | -.063 |
| 5. …who appears to have a forceful or dominant personality. | | | | | **.855** | -.102 |
| 6. …who is known to others that it is better to let him/her have his/her way. | | | | | **.871** | -.134 |
| 7. …who enjoys having authority over other people | | | | | **.868** | -.027 |
| 8. …who might be feared by some members. | | | | | **.762** | -.116 |
| **Prestige**  *I would prefer to be a leader…* | | | | |  |  |
| 1. …who is respected and admired by other members. | | | | | -.025 | **.797** |
| 2. …who may be a respected role model for other members. | | | | | -.193 | **.801** |
| 3. …who is expected to be successful by other members. | | | | | .100 | **.682** |
| 4. …whose opinion is valued by other members. | | | | | .225 | **.730** |
| 5. …who is held in high esteem by other members. | | | | | -.004 | **.791** |
| 6. …whose unique talents and abilities are recognized by others. | | | | | -.184 | **.741** |
| 7. …who is considered an expert on some matters by others. | | | | | -.079 | **.760** |
| 8. …who is sought for advice on some matters by others. | | | | | -.159 | **.689** |
| 9. …who other members enjoy hanging out with. | | | | | -.076 | **.592** |
| Eigenvalue | | | | | 6.857 | 4.067 |
| % Variance explained | | | | | 40.335 | 23.925 |

*Note.* Numbers in boldface indicate high factor loadings.

## **Table S5: Post-hoc test (Study 1b)**

**A: Dominance manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 1.78 | 1.22 | - |  |  |  |
| High dominance | 5.27 | 1.42 | 3.49\*\*\* | - |  |  |
| Low prestige | 3.76 | 2.04 | 1.98\*\*\* | -1.51\*\*\* | - |  |
| High prestige | 2.48 | 1.41 | .69\*\*\* | -2.80\*\*\* | -1.28\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**B: Prestige manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 5.47 | 1.15 | - |  |  |  |
| High dominance | 5.14 | 1.18 | -.33† | - |  |  |
| Low prestige | 2.59 | 1.65 | -2.87\*\*\* | -2.55\*\*\* | - |  |
| High prestige | 6.28 | .72 | .82\*\*\* | 1.14\*\*\* | 3.69\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S6: Phase 4 Confirmatory factor analysis of alternative models (Study 2)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | Comparison with Model A | |
| Model | Description | χ2 | *df* | *CFI* | *TLI* | *RMSEA* | Δχ2 | Δ*df* |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Model A a | Hypothesized 12-factor model | 4323.06 | 2556 | .83 | .81 | .063 |  |  |
| Model B b | 11-factor model | 4667.07 | 2406 | .79 | .78 | .069 | 344.01\*\*\* | 11 |
| Model C c | 5-factor model | 6559.35 | 2458 | .63 | .61 | .091 | 2236.3\*\*\* | 63 |
| Model D d | 1-factor model | 6873.92 | 2461 | .60 | .58 | .095 | 2550.9\*\*\* | 66 |
|  |  |  |  |  |  |  |  |  |

*Notes*. *N* = 200. *CFI* = comparative fit index; *TLI* = Tucker–Lewis index; *RMSEA* = root-mean-square error of approximation.

a Hypothesized 12-factor model: Dependency helping, Autonomy helping, General helping, Perceived supervisor support, Interpersonal deviance, In-role behavior, Civic virtue, Coaching, Individualized consideration (supportive leadership dimension), Servant leadership, Directive leadership, Empowering Leadership.

b 11-factor model: Forms of helping (Autonomy helping and Dependency helping collapsed into one factor) and General helping, Perceived supervisor support, Interpersonal deviance, In-role behavior, Civic virtue, Coaching, Individualized consideration (supportive leadership dimension), Servant leadership, Directive leadership, Empowering Leadership.

c 5-factor model: Forms of helping (Autonomy helping, Dependency helping, General helping, Perceived supervisor support collapsed into one factor), OCBs (Interpersonal deviance, In-role behavior, Civic virtue, and Coaching collapsed into one factor), and leadership behaviors (Individualized consideration (supportive leadership dimension), Servant leadership, Directive leadership, and Empowering Leadership collapsed into one factor).

d 1-factor model: All measures collapsed into one factor

\*\*\* *p* < .001

## **Table S7: Phase 4 Means, standard deviations, and inter-correlations for all seven variables (Study 2)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VARIABLES** | ***M*** | ***SD*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | 12 |
| 1 | Dependency helping | 3.20 | 1.58 | *(.95)* |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Autonomy helping | 6.11 | .67 | -.10 | *(.90)* |  |  |  |  |  |  |  |  |  |  |
| 3 | General helping | 5.79 | .74 | .06 | .55\*\*\* | *(.86)* |  |  |  |  |  |  |  |  |  |
| 4 | Perceived supervisor support | 5.83 | .79 | -.19\*\* | .53\*\*\* | .46\*\*\* | *(.84)* |  |  |  |  |  |  |  |  |
| 5 | Interpersonal deviance | 1.23 | .48 | .19\*\* | -.20\*\* | -.12 | -.34\*\*\* | *(.86)* |  |  |  |  |  |  |  |
| 6 | In-role behavior | 6.51 | .65 | -.17\* | .59\*\*\* | .55\*\*\* | .48\*\*\* | -.30\*\*\* | *(.94)* |  |  |  |  |  |  |
| 7 | Civic virtue | 5.46 | 1.17 | -.01 | .30\*\*\* | .52\*\*\* | .22\*\* | -.04 | .38\*\*\* | *(.84)* |  |  |  |  |  |
| 8 | Coaching | 5.46 | 1.16 | .002 | .53\*\*\* | .51\*\*\* | .45\*\*\* | -.04 | .35\*\*\* | .49\*\*\* | *(.89)* |  |  |  |  |
| 9 | Individualized consideration (supportive leadership dimension) | 5.84 | 1.00 | -.08 | .45\*\*\* | .50\*\*\* | .68\*\*\* | -.25\*\*\* | .48\*\*\* | .25\*\*\* | .47\*\*\* | *(.94)* |  |  |  |
| 10 | Servant leadership | 4.91 | 1.16 | .17\* | .28\*\*\* | .42\*\*\* | .43\*\*\* | -.05 | .21\*\* | .35\*\*\* | .44\*\*\* | .46\*\*\* | *(.90)* |  |  |
| 11 | Directive leadership | 3.77 | .85 | .24\*\*\* | .08 | .004 | -.17\* | .20\*\* | -.04 | .02 | .18\* | -.17\* | -.005 | *(.48)* |  |
| 12 | Empowering leadership | 5.78 | .68 | -.13 | .67\*\*\* | .61\*\*\* | .58\*\*\* | -.21\*\* | .56\*\*\* | .40\*\*\* | .60\*\*\* | .50\*\*\* | .45\*\*\* | -.003 | *(.92)* |

Notes: *N* = 200; Internal consistency reliabilities appear in parentheses along the diagonal

\* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S8: Phase 5 Fractional logit for dependency help offered (Study 2)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF DEPENDENCY HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Self-reported dependency helping | .279\*\*\* |  | .268\*\*\* | .258\*\*\* |  | .250\*\* |
|  | (.069) |  | (.071) | (.074) |  | (.076) |
| Self-reported autonomy helping |  | -.271\*\* | -.193\* |  | -.212\* | -.139 |
|  |  | (.101) | (.096) |  | (.106) | (.106) |
| Gender a |  |  |  | -.264 | -.191 | -.208 |
|  |  |  |  | (.178) | (.193) | (.187) |
| Age |  |  |  | -.059\*\* | -.066\*\*\* | -.060\*\* |
|  |  |  |  | (.018) | (.019) | (.018) |
| Income |  |  |  | -.086 | -.066 | -.083 |
|  |  |  |  | (.067) | (.068) | (.068) |
| Job experience |  |  |  | .043\* | .045\* | .045\* |
|  |  |  |  | (.018) | (.018) | (.018) |
| Constant | -3.806\*\*\* | -1.270\* | -2.618\*\*\* | -1.777\*\*\* | .454 | -.955 |
|  | (.250) | (.597) | (.668) | (.534) | (.762) | (.843) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 85.34 | 86.30 | 87.16 | 92.17 | 93.05 | 94.08 |
| *BIC* | 91.94 | 92.90 | 97.05 | 112.0 | 112.8 | 117.2 |
| *Log likelihood* | -40.67 | -41.15 | -40.58 | -40.08 | -40.52 | -40.04 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S9: Phase 5 Fractional logit for autonomy help offered (Study 2)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF AUTONOMY HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Self-reported dependency helping | -.044\*\* |  | -.031\* | -.041\* |  | -.030\* |
|  | (.016) |  | (.014) | (.016) |  | (.014) |
| Self-reported autonomy helping |  | .164\*\*\* | .155\*\* |  | .161\*\*\* | .153\*\* |
|  |  | (.049) | (.049) |  | (.049) | (.049) |
| Gender a |  |  |  | .083\* | .041 | .042 |
|  |  |  |  | (.041) | (.038) | (.037) |
| Age |  |  |  | .016\*\* | .017\*\* | .017\*\*\* |
|  |  |  |  | (.005) | (.005) | (.005) |
| Income |  |  |  | .017 | .012 | .014 |
|  |  |  |  | (.015) | (.014) | (.014) |
| Job experience |  |  |  | -.012\* | -.014\* | -.015\* |
|  |  |  |  | (.006) | (.006) | (.006) |
| Constant | -.739\*\*\* | -1.868\*\*\* | -1.718\*\*\* | -1.242\*\*\* | -2.326\*\*\* | -2.184\*\*\* |
|  | (.044) | (.310) | (.310) | (.143) | (.348) | (.346) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 246.3 | 246.0 | 247.9 | 254.0 | 253.7 | 255.6 |
| *BIC* | 252.9 | 252.6 | 257.8 | 273.8 | 273.5 | 278.7 |
| *Log likelihood* | -121.2 | -121.0 | -120.9 | -121.0 | -120.8 | -120.8 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S10: Phase 5 Fractional logit for no help offered (Study 2)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF NO HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Self-reported dependency helping | .135 |  | -.141 | .068 |  | -.218 |
|  | (.184) |  | (.242) | (.192) |  | (.268) |
| Self-reported autonomy helping |  | -1.389\*\*\* | -1.466\*\*\* |  | -1.310\*\*\* | -1.421\*\*\* |
|  |  | (.328) | (.344) |  | (.347) | (.384) |
| Gender a |  |  |  | -.762 | -.164 | -.177 |
|  |  |  |  | (.595) | (.603) | (.593) |
| Age |  |  |  | .012 | .020 | .022 |
|  |  |  |  | (.062) | (.052) | (.053) |
| Income |  |  |  | .035 | .117 | .126 |
|  |  |  |  | (.164) | (.180) | (.179) |
| Job experience |  |  |  | -.057 | -.050 | -.059 |
|  |  |  |  | (.074) | (.064) | (.068) |
| Constant | -5.180\*\*\* | 3.120† | 3.994† | -4.369\*\*\* | 2.256 | 3.573 |
|  | (.634) | (1.759) | (2.227) | (1.286) | (2.125) | (2.483) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 23.76 | 21.61 | 23.57 | 31.19 | 29.45 | 31.37 |
| *BIC* | 30.35 | 28.20 | 33.47 | 50.98 | 49.24 | 54.46 |
| *Log likelihood* | -9.878 | -8.804 | -8.786 | -9.596 | -8.726 | -8.687 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S11: Phase 5 Poisson regression results for dependency help count (Study 2)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DEPENDENCY HELP COUNT** | | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** | ***Model 7*** |
|  |  |  |  |  |  |  |  |
| Self-reported dependency  helping | .245\*  (.041) |  | .240\*\*\*  (.042) |  | .232\*\*\*  (.042) |  | .226\*\*\*  (.042) |
| Self-reported autonomy  helping |  | -.165\*  (.079) | -.099  (.077) |  |  | -.182\*  (.082) | -.131  (.081) |
| Gender a |  |  |  | .134  (.110) | .140  (.110) | .199†  (.114) | .191†  (.114) |
| Age |  |  |  | -.017\*\*  (.006) | -.011\*  (.006) | -.016\*\*  (.006) | -.011†  (.006) |
| Income |  |  |  | .081\*  (.039) | .069†  (.039) | .087\*  (.040) | .074†  (.039) |
| Constant | -.283†  (.154) | 1.516\*\*  (.476) | .328  (.501) | .705\*\*  (.266) | -.207  (.313) | 1.738\*\*\*  (.521) | .529  (.552) |
| *N*  *AIC* | 200  731.26 | 200  761.46 | 200  731.64 | 200  758.18 | 200  730.20 | 200  755.15 | 200  729.64 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S12: Phase 5 Poisson regression results for autonomy help count (Study 2)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **AUTONOMY HELP COUNT** | | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** | ***Model 7*** |
|  |  |  |  |  |  |  |  |
| Self-reported dependency  helping | -.086\*\*  (.026) |  | -.067\*  (.026) |  | -.083\*\*  (.027) |  | -.072\*\*  (.027) |
| Self-reported autonomy  helping |  | .232\*\*\*  (.051) | .213\*\*\*  (.052) |  |  | .179\*\*\*  (.053) | .162\*\*  (.054) |
| Gender a |  |  |  | .320\*\*\*  (.066) | .315\*\*\*  (.066) | .272\*\*\*  (.067) | .274\*\*\*  (.067) |
| Age |  |  |  | .003  (.003) | .001  (.003) | .002  (.003) | .001  (.003) |
| Income |  |  |  | .101\*\*\*  (.024) | .105\*\*\*  (.024) | .097\*\*\*  (.024) | .102\*\*\*  (.024) |
| Constant | 1.82\*\*\*  (.085) | .155  (.317) | .473  (.343) | .823\*\*\*  (.161) | 1.103\*\*\*  (.185) | -.208  (.348) | .130  (.373) |
| *N*  *AIC* | 200  1300.8 | 200  1290.6 | 200  1285.9 | 200  1273.7 | 200  1265.8 | 200  1264.1 | 200  1258.7 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S13:Phase 6a Incremental validity of our dependency scale over existing scales in predicting employee absenteeism (Study 2)**

|  |  |  |
| --- | --- | --- |
|  | **ABSENTEESIM** | |
| PREDCITOR | ***Step 1*** | ***Step 2*** |
|  |  |  |
| Helping orientations inventory (dependency orientation) | .011  (.035) | .025  (.035) |
| Modified dependent help-giving styles scale | .091\*\*  (.031) | .148\*\*\*  (.039) |
| Our dependency helping scale |  | -.081\*  (.035) |
| Constant | 1.058\*\*\*  (.142) | 1.043\*\*\*  (.143) |
| *Residual df* | 197 | 196 |
| *Residual deviance* | 830.89 | 825.52 |
| Δ *Deviance* | 5.367\* | |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S14:Phase 6a Incremental validity of our autonomy scale over existing scales in predicting employee absenteeism (Study 2)**

|  |  |  |
| --- | --- | --- |
|  | **ABSENTEESIM** | |
| PREDCITOR | ***Step 1*** | ***Step 2*** |
|  |  |  |
| Helping orientations inventory (autonomy orientation) | .089†  (.051) | -.036  (.055) |
| Modified autonomous help-giving styles scale | -.128\*\*  (.049) | -.264\*\*\*  (.055) |
| Our autonomy helping scale |  | .378\*\*\*  (.070) |
| Constant | 1.557\*\*\*  (.289) | .758\*  (.345) |
| *Residual df* | 197 | 196 |
| *Residual deviance* | 836.16 | 805.90 |
| Δ *Deviance* | 30.257\*\*\* | |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S15: Confirmatory factor analyses of alternative models (Study 3a)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | Comparison with Model A | |
| Model | Description | *χ2* | *df* | *CFI* | *TLI* | *RMSEA* | *SRMR* | Δ*χ2* | Δ*df* |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Model A a | Hypothesized four factor model | 448.15 | 370 | .95 | .95 | .041 | .059 |  |  |
| Model B b | Two factor model | 534.92 | 375 | .91 | .90 | .058 | .068 | 86.77\*\*\* | 5 |
| Model C c | One factor model | 796.51 | 376 | .75 | .74 | .094 | .095 | 348.37\*\*\* | 6 |
|  |  |  |  |  |  |  |  |  |  |

*Notes*. *N* = 128. *CFI* = comparative fit index; *TLI* = Tucker–Lewis index; *RMSEA* = root-mean-square error of approximation.

a Hypothesized four-factor model: Dominance, Prestige, Dependency helping, and Autonomy helping.

b 2-factor model with measures group by hierarchical orientation and helping behavior: Hierarchical orientation (Dominance, Prestige) and Helping behavior (Dependency helping and Autonomy helping).

c 1-factor model.

\*\*\* *p* < .001

## **Table S16: Multilevel confirmatory factor analyses of alternative models (Study 3b)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  | Comparison with Model A | |
| Model | Description | *χ2* | *df* | *CFI* | *TLI* | *RMSEA* | *SRMR* | Δ*χ2* | Δ*df* |
|  |  |  |  |  |  |  |  |  |  |
| Model A a | Hypothesized six factor model | 1785.74 | 640 | .86 | .84 | .065 | .053 |  |  |
| Model B b | Five factor model | 1806.05 | 645 | .86 | .84 | .066 | .053 | 20.30\*\* | 5 |
| Model C c | Two factor model | 3116.12 | 654 | .69 | .67 | .095 | .082 | 1330.37\*\*\* | 14 |
| Model D d | One factor model | 3237.91 | 655 | .68 | .66 | .097 | .083 | 1452.17\*\*\* | 15 |
|  |  |  |  |  |  |  |  |  |  |

*Notes*. *N* = 420. *CFI* = comparative fit index; *TLI* = Tucker–Lewis index; *RMSEA* = root-mean-square error of approximation.

a Hypothesized six-factor model: Dominance, Prestige, Zero-sum mindset, Dependency helping, Autonomy helping, and Status threat.

b 5-factor model with mediator and moderator grouped together: Dominance, Prestige, Dependency helping, Autonomy helping, and Mediator and Moderator (Zero-sum mindset and Status threat)

c 2-factor model with measures group by survey responder: Leader (Dominance, Prestige, Zero-sum mindset, and Status threat) and Employee (Dependency helping and Autonomy helping).

d 1-factor model.

\*\*\* *p* < .001

## **Table S17: Results of linear regression for dependency help analyzed at the leader-level (Study 3b)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | |  | |  | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | |
|  | **DEPENDENCY HELP MODELS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Variables*** | **1** | | | **2** | | **3** | | **4** | | **5** | **6** | | **7** | | **8** | | **9** | | **10** | | **11** | | **12** | | **13** | | **14** | | **15** | | **16** | | **17** | **18** | | **19** |
| Dominance | .60\*\*\* | | |  | | .31\*\*\* | |  | | .18\* |  | | .19\* | | -.16 | | .20\* | |  | | .39\*\*\* | |  | | .25\*\* | |  | | .18\* | |  | | .18\* | -.08 | | .18\* |
|  | (.07) | | |  | | (.08) | |  | | (.08) |  | | (.08) | | (.13) | | (.08) | |  | | (.08) | |  | | (.08) | |  | | (.08) | |  | | (.08) | (.14) | | (.08) |
| Prestige |  | | | -.61\*\*\* | | -.42\*\*\* | |  | | -.34\*\*\* |  | | -.33\*\*\* | | -.31\*\*\* | | -.22 | |  | |  | | -.44\*\*\* | | -.35\*\*\* | |  | | -.31\*\*\* | |  | | -.31\*\*\* | -.31\*\*\* | | -.33\* |
|  |  | | | (.06) | | (.08) | |  | | (.07) |  | | (.07) | | (.07) | | (.14) | |  | |  | | (.07) | | (.08) | |  | | (.07) | |  | | (.07) | (.07) | | (.15) |
| Zero-sum mindset |  | | |  | |  | | .53\*\*\* | | .30\*\*\* |  | | .28\*\*\* | | .22\*\* | | .26\*\* | |  | |  | |  | |  | | .39\*\*\* | | .27\*\*\* | |  | | .27\*\*\* | .23\*\* | | .27\*\* |
|  |  | | |  | |  | | (.06) | | (.06) |  | | (.08) | | (.08) | | (.08) | |  | |  | |  | |  | | (.07) | | (.07) | |  | | (.08) | (.08) | | (.08) |
| Status threat |  | | |  | |  | |  | |  | .41\*\*\* | | .03 | | -.39\* | | .17 | |  | |  | |  | |  | |  | |  | | .19\* | | .01 | -.30† | | -.01 |
|  |  | | |  | |  | |  | |  | (.06) | | (.07) | | (.15) | | (.16) | |  | |  | |  | |  | |  | |  | | (.08) | | (.07) | (.15) | | (.18) |
| Dominance X |  | | |  | |  | |  | |  |  | |  | | .13\*\* | |  | |  | |  | |  | |  | |  | |  | |  | |  | .11\* | |  |
| Status threat |  | | |  | |  | |  | |  |  | |  | | (.04) | |  | |  | |  | |  | |  | |  | |  | |  | |  | (.05) | |  |
| Prestige X |  | | |  | |  | |  | |  |  | |  | |  | | -.03 | |  | |  | |  | |  | |  | |  | |  | |  |  | | .005 |
| Status threat |  | | |  | |  | |  | |  |  | |  | |  | | (.03) | |  | |  | |  | |  | |  | |  | |  | |  |  | | (.03) |
| Age |  | | |  | |  | |  | |  |  | |  | |  | |  | | .01 | | .02 | | .01 | | .02 | | .01 | | .02 | | .01 | | .02 | .01 | | .02 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.02) | | (.02) | | (.01) | | (.01) | | (.02) | | (.01) | | (.02) | | (.01) | (.01) | | (.01) |
| Gender a |  | | |  | |  | |  | |  |  | |  | |  | |  | | .05 | | .06 | | .04 | | .05 | | -.00 | | .01 | | .07 | | .02 | .02 | | .01 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.12) | | (.11) | | (.11) | | (.10) | | (.11) | | (.09) | | (.12) | | (.10) | (.09) | | (.10) |
| Perception of |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.18\* | | -.15\* | | -.16\* | | -.14\* | | -.11 | | -.10 | | -.12 | | -.09 | -.06 | | -.10 |
| employee competence |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.08) | | (.08) | | (.07) | | (.07) | | (.08) | | (.06) | | (.09) | | (.07) | (.07) | | (.07) |
| Perceived status of |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.13\* | | -.13\* | | -.10† | | -.11\* | | -.08 | | -.07 | | -.11† | | -.07 | -.05 | | -.07 |
| employee |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.06) | | (.06) | | (.06) | | (.05) | | (.06) | | (.05) | | (.06) | | (.05) | (.05) | | (.05) |
| Envy |  | | |  | |  | |  | |  |  | |  | |  | |  | | .29\*\*\* | | .10 | | .06 | | -.01 | | .22\*\*\* | | -.00 | | .24\*\* | | -.01 | -.04 | | -.01 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.07) | | (.08) | | (.07) | | (.07) | | (.06) | | (.07) | | (.07) | | (.07) | (.07) | | (.07) |
| Self-interest |  | | |  | |  | |  | |  |  | |  | |  | |  | | .08 | | .08 | | .08 | | .08† | | .17\*\* | | .14\*\* | | .13\* | | .15\*\* | .15\*\* | | .15\*\* |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.06) | | (.05) | | (.05) | | (.05) | | (.05) | | (.05) | | (.06) | | (.05) | (.05) | | (.05) |
| Other orientation |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.14\* | | -.10† | | -.09† | | -.08 | | -.07 | | -.04 | | -.12\* | | -.04 | -.02 | | -.04 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.06) | | (.06) | | (.05) | | (.05) | | (.06) | | (.05) | | (.06) | | (.05) | (.05) | | (.05) |
| LMX |  | | |  | |  | |  | |  |  | |  | |  | |  | | .29\* | | .22† | | .07 | | .07 | | .29\* | | .10 | | .27† | | .10 | .06 | | .10 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.14) | | (.13) | | (.13) | | (.12) | | (.13) | | (.11) | | (.14) | | (.11) | (.11) | | (.12) |
| Constant | 1.01\*\*\* | | | 5.80\*\*\* | | 3.95\*\*\* | | 1.26\*\*\* | | 3.12\*\*\* | 1.59\*\*\* | | 3.08\*\*\* | | 4.14\*\*\* | | 2.51\*\* | | 1.76 | | .91 | | 5.36\*\*\* | | 4.06\*\* | | -.52 | | 2.29† | | .82 | | 2.27† | 2.99\* | | 2.39 |
|  | (.19) | | | (.33) | | (.57) | | (.16) | | (.53) | (.16) | | (.54) | | (.62) | | (.80) | | (1.25) | | (1.14) | | (1.22) | | (1.24) | | (1.19) | | (1.22) | | (1.29) | | (1.24) | (1.25) | | (1.45) |
| *N* | 105 | | | 105 | | 105 | | 105 | | 105 | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | 105 | | 105 |
| *AIC* | 201.0 | | | 188.8 | | 176.5 | | 196.7 | | 152.0 | 219.0 | | 153.8 | | 146.6 | | 154.8 | | 202.7 | | 181.3 | | 170.4 | | 162.3 | | 178.1 | | 146.4 | | 198.8 | | 148.4 | 144.4 | | 150.3 |
| *BIC* | 206.3 | | | 194.1 | | 184.5 | | 202.0 | | 162.6 | 224.3 | | 167.1 | | 162.5 | | 170.8 | | 226.6 | | 207.8 | | 196.9 | | 191.5 | | 204.6 | | 178.2 | | 225.4 | | 182.9 | 181.6 | | 187.5 |
| *ICC* | -98.52 | | | -92.41 | | -85.26 | | -96.36 | | -72.00 | -107.5 | | -71.90 | | -67.28 | | -71.42 | | -92.33 | | -80.64 | | -75.20 | | -70.13 | | -79.04 | | -61.19 | | -89.42 | | -61.18 | -58.21 | | -61.16 |
| *Log Likelihood* | 1 | | | 1 | | 2 | | 1 | | 3 | 1 | | 4 | | 5 | | 5 | | 8 | | 9 | | 9 | | 10 | | 9 | | 11 | | 9 | | 12 | 13 | | 13 |

*Notes*. Standard errors in parentheses; a Categorical variable, 0 = Female, 1 = Male; † *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S18: Results of linear regression for autonomy help analyzed at the leader-level (Study 3b)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | |  | |  | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | |  | | |
|  | **AUTONOMY HELP MODELS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Variables*** | **1** | | | **2** | | **3** | | **4** | | **5** | **6** | | **7** | | **8** | | **9** | | **10** | | **11** | | **12** | | **13** | | **14** | | **15** | | **16** | | **17** | **18** | | **19** |
| Dominance | -.61\*\*\* | | |  | | -.42\*\*\* | |  | | -.20\* |  | | -.21\* | | .17 | | -.23\* | |  | | -.30\*\* | |  | | -.23\* | |  | | -.13 | |  | | -.16† | .18 | | -.18† |
|  | (.09) | | |  | | (.11) | |  | | (.09) |  | | (.09) | | (.16) | | (.09) | |  | | (.10) | |  | | (.11) | |  | | (.10) | |  | | (.09) | (.17) | | (.09) |
| Prestige |  | | | .54\*\*\* | | .28\*\* | |  | | .14† |  | | .12 | | .09 | | -.16 | |  | |  | | .26\*\* | | .17† | |  | | .12 | |  | | .12 | .11 | | -.19 |
|  |  | | | (.08) | | (.10) | |  | | (.09) |  | | (.08) | | (.08) | | (.16) | |  | |  | | (.09) | | (.10) | |  | | (.09) | |  | | (.09) | (.09) | | (.18) |
| Zero-sum mindset |  | | |  | |  | | -.66\*\*\* | | -.51\*\*\* |  | | -.30\*\* | | -.24\* | | -.27\*\* | |  | |  | |  | |  | | -.45\*\*\* | | -.39\*\*\* | |  | | -.24\* | -.20\* | | -.22\* |
|  |  | | |  | |  | | (.06) | | (.07) |  | | (.09) | | (.09) | | (.09) | |  | |  | |  | |  | | (.08) | | (.08) | |  | | (.10) | (.10) | | (.10) |
| Status threat |  | | |  | |  | |  | |  | -.59\*\*\* | | -.27\*\* | | .19 | | -.61\*\* | |  | |  | |  | |  | |  | |  | | -.40\*\*\* | | -.26\*\* | .14 | | -.64\*\* |
|  |  | | |  | |  | |  | |  | (.06) | | (.08) | | (.18) | | (.19) | |  | |  | |  | |  | |  | |  | | (.08) | | (.09) | (.19) | | (.21) |
| Dominance X |  | | |  | |  | |  | |  |  | |  | | -.14\*\* | |  | |  | |  | |  | |  | |  | |  | |  | |  | -.14\* | |  |
| Status threat |  | | |  | |  | |  | |  |  | |  | | (.05) | |  | |  | |  | |  | |  | |  | |  | |  | |  | (.06) | |  |
| Prestige X |  | | |  | |  | |  | |  |  | |  | |  | | .07\* | |  | |  | |  | |  | |  | |  | |  | |  |  | | .08\* |
| Status threat |  | | |  | |  | |  | |  |  | |  | |  | | (.04) | |  | |  | |  | |  | |  | |  | |  | |  |  | | (.04) |
| Age |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.00 | | -.01 | | -.00 | | -.01 | | .00 | | -.00 | | .00 | | .00 | .00 | | -.00 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | (.02) | | (.02) |
| Gender a |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.07 | | -.07 | | -.07 | | -.07 | | -.01 | | -.02 | | -.10 | | -.06 | -.07 | | -.12 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.14) | | (.13) | | (.14) | | (.13) | | (.12) | | (.12) | | (.13) | | (.12) | (.12) | | (.12) |
| Perception of |  | | |  | |  | |  | |  |  | |  | |  | |  | | .14 | | .12 | | .12 | | .11 | | .05 | | .04 | | .01 | | -.01 | -.06 | | -.04 |
| employee competence |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.09) | | (.09) | | (.09) | | (.09) | | (.08) | | (.08) | | (.09) | | (.08) | (.08) | | (.08) |
| Perceived status of |  | | |  | |  | |  | |  |  | |  | |  | |  | | .08 | | .08 | | .07 | | .07 | | .02 | | .02 | | .03 | | .01 | -.01 | | -.00 |
| employee |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.07) | | (.07) | | (.07) | | (.07) | | (.06) | | (.06) | | (.07) | | (.06) | (.06) | | (.06) |
| Envy |  | | |  | |  | |  | |  |  | |  | |  | |  | | -.29\*\*\* | | -.14 | | -.16† | | -.09 | | -.21\*\* | | -.10 | | -.19\* | | -.05 | -.01 | | -.09 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.08) | | (.09) | | (.09) | | (.09) | | (.07) | | (.09) | | (.08) | | (.08) | (.08) | | (.09) |
| Self-interest |  | | |  | |  | |  | |  |  | |  | |  | |  | | .08 | | .08 | | .08 | | .08 | | -.03 | | -.01 | | -.03 | | -.05 | -.06 | | -.03 |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.06) | | (.06) | | (.06) | | (.06) | | (.06) | | (.06) | | (.06) | | (.06) | (.06) | | (.06) |
| Other orientation |  | | |  | |  | |  | |  |  | |  | |  | |  | | .22\*\* | | .19\*\* | | .20\*\* | | .18\*\* | | .14\* | | .13\* | | .20\*\* | | .14\* | .11† | | .12\* |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.07) | | (.07) | | (.07) | | (.07) | | (.06) | | (.06) | | (.06) | | (.06) | (.06) | | (.06) |
| LMX |  | | |  | |  | |  | |  |  | |  | |  | |  | | .10 | | .16 | | .24 | | .23 | | .11 | | .19 | | .15 | | .22 | .28† | | .24† |
|  |  | | |  | |  | |  | |  |  | |  | |  | |  | | (.16) | | (.16) | | (.16) | | (.16) | | (.14) | | (.15) | | (.15) | | (.14) | (.14) | | (.14) |
| Constant | 7.07\*\*\* | | | 2.62\*\*\* | | 5.08\*\*\* | | 7.14\*\*\* | | 6.52\*\*\* | 6.92\*\*\* | | 6.81\*\*\* | | 5.65\*\*\* | | 8.20\*\*\* | | 2.88\* | | 3.53\* | | .79 | | 1.98 | | 5.54\*\*\* | | 4.51\*\* | | 4.92\*\*\* | | 5.02\*\* | 4.09\*\* | | 6.82\*\*\* |
|  | (.24) | | | (.45) | | (.78) | | (.17) | | (.66) | (.16) | | (.63) | | (.74) | | (.93) | | (1.40) | | (1.36) | | (1.56) | | (1.62) | | (1.32) | | (1.57) | | (1.33) | | (1.52) | (1.54) | | (1.75) |
| *N* | 105 | | | 105 | | 105 | | 105 | | 105 | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | 105 | | 105 |
| *AIC* | 246.3 | | | 252.9 | | 241.1 | | 208.1 | | 196.9 | 216.3 | | 187.8 | | 181.8 | | 185.6 | | 227.6 | | 219.6 | | 221.5 | | 218.4 | | 200.8 | | 198.7 | | 206.3 | | 191.9 | 187.4 | | 189.4 |
| *BIC* | 251.6 | | | 258.2 | | 249.0 | | 213.4 | | 207.5 | 221.6 | | 201.1 | | 197.7 | | 201.6 | | 251.5 | | 246.2 | | 248.1 | | 247.6 | | 227.3 | | 230.5 | | 232.8 | | 226.4 | 224.6 | | 226.5 |
| *Log Likelihood* | -121.1 | | | -124.4 | | -117.5 | | -102.1 | | -94.45 | -106.1 | | -88.92 | | -84.89 | | -86.81 | | -104.8 | | -99.82 | | -100.8 | | -98.21 | | -90.40 | | -87.33 | | -93.14 | | -82.95 | -79.70 | | -80.69 |

*Notes*. Standard errors in parentheses; a Categorical variable, 0 = Female, 1 = Male; † *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S19: Results of linear regression for zero-sum mindset analyzed at the leader-level (Study 3b)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | |  | |  | |  | | |  | |  | |  | |  | |  | |  | |  | |  | |  | |
|  | **ZERO-SUM MINDSET MODELS** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***Variables*** | **1** | | | **2** | | **3** | | **4** | | **5** | **6** | | **7** | | **8** | | **9** | | **10** | | **11** | | **12** | | **13** | | **14** | | **15** | |
| Dominance | .61\*\*\* | | |  | | .43\*\* | |  | | .23\* | -.13 | | .25\*\* | |  | | .30\*\* | |  | | .24\* | |  | | .23\* | | -.05 | | .24\* | |
|  | (.10) | | |  | | (.13) | |  | | (.09) | (.17) | | (.09) | |  | | (.11) | |  | | (.12) | |  | | (.10) | | (.18) | | (.10) | |
| Prestige |  | | | -.53\*\*\* | | -.26\* | |  | | -.07 | -.04 | | .14 | |  | |  | | -.22\* | | -.13 | |  | | -.09 | | -.08 | | .13 | |
|  |  | | | (.10) | | (.12) | |  | | (.09) | (.09) | | (.17) | |  | |  | | (.10) | | (.11) | |  | | (.09) | | (.09) | | (.19) | |
| Status threat |  | | |  | |  | | .71\*\*\* | | .61\*\*\* | .15 | | .86\*\*\* | |  | |  | |  | |  | | .52\*\*\* | | .50\*\*\* | | .17 | | .77\*\*\* | |
|  |  | | |  | |  | | (.06) | | (.06) | (.20) | | (.19) | |  | |  | |  | |  | | (.08) | | (.08) | | (.20) | | (.21) | |
| Dominance X |  | | |  | |  | |  | |  | .13\* | |  | |  | |  | |  | |  | |  | |  | | .11† | |  | |
| Status threat |  | | |  | |  | |  | |  | (.05) | |  | |  | |  | |  | |  | |  | |  | | (.06) | |  | |
| Prestige X |  | | |  | |  | |  | |  |  | | -.05 | |  | |  | |  | |  | |  | |  | |  | | -.06 | |
| Status threat |  | | |  | |  | |  | |  |  | | (.04) | |  | |  | |  | |  | |  | |  | |  | | (.04) | |
| Age |  | | |  | |  | |  | |  |  | |  | | .01 | | .01 | | .01 | | .01 | | -.00 | | .00 | | .00 | | .00 | |
|  |  | | |  | |  | |  | |  |  | |  | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | | (.02) | |
| Gender a |  | | |  | |  | |  | |  |  | |  | | .13 | | .13 | | .12 | | .13 | | .17 | | .17 | | .18 | | .21 | |
|  |  | | |  | |  | |  | |  |  | |  | | (.15) | | (.15) | | (.15) | | (.15) | | (.13) | | (.13) | | (.12) | | (.13) | |
| Perception of |  | | |  | |  | |  | |  |  | |  | | -.20† | | -.18† | | -.19† | | -.17† | | -.02 | | -.01 | | .03 | | .01 | |
| employee competence |  | | |  | |  | |  | |  |  | |  | | (.10) | | (.10) | | (.10) | | (.10) | | (.09) | | (.09) | | (.09) | | (.09) | |
| Perceived status of |  | | |  | |  | |  | |  |  | |  | | -.14† | | -.14† | | -.13 | | -.13† | | -.08 | | -.08 | | -.05 | | -.07 | |
| employee |  | | |  | |  | |  | |  |  | |  | | (.08) | | (.08) | | (.08) | | (.08) | | (.07) | | (.07) | | (.07) | | (.07) | |
| Envy |  | | |  | |  | |  | |  |  | |  | | .17† | | .02 | | .05 | | -.02 | | .04 | | -.11 | | -.14 | | -.08 | |
|  |  | | |  | |  | |  | |  |  | |  | | (.09) | | (.10) | | (.10) | | (.10) | | (.08) | | (.09) | | (.09) | | (.09) | |
| Self-interest |  | | |  | |  | |  | |  |  | |  | | -.24\*\*\* | | -.24\*\*\* | | -.24\*\*\* | | -.24\*\*\* | | -.10 | | -.10† | | -.09 | | -.11† | |
|  |  | | |  | |  | |  | |  |  | |  | | (.07) | | (.07) | | (.07) | | (.07) | | (.06) | | (.06) | | (.06) | | (.06) | |
| Other orientation |  | | |  | |  | |  | |  |  | |  | | -.18\* | | -.15\* | | -.16\* | | -.14† | | -.15\* | | -.12† | | -.09 | | -.10 | |
|  |  | | |  | |  | |  | |  |  | |  | | (.08) | | (.07) | | (.08) | | (.07) | | (.07) | | (.06) | | (.06) | | (.06) | |
| LMX |  | | |  | |  | |  | |  |  | |  | | .00 | | -.05 | | -.11 | | -.11 | | -.05 | | -.14 | | -.18 | | -.15 | |
|  |  | | |  | |  | |  | |  |  | |  | | (.18) | | (.17) | | (.18) | | (.18) | | (.15) | | (.15) | | (.15) | | (.15) | |
| Constant | .93\*\* | | | 5.32\*\*\* | | 2.80\*\* | | .78\*\*\* | | .76 | 1.80\* | | -.31 | | 5.91\*\*\* | | 5.27\*\*\* | | 7.73\*\*\* | | 6.46\*\*\* | | 3.27\* | | 3.59\* | | 4.21\* | | 2.24 | |
|  | (.28) | | | (.51) | | (.90) | | (.16) | | (.68) | (.78) | | (1.01) | | (1.53) | | (1.49) | | (1.72) | | (1.79) | | (1.37) | | (1.59) | | (1.61) | | (1.88) | |
| *N* | 105 | | | 105 | | 105 | | 105 | | 105 | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | | 105 | |
| *AIC* | 274.9 | | | 281.0 | | 272.1 | | 212.0 | | 202.8 | 198.6 | | 202.7 | | 245.3 | | 239.0 | | 242.2 | | 239.5 | | 212.1 | | 205.7 | | 204.1 | | 205.7 | |
| *BIC* | 280.2 | | | 286.3 | | 280.0 | | 217.3 | | 213.4 | 211.8 | | 216.0 | | 269.1 | | 265.6 | | 268.7 | | 268.6 | | 238.7 | | 237.6 | | 238.6 | | 240.2 | |
| *Log Likelihood* | -135.4 | | | -138.5 | | -133.0 | | -104.0 | | -97.41 | -94.29 | | -96.37 | | -113.6 | | -109.5 | | -111.1 | | -108.7 | | -96.06 | | -90.86 | | -89.03 | | -89.86 | |

*Notes*. Standard errors in parentheses; a Categorical variable, 0 = Female, 1 = Male; † *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S20: Means, Standard Deviations, and Inter-correlations (Study S1)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VARIABLES** | ***M*** | ***SD*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| 1 | Dominance | 2.56 | 1.42 | (.96) |  |  |  |  |  |  |  |
| 2 | Prestige | 6.23 | .65 | -.17\* | (.86) |  |  |  |  |  |  |
| 3 | Proportion of dependency help offered | .13 | .18 | .34\*\*\* | -.21\*\* | - |  |  |  |  |  |
| 4 | Proportion of autonomy help offered | .83 | .22 | -.43\*\*\* | .25\*\*\* | -.87\*\*\* | - |  |  |  |  |
| 5 | Proportion of no help offered | .04 | .11 | .32\*\*\* | -.17\* | .12 | -.59\*\*\* | - |  |  |  |
| 6 | Gender a | .48 | .50 | -.30\*\*\* | .15\* | .02 | .07 | -.18\* | - |  |  |
| 7 | Age | 36.05 | 10.29 | -.18\* | .13† | -.09 | .15 | -.15 | .04 | - |  |
| 8 | Income | 3.79 | 1.38 | .02 | -.06 | -.10 | .08 | -.0007 | -.21\*\* | .25\*\*\* | - |

Notes: *N* = 200; Internal consistency reliabilities appear in parentheses along the diagonal

a Categorical variable: 0 = Male, 1 = Female

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S21: Fractional logit results for dependency help offered (Study S1)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF DEPENDENCY HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Dominance | .30\*\*\* |  | .28\*\*\* | .34\*\*\* |  | .33\*\*\* |
|  | (.06) |  | (.06) | (.07) |  | (.06) |
| Prestige |  | -.46\*\* | -.36\* |  | -.47\*\* | -.43\*\* |
|  |  | (.14) | (.14) |  | (.15) | (.15) |
| Gender a |  |  |  | .40 | .08 | .46† |
|  |  |  |  | (.25) | (.24) | (.24) |
| Age |  |  |  | -.00 | -.01 | .00 |
|  |  |  |  | (.01) | (.01) | (.01) |
| Income |  |  |  | -.10 | -.12 | -.12 |
|  |  |  |  | (.11) | (.11) | (.11) |
| Constant | -2.76\*\*\* | .89 | -.48 | -2.66\*\*\* | 1.60 | -.11 |
|  | (.22) | (.86) | (.86) | (.58) | (1.06) | (1.06) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 151.7 | 155.1 | 152.4 | 156.4 | 160.2 | 156.7 |
| *BIC* | 158.3 | 161.7 | 162.3 | 172.9 | 176.7 | 176.5 |
| *Log likelihood* | -73.86 | -75.54 | -73.20 | -73.21 | -75.11 | -72.33 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S22:Fractional logit for autonomy help offered (Study S1)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF AUTONOMY HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Dominance | -.39\*\*\* |  | -.37\*\*\* | -.39\*\*\* |  | -.38\*\*\* |
|  | (.07) |  | (.07) | (.08) |  | (.07) |
| Prestige |  | .55\*\*\* | .44\*\* |  | .53\*\*\* | .47\*\* |
|  |  | (.15) | (.15) |  | (.16) | (.15) |
| Gender a |  |  |  | -.17 | .19 | -.23 |
|  |  |  |  | (.24) | (.23) | (.24) |
| Age |  |  |  | .01 | .01 | .00 |
|  |  |  |  | (.01) | (.01) | (.01) |
| Income |  |  |  | .07 | .10 | .10 |
|  |  |  |  | (.10) | (.09) | (.10) |
| Constant | 2.71\*\*\* | -1.80\* | -.08 | 2.19\*\*\* | -2.62\* | -.64 |
|  | (.22) | (.91) | (.89) | (.57) | (1.06) | (1.07) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 173.5 | 180.8 | 173.1 | 178.6 | 185.3 | 178.0 |
| *BIC* | 180.1 | 187.4 | 183.0 | 195.1 | 201.8 | 197.8 |
| *Log likelihood* | -84.73 | -88.39 | -83.55 | -84.30 | -87.64 | -83.01 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S23: Fractional logit for no help offered (Study S1)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***PROPORTION OF NO HELP OFFERED*** | | | | | |
| VARIABLES | ***Model 1*** | ***Model 2*** | ***Model 3*** | ***Model 4*** | ***Model 5*** | ***Model 6*** |
| Dominance | .46\*\*\* |  | .46\*\*\* | .38\*\* |  | .38\*\* |
|  | (.11) |  | (.12) | (.12) |  | (.13) |
| Prestige |  | -.63\* | -.52\* |  | -.50† | -.43 |
|  |  | (.25) | (.25) |  | (.29) | (.29) |
| Gender a |  |  |  | -.67 | -1.04\* | -.60 |
|  |  |  |  | (.45) | (.43) | (.45) |
| Age |  |  |  | -.04 | -.04 | -.03 |
|  |  |  |  | (.03) | (.03) | (.03) |
| Income |  |  |  | .06 | -.02 | .01 |
|  |  |  |  | (.13) | (.14) | (.14) |
| Constant | -4.66\*\*\* | .64 | -1.48 | -3.09\*\* | 1.71 | -.49 |
|  | (.42) | (1.49) | (1.58) | (1.09) | (1.74) | (1.95) |
| *N* | 200 | 200 | 200 | 200 | 200 | 200 |
| *AIC* | 64.89 | 68.55 | 65.88 | 69.56 | 71.76 | 70.90 |
| *BIC* | 71.48 | 75.15 | 75.77 | 86.05 | 88.25 | 90.69 |
| *Log likelihood* | -30.44 | -32.28 | -29.94 | -29.78 | -30.88 | -29.45 |

*Note.* Standard errors in parentheses.

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

a Categorical variable (0 = male, 1 = female)

## **Table S24: Means, Standard Deviations, and Inter-correlations (Study S2)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VARIABLES** | ***M*** | ***SD*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 1 | Condition a | 1.50 | 1.12 | - |  |  |  |  |  |  |  |  |  |
| 2 | Dominance | 3.27 | 2.03 | .11\*\* | (.98) |  |  |  |  |  |  |  |  |
| 3 | Prestige | 4.74 | 1.88 | -.06 | -.20\*\*\* | (.98) |  |  |  |  |  |  |  |
| 4 | Proportion of dependency help offered | .05 | .08 | -.01 | .05 | -.09\* | - |  |  |  |  |  |  |
| 5 | Proportion of autonomy help offered | .23 | .13 | -.08\* | -.32\*\*\* | .64\*\*\* | -.33\*\*\* | - |  |  |  |  |  |
| 6 | Proportion of no help offered | .07 | .12 | .12\*\* | .30\*\*\* | -.64\*\*\* | -.07 | -.85\*\*\* | - |  |  |  |  |
| 7 | Gender b | .50 | .50 | -.12\*\* | -.10\* | -.02 | .04 | .04 | -.05 | - |  |  |  |
| 8 | Age | 39.40 | 11.93 | -.10\* | -.04 | -.02 | -.16\*\*\* | .05 | .007 | .10\* | - |  |  |
| 9 | Income | 3.76 | 1.82 | .06 | .05 | -.02 | -.002 | -.04 | .07† | -.16\*\*\* | .04 | - |  |
| 10 | Job experience | 13.72 | 6.41 | -.04 | .01 | -.04 | -.15\*\*\* | -.02 | .09\* | .05 | .74 | .16\*\*\* | - |

Notes: *N* = 551 (Low dominance *N* = 139, High dominance *N* = 135, Low prestige *N* = 139, High prestige *N* = 138)

Internal consistency reliabilities appear in parentheses along the diagonal

a Categorical variable: 0 = Low dominance condition, 1 = High dominance condition, 2 = Low prestige condition, 3 = High prestige condition

b Categorical variable: 0 = Male, 1 = Female

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S25. Post-hoc tests (Study S2)**

**A: Dominance manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 1.51 | .87 | - |  |  |  |
| High dominance | 5.35 | 1.49 | 3.84\*\*\* | - |  |  |
| Low prestige | 3.54 | 1.95 | 2.03\*\*\* | -1.81\*\*\* | - |  |
| High prestige | 2.76 | 1.44 | 1.25\*\*\* | -2.59\*\*\* | -.78\*\*\* |  |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**B: Prestige manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 5.57 | 1.20 | - |  |  |  |
| High dominance | 4.96 | 1.33 | -.60\*\*\* | - |  |  |
| Low prestige | 2.37 | 1.42 | -3.19\*\*\* | -2.59\*\*\* | - |  |
| High prestige | 6.08 | .83 | .51\*\* | 1.12\*\*\* | 3.71\*\*\* |  |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**C: Dependency help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | .05 | .08 | - |  |  |  |
| High dominance | .05 | .08 | .003 | - |  |  |
| Low prestige | .07 | .10 | .01 | .01 | - |  |
| High prestige | .04 | .07 | -.008 | -.01 | -.02\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**D: Autonomy help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | .29 | .08 | - |  |  |  |
| High dominance | .23 | .12 | -.06\*\*\* | - |  |  |
| Low prestige | .10 | .13 | -.19\*\*\* | -.13\*\*\* | - |  |
| High prestige | .30 | .06 | .01 | .07\*\*\* | .21\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**E: No help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | .01 | .05 | - |  |  |  |
| High dominance | .06 | .10 | .05\*\*\* | - |  |  |
| Low prestige | .19 | .13 | .18\*\*\* | .13\*\*\* | - |  |
| High prestige | .008 | .03 | -.003 | -.05\*\*\* | -.18\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S26: Means, Standard Deviations, and Inter-correlations (Study S3)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VARIABLES** | ***M*** | ***SD*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| 1 | Condition a | 1.51 | 1.12 | - |  |  |  |  |  |  |  |  |
| 2 | Dominance | 3.31 | 2.09 | .02 | (.98) |  |  |  |  |  |  |  |
| 3 | Prestige | 4.75 | 1.88 | -.02 | -.26\*\*\* | (.98) |  |  |  |  |  |  |
| 4 | Proportion of dependency help offered | .13 | .18 | .05 | .23\*\*\* | -.54\*\*\* | - |  |  |  |  |  |
| 5 | Proportion of autonomy help offered | .39 | .17 | -.07 | -.22\*\*\* | .57\*\*\* | -.96\*\*\* | - |  |  |  |  |
| 6 | Gender b | .50 | .50 | -.05 | -.07† | -.03 | -.04 | .04 | - |  |  |  |
| 7 | Age | 41.45 | 13.66 | .03 | -.01 | .01 | -.05 | .05 | .18\*\*\* | - |  |  |
| 8 | Income | 3.81 | 1.79 | .02 | -.02 | .07† | .006 | -.02 | -.07 | .14\*\*\* | - |  |
| 9 | Job experience | 14.30 | 6.42 | .0008 | -.06 | -.006 | -.08† | .07 | .15\*\*\* | .76\*\*\* | .23\*\*\* | - |

Notes: *N* = 550 (Low dominance *N* = 136, High dominance *N* = 138, Low prestige *N* = 138, High prestige *N* = 138)

Internal consistency reliabilities appear in parentheses along the diagonal

a Categorical variable: 0 = Low dominance condition, 1 = High dominance condition, 2 = Low prestige condition, 3 = High prestige condition

b Categorical variable: 0 = Male, 1 = Female

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S27. Post-hoc tests (Study S3)**

**A: Dominance manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 1.70 | 1.24 | - |  |  |  |
| High dominance | 5.38 | 1.52 | 3.68\*\*\* | - |  |  |
| Low prestige | 3.75 | 1.99 | 2.05\*\*\* | -1.63\*\*\* | - |  |
| High prestige | 2.39 | 1.34 | .69\*\* | -2.99\*\*\* | -1.36\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**B: Prestige manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 5.46 | 1.13 | - |  |  |  |
| High dominance | 5.02 | 1.22 | -.45\*\* | - |  |  |
| Low prestige | 2.28 | 1.41 | -3.18\*\*\* | -2.73\*\*\* | - |  |
| High prestige | 6.24 | .70 | .78\*\*\* | 1.22\*\*\* | 3.96\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**C: Dependency help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | .06 | .11 | - |  |  |  |
| High dominance | .12 | .16 | .06\*\* | - |  |  |
| Low prestige | .28 | .22 | .21\*\*\* | .16\*\*\* | - |  |
| High prestige | .04 | .08 | -.03\* | -.08\*\*\* | -.24\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**D: Autonomy help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | .45 | .10 | - |  |  |  |
| High dominance | .40 | .14 | -.05\*\* | - |  |  |
| Low prestige | .24 | .22 | -.21\*\*\* | -.17\*\*\* | - |  |
| High prestige | .47 | .08 | .02† | .07\*\*\* | .23\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S28. Means, Standard Deviations, and Inter-correlations (Study S4)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **VARIABLES** | ***M*** | ***SD*** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| 1 | Condition a | 1.46 | 1.13 | - |  |  |  |  |  |  |  |  |
| 2 | Dominance | 3.39 | 2.05 | .09\* | (.98) |  |  |  |  |  |  |  |
| 3 | Prestige | 4.86 | 1.77 | -.04 | -.21\*\*\* | (.97) |  |  |  |  |  |  |
| 4 | Zero-sum mindset | 3.97 | 1.39 | .04 | .56\*\*\* | -.36\*\*\* | (.90) |  |  |  |  |  |
| 5 | Autonomy help | 3.59 | 1.22 | -.08† | -.35\*\*\* | .47\*\*\* | -.38\*\*\* | (.80) |  |  |  |  |
| 6 | Gender b | .52 | .50 | -.006 | -.07† | -.03 | .004 | -.004 | - |  |  |  |
| 7 | Age | 42.65 | 13.30 | -.02 | -.008 | -.04 | -.11\* | -.01 | .07 | - |  |  |
| 8 | Income | 3.70 | 1.77 | .04 | .05 | -.01 | .05 | -.08\* | -.15\*\*\* | .03 | - |  |
| 9 | Job experience | 14.79 | 5.94 | .01 | .03 | -.02 | -.10\* | .008 | .05 | .73 | .11\*\* | - |

Notes: *N* = 571 (Low dominance *N* = 151, High dominance *N* = 146, Low prestige *N* = 135, High prestige *N* = 139)

Internal consistency reliabilities appear in parentheses along the diagonal

a Categorical variable: 0 = Low dominance condition, 1 = High dominance condition, 2 = Low prestige condition, 3 = High prestige condition

b Categorical variable: 0 = Male, 1 = Female

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

## **Table S29. Post-hoc tests (Study S4)**

**A: Dominance manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 1.69 | 1.06 | - |  |  |  |
| High dominance | 5.49 | 1.29 | 3.78\*\*\* | - |  |  |
| Low prestige | 3.66 | 2.01 | 1.97\*\*\* | -1.82\*\*\* | - |  |
| High prestige | 2.75 | 1.47 | 1.07\*\*\* | -2.73\*\*\* | -.91\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**B: Prestige manipulation check**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 5.50 | 1.10 | - |  |  |  |
| High dominance | 5.04 | 1.26 | -.45\*\* | - |  |  |
| Low prestige | 2.64 | 1.60 | -2.86\*\*\* | -2.40\*\*\* | - |  |
| High prestige | 6.12 | .81 | .62\*\*\* | 1.08\*\*\* | 3.47\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**C: Degree of autonomy help offered**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 4.12 | .88 | - |  |  |  |
| High dominance | 3.33 | 1.24 | -.79\*\*\* | - |  |  |
| Low prestige | 2.81 | 1.32 | -1.31\*\*\* | -.52\*\*\* | - |  |
| High prestige | 4.04 | .89 | -.08 | .70\*\*\* | 1.23\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

**D: Zero-sum mindset**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Mean | SD | Low dominance | High dominance | Low prestige | High dominance |
| Low dominance | 3.28 | 1.13 | - |  |  |  |
| High dominance | 4.60 | 1.24 | 1.32\*\*\* | - |  |  |
| Low prestige | 4.69 | 1.26 | 1.41\*\*\* | .09 | - |  |
| High prestige | 3.37 | 1.27 | .08 | -.12\*\*\* | -.32\*\*\* | - |

† *p* < .10, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001

# FIGURES

## ***Figure S1. Interaction effect of dominance and status threat on dependency helping analyzed at the leader-level (Study 3b)***

******

*Note. Lower status threat (-1 SD) raw value = -.883; Higher status threat (+1 SD) raw value = .883*

## ***Figure S2. Interaction effect of dominance and status threat on autonomy helping analyzed at the leader-level (Study 3b)***

******

*Note. Lower status threat (-1 SD) raw value = -.883; Higher status threat (+1 SD) raw value = .883*

## ***Figure S3. Interaction effect of prestige and status threat on autonomy helping analyzed at the leader-level (Study 3b)***

******

*Note. Lower status threat (-1 SD) raw value = -.931; Higher status threat (+1 SD) raw value = .931*

## ***Figure S4. Interaction effect of dominance and status threat on dependency helping (Study 3b)***

***A graph of a number of individuals

Description automatically generated with medium confidence***

*Note. Lower status threat (-1 SD) raw value = -.883; Higher status threat (+1 SD) raw value = .883*

## ***Figure S5. Interaction effect of dominance and status threat on autonomy helping (Study 3b)***

***A graph of a red line and blue line

Description automatically generated***

*Note. Lower status threat (-1 SD) raw value = -.883; Higher status threat (+1 SD) raw value = .883*

## ***Figure S6. Interaction effect of prestige and status threat on autonomy helping (Study 3b)***

***A graph with a line and a red line

Description automatically generated with medium confidence***

*Note. Lower status threat (-1 SD) raw value = -.931; Higher status threat (+1 SD) raw value = .931*

1. One participant simultaneously selected all three options for one scenario—ignoring the request, giving dependency help, and giving autonomy help. No participant ignored the request and provided dependency help. One participant ignored the request and provided autonomy help for three scenarios. These responses represent only 4 out of 1,200 scenario instances (0.33%). The most common combination of multiple help options was selecting both dependency help and autonomy help, chosen by 45 participants. Of these, 24 selected this combination for one scenario, 15 for two scenarios, 3 for three scenarios, and 3 for four scenarios. We conducted four robustness checks to ensure that these responses did not unduly influence the results. First, we excluded the response from the participant who selected all three options for a single scenario. Second, we reclassified the one participant’s response where they ignored the request while providing autonomy help for three scenarios, retaining only the type of help given (i.e., autonomy help). Third, we reclassified these responses as “no help.” Fourth, we excluded them entirely. Across all approaches, the overall significance and directionality of the results remained unchanged. [↑](#footnote-ref-1)
2. The model excluding self-reported dependency helping found that self-reported autonomy helping negatively predicts the proportion of times dependency help was offered, *b* = -.21, *SE* = .11, *z* = -2.01, *p* = .045, *95% CI* [-.42, -.005] (Table S8, Model 5). [↑](#footnote-ref-2)
3. The model excluding self-reported dependency helping found that self-reported autonomy helping negatively predicts the proportion of times dependency help was offered, *b* = -.18, *SE* = .08, *z* = -2.21, *p* = .027, *95% CI* [-.34, -.02] (Table S11, Model 6). [↑](#footnote-ref-3)
4. The model excluding covariates found that prestige positively predicted autonomy helping, *b* = .28, *SE* = .10, *t* = 2.69, *p* = .008, *95% CI* [.07, .49] (Table S18, Model 3). [↑](#footnote-ref-4)
5. The model excluding dominance found that prestige negatively predicted zero-sum mindset, *b* = -.22, *SE* = .10, *t* = -2.17, *p* = .033, *95% CI* [-.43, -.02] (Table S19, Model 10). [↑](#footnote-ref-5)
6. One participant simultaneously selected all three options for one scenario—ignoring the request, giving dependency help, and giving autonomy help. 16 participants ignored the request and provided dependency help (7 participants for one scenario, 8 participants for two scenarios, 1 participant for three scenarios). 11 participants ignored the request and provided autonomy help (8 participants for one scenario, 1 participant for two scenarios, 2 participants for three scenarios). These responses represent 43 out of 3,306 scenario instances (1.30%). The most common combination of multiple help options was selecting both dependency help and autonomy help, chosen by 71 participants. Of these, 29 selected this combination for one scenario, 19 for two scenarios, 13 for three scenarios, 2 for four scenarios, 2 for five scenarios, and 6 for six scenarios. We conducted four robustness checks to ensure that these responses did not unduly influence the results. First, we excluded the response from the participant who selected all three options for a single scenario. Second, we reclassified the one participant’s responses where they ignored the request while providing help, retaining only the type of help given. Third, we reclassified these responses as “no help.” Fourth, we excluded them entirely. Across all approaches, the overall significance and directionality of the results remained unchanged. [↑](#footnote-ref-6)
7. Results remained the same when we used ordinal count of help rather than the ratio. [↑](#footnote-ref-7)
8. Post-hoc comparisons of all conditions are presented in the SI (Table S25). [↑](#footnote-ref-8)
9. Results remained the same when we used ordinal count of help rather than the ratio. [↑](#footnote-ref-9)
10. Post-hoc comparisons of all conditions are presented in the SI (Table S27). [↑](#footnote-ref-10)
11. Participants were instructed to select a specific response to a question. [↑](#footnote-ref-11)
12. We have always conceptualized dependency help and autonomy help as distinct constructs, in line with published research. However, when designing this study, we combined the two constructs into a single dependent variable. As a result, we chose to report the results in terms of degrees of autonomy helping. Nonetheless, we continue to view dependency and autonomy help as separate constructs. [↑](#footnote-ref-12)
13. Bonferroni post-hoc comparisons of all conditions are presented in Table S29. Significance of the results remained unchanged with Sidak and Scheffe post-hoc tests for all results that involve post-hoc testing. [↑](#footnote-ref-13)