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Testing the GRIP: An Empirical Examination of the Gender Roles Inhibiting Prosociality Model

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Declarations

Funding: This work was partially funded by a grant from The British Academy awarded to Alyssa Croft, Ph.D.

Conflicts of Interest: The authors declare no conflicts of interest.

Availability of Data and Materials: Data and materials will be made publicly available via the Open Science Framework upon publication of this manuscript.

Code availability: All code and syntax will be made publicly available via the Open Science Framework upon publication of this manuscript.
Abstract

Although men and women help others, there are systematic gender differences in the type of helping they perform. Consistent with traditional gender roles and stereotypes, men typically help in agentic ways, and women typically help in communal ways. Drawing on the Theory of Planned Behavior, the Gender Roles Inhibiting Prosociality model predicts that gender stereotypes about gender-inconsistent helping create negative attitudes, restrictive subjective norms, and low self-efficacy that undermine helping intentions, which, in turn, reduce engagement in gender-inconsistent helping contexts. Across three studies \( N = 1,355 \), we find empirical support for the hypothesized model: When asked to imagine engaging in a gender-inconsistent (vs. gender-consistent) helping scenario, participants anticipated feeling worse, expected others to judge them more negatively, and reported decreased self-efficacy beliefs, and these factors predicted lower intentions to engage in gender-inconsistent helping. Critically, behavioral intentions explained some of the variance in gender-inconsistent helping during the following month. Internal meta-analyses of the differences between gender-consistent and -inconsistent helping on attitudes, subjective norms, self-efficacy, and behavioral intentions across studies revealed small-to-medium average effect sizes \( d_s = 0.16 - 0.47 \). These results have the potential to inform interventions aimed at increasing helping in all its forms.

Keywords: gender, stereotypes, gender roles, prosocial behavior, helping

Word count: 194
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Prosociality refers to kind actions that benefit others. Prosocial actions take on many familiar forms, like charitable giving, volunteering, donating blood, or the everyday kinds of helping that we focus on in the current research, such as sharing food or offering advice to others (Aknin & Whillans, 2021). Prosociality is a hallmark of a well-functioning society (Bowles & Gintis, 2003; Rand & Nowak, 2013), and performing prosocial acts can provide personal benefits to the helper, including positive reputational rewards (Willer, 2009; Willer et al., 2010), better physical health (Brown et al., 2009; Kushlev et al., 2020; Lyubomirsky et al., 2005; Whillans et al., 2016), and increased emotional well-being and meaning in life (Aknin et al., 2013,2015; Van Tongeren et al., 2016). Despite the benefits of prosociality, people sometimes choose not to help others, and research has examined factors that restrict helping behaviors (Latané & Darley, 1970; Piliavin et al., 1981), including gender roles. Traditional gender role stereotypes have been identified as a barrier to helping others (Eagly, 2009; Eagly & Crowley, 1986), and the present research builds on this theorizing by empirically examining the proximal factors that undermine engagement in everyday forms of prosociality that violate gender roles.

Gender Differences in Prosocial Behavior

Gender stereotypes characterize men as more *agency* than women, and women as more *communion* than men (Wood & Eagly, 2010). Agency is associated with traits like competitiveness, independence, and dominance over others, while communion is linked to traits like friendliness, concern for others, and increased emotional expression. Gender stereotypes inform the behavior of people in a variety of contexts, including when and how people decide to
help others (Eagly, 2009; Eagly & Crowley, 1986). Although there are no gender differences in overall helping frequency (i.e., there is not a more helpful sex), men and women typically help in ways that are congruent with gender stereotypes (i.e., *gender-consistent* helping) and avoid helping in ways that are incongruent with gender stereotypes (i.e., *gender-inconsistent* helping; Diekman & Clark, 2015; Eagly, 2009; Eagly & Crowley, 1986). That is, men tend to help in agentic ways by taking initiative to provide unsolicited assistance to strangers, engaging in chivalrous actions to protect weaker others, and performing physically strenuous and risky tasks in emergency scenarios (Becker & Eagly, 2004; Eagly, 2009; Rankin & Eagly, 2008). These helping behaviors are more frequently observed in men than women and involve traits like assertiveness and taking initiative, which are congruent with masculine gender stereotypes. Conversely, women tend to help in communal ways by engaging in caregiving behaviors and by providing personal and emotional support to close others (Diekman & Clark, 2015; Eagly, 2009). These helping behaviors are typically performed by women more than men and require attributes like expressiveness and concern about the needs of others, which are in line with feminine gender stereotypes. Gender-inconsistent helping for men involves helping that is more communal, whereas gender-inconsistent helping for women involves helping that is more agentic.

**The Gender Roles Inhibiting Prosociality (GRIP) model**

The Gender Roles Inhibiting Prosociality (GRIP) model (Croft et al., 2020) is an integrative process model that explains how gender stereotypes undermine helping behavior. It integrates Social Role Theory (Wood & Eagly, 2010) and the Theory of Planned Behavior (Ajzen, 1991, 2002) to outline the distal and proximal factors that prevent people from helping in gender-inconsistent ways. The present research is the first empirical examination of the GRIP
model and tests the proximal predictors of helping in a series of incremental studies (see Figure 1 for components of the model tested in the current research). Below we include a brief description of the GRIP model but see Croft et al., 2020 for a more in-depth discussion.

Briefly, the GRIP model uses Social Role Theory to explain how gender stereotypes lead people to engage in gender-consistent forms of helping at the distal-level. According to Social Role Theory, gender stereotypes about how men and women are and should be arise from repeated observations of the types of social roles that men and women typically occupy in a society (Wood & Eagly, 2010). Because people tend to observe others engaging in helping behaviors that are consistent with gender roles (and avoiding helping behaviors inconsistent with gender roles), gender stereotypes continue to enforce the norm that people should help others in gender normative ways (Eagly, 2009). Importantly, these gender stereotypes are internalized into the self-concept during early gender socialization processes, and people use them as a standard against which they evaluate their own behavior through self-stereotyping (Hentschel et al., 2019), and to evaluate the behavior of others. As a consequence, people come to learn that gender-consistent helping is expected and appropriate, and that gender-inconsistent helping should be avoided.

In addressing how gender stereotypes influence helping behavior, the GRIP model considers not only societal-level, but also individual-level factors. It proposes that gender stereotypes operate to decrease engagement in gender-inconsistent helping by negatively impacting proximal, psychological factors known to predict behavior. Drawing on the Theory of Planned Behavior (Ajzen, 1991, 2002), the GRIP model predicts that engagement in a helping behavior is predicted by people’s intentions to help others, and intentions to help others are predicted by a combination of (a) one’s attitudes toward the helping behavior, (b) one’s
perception of the subjective norms regarding the helping behavior, and (c) one’s perceived control or self-efficacy over the helping behavior. Thus, the more positive a person’s attitudes, the more they perceive that others approve of them engaging in a behavior, and the higher their self-efficacy, the greater their intentions to engage in the behavior will be. The model predicts that when people are confronted with an opportunity to help in a gender-inconsistent manner, they experience negative attitudes toward the behavior, increased concern about negative evaluations from others, and low self-efficacy—all of which combine to predict lower behavioral intentions and engagement. In the following section, we discuss each proximal factor in greater detail, grounded within existing research, then outline predictions for behavioral intentions and engagement.

**Attitudes toward the behavior.** People are more likely to engage in behaviors if they hold favorable attitudes toward those behaviors, and attitudes are predicted by expectations about the potential outcomes associated with a given behavior (Ajzen, 1991, 2002). To illustrate, if a person has the opportunity to help someone and they expect that doing so will result in favorable outcomes (e.g., a boost in mood, achievement of an important goal), then they should form more positive attitudes toward that behavior, which, in turn, should increase their behavioral intentions and engagement. But if someone anticipates a behavior will result in negative outcomes, they should form more negative attitudes toward that behavior, which should decrease behavioral intentions and engagement.

What determines whether or not someone will form positive attitudes toward a helping behavior? Attitudes have been operationalized as both affective, relating to one’s emotional evaluation of a target or behavior (Wilson & Gilbert, 2003), and cognitive, relating to the perceived valence of a given construct (Ajzen, 1991, 2002), and the GRIP model theorizes that
both operationalizations should provide meaningful insight into evaluations of gender-consistent and gender-inconsistent helping behaviors (see Croft et al. 2020 for more details). Research on affective forecasting illustrates that people consider how different behaviors will make them feel, and the extent to which a person anticipates feeling negatively after engaging in a behavior (i.e., holds negative attitudes) predicts lower intentions to perform that behavior (Loewenstein et al., 2003; Mellers & McGraw, 2001; Wilson & Gilbert, 2003). People tend to report more positive feelings after engaging in gender-consistent behaviors (Wood et al., 1997), so it is possible that people may anticipate feeling better after engaging in gender-consistent (vs. inconsistent) forms of helping.

With respect to both the cognitive and affective evaluations of attitudes, the Theory of Planned Behavior predicts that people who anticipate that their engagement in a given behavior will yield a negative outcome should be less likely to engage in that behavior (Ajzen, 1991, 2002). Similarly, when people use gender stereotypes to forecast the potential outcomes associated with their engagement in a behavior (Brown & Diekman, 2010; Croft et al., 2019), these forecasts shape the goals and roles that men and women internalize and pursue (Diekman et al., 2010, 2011; Diekman & Eagly, 2008; Evans & Diekman, 2009). As outlined by Goal Congruity Theory, men and women internalize agency and communal-oriented goals to varying degrees, which guides their selection of agentic and communal social roles to afford the achievement of these motivational goals. Applying this theorizing to helping, we posit that people should form positive attitudes toward behaviors that facilitate fulfillment of important goals and gender role expectations, and similarly form negative attitudes toward behaviors that do not facilitate the achievement of important goals and gender role expectations. In other words, people should expect more favorable outcomes (i.e., positive attitudes) to occur if they engaged
in gender-consistent helping, and less favorable outcomes (i.e., negative attitudes) toward
gender-inconsistent forms of helping. Taken together, we hypothesize that people will form less
favorable attitudes toward gender-inconsistent helping opportunities than gender-consistent
helping opportunities (Hypothesis 1a).

**Subjective norms.** Subjective norms refer to one’s perception of what important others
think they should or should not do. If an individual expects that important others disapprove of
them engaging in a particular behavior, they should report lower intentions—and subsequent
engagement—in that behavior. Likewise, if an individual expects that important others approve
of them engaging in a particular behavior, they should report greater intentions—and subsequent

Gender stereotypes inform expectations for appropriate behavior within a culture.
Although research suggests that men and women are more similar than different (Hyde, 2005,
2014), people often exaggerate and essentialize the differences between them (Prentice &
Carranza, 2002; Prentice & Miller, 2006). Furthermore, the behaviors people perform can lead to
social rewards or punishments. On one hand, when people behave in ways that are consistent
with gender stereotypes, they fulfill perceivers’ expectations, and research on Role Congruity
Theory demonstrates that people are rewarded for these actions (Diekman & Goodfriend, 2006).
On the other hand, when people deviate from societal standards set for their group, they
experience social backlash (e.g., Heilman et al., 2004; Rudman & Fairchild, 2004; Rudman &
Glick, 2001; Rudman & Mescher, 2013). Specifically, women who engage in male-stereotypic
(vs. female-stereotypic) behaviors are perceived as less likeable and lower in warmth (Heilman
et al., 2004; Rudman, 1998; Rudman & Glick, 2001; Rudman et al., 2012), and men who engage
in female-stereotypic (vs. male-stereotypic) behaviors are perceived as weaker and lower in
competence (Moss-Racusin et al., 2010; Rudman & Mescher, 2013). Importantly, people are concerned about the consequences associated with gender role violations, a process known as the *fear of backlash effect*, and are motivated to avoid social backlash by engaging in gender congruent behaviors (Amanatullah & Morris, 2010; Moss-Racusin & Rudman, 2010; Rudman & Fairchild, 2004).

Because gender-inconsistent forms of helping violate gender stereotypes, people may anticipate that others will evaluate them negatively if they engage in these behaviors, which should lead to decreased intentions and enactment of this form of helping. Thus, we hypothesize that people will report more restrictive subjective norms toward gender-inconsistent helping than gender-consistent helping (Hypothesis 1b).

**Self-efficacy.** Perceived behavioral control captures one’s subjective beliefs about their ability to perform a given behavior (i.e., self-efficacy) and external factors that may inhibit performance of the behavior (Ajzen, 1991, 2002). In the current research, we consider the self-efficacy component of perceived behavioral control (and exclude external, actual control over the behavior) because perceptions of self-efficacy are informed by cultural stereotypes about behaviors that are appropriate for one’s gender group (Eagly, 2009; Wood & Eagly, 2010). As explained in more detail below, we reason that if an individual does not believe they have the ability or skill-set necessary to perform a given behavior, they should report low self-efficacy toward the behavior, which in turn leads to decreased intentions and actual engagement in the behavior.

Gender stereotypes may impair actual performance in a given social role. People come to develop varying levels of expertise and comfort in gender stereotypical roles due to repeated experience (Diekman & Clark, 2015). As a consequence, if someone rarely engages in a
behavior, they likely will not have the skills necessary to perform it effectively. As illustrated by Expectancy Value Theory, beliefs about one’s ability to accomplish a particular task influences whether or not they will engage in it; if the task is estimated to involve a skillset outside of one’s own, then people should be less likely to engage in that particular task (Eccles, 1994).

Early socialization practices can also negatively influence self-efficacy beliefs toward gender-inconsistent helping opportunities. Gender identity is one of the first social group distinctions people make, and once able to make categorizations based on gender, children begin to form implicit associations for the traits and attributes that are appropriate for their gender group (Baron et al., 2014). As people internalize gender norms, they may come to view their self-efficacy and performance in a given behavior through the lens of gender stereotypes. For instance, adult men may be reluctant to pursue female-stereotypic occupations because masculine stereotypes dictate that men are not skilled at communal tasks (Cejka & Eagly, 1999), leading men to form low self-efficacy in these domains (Giles & Rea, 1999). Likewise, people may also come to undervalue their contributions and performance in gender atypical tasks (Haynes & Heilman, 2013; Heilman, 1983). For instance, women working on a team to perform an agentic task report they contributed less, and that their contributions were less valuable than their male counterparts (Haynes & Heilman, 2013). Taken together, we reason that people should also expect that they will not perform gender-inconsistent helping well, and hypothesize that people will report lower self-efficacy for gender-inconsistent versus gender-consistent helping behaviors (Hypothesis 1c).

**Behavioral intentions and engagement.** As discussed previously, prior research demonstrates that people more often perform helping behaviors that are congruent with gender roles (Eagly, 2009; Eagly & Crowley, 1986). In the GRIP model, we theorize this process
unfolds because people may hold (a) negative attitudes, (b) unfavorable subjective norms, and (c) decreased self-efficacy beliefs toward gender-inconsistent helping opportunities (Croft et al., 2020). In combination, these three constructs inform an individual’s behavioral intentions, such that negative attitudes, restrictive subjective norms, and reduced self-efficacy beliefs are linked to decreased intentions to engage in a behavior. In the current research, we tested this directly by examining whether people reported decreased intentions to engage in gender-inconsistent compared to gender-consistent forms of helping (Hypothesis 2). Because behavioral intentions operate as a direct antecedent to one’s behavior (Ajzen, 1991, 2002), we also examined whether people with lower intentions to engage in gender-inconsistent helping also reported less actual engagement in these forms of helping (Hypothesis 3).

The Current Research

We tested the proximal components of the GRIP model incrementally in a series of three studies (N = 1,355) and an internal meta-analysis. We first conducted a study to obtain and pilot examples of gender-consistent and -inconsistent forms of helping as stimuli for the main studies (Pretest). Then, using these stimuli, we measured attitudes, subjective norms, and self-efficacy toward gender-inconsistent (vs. -consistent) helping (Studies 1-3). We further examined if people report lower intentions to engage in gender-inconsistent (vs. -consistent) forms of helping (Studies 2 & 3; Hypothesis 2), and if these lower intentions would be mediated by negative attitudes, less favorable subjective norms and lower self-efficacy (Studies 2 & 3). Finally, we examined if lower intentions to engage in gender-inconsistent helping would be associated with lower engagement in gender-inconsistent forms of helping (Study 3; Hypothesis 3). Data and materials for all studies are available on the project Open Science Framework page.
GENDER ROLES INHIBITING PROSOCIALITY

(https://osf.io/h4sca/?view_only=13506da0c1d0482aadcb26350ed4a5c7), and Studies 1 and 3 were pre-registered.

Pretest

Method

Participants

We recruited 107 adults from Amazon Mechanical Turk (34.6% female, \( n = 37 \); \( M_{age} = 32.79, SD_{age} = 9.54 \), range = 19-72 years) in exchange for $1.25 USD. Prior to data collection, an institutional review board responsible for the ethical treatment of human participants reviewed and approved this research study, and all the studies reported in this paper. Participants identified as Caucasian/White (\( n = 70, 65.4\% \)), Asian (\( n = 14, 13.1\% \)), Black/African American (\( n = 10, 9.4\% \)), Hispanic/Latino (\( n = 8, 7.5\% \)), Middle Eastern (\( n = 1, 0.9\% \)), and other racial/ethnic categories (\( n = 3, 2.8\% \)). Participants were heterosexual (\( n = 86, 80.4\% \)), bisexual (\( n = 12, 11.2\% \)), gay/lesbian (\( n = 7, 6.5\% \)), other sexual orientation identities (\( n = 1, 0.9\% \)), or preferred not to identify (\( n = 1, 0.9\% \)).

Procedure

Participants were recruited for a study on perceptions of helping behavior and were asked to evaluate 25 everyday helping behaviors developed by the research team using previous theorizing on gender and helping behavior (e.g., Eagly, 2009). The helping behaviors evaluated are listed in Table 1. Participants rated the gender stereotypicality of each behavior using a single item (“For each way of helping, indicate how masculine/feminine each behavior is perceived to be (according to society’s expectations)”; 1 = extremely masculine, 3 = neutral, 5 = extremely feminine). We used this rating to create two new variables: masculine stereotypicality and feminine stereotypicality, which together added up to 5 (the scale endpoint). For example, if the
average gender stereotypicality rating for a particular helping behavior was 3.5 (i.e., more feminine than masculine), then we would score the feminine stereotypicality as 3.5, and score the masculine stereotypicality as 1.5. Participants also reported their behavioral engagement (“For each type of helping, please indicate how many times you have engaged in the behavior during the past month”; 0 = never to 5 = five times or more). Participants saw the full list of helping behaviors at one time and made ratings for each behavior on each dependent variable. The helping behaviors were presented in the same order for each dependent variable rating.

We selected a subset of five prototypically masculine helping behaviors and five prototypically feminine helping behaviors through the following process. For each helping behavior, we created a masculine composite score, which was the average of the z-score of the masculine stereotypicality variable and the z-score of behavioral engagement ratings from male participants (i.e., higher z-scores indicated behaviors that were rated as stereotypically masculine, and which men reported frequently engaging in). We also created a feminine composite, which was the average of the z-score of the feminine stereotypicality variable and the z-score of behavioral engagement ratings from female participants (i.e., higher z-scores indicated behaviors that were rated as stereotypically feminine, and which women reported frequently engaging in). We created z-scores for these composites because the gender stereotypicality and behavioral engagement items were scored on different Likert scales. To select prototypical masculine helping behaviors for use as future stimuli, we selected the behaviors that were simultaneously high on the masculine composite and low on the feminine composite (and vice versa for the feminine helping behaviors). The full list of helping behaviors tested are listed in Table 1, with the ten selected behaviors in bold.
As a preliminary test of the GRIP model, participants reported anticipated affect (i.e., attitudes), perceived favorability (i.e., subjective norms), and behavioral intentions. We did not examine self-efficacy beliefs in this preliminary analysis. Given that we focused participants’ attention on our interest in gender, and thus may have influenced how participants responded, we report these results on the project OSF page, but not in this manuscript.

Results and Discussion

To validate our composites, we conducted paired samples t-tests to examine whether the five selected masculine helping behaviors were perceived differently along dimensions of gender stereotypicality than the five selected feminine helping behaviors. As expected, the masculine (M = 2.34, SD = 0.89) and feminine composites (M = 3.73, SD = 0.73) were rated as significantly different from one another on dimensions of gender-stereotypicality, t(105) = -11.02, p < .001, d = -1.72 CI95 [-2.01, -1.41]. We next conducted one sample t-tests to determine if the composite masculine and feminine behaviors were significantly different from the scale mid-point of 3, or gender neutral. As expected and consistent with stereotype-based expectations, the feminine composite was rated as significantly different than gender neutral in the direction of being more stereotypically feminine, t(105) = 10.25, p < .001, d = 0.97 CI95 [0.74, 1.20]. Following a similar pattern, the masculine composite was rated as significantly different than gender neutral in the direction of being more stereotypically masculine, t(105) = -7.66, p < .001, d = -.74 CI95 [-0.96, -0.53]. Thus, we successfully selected stimuli that differentiated stereotypical forms of masculine and feminine helping behavior from one another, and from gender-neutral forms of helping.

In sum, the Pretest allowed us to identify and compare perceptions of a set of stereotypically masculine and feminine helping behaviors. Of the 25 target behaviors, participants’ ratings identified five as stereotypically masculine and five as stereotypically
feminine forms of helping. Next, we used these masculine and feminine helping behaviors as stimuli in a series of incremental studies designed to test the proximal components of the GRIP model.

**Study 1: Attitudes, Norms, Self-efficacy**

In Study 1 we tested for mean differences in attitudes, subjective norms, and self-efficacy with respect to gender-consistent and -inconsistent helping. We pre-registered our study design, materials, and analyses prior to data collection on the project OSF page (https://osf.io/h4sca/?view_only=13506da0c1d0482aadcb26350ed4a5c7).

**Method**

**Participants**

We recruited 462 psychology students from The University of Arizona, USA (n = 407, 88.1%) and The University of Essex, UK (n = 55, 11.9%) in exchange for either course credit or £5 cash. Responses from 50 (10.8%) participants were excluded for the following reasons: 29 (6.3%) participants failed attention checks (see below for additional details), 18 (3.9%) participants did not meet study inclusion criteria (see pre-registration for details), two (0.4%) participants were interrupted during their session due to an unexpected alarm, and one (0.2%) participant misunderstood the directions, leaving their data unusable. Results do not change if these participants are included.

The final sample after exclusions consisted of 412 adults (n = 302, 73.3% female; M<sub>age</sub> = 20.97, SD<sub>age</sub> = 6.58, range = 18-64 years). Participants identified as Aboriginal/Native (n = 4, 1.0%), Black/African American (n = 17, 4.1%), Asian (n = 29, 7.1%), Hispanic/Latino (n = 102, 24.8%), Middle Eastern (n = 6, 1.5%), Caucasian/White (n = 219, 53.2%), other racial/ethnic identities (n = 34, 8.3%), or preferred not to identify (n = 1, 0.2%). Participants reported as
heterosexual \((n = 371, 90.0\%\) ), gay/lesbian \((n = 8, 1.9\%\) ), bisexual \((n = 24, 5.8\%\) ), other sexual orientation identities \((n = 4, 1.0\%\) ), or preferred not to identify \((n = 5, 1.2\%\) ). Participants politically identified as very liberal \((n = 20, 4.9\%\) ), liberal \((n = 89, 21.6\%\) ), somewhat liberal \((n = 71, 17.2\%\) ), neutral \((n = 125, 30.3\%\) ), somewhat conservative \((n = 37, 9.0\%\) ), conservative \((n = 34, 8.3\%\) ), very conservative \((n = 6, 1.5\%\) ), or preferred not to identify \((n = 30, 7.3\%\)).

**Procedure**

As a cover story, participants were told the purpose of the study was to examine people’s ability to visualize imaginary scenarios. Participants were randomly assigned to read a gender-consistent or gender-inconsistent helping scenario and spent five minutes reflecting on the imagined experience in writing. In the reflection prompt, participants were encouraged to consider how they might feel, how they might be perceived by others, but not self-efficacy beliefs (e.g., “In your journal consider the following: How might you expect to feel after this experience? If other people were around, how do you think they might perceive you?”). After completing the visualization exercise, participants reported their attitudes, subjective norms, and self-efficacy beliefs for the behavior illustrated in their scenario. Participants always completed the attitude items first, with the order of the subjective norms and self-efficacy items counterbalanced. Finally, participants reported demographic information and were debriefed.

We included four attention check questions in this study. Three attention checks were embedded in questionnaires and asked participants to select a particular response option (e.g., “If you are reading this, select strongly disagree”). The fourth attention check asked participants to disclose how closely they read the study materials at the end of the survey: “How closely did you read the visualization scenario you were asked to imagine yourself in? (I didn’t read it at all, I skimmed it, I read it closely). Participants’ data were excluded from analyses if they answered.
any of the first three questions incorrectly or indicated that they did not read the visualization scenario closely.

**Manipulated Variable**

Participants were randomly assigned to imagine themselves in a stereotypically masculine or stereotypically feminine helping scenario. Helping scenarios were drawn from the Pretest; we selected the highly ranked masculine and feminine behaviors that were most likely to be equivalent in terms of their feasibility and likelihood of occurring in everyday life. In the feminine helping scenario, participants were asked to imagine their friend was going on a date and asked for their help picking out an outfit (“Imagine your friend is going on a date and they ask you to help them pick out something to wear.”). This scenario was coded as gender-consistent for women, and gender-inconsistent for men. In the masculine helping scenario, participants were asked to imagine their friend was hanging a heavy picture frame and asked for their assistance (“Imagine your friend asks you to help them hang a heavy picture frame.”). This scenario was coded as gender-consistent for men, and gender-inconsistent for women. In both scenarios, participants were told their friend was grateful for their assistance.

**Measured Variables**

**Attitudes.** Participants completed a modified version of the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The PANAS is a 20-item scale with 10 items assessing positive affect (e.g., excited) and 10 items assessing negative affect (e.g., distressed). Following methodological approaches used by other researchers (e.g., Aknin et al., 2015), the item “happy” was added to the positive affect subscale. Participants rated the extent to which they would feel each of 21 emotions if they were to engage in their imaginary scenario (“Doing your best to imagine what it would be like to be in this scenario, please rate how much you think you would
feel the following.”) using a 5-point Likert scale (1 = very slightly or not at all, 5 = extremely).
Following scoring conventions prescribed by Watson and colleagues (1988), we calculated sum scores for the 11 positive affect (α = .88) and 10 negative affect (α = .80) items.

**Subjective norms.** Participants completed an 8-item adapted version of the Fear of Backlash Index (Rudman & Fairchild, 2004). The Fear of Backlash index assesses the extent to which people are concerned about negative evaluations from others following gender role violations (e.g., “Would you worry that people might think you were odd?”). Participants answered each question in response to their imagined scenario, and responses were scored using a 5-point Likert scale ranging from 1 (not at all) to 5 (very much). The items were aggregated to create a mean subjective norms score (α = .73).

**Self-efficacy.** Self-efficacy was measured using a 6-item questionnaire. Items were designed for the study to assess the extent to which participants expected that they would have the ability necessary to engage in the task described in their scenario (“Compared to other people, I would do well helping someone in this way”, “I am qualified to provide help in this way”, “I would feel concerned about my ability to help in this way”, “I would feel frustrated about my ability to help this individual in this way”, “The person I would help would think I did a good job”, “For me to help someone in this way would be extremely difficult”). All items were scored using a 7-point Likert scale ranging from 1 (not at all certain) to 7 (extremely certain). We calculated a mean score to create a single index of self-efficacy (α = .83).

**Demographics.** Participants reported their age, gender, sexual orientation, race/ethnicity, and political orientation.

**Results**
We used independent samples $t$-tests to assess mean differences in attitudes, subjective norms, and self-efficacy by helping condition (gender-consistent vs. gender-inconsistent).

**Mean Differences by Helping Condition**

All means and standard deviations are located in Table 2. Consistent with pre-registered Hypothesis 1a, participants who imagined helping in a gender-inconsistent way reported lower anticipated positive affect (i.e., less positive attitudes) than those who imagined helping in a gender-consistent way, $t(410) = 3.90, p < .001, d = 0.38, CI_{95} [0.19, 0.58]$. We had no pre-registered predictions for negative affect, and there were no differences in anticipated negative affect by helping condition, $t(410) = 0.44, p = .66, d = 0.04, CI_{95} [-0.15, 0.23]$. Counter to our pre-registered Hypothesis 1b, there was no difference in subjective norms by helping condition, $t(407) = -0.29, p = .77, d = -0.02, CI_{95} [-0.21, 0.17]$; people reported similarly low fears of backlash when engaging in gender-consistent and gender-inconsistent helping. Finally, consistent with our pre-registered Hypothesis 1c, participants who imagined helping in a gender-inconsistent way reported lower self-efficacy than participants who imagined helping in a gender-consistent way, $t(410) = 7.07, p < .001, d = 0.70, CI_{95} [0.50, 0.90]$.

**Exploratory Analyses**

We conducted a series of exploratory 2 (help type: masculine vs. feminine) x 2 (participant gender: male vs. female) between-subjects ANOVAs on attitudes, subjective norms, and self-efficacy beliefs. Results from these analyses are in Table 3. The interaction effects for positive affect, negative affect, and subjective norms were not statistically significant. While we did observe a significant interaction for self-efficacy, pairwise comparisons revealed a difference in magnitude rather than direction. That is, men who imagined helping in a gender-consistent (i.e., masculine) way reported higher self-efficacy than men who imagined helping in a gender-
inconsistent (i.e., feminine) way, \( p < .001 \). Following a similar pattern, women who imagined helping in a gender-consistent (i.e., feminine) way reported higher self-efficacy than women who imagined helping in a gender-inconsistent (i.e., masculine) way, \( p < .001 \).

**Discussion**

Study 1 provided partial support for Hypotheses 1a-c. People who imagined performing gender-inconsistent helping reported lower anticipated positive affect (Hypothesis 1a) and self-efficacy (Hypothesis 1c) relative to participants who imagined a gender-consistent scenario. However, counter to our prediction, there were no condition differences for subjective norms (Hypothesis 1b), suggesting that people did not expect others to evaluate them negatively after engaging in a gender-consistent or gender-inconsistent form of helping.

One potential explanation for the null effect on subjective norms may lie in how this variable was operationalized. The Fear of Backlash index does not directly measure subjective norms (i.e., beliefs about what important others think one should or should not do), but instead measures *concerns about backlash* for violating social norms. The Fear of Backlash index also lacked specificity with respect to *whose* evaluations the participant might be concerned with (e.g., the helping recipient, outside observers, or people in general), and may not have accurately captured subjective norms as intended. Finally, it may have been challenging for participants to consider subjective norms in this context because both forms of helping were likely to be provided in the absence of outside perceivers. On a related note, it may also be the case that people were less concerned about backlash in this context because the gender role violation they were asked to consider in the helping scenario was less severe and occurred in a relatively private setting with a friend. In Study 2 we address these limitations by using an adapted Theory of Planned Behavior questionnaire that more directly specifies and captures subjective norms,
and by adjusting the helping scenarios to increase the severity of the gender violation by changing the helping target to a less familiar person (i.e., a neighbor).

**Study 2: Behavioral Intentions**

In Study 2, we sought to replicate and extend Study 1 by measuring behavioral intentions. Using a design similar to that of Study 1, we asked participants to imagine engaging in a gender-consistent or gender-inconsistent manner, then report attitudes (using a valence-based measure), subjective norms, self-efficacy, and behavioral intentions.

**Method**

**Participants**

We recruited 445 adults recruited from TurkPrime in exchange for $0.40 USD. We excluded a total of 15 (3.4%) participants for the following reasons: nine (2.0%) participants failed attention checks (see below for additional information) and six (1.3%) failed to meet inclusion criteria (see pre-registration for details), leaving a final sample of 430 adults (63.0% female, $n = 271$; $M_{\text{age}} = 38.52, SD_{\text{age}} = 13.07$, range = 18-80 years). Results remained unchanged with these participants included. Participants identified as Aboriginal/Native ($n = 2, 0.5%$), Black/African American ($n = 42, 9.8%$), Hispanic/Latino ($n = 26, 6.0%$), Middle Eastern ($n = 1, 0.2%$), Asian ($n = 25, 5.9%$), White/Caucasian ($n = 320, 74.4%$), other racial/ethnic identities ($n = 12, 2.8%$), or preferred not to identify ($n = 2, 0.5%$). Participants reported as heterosexual ($n = 382, 88.8%$), gay/lesbian ($n = 12, 2.8%$), bisexual ($n = 27, 6.3%$), other sexual orientation identities ($n = 3, 0.7%$), or preferred not to identify ($n = 6, 1.4%$). Participants politically identified as very liberal ($n = 51, 11.9%$), liberal ($n = 109, 25.3%$), somewhat liberal ($n = 54, 12.6%$), neutral ($n = 86, 20.0%$), somewhat conservative ($n = 47, 10.9%$), conservative ($n = 57, 13.3%$), very conservative ($n = 19, 4.4%$), or preferred not to identify ($n = 7, 1.6%$). Two
hundred and fifty-one (58.3%) participants reported making less than $50,000 per year, 142 (33.1%) reported income between $50,000 and $99,999, and 37 (8.6%) reported income greater than $100,000.

Participants completed two attention checks: The first asked participants to select a particular response on a questionnaire scale (e.g., “If you’re reading this, select strongly disagree”) and the second asked participants to describe what they ate for their last meal. These attention checks were designed to test if participants were reading each question and to filter out responses from computerized bots. The data from participants who either (a) answered the first question incorrectly or (b) provided a nonsense response to the second question were excluded from analyses.

**Manipulated Variable**

Participants were randomly assigned to imagine helping a new neighbor in a gender-consistent or gender-inconsistent helping scenario. Specifically, participants assigned to the *feminine helping scenario* were told, “Your new neighbor is going on a date and they are very nervous. They ask for your advice, so you help them by offering emotional support. You also help them pick out something to wear.” This scenario was coded as gender-consistent for women, and gender-inconsistent for men. Meanwhile, participants assigned to the *masculine helping scenario* were told, “Your new neighbor is moving, and they are very overwhelmed. They ask for your assistance, so you help them by offering to move their heavy furniture. You also help them with household repairs at their new house.” This scenario was coded as gender-consistent for men, and gender-inconsistent for women. The gender of the neighbor was not specified. We used a neighbor as the help recipient in this study (as opposed to a friend in Study 1) to increase generalizability of the helping target.
Measured Variables

After reading the helping scenario, participants reported attitudes, subjective norms, self-efficacy, and behavioral intentions using an adapted Theory of Planned Behavior questionnaire (Fishbein & Ajzen, 2010).

**Attitudes.** Participants reported their attitudes toward the helping behavior using a 3-item scale adapted for this study (Fishbein & Ajzen, 2010; e.g., “My helping in this way would be…” 1 = bad, 7 = good; 1 = unpleasant, 7 = pleasant; 1 = worthless, 7 = valuable). Items were scored using a 7-point semantic differential scale and higher scores indicated more favorable attitudes toward the behavior. All items were averaged to create a composite score (α = .80).

**Subjective norms.** Perceptions of the subjective norms around the helping behavior were measured using a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: “It is expected of me to help an individual in this way” (1 = definitely false, 7 = definitely true), “Most people who are important to me would approve of me helping this individual in this way” (1 = disagree, 7 = agree), and “Most people who are like me would help in this way” (1 = unlikely, 7 = likely). Items were scored on a 7-point Likert scale with higher scores indicating more favorable subjective norms. All items were averaged to create a composite score (α = .68).

**Self-efficacy.** Participants completed a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: “I am confident that I would be able to help an individual in this way” (1 = false, 7 = true), “My decision to help an individual in this way would be up to me” (1 = disagree, 7 = agree), and “For me to help an individual in this way would be…” (1 = extremely difficult, 7 = extremely easy). Items were scored using a 7-point Likert scale, and
higher values indicated greater self-efficacy. All items were averaged to create a composite score ($\alpha = .71$).

**Behavioral intentions.** Intentions to engage in the helping behavior were assessed using a 3-item scale adapted for this study (Fishbein & Ajzen, 2010). The items included: “If I were in this scenario, I would intend to help this individual in this way” (1 = unlikely, 7 = likely), “I would make the effort to help this individual in this way” (1 = I definitely would not, 7 = I definitely would), and “If I were in this scenario, I would plan to help an individual in this way” (1 = extremely unlikely, 7 = extremely likely). Items were scored using a 7-point Likert scale, with higher values indicating greater intentions to engage in the helping behavior. All items were averaged to create a composite score ($\alpha = .94$).

**Demographics.** Participants reported their age, gender, sexual orientation, race/ethnicity, income, and political orientation.

**Results**

Independent samples $t$-tests were used to test for mean differences in attitudes, subjective norms, self-efficacy, and behavioral intentions between helping conditions. We also tested the hypothesis that attitudes, subjective norms, and self-efficacy would mediate the relationship between helping condition and helping intentions using a parallel mediation analysis.

**Mean Differences by Helping Condition**

All means and standard deviations are illustrated in Table 2. Participants who imagined helping in a gender-inconsistent way did not report less favorable attitudes toward the behavior than participants who imagined helping in a gender-consistent way, $t(428) = 1.74, p = .08, d = 0.17, CI_{95} [-0.02, 0.37]$, failing to support Hypothesis 1a. In line with Hypothesis 1b, participants in the gender-inconsistent condition reported less favorable subjective norms relative to
participants in the gender-consistent condition, $t(428) = 2.13, p = .03, d = 0.21, CI_{95} [0.02, 0.40]$.

Congruent with Hypothesis 1c, participants also reported lower self-efficacy when they imagined helping in a gender-inconsistent (versus gender-consistent) manner, $t(428) = 4.50, p < .001, d = 0.45, CI_{95} [0.26, 0.65]$. Finally, at odds with Hypothesis 2, participants did not significantly differ between conditions in their intentions to engage in gender-inconsistent helping, $t(428) = 1.75, p = .08, d = 0.18, CI_{95} [-0.01, 0.37]$.

**Exploratory Analyses**

As in Study 1, we conducted a series of exploratory 2 (help type: masculine vs. feminine) x 2 (participant gender: male vs. female) between-subjects ANOVAs on attitudes, subjective norms, self-efficacy beliefs, and behavioral intentions. Results from these analyses are presented in Table 4. There were no significant main effects or interaction effects on attitudes, subjective norms or behavioral intentions. We did observe a main effect of help type on self-efficacy that was qualified by a significant help type x participant gender interaction. Pairwise comparisons revealed that women who imagined helping in a gender-consistent (i.e., feminine) way reported greater self-efficacy than women who imagined helping in a gender-inconsistent (i.e., masculine) way, $p < .001$. However, there were no significant differences in self-efficacy ratings from men who imagined helping in a gender-consistent (i.e., masculine) or gender-inconsistent (i.e., feminine) way, $p = .81$.

**Mediation Model**

To test Hypothesis 3, we conducted a multiple mediation analysis to examine the extent to which attitudes, subjective norms, and self-efficacy statistically mediate the relationship between helping condition and behavioral intentions. Using model 4 in PROCESS version 3.5 for SPSS (Hayes, 2017), we entered helping condition (0 = gender-consistent, 1 = gender-
inconsistent) as the predictor variable, attitudes, subjective norms, and self-efficacy as continuous mediators, and intentions to engage in the behavior as the outcome variable.

The full mediation model is illustrated in Figure 2. Bias-corrected confidence intervals for the indirect effects were calculated using 5,000 bootstrapped samples. The indirect effects of subjective norms and self-efficacy were statistically significant (subjective norms: \( ab = -0.12, se = 0.06, CI_{95} [-0.24, -0.01] \); self-efficacy: \( ab = -0.22, se = 0.06, CI_{95} [-0.35, -0.12] \)). However, the indirect effect of attitude toward the behavior was not statistically significant (\( ab = -0.06, se = 0.04, CI_{95} [-0.13, 0.01] \)). The direct effect of helping condition on intentions decreased in size when including attitudes, subjective norms, and self-efficacy in the model (\( c' = 0.14, p = .05 \)), providing evidence for partial mediation. In sum, these results yield partial support for Hypothesis 3 such that subjective norms and self-efficacy mediated the relationship between helping condition and behavioral intentions, but attitudes did not. For a report of exploratory analyses including participant gender as a moderator, see the project OSF page.

Discussion

Results from Study 2 lend additional support for the proximal components of the GRIP model. Consistent with Hypotheses 1b-c, participants who imagined helping in a gender-inconsistent way reported less favorable subjective norms and lower self-efficacy than participants who imagined helping in a gender-consistent way. Although mean differences in attitudes (Hypothesis 1a) and intentions (Hypothesis 2) were in the predicted direction, these effects were not statistically significant. We also found evidence for partial mediation between helping condition and behavioral intentions through subjective norms and self-efficacy, partially supporting Hypothesis 3. Counter to prediction, attitudes toward the behavior was not a significant mediator.
One notable limitation in the current study is the contextual differences between the masculine and feminine helping behaviors. In the masculine scenario, participants were asked to imagine helping their friend during a move, but in the feminine scenario participants were asked to imagine help their friend prepare for a date. We address this limitation in Study 3 by using more contextually similar helping scenarios.

**Study 3: Behavioral Engagement**

The aim of Study 3 was to replicate Studies 1 and 2 and extend them by testing the full proximal portion of the GRIP model (including predicting real-world recalled helping behavior) in a single sample with a common and well-validated paradigm for testing the Theory of Planned Behavior (e.g., van der Linden, 2011; Warburton & Terry, 2000). Participants were randomly assigned to imagine performing a gender-consistent or gender-inconsistent helping behavior, and reported their attitudes, subjective norms, self-efficacy, and behavioral intentions. The same participants were re-contacted one month later and reported the frequency with which they had engaged in particular gender-consistent and gender-inconsistent helping behaviors over the course of that month. We pre-registered our study design, materials, and analyses on the project OSF page (https://osf.io/h4sca/?view_only=13506da0e1d0482aadcb26350ed4a5c7).

**Method**

**Participants**

We recruited 756 adults from TurkPrime in exchange for $0.30 USD. Participants were re-contacted approximately four weeks later for a follow-up survey and 523 participants (69.0% of the original sample) completed the second portion of the study. At Time 2, participants received $0.60 as compensation. Ten participants (1.3%) were excluded in accordance with our pre-registered exclusion criteria because they failed attention checks ($n = 9$, 1.2%; see below for
additional information) or did not engage with the task \((n = 1, 0.1\%)\), leaving a final sample of
513 adults \((65.7\% \text{ female}, n = 337; M_{\text{age}} = 40.79, SD_{\text{age}} = 13.79, \text{ range} = 18-81 \text{ years})\). Results
remain unchanged with these participants included. Participants identified as aboriginal/native \((n = 1, 0.2\%),\)
Caucasian/White \((n = 378, 73.7\%)\), Black/African American \((n = 47, 9.2\%)\),
Hispanic/Latino \((n = 26, 5.1\%)\), Asian \((n = 36, 7.0\%)\), Middle Eastern \((n = 4, 0.8\%)\), other/mixed
racial identities \((n = 14, 2.7\%)\), or preferred not to identify \((n = 7, 1.4\%)\). Participants reported as
heterosexual \((n = 461, 89.9\%)\), gay/lesbian \((n = 13, 2.5\%)\), bisexual \((n = 31, 6.0\%)\), other sexual
orientation identities \((n = 5, 1.0\%)\) or preferred not to identify \((n = 3, 0.6\%)\). Participants
politically identified as very liberal \((n = 58, 11.3\%)\), liberal \((n = 121, 23.6\%)\), somewhat liberal
\((n = 68, 13.3\%)\), neutral \((n = 104, 20.3\%)\), somewhat conservative \((n = 59, 11.5\%)\), conservative
\((n = 74, 14.4\%)\), very conservative \((n = 24, 4.7\%)\), or preferred not to identify \((n = 5, 1.0\%)\).

Three hundred and three \((59.1\%)\) participants reported making less than $50,000 per year, 156
\((30.4\%)\) reported income between $50,000 and $99,999, and 54 \((10.5\%)\) reported income greater
than $100,000.

As an attention check, participants were asked to report the weather in their current
location using a few sentences. This check was designed to filter out responses from
computerized bots, or participants who were not paying attention to each question. The data from
participants who provided a nonsense response to this question were excluded from analyses.

**Procedure**

The present study utilized a two-wave longitudinal design. The design and procedure of
Time 1 were identical to Study 2. Participants were randomly assigned to imagine themselves in
a gender-consistent or -inconsistent helping scenario and then asked to report their attitudes,
subjective norms, self-efficacy, and intentions to engage in the behavior. One month later the
same participants were re-contacted for follow-up. At Time 2, participants were asked to indicate how often they had engaged in a set of gender-consistent and gender-inconsistent helping behaviors. The behaviors used were those we pilot tested and selected from the Pretest (see items bolded in Table 1).

**Manipulated Variable**

Similar to Studies 1 and 2, at Time 1 participants were randomly assigned to imagine helping a friend in a gender-consistent or inconsistent manner. In both scenarios, participants were told their friend was moving because they received a job in a nearby city. This adjustment was made to the manipulation from Study 2 to strengthen the design by ensuring the masculine and feminine helping scenarios were contextually similar to each other. In the *feminine helping scenario*, participants were asked to imagine they helped their friend who was moving by providing emotional support and going to the mall to help them pick out new clothing for their job. This condition was coded as gender-consistent for women, and gender-inconsistent for men. In the *masculine helping scenario*, participants were asked to imagine they helped their friend who was moving by carrying heavy furniture and going to the hardware store to help them select supplies for household repairs at their new place. This condition was coded as gender-consistent for men and gender-inconsistent for women.

**Measured Variables**

After reading the helping scenario at Time 1, participants reported their attitudes toward the imagined behavior, their perceptions of the subjective norms about doing this behavior, self-efficacy, and intentions to do the behavior, using an expanded version of the scale used in Study 2 (Fishbein & Ajzen, 2010). The measures were conceptually similar to those used in Study 2, but the wording was adjusted to fit within the study time-period (e.g., during the next month). At
Time 2, participants reported the actual frequency with which they had engaged in a set of
gender-consistent and gender-inconsistent helping behaviors during the previous month (since
Time 1).

**Attitudes.** Participants reported their attitudes using a 6-item semantic differential scale
(e.g., “My helping in this way would be…”). In addition to the word pairs used in Study 2, the
following additional word pairs were used: unenjoyable/enjoyable, unsatisfying/satisfying,
unfavorable/favorable. Items were scored on a 7-point scale with higher scores indicating more
favorable attitudes toward engagement in the behavior. All items were averaged to create a
composite score ($\alpha = .95$).

**Subjective norms.** Subjective norms were assessed using a 3-item scale adapted for this
study (Fishbein & Ajzen, 2010): “If I decided to help in the way described above during the next
month, those who are most important to me would approve”, “Those most important to me think
that I should help in the way described above during the next month”, and “Those who are
important to me would not want me to help in the way described above during the next month.”
The third scale item was reverse scored. Items were scored using a 7-point Likert scale ranging
from 1 (strongly disagree) to 7 (strongly agree) and higher values indicated more favorable
subjective norms. All items were averaged to create a composite subjective norm score ($\alpha = .72$).

**Self-efficacy.** Participants completed a 4-item scale assessing self-efficacy adapted for
this study (Fishbein & Ajzen, 2010): “If I wanted to, I could easily help in the way described
above during the next month”, “Events outside of my control will stop me from helping in the
way described above during the next month”, “It would be very difficult for me to help in the
way described above during the next month”, and “I expect that I will have the skills to provide
the type of help described above during the next month.” The second and third item were reverse
scored. Items were scored using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and higher values indicated greater self-efficacy. All items were averaged to create a composite self-efficacy score. As outlined in the pre-registration, since the reliability coefficient was < .65 ($\alpha = .63$), we made adjustments to improve the scale reliability. We dropped item four (“I expect that I will have the skills to provide the help described during the next month.”), and the reliability for the revised three item scale improved ($\alpha = .82$).

**Behavioral intentions.** At Time 1, intentions to engage in the helping behavior were assessed using a 3-item scale (Fishbein & Ajzen, 2010): “If asked during the next month, I would help in the way described above”, “I intend to help in the way described above during the next month”, and “It is likely that I will help someone in the way described above during the next month.” Items were scored using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). All items were averaged to create a composite score ($\alpha = .81$).

**Behavioral engagement.** At Time 2, participants reported the frequency with which they had engaged in a set of gender-consistent and -inconsistent helping scenarios (e.g., “For each type of helping, please indicate how many times you have engaged in the behavior during the past month”; 0 = *never*, 5 = *five times or more*). The behaviors used were identical to those selected in the Pretest; there were five masculine helping behavior items ($\alpha = .75$) and five feminine helping behavior items ($\alpha = .77$).

**Demographics.** Participants reported their age, gender, sexual orientation, race/ethnicity, income, and political orientation.

**Results and Discussion**

Independent samples $t$-tests compared mean differences in attitudes toward the behavior, subjective norms, self-efficacy, and behavioral intentions by helping condition. To examine if
there were gender differences in the frequency with which participants engaged in helping behaviors, we conducted a 2 (participant gender: male vs. female) x 2 (help type: masculine vs. feminine) mixed model ANOVA on behavioral engagement. Finally, we conducted a structural equation model to test the full proximal components outlined by the GRIP model.

**Mean Differences by Helping Condition**

Consistent with our pre-registered Hypotheses 1a-c and Studies 1 and 2, at Time 1 participants who imagined helping in a gender-inconsistent way reported less favorable attitudes toward the behavior, $t(511) = 2.83, p < .01, d = 0.25, \text{CI}_{95} [0.08, 0.43]$, less favorable subjective norms, $t(511) = 3.00, p < .01, d = 0.26, \text{CI}_{95} [0.09, 0.44]$, and lower self-efficacy, $t(511) = 3.68, p < .001, d = 0.36, \text{CI}_{95} [0.19, 0.53]$, than participants in the gender-consistent condition. Furthermore, in line with Hypothesis 2, participants who imagined helping in a gender-inconsistent way reported lower intentions to engage in the behavior than participants who imagined helping in a gender-consistent way, $t(511) = 2.34, p = .02, d = 0.21, \text{CI}_{95} [0.03, 0.38]$. See Table 2 for descriptive statistics.

**Exploratory Analyses**

We conducted exploratory participant gender x help type between-subjects ANOVAs on attitudes, subjective norms, self-efficacy, and behavioral intentions (see Table 5 for full results). We found no significant interactions on attitudes, subjective norms, and behavioral intentions. There was a significant main effect of help type on self-efficacy beliefs, which was qualified by a significant interaction. Women who imagined helping in a gender-consistent (i.e., feminine) way reported higher self-efficacy than women who imagined helping in a gender-inconsistent (i.e., masculine) way, $p < .001$. There were no significant differences in self-efficacy reported by men who imagined helping in a gender-consistent or gender-inconsistent way, $p = .06$. 
Are there gender differences in helping engagement?

At Time 2, we measured participants’ recalled engagement in both masculine and feminine types of helping during the past month. Because we did not necessarily expect recalled behavior at Time 2 to be impacted by random assignment to imagining either a gender-consistent or -inconsistent helping scenario at Time 1, a 2 (help type: masculine vs. feminine) x 2 (participant gender: male vs. female) mixed ANOVA was conducted to test for gender differences in recalled behavioral engagement. There was a significant main effect of help type, $F(1, 511) = 5.80, p = .02, \eta^2_p = .01$. People reported more frequently engaging in masculine ($M = 2.14, SD = 1.00$) than feminine helping behaviors ($M = 2.07, SD = 0.97$), though the magnitude of this effect was quite small, $d = 0.07, CI_{95} [-0.01, 0.16]$. The main effect of participant gender was not statistically significant, $F(1, 511) = 0.001, p = .97, \eta^2_p < .001$, nor was the help type x participant gender interaction, $F(1, 511) = 2.61, p = .11, \eta^2_p = .01$.

Testing the Full Structural Equation Model

Using the lavaan package in R statistical software version 3.6.1 (Rosseel, 2012), we conducted a structural equation model (SEM) to test the relevant proximal sections of the GRIP model in a single analysis. SEM is an ideal analytic technique in this context because it allows for the simultaneous testing of measurement models that correct for measurement error and a priori path models, and allow for model complexity (e.g., inclusion of mediators and multiple outcome variables). As part of the SEM model, we conducted confirmatory factor analyses (CFAs) for attitudes, subjective norms, self-efficacy and behavioral intentions using the fixed-factor method to set the scale of the unobserved latent variables (i.e., setting the variance to 1 and mean fixed at 0; Beaujean, 2014). In order to account for multivariate non-normality in the continuous outcome variables, the model was estimated using Satorra-Bentler scaled measures.
that utilize maximum likelihood estimation with robust standard errors and corrected model test statistics (Kline, 2015; Satorra & Bentler, 1994). Following reporting conventions, to assess model fit we report the scaled chi-square ($\chi^2$) statistic with degrees of freedom and $p$-value, scaled Comparative Fit Indices (CFI), Standardized Root Mean Square Residual (SRMR), and scaled Root-Mean Squared Error Approximation (RMSEA) with a 95% confidence interval (Beaujean, 2014; McDonald & Ho, 2002).

In SEM, each variable is either manifest (i.e., observed, or directly measured) or latent (i.e., not directly measured, but rather a construct assumed to exist as a combination of measured items). Variables are also either endogenous (i.e., a variable whose variability is explained by one or more variables) or exogenous (i.e., a variable whose variability is not explained by any variables in the model). We entered helping condition manipulation (0 = gender-consistent, 1 = gender-inconsistent) as an observed exogenous variable. We entered the three mediator variables (attitudes, subjective norms, and self-efficacy) as latent endogenous variables, and the indicators for each of these latent variables (i.e., the items that assessed each measure) were included as observed variables. Intentions to engage in the behavior were included as a latent endogenous variable and the three indicators for this variable (i.e., the three items) were included as observed variables in the model. Finally, behavioral engagement was entered as an observed endogenous variable.

Behavioral engagement was included in the full test of the model as a between-subjects variable, rather than as a repeated measures variable—which is how it was actually measured (i.e., at Time 2, participants reported the frequency in which they engaged in both masculine and feminine helping). We modelled only the responses for a person’s assigned helping condition (gender-consistent or -inconsistent) in order to more directly map onto the between-subjects
Time 1 measures in the model. For example, for men in the gender-consistent condition, the model only looked at their engagement in gender-consistent behaviors (i.e., their engagement in gender-inconsistent behaviors were not included in the model).

The model met conventional standards for acceptable fit according to the fit indices of interest, $\chi^2 (126, N = 513) = 510.97, p < .001$, CFI = .92, RMSEA = .09 CI$_{95}$ [.08, .10], SRMR = .05. In line with the hypothesis and the $t$-tests reported earlier, gender-inconsistent helping was negatively associated with attitudes, subjective norms, and self-efficacy, and behavioral intentions (see Figure 3, full model details including measurement models are available on the project OSF page). Attitudes, subjective norms and self-efficacy positively predicted behavioral intentions. Behavioral intentions did not significantly predict recalled behavioral engagement, though the relationship was in the expected positive direction. We calculated bias-corrected bootstrap confidence intervals for the indirect effects of helping condition on behavioral intentions using 5,000 samples. Consistent with the hypothesis, the indirect effects of attitudes, $ab = -0.11, se = 0.05$, CI$_{95}$ [-0.23, -0.02], subjective norms, $ab = -0.27, se = 0.12$, CI$_{95}$ [-0.57, -0.09], and self-efficacy, $ab = -0.34, se = 0.12$, CI$_{95}$ [-0.63, -0.14] were statistically significant. The direct effect of helping condition on intentions was not statistically significant after including attitudes, subjective norms, and self-efficacy in the model ($c' = 0.18, p = .23$).

In summary, people reported less favorable attitudes, restrictive subjective norms, and lower self-efficacy with respect to gender-inconsistent helping, which in part explained decreased intentions to help in a gender-inconsistent way. While the relationship between behavioral intentions at Time 1 and behavioral engagement at Time 2 was in the predicted direction, it was not statistically significant.

**Meta-Analysis of Mean Differences Across Studies**
To establish the average strength and reliability of the key measures assessed across studies, we conducted a fixed effects meta-analysis to obtain the weighted effect sizes of the differences in attitudes, subjective norms, self-efficacy, and behavioral intentions by helping condition (see Figure 4). For attitudes, subjective norms and self-efficacy, effects from Studies 1, 2 and 3 were included ($N = 1,355$), and for behavioral intentions, effects from Studies 2 and 3 were included ($N = 943$). Effect sizes for differences between gender-consistent and gender-inconsistent behaviors were significant for every variable: attitudes, $d = 0.21$ ($r = .20$), CI$_{95}$ [0.12, 0.31]; subjective norm, $d = 0.16$ ($r = .10$), CI$_{95}$ [0.05, 0.26]; self-efficacy, $d = 0.49$ ($r = .24$), CI$_{95}$ [0.38, 0.60]; behavioral intentions, $d = 0.20$ ($r = .10$), CI$_{95}$ [0.07, 0.33].

To interpret the magnitude of the effect sizes calculated, we consider previous effect sizes observed in social psychological research on gender roles and helping behavior. Although Cohen’s (1988) benchmarks for effect size are $r = .10$ as small, $r = .30$ as medium, and $r = .50$ as large, updated guidelines specific to social psychology proposed by Richard et al. (2003) indicate $r = .10$ as a small sized-effect, $r = .20$ as a medium sized-effect, and $r = .30$ as a large-sized effect. Furthermore, in a large-scale review of the psychological literature, average effect sizes in research conducted on gender roles and helping behavior were small-to-medium in size (average $r = .18$; Richard et al., 2003). Thus, the effect sizes observed in the current internal meta-analysis are comparable to the effect sizes commonly observed in social psychological research.

**General Discussion**

The current research is the first empirical test of the proximal components of the GRIP model outlined by Croft and colleagues (2020). Though the findings from individual studies differ, an internal meta-analysis across all studies suggests that people hold less favorable attitudes, perceive more restrictive subjective norms, and feel reduced self-efficacy toward
gender-inconsistent (vs. gender-consistent) helping. Furthermore, people report weaker intentions to engage in gender-inconsistent helping, and though behavioral intentions were not significantly related to decreased engagement in gender-inconsistent helping over the previous month, this effect was in the predicted direction. Taken as a whole, our findings lend initial support for the proximal components outlined in the GRIP model and highlight several reasons why people opt out of gender-inconsistent helping opportunities.

The current research identified the relative strength of the psychological barriers undermining gender-inconsistent helping. While a combination of negative attitudes, less favorable subjective norms, and low self-efficacy explained lower gender-inconsistent helping intentions, low self-efficacy most consistently and robustly mediated this relationship (Studies 2 & 3). Furthermore, the average effect size of self-efficacy ($d = 0.49$) was over twice as large as the effect sizes for attitudes ($d = 0.21$) and subjective norms ($d = 0.16$). These findings suggest that although negative attitudes and concerns about the judgments of others play a role in weaker intentions to engage in gender-inconsistent helping, it is lower self-efficacy beliefs that appear to be the most critical for explaining weaker helping intentions.

People have repeated experiences with gender-consistent behaviors and develop increased comfort and competence with behaviors congruent with gender stereotypes (Diekman & Clark, 2015). Our findings support this reasoning and demonstrate that people report more self-efficacy toward gender-consistent helping opportunities, which predicts intentions to perform these helping behaviors. A lack of experience with gender-inconsistent behaviors stems from early gender socialization experiences that teach and reward young girls and women to perform communal behaviors and young boys and men to perform agentic behaviors (Wood & Eagly, 2010). It is also a possibility that people have fewer opportunities to gain experience
helping others in gender-inconsistent ways because people tend to solicit assistance in gender
typical ways. That is, people may turn to men to provide agentic forms of assistance, and to
give communal forms of assistance. While the current research did not directly
examine the interactions between help seekers and help providers, the present findings suggest
that lower self-efficacy beliefs may undermine engagement in gender-inconsistent helping. This
may be particularly true for women, as our exploratory analyses including helper gender
indicated that women reported decreased self-efficacy in gender-inconsistent domains more
consistently than men. It is possible these differences emerged due to differences in confidence
between men and women, or perhaps due to the skill-based requirements involved in the male-
typed helping versus female-typed helping. The masculine helping behaviors used in the present
research require specific skills that people might recognize that they do not have (e.g., repairing a
broken household item), while the feminine helping behaviors are more subjective or those that
people may be able to perform without expertise. Alternatively, while a simple “how to” search
online is possible for either type of helping, the consequences of failure are perhaps more
concrete for masculine helping behaviors. These are interesting questions that future research
could more systematically address.

Our findings with respect to attitudes and subjective norms also add to the research and
theorizing on Social Role Theory (Wood & Eagly, 2010) and the fear of backlash literature
(Amanatullah & Morris, 2010; Moss-Racusin & Rudman, 2010; Rudman & Fairchild, 2004).
People anticipated more negative outcomes when they imagined helping in gender-inconsistent
ways, and this negatively predicted helping intentions. Social Role Theory contends that people
use stereotypes to regulate their behavior by forecasting their expectations about the potential
outcomes associated with engaging in a social role, particularly in the absence of prior
experience (Brown & Diekman, 2010; Croft et al., 2019). Our results reveal that this process extends to helping roles, as demonstrated by the result that people anticipated more negative outcomes if they were to help in gender-inconsistent ways. Additionally, people perceived less favorable subjective norms toward gender-inconsistent helping, which is congruent with research on the fear of social backlash. Traditional gender stereotypes are maintained through compliance with gender roles, and people are hesitant to act in gender-inconsistent ways because they are motivated to avoid social sanctions (Rudman & Fairchild, 2004). While research on the fear of backlash has primarily examined the consequences of gender role violations in professional settings (Rudman & Mescher, 2013; Rudman et al., 2012), our findings suggest that a similar process operates in helping contexts which may offer a particularly potent test because helping behaviors and helpers are often viewed positively (Klein et al., 2015).

While the robustness of these results is strengthened by the inclusion of an internal meta-analysis across studies, it is prudent to address inconsistent patterns across individual studies. Although we found that people reported less favorable attitudes, subjective norms, and lower self-efficacy toward gender-inconsistent helping in Study 3, we failed to find consistently statistically significant results in Studies 1 and 2. Specifically, in Study 1 we did not find significant differences in subjective norm ratings, and in Study 2 we did not find differences in ratings of attitudes. There are a few potential explanations for these inconsistencies across studies. Self-efficacy may simply be the strongest and most reliable barrier to gender-inconsistent helping. Indeed, across all studies, self-efficacy consistently and most strongly predicted decreased gender-inconsistent helping intentions, and we speculate this occurred because of the positive nature of prosociality. Helping others is generally regarded favorably (Klein et al., 2015; Willer, 2009; Willer et al., 2010) and generous actors reap emotional benefits
(Aknin et al., 2013, 2015; Aknin & Whillans, 2021), so it is possible that these factors may have weakened the negative impacts of gender-inconsistent helping on subjective norms and attitudes.

An alternative explanation for the inconsistent pattern of results for attitudes and subjective norms may stem from our use of different measures across studies. As the project progressed, we refined our measures to better address our constructs of interest by using an existing Theory of Planned Behavior questionnaire (rather than adapting measures not designed to assess the Theory of Planned Behavior constructs), and it is possible that the measures used in Studies 1 and 2 to assess attitudes and subjective norms were not valid or reliable operationalizations. Specifically, the fear of backlash scale used to assess subjective norms in Study 1 may not have been a valid operationalization of this construct because this scale examines concerns about backlash for violating social norms, rather than people’s beliefs about what important others think they should or should not do. In subsequent studies, we used an established scale designed to test subjective norms to improve the validity of this measure and found evidence in support of our predictions. It is also important to note that some measures had less than optimal reliability, likely due to the small number of items included in our scales. We also used different operationalizations of attitudes across studies, using an affective-based scale in Study 1 and valence-based scales in Studies 2 and 3.

Not only did the measures vary across studies, but so did the helping scenarios, which may have contributed to the inconsistent results for attitudes and subjective norms across studies. Although we derived the helping stimuli for all studies from our Pretest and originally varied the stimuli and measures in an effort to improve the generalizability of our findings, there were important contextual differences in these scenarios across studies, including the helping target and setting. With respect to subjective norms, it is possible that helping a stranger or assisting
someone in a public setting may increase concerns about the evaluations of others when violating
gender roles, compared to helping a friend in a private setting. We found some support for this
idea in Study 2 (helping a new neighbor, a stranger) and Study 3 (helping someone by going to a
hardware store/mall, a public setting), where significant mean differences emerged between
gender-consistent and gender-inconsistent helping on subjective norms. This pattern of mean
differences did not emerge in Study 1, when people were asked to imagine helping a friend in a
private setting, and perhaps concerns about disapproval were lower as the helping target was
familiar and there were fewer potential observers. Future research could address this open
question by manipulating the private versus public nature of the helping setting, as well as the
familiarity with the helping target to see if these contextual features influence subjective norm
ratings.

Limitations and Future Research Directions

Although these findings provide a foundation from which to understand the proximal
barriers that restrict gender-inconsistent helping, it is important to note the limitations in this
research. As highlighted above, we restricted our examination of helping to contexts where
people assisted someone they were already familiar with, which may have shaped expectations
surrounding the helping experience. Our findings do indicate that the barriers to gender-
inconsistent helping are generalizable to both familiar (a friend) and newer relationships where
people may be concerned about forming a positive first impression (a new neighbor), suggesting
that a similar pattern could exist with an unknown other. Nonetheless, it will be important for
future research to confirm this speculation by examining how the proximal barriers to gender-
inconsistent helping operate in public settings with unfamiliar helping targets.
The inclusion of multiple pretested forms of gendered helping behaviors is a notable strength of the present research. While we intended to increase the generalizability of our findings to multiple types of helping, this approach comes at a critical cost to internal validity. In using multiple forms of helping within individual scenarios, it is challenging to parse what features of the scenarios were most influential in shaping people's judgments of the helping opportunity. For example, both providing emotional support and going clothes shopping are stereotypically feminine, but each behavior could theoretically elicit different reactions on its own. Perhaps some participants more strongly reacted to the emotional support component, while others reacted to the clothes shopping component. On a related note, the extent to which the masculine and feminine behaviors were parallel to one another within studies is a notable internal validity consideration. It is plausible that some aspects of the masculine and feminine helping behaviors outside of their gendered nature were systematically different. One might argue that taking a friend clothes shopping and moving furniture necessitates different physical and emotional demands in addition to the gendered nature of these behaviors. Perhaps a participant assigned to imagine helping someone move furniture more strongly considered the physical burden of this behavior in shaping their evaluations rather than the masculine stereotypes attached to it. Future research might remedy these limitations by examining single acts of masculine and feminine helping that are more comparable, like helping a new neighbor with household repairs or bringing that same new neighbor a home-cooked meal. Notably, both behaviors involve helping a new neighbor get settled into their home while better isolating the gendered nature of the helping act.

The generalizability of the current research is also limited to instances of direct helping requests. Given that it is difficult for people who are directly asked for help to say no (Bohns &
Flynn, 2015), participants may have been more receptive to helping in a gender-inconsistent way because they were asked to imagine themselves in a scenario where their assistance was requested. Being directly asked for assistance may also signal a boost in self-efficacy or decreased concerns about negative evaluations from the helping target. To illustrate, if asked for emotional support or advice, a person might think the person who asked them for assistance will not judge them negatively (even if the helping violates gender norms), and possibly asked them because they think they are particularly good at providing advice or being a supportive friend. While direct requests for help could increase confidence and perceptions of ability, this feature of the study design was consistent across helping conditions, suggesting that it may have increased these factors overall, but importantly, this does not account for the observed effects. That is, subjective norms and self-efficacy may have increased in both gender-consistent and gender-inconsistent helping scenarios, but we still observe differences in these elements between the helping scenarios. It will be important for future research to examine how the proximal barriers to gender-inconsistent helping tested in the current research generalize to instances of unsolicited or proactive forms of helping. To the extent that proactive helping is more deliberate, we would expect that gender-inconsistent helping is less likely because reflection might provide opportunity for the barriers studied here to undermine prosocial action.

It will also be important for future research to clarify the extent to which gender-inconsistent helping intentions predict actual helping behavior. Weaker intentions to help in gender-inconsistent ways were related to less helping engagement, but this effect was not statistically significant. Our ability to detect significant differences in this relationship may have been limited by critical elements of the Study 3 design, particularly the way in which these constructs were measured. Although the helping stimuli used to assess behavioral intentions and
engagement were conceptually similar and derived from the same Pretest, they were not identical and may have contained additional measurement error due to procedural differences in how they were measured. We also did not measure helping in real-time, but instead relied on participants to accurately recall or imagine performing helping behaviors. Recalled behavioral measures are susceptible to biases, whether it be socially desirable responding bias, or inaccuracies in recall (Schwarz, 2007; Tourangeau, 2000), so it is possible that participants consciously or unconsciously made errors in these reports. The behaviors that were used to measure helping engagement only represent a sample of possible gender-consistent and gender-inconsistent forms of helping, and it is certainly possible that these helping opportunities did not arise during the month-long study period. The average helping engagement across all behaviors was on the lower end of the scale which offers additional support for this speculation. Future research could address these limitations by examining actual behavior in real-time, including observational laboratory studies that eliminate recall bias, or daily diary methods that minimize the amount of time before recall.

Armed with a greater understanding of the proximal barriers to helping in gender-inconsistent ways, we see intervention studies as an important next step in shifting attitudes, subjective norms, and self-efficacy toward these behaviors (see Croft et al., 2020 for a more detailed discussion of proposed interventions). Research on affective forecasting errors (Wilson & Gilbert, 2003) could inform strategies to shift negative attitudes toward gender-inconsistent helping behaviors. Future research could compare how people expect to feel after engaging in gender-inconsistent helping to how they actually feel. If people do not actually feel bad after gender-inconsistent helping, an intervention study could make people aware of these forecasting errors, which may increase receptiveness to engaging in gender-inconsistent helping. Subjective
norms could be shifted by showing people that they may be unrealistically concerned about negative evaluations from others for performing gender-inconsistent helping. Typically, people are evaluated negatively when their behavior violates gender stereotypes (e.g., Rudman & Fairchild, 2004), but this pattern may not hold true in the context of prosocial behavior (e.g., Heilman & Chen, 2005; Taynor & Deaux, 1973); indeed, we find in our own recent research that people expect others to evaluate gender-inconsistent helpers negatively, but this backlash does not actually occur (Atkinson, Sandstrom, & Croft, 2021). Making people aware of the tendency to overestimate negative evaluations from others could alter their subjective norms and increase engagement in gender-inconsistent helping.

Increasing self-efficacy around gender-inconsistent helping could prove particularly fruitful for changing helping behavior given that it consistently and robustly predicted behavioral intentions across studies. Interventions could be designed to teach prosocial skills to children by adapting existing educational training workshops (e.g., Schonert-Reichl et al., 2015), potentially altering self-efficacy beliefs during impactful periods of gender socialization. For adults, programs designed to increase gender-inconsistent helping could be implemented in the workplace. Using insights from the lack of fit framework (Heilman & Caleo, 2018), organizations could reduce people’s performance concerns by providing hands-on experience and training with gender-inconsistent helping opportunities, which will decrease situational ambiguity and confusion, and incentivize these behaviors, which will increase motivation.

**Practice Implications**

Together, these studies focus on documenting the proximal barriers to helping and provide a framework for understanding decision-making in contexts where helping is restricted by gender stereotypes. Long-term, increased engagement in gender-inconsistent helping has the
potential to change gender stereotypes and norms, which should eventually change behavior, as outlined by Social Role Theory (Wood & Eagly, 2010). Not only will people gain additional experience engaging in gender atypical roles, but repeated observations of men and women engaging in such behaviors can change perceptions of behaviors that are appropriate for men and women, with the potential to shift and decrease the restrictive nature of gender stereotypes in other contexts. While gender roles and stereotypes have changed over time, the rate of change is not the same for men and women (Croft et al., 2015). Women continue to enter traditionally masculine fields at a faster rate than men enter traditionally feminine fields. We reason that changing the expectations surrounding gender-inconsistent prosociality could be an effective way to increase gender equality as a whole, particularly with respect to men’s willingness to take on communal roles (Croft et al., 2020). Specifically, prosociality may be an ideal entry point to promote gender equality because helping is rewarding, and therefore people may find engagement in gender-inconsistent experiences to be positive and worth pursuing. Additionally, people may be more willing to violate gender stereotypes in prosocial contexts because doing so does not threaten the existing gender hierarchy, and as a result, the consequences of violating stereotypes are less severe than in other contexts. Finally, gender-inconsistent helping is a malleable skill that can be learned, which should empower people to learn to help in new ways (for a more detailed discussion of these arguments, see Croft et al., 2020).

**Conclusion**

The present research tested the proximal factors of the GRIP model. Taken together, our findings suggest that a combination of negative attitudes, perceptions of restrictive subjective norms, and especially low self-efficacy act as psychological barriers to gender-inconsistent prosocial behavior. In the future, research should consider interventions that can counteract the
effects of gender stereotypic expectations on helping in order to promote increased engagement in gender-inconsistent prosociality and, ultimately, cultivate gender equality across contexts.
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https://doi.org/10.1177/0956797620919673


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*Advances in experimental social psychology* (Vol. 35, pp. 345–411). Amsterdam:

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Table 1
Full List of Helping Behaviors Tested in the Pretest

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Gender Stereotypicality</th>
<th>Behavioral Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total  ( M (SD) )</td>
<td>Men  ( M (SD) )</td>
</tr>
<tr>
<td>Doing yard work or household repairs for someone else.</td>
<td>2.30 (1.12)</td>
<td>3.33 (1.95)</td>
</tr>
<tr>
<td>Helping someone jump-start a car.</td>
<td>2.06 (1.05)</td>
<td>2.51 (1.69)</td>
</tr>
<tr>
<td>Helping someone carry groceries, a heavy box, etc.</td>
<td>2.36 (1.02)</td>
<td>3.62 (2.10)</td>
</tr>
<tr>
<td>Helping someone move into a new place.</td>
<td>2.46 (1.01)</td>
<td>3.12 (2.05)</td>
</tr>
<tr>
<td>Teaching someone how to use their new electronic device/appliance/tool.</td>
<td>2.51 (0.97)</td>
<td>3.43 (2.02)</td>
</tr>
<tr>
<td>Helping someone figure out an issue with their computer/electronic device.</td>
<td>2.57 (0.83)</td>
<td>3.77 (1.79)</td>
</tr>
<tr>
<td>Helping someone cross a busy intersection.</td>
<td>2.82 (0.87)</td>
<td>2.34 (1.74)</td>
</tr>
<tr>
<td>Giving directions to someone who looks lost.</td>
<td>2.87 (0.78)</td>
<td>3.36 (2.06)</td>
</tr>
<tr>
<td>Lending someone a large sum of money.</td>
<td>2.87 (0.74)</td>
<td>1.88 (1.35)</td>
</tr>
<tr>
<td>Giving up your seat on the bus to someone who needs it.</td>
<td>2.77 (0.85)</td>
<td>2.64 (1.86)</td>
</tr>
<tr>
<td>Holding a door open for someone.</td>
<td>2.46 (0.99)</td>
<td>4.46 (1.84)</td>
</tr>
<tr>
<td>Helping out in your neighborhood.</td>
<td>3.03 (0.88)</td>
<td>2.39 (1.83)</td>
</tr>
<tr>
<td>Picking up an item someone has dropped.</td>
<td>2.98 (0.76)</td>
<td>3.64 (2.11)</td>
</tr>
<tr>
<td>Paying the tab for the person behind you in the line.</td>
<td>3.10 (0.70)</td>
<td>2.12 (1.75)</td>
</tr>
<tr>
<td>Leaving an extra generous tip.</td>
<td>2.99 (0.80)</td>
<td>3.18 (1.95)</td>
</tr>
<tr>
<td>Giving someone a ride somewhere new.</td>
<td>2.98 (0.77)</td>
<td>2.94 (2.08)</td>
</tr>
<tr>
<td>Offering to proofread someone’s resume/CV.</td>
<td>3.27 (0.74)</td>
<td>2.45 (1.91)</td>
</tr>
<tr>
<td>Spotting someone small change.</td>
<td>3.04 (0.72)</td>
<td>3.36 (1.87)</td>
</tr>
<tr>
<td>Volunteering to mentor children.</td>
<td>3.37 (1.00)</td>
<td>2.09 (1.77)</td>
</tr>
<tr>
<td>Listening and/or giving advice to someone about a personal problem.</td>
<td>3.64 (0.88)</td>
<td>4.17 (1.87)</td>
</tr>
<tr>
<td>Visiting folks at a retirement home or hospital.</td>
<td>3.52 (0.82)</td>
<td>2.39 (1.86)</td>
</tr>
<tr>
<td>Keeping someone company during a doctor’s appointment.</td>
<td>3.58 (0.88)</td>
<td>2.75 (1.87)</td>
</tr>
<tr>
<td>Calling someone who seems like they need to be cheered up.</td>
<td>3.76 (0.81)</td>
<td>3.03 (2.15)</td>
</tr>
<tr>
<td>Taking a home-cooked meal to a sick friend/neighbor.</td>
<td>3.83 (1.00)</td>
<td>2.06 (1.67)</td>
</tr>
<tr>
<td>Helping someone choose what to wear.</td>
<td>3.93 (0.96)</td>
<td>2.52 (1.94)</td>
</tr>
</tbody>
</table>

Note. Items in bold are those selected as stimuli in the Pretest. Masculine helping behaviors bolded at the top of the table and feminine helping behaviors are bolded at the bottom of the table. Higher gender stereotypicality scores indicate that the behavior was judged as more
female-stereotypic. The gender stereotypicality of each helping behavior was rated on a 5-point Likert scale (1 = extremely masculine, 3 = neutral, 5 = extremely feminine) and behavioral engagement was rated on a 6-point Likert scale (1 = never, 2 = 1 time, 3 = 2 times, 4 = 3 times, 5 = 4 times, 6 = five times or more).
Table 2
*Mean Differences by Helping Condition in Studies 1-3*

<table>
<thead>
<tr>
<th></th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gender Consistent</td>
<td>Gender Inconsistent</td>
<td>Gender Consistent</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Attitudes</td>
<td>-</td>
<td>5.72 (1.02)</td>
<td>5.52 (1.28)</td>
</tr>
<tr>
<td>Positive affect</td>
<td>40.03 (8.57)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Negative affect</td>
<td>13.41 (4.19)</td>
<td>13.24 (3.95)</td>
<td>-</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>1.47 (0.47)</td>
<td>1.48 (0.49)</td>
<td>5.22 (1.12)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>5.90 (0.88)</td>
<td>5.19 (1.13)</td>
<td>5.78 (1.02)</td>
</tr>
<tr>
<td>Intentions</td>
<td>-</td>
<td>-</td>
<td>5.69 (1.27)</td>
</tr>
</tbody>
</table>

*Note.* Study 1 (gender-consistent N = 206, gender-inconsistent N = 206). Study 2 (gender-consistent N = 245, gender-inconsistent N = 185); Study 3 (gender-consistent N = 256, gender-inconsistent N = 257). In Study 1, attitudes (positive and negative affect) were rated on 5-point Likert scales (1 = very slightly o not at all, 5 = extremely), subjective norms were rated on a 5-point Likert scale (1 = not at all, 5 = very much), and self-efficacy beliefs were rated on a 7-point Likert scale (1 = not at all certain, 7 = extremely certain). In Studies 2 and 3, attitudes, subjective norms, self-efficacy beliefs, and behavioral intentions were rated on 7-point Likert scales.
Table 3
Results from Participant Gender x Help Type ANOVAs in Study 1

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Main effects</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masculine</td>
<td>Feminine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td>34.64</td>
<td>37.39</td>
<td>12.45 (.03)</td>
<td>20.17 (.05)</td>
</tr>
<tr>
<td></td>
<td>(8.87)</td>
<td>(9.22)</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Negative affect</td>
<td>12.13</td>
<td>13.19</td>
<td>4.17 (.01)</td>
<td>3.55 (.01)</td>
</tr>
<tr>
<td></td>
<td>(3.05)</td>
<td>(3.91)</td>
<td>*</td>
<td>(.01)</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>1.45</td>
<td>1.58</td>
<td>1.11 (.003)</td>
<td>2.04 (.01)</td>
</tr>
<tr>
<td></td>
<td>(0.47)</td>
<td>(0.48)</td>
<td></td>
<td>(.002)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>5.97</td>
<td>5.10</td>
<td>0.02 (&lt;.001)</td>
<td>.99 (.002)</td>
</tr>
<tr>
<td></td>
<td>(0.80)</td>
<td>(1.26)</td>
<td></td>
<td>***</td>
</tr>
</tbody>
</table>

Note. * p < .05. ** p < .01. *** p < .001.
Table 4

Results from Participant Gender x Help Type ANOVAs in Study 2

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Main effects</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masculine</td>
<td>Feminine</td>
<td>Gender</td>
<td>Help type</td>
</tr>
<tr>
<td>Attitudes</td>
<td>5.56 (1.05)</td>
<td>5.44 (1.02)</td>
<td>2.70 (.01)</td>
<td>0.40 (.001)</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>5.19 (1.17)</td>
<td>5.07 (1.21)</td>
<td>0.15 (&lt;.001)</td>
<td>0.67 (.002)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>5.48 (1.09)</td>
<td>5.44 (1.09)</td>
<td>1.09 (.03)</td>
<td>10.76 (.03)</td>
</tr>
<tr>
<td>Intentions</td>
<td>5.38 (1.41)</td>
<td>5.41 (1.41)</td>
<td>3.76 (.01)</td>
<td>2.55 (.01)</td>
</tr>
</tbody>
</table>

Note. * p < .05. ** p < .01. *** p < .001.
<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Main effects</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Masculine</td>
<td>Feminine</td>
<td>Gender</td>
<td>Help type</td>
</tr>
<tr>
<td>Attitudes</td>
<td>5.54 (.24)</td>
<td>5.77 (.20)</td>
<td>0.54 (.01)</td>
<td>12.75 (.02)</td>
</tr>
<tr>
<td>Subjective norms</td>
<td>5.55 (.22)</td>
<td>5.69 (.21)</td>
<td>0.58 (.01)</td>
<td>9.75 (.02)</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>5.26 (.32)</td>
<td>5.65 (.14)</td>
<td>0.13 (&lt;.01)</td>
<td>25.37 (.05)</td>
</tr>
<tr>
<td>Intentions</td>
<td>5.13 (.50)</td>
<td>5.22 (.32)</td>
<td>0.03 (&lt;.01)</td>
<td>4.69 (.01)</td>
</tr>
</tbody>
</table>

Note. * p < .05. ** p < .01. *** p < .001.
Figure 1

The Gender Roles Inhibiting Prosociality (GRIP) Model

Figure 2

Mediation Results for Behavioral Intentions in Study 2.

Attitudes

Subjective norms

Self-efficacy

Behavioral intentions

Helping condition
0 = gender-consistent
1 = gender-inconsistent

\[ c = -0.25 (c' = 0.14) \]

\[ -0.20 (SE = 0.11) \]

\[ -0.25 (SE = 0.12) \]

\[ -0.50 (SE = 0.11) \]

\[ 0.28 (SE = 0.05) \]

\[ 0.46 (SE = 0.04) \]

\[ 0.45 (SE = 0.05) \]

Note. Unstandardized coefficients are presented and standard errors for each path are in parentheses. The indirect effects of subjective norms and self-efficacy were statistically significant. Note. *p < .05. **p < .01. ***p < .001.
Figure 3

Full Test of Proximal Components of the Gender Roles Inhibiting Prosociality (GRIP) Model in Study 3.

Note. Unstandardized coefficients are presented and standard errors for each path are in parentheses. The indirect effects of attitudes, subjective norms, and self-efficacy in the relationship between helping condition and behavioral intentions were statistically significant. Note. Indicators for latent variables are omitted for presentation clarity. Latent variables are represented with ovals. *p < .05. **p < .01. ***p < .001.
GENDER ROLES INHIBITING PROSOCIALITY

Figure 4
Average Estimated Effect Size for Attitudes, Subjective Norms, Self-efficacy, and Intentions as a Function of Helping Condition.

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>Avg. Estimated Effect, $d = 0.21$ CI$_{95}$ [0.12, 0.31]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1 (positive affect)</td>
<td>-</td>
</tr>
<tr>
<td>Study 1 (negative affect)</td>
<td>-</td>
</tr>
<tr>
<td>Study 2</td>
<td>-</td>
</tr>
<tr>
<td>Study 3</td>
<td>-</td>
</tr>
<tr>
<td>Summary</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subjective Norms</th>
<th>Avg. Estimated Effect, $d = 0.16$ CI$_{95}$ [0.05, 0.26]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>-</td>
</tr>
<tr>
<td>Study 2</td>
<td>-</td>
</tr>
<tr>
<td>Study 3</td>
<td>-</td>
</tr>
<tr>
<td>Summary</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-Efficacy</th>
<th>Avg. Estimated Effect, $d = 0.49$ CI$_{95}$ [0.38, 0.60]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>-</td>
</tr>
<tr>
<td>Study 2</td>
<td>-</td>
</tr>
<tr>
<td>Study 3</td>
<td>-</td>
</tr>
<tr>
<td>Summary</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intentions</th>
<th>Avg. Estimated Effect, $d = 0.20$, CI$_{95}$ [0.07, 0.33]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 2</td>
<td>-</td>
</tr>
<tr>
<td>Study 3</td>
<td>-</td>
</tr>
<tr>
<td>Summary</td>
<td>-</td>
</tr>
</tbody>
</table>