



Belongingness as a Mechanism for the Linguistic Correlates of Depression

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Introduction

Background

- Higher levels of depression are associated with increased use of self-focused pronouns (first-person singular; *I, me, my*) and negative emotion words (Edwards & Holtzman, 2017; Rude, Gortner, & Pennebaker, 2004; Zimmerman et al., 2016).
- Partner use of collective self-focused language (first-person plural pronouns; *we, us, our*) predicts positive health outcomes for patients with a variety of diseases and disorders; like depressed individuals, such patients use high rates of self-focused language (Rentschner et al., 2015; Robbins et al., 2013; Rohrbaugh et al., 2008; Rohrbaugh et al., 2012).

Research Questions

- What social psychological mechanisms could account for depressed individuals' increased self-focus?
- Can partner (or significant other) use of self- and other-focused personal pronouns predict lower levels of depression in participants?

Hypotheses

- Because first-person singular pronouns isolate self from other (Dewall et al., 2011; Schofield & Mehr, 2016), and depression and negative emotion is associated with decreased belongingness (Choenarom, Williams, & Hagerty, 2005; Hagerty & Williams, 1999), we predicted that:
 - (H1)** Depression's linguistic correlates are mediated and moderated by decreased belongingness.
 - (H2)** Significant others' use of first-person plural pronouns predicts participant levels of depression.

Method

Participants and Procedure

- Undergraduate students ($N = 243$; 62.6% female; $M_{age} = 19.68$, $SD_{age} = 2.94$) completed depression and belongingness surveys, wrote about the most recent interaction they had with someone they deeply care about, and nominated that person ($N = 20$; 70% female; $M_{age} = 37.55$, $SD_{age} = 15.5$) to do the same.

Measures

- The Center for Epidemiologic Studies Depression Scale-Revised (CESD-R; Eaton et al., 2004) asked about depression symptoms in the last 2 weeks:
 - The CESD-R includes 20 items, e.g., "Nothing made me happy."
- Three scales were used to measure participants' levels of belongingness:
 - Need to Belong (NTB; Leary et al., 2005) Scale includes 10 items, e.g., "I do not like being alone."
 - Interpersonal Needs Questionnaire (INQ; Van Orden et al., 2012) includes 15 items, e.g., "These days, the people in my life would be better off if I were gone."
 - Inclusion of Other in the Self (IOS; Aron, Aron, & Smollan, 1992) scale is a single-item measure of interpersonal closeness.
- Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015) measured relative frequency (% of total words used) for...
 - First-person singular pronouns (e.g., *I, me, my*)
 - First-person plural active (*we*) and passive (*us, our*) pronouns
 - Negative emotion (e.g., *cry, worry*)

Results

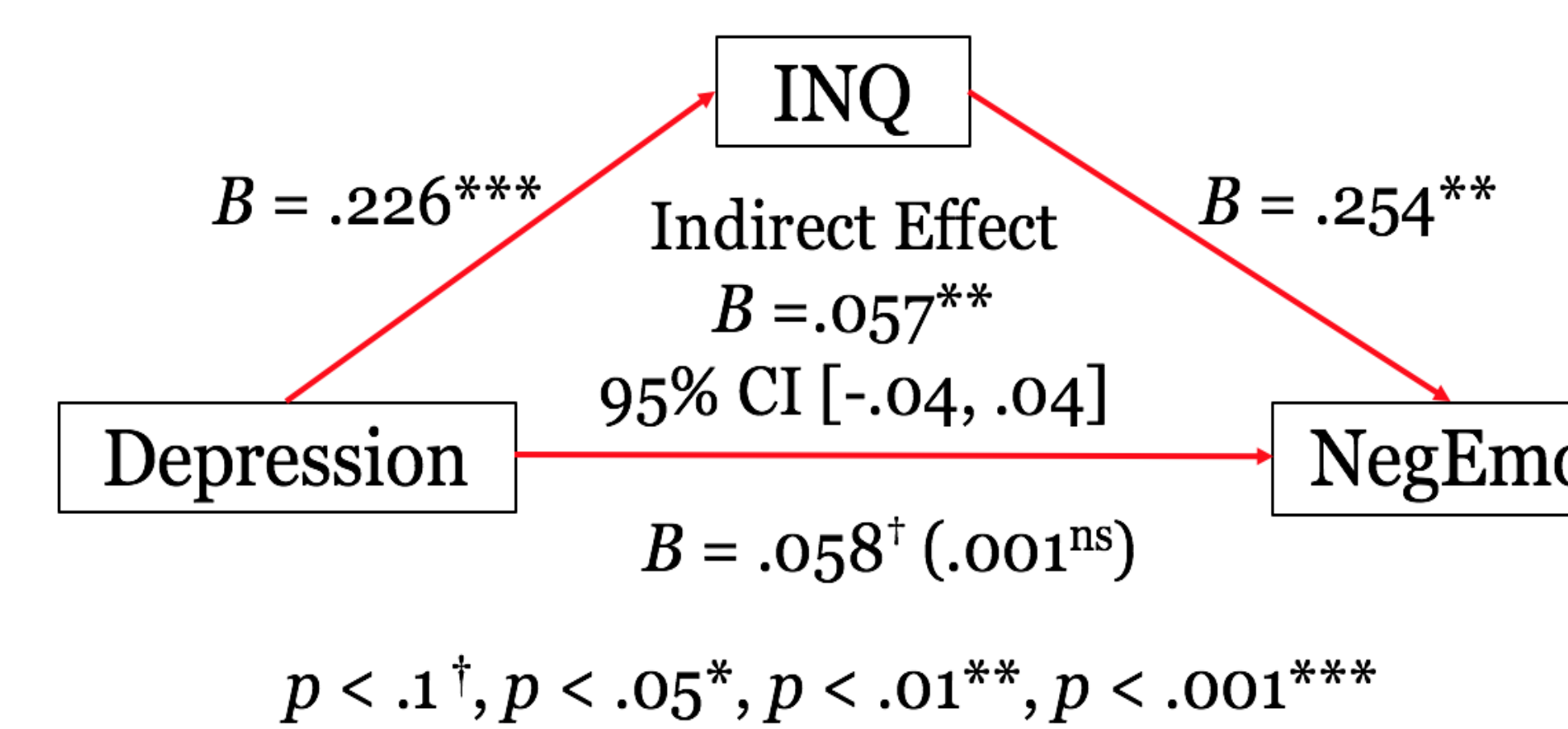


Figure 1. Mediation effect of perceived burdensomeness and thwarted belongingness on depression and negative emotion language.

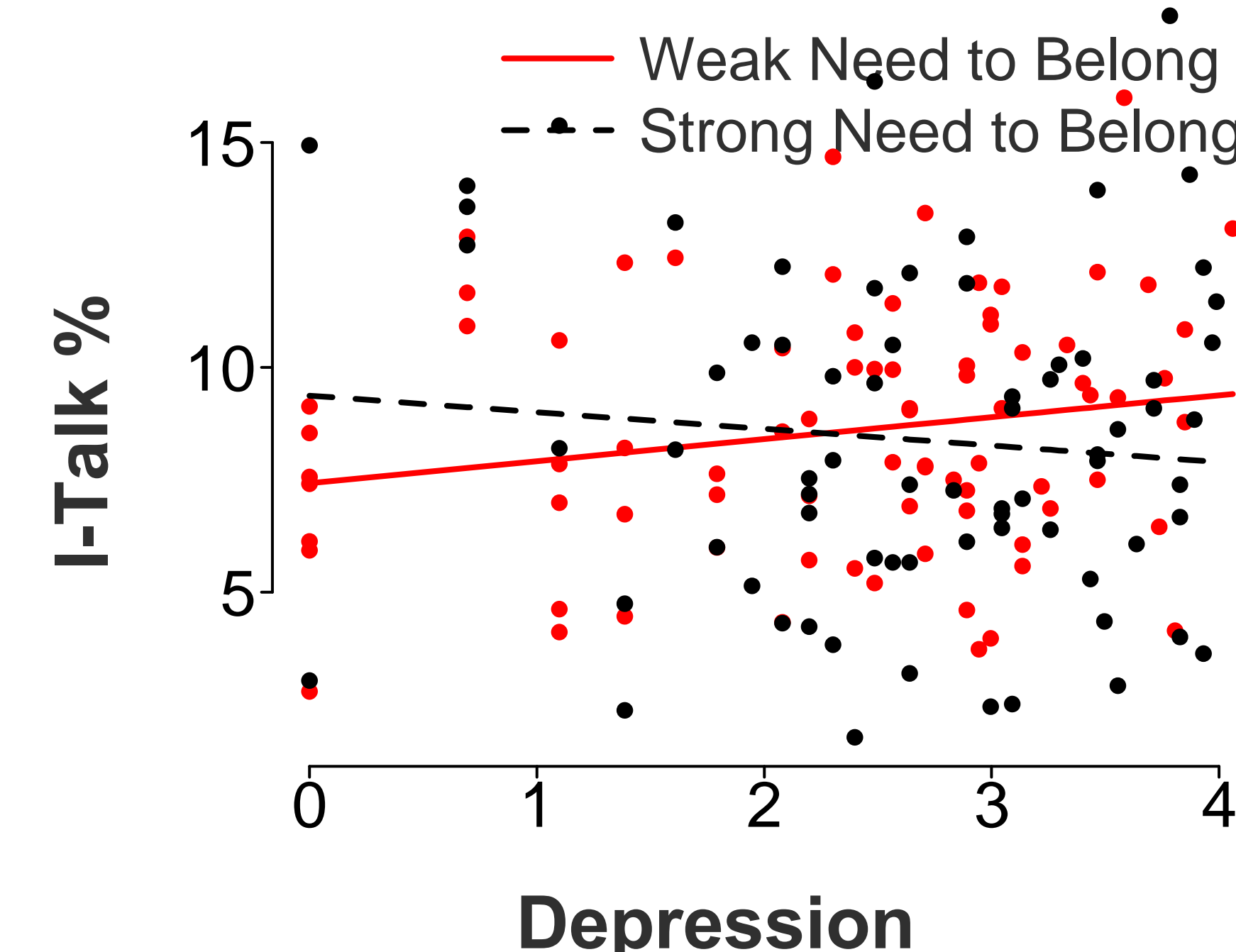


Figure 2. Women's use of I-talk: Sex x depression x need to belong interaction, $p = .009$. For women with weak need to belong, depression positively correlates with I-talk, $p = .03$.

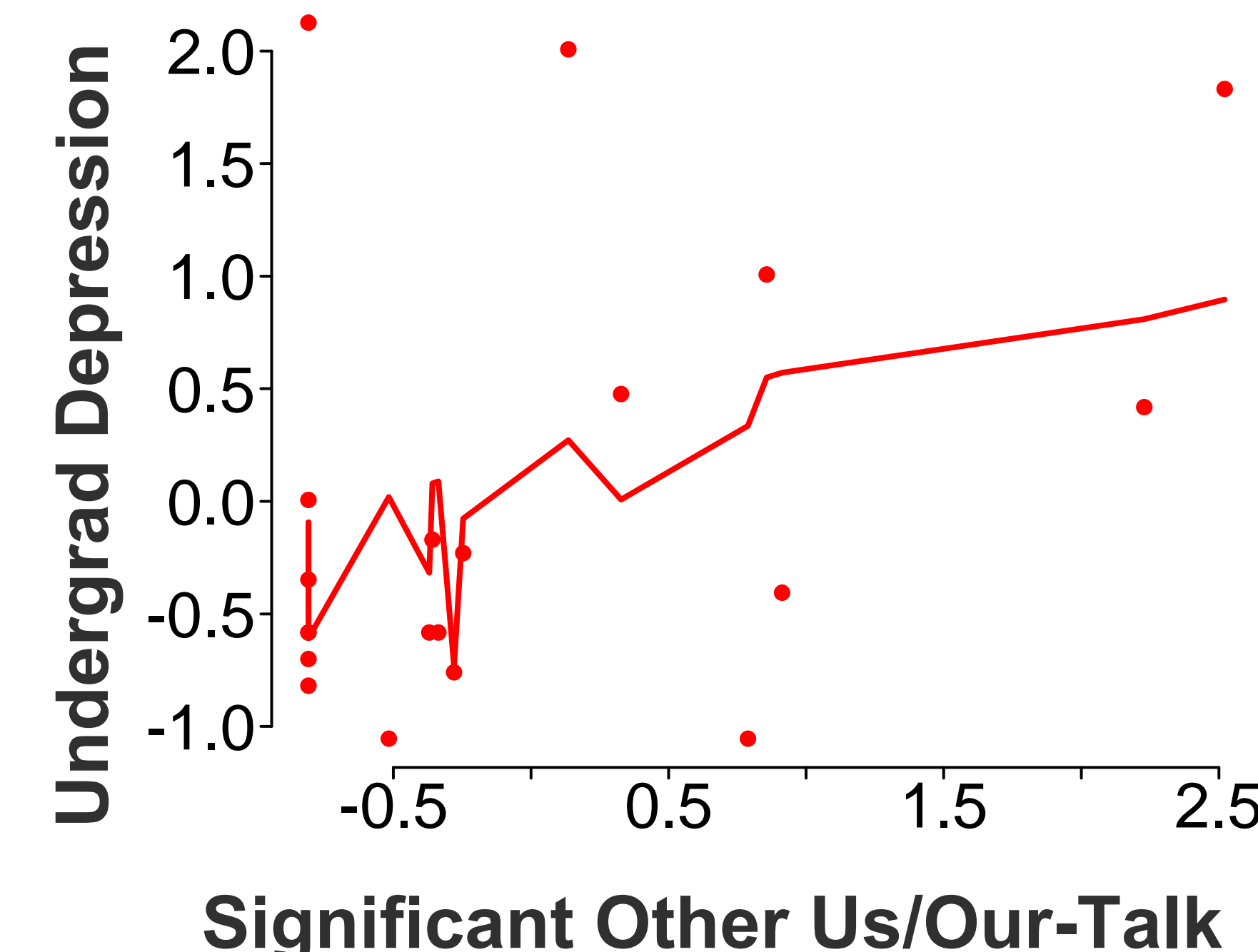


Figure 3. Significant others' passive *we*-talk (controlling for active *we*-talk) positively correlates with undergraduate students' levels of depression, $p = .04$.

Discussion

- Corroborating findings that loneliness is a key predictor of depression (Cacioppo et al., 2015), negative affective language was positively correlated with depression, and that association was partially mediated by a composite measure of thwarted belongingness and perceived burdensomeness.
- Relevant to research demonstrating a higher prevalence of depression and self-focused speech in women (Chung & Pennebaker, 2007; Nolen-Hoeksema, 2001), depressed women used more "I" to the degree that they had a weaker need to belong; for depressed women, increased "I" rates may signal social disengagement.
- Complementing research establishing active partner *we* as a predictor of positive health outcomes in patients (Rohrbaugh et al., 2008), we found significant others' higher use of passive *we* (*us, our*), while controlling for active *we*, correlated with higher levels of depression in undergraduates.
 - Findings suggest that passive *us* or *our*, but not active *we*, may be harmful in close relationships.

Impact

- Over 300 million adults worldwide are negatively impacted by depression (WHO, 2018), making it critical for researchers to uncover more social factors that may exacerbate or ameliorate the condition.
- Natural language patterns, as a behavioral measure, may more directly reflect cognition and emotion than self-reports that can be skewed by limited self-awareness and social desirability biases (Youyou et al., 2017).

Reference list is available on the back of handouts.