

# Weight status, negative body talk, and body dissatisfaction: A dyadic analysis of male friends

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## Abstract

This study examined the associations among weight status, body dissatisfaction, and negative body talk with a sample of young adult male friends ( $N=55$  pairs). Actor–Partner Interdependence Model revealed that individuals' body dissatisfaction was positively associated with their own body mass index, but was negatively associated with their friend's body mass index. In addition, having a friend with low body mass index escalated the association between individuals' own body mass index and body dissatisfaction. Further, when individuals with higher body mass index engaged in higher negative body talk, they had lower body dissatisfaction compared to those who engaged in lower negative body talk.

## Keywords

actor–partner interdependence model, body dissatisfaction, body mass index, body talk, friends, weight

Being overweight is associated with more physical health and psychological problems (Kopelman, 2000). Research consistently shows that individuals who are overweight tend to experience higher body dissatisfaction, desire for thinness, and fear of becoming overweight (i.e. fear of fat; e.g. Pingitore et al., 1997). Not all overweight individuals, however, experience body image disturbance. The imperfect association between weight status and body dissatisfaction has led researchers to focus on the moderators between these constructs (e.g. Bardone-Cone et al., 2008; Gumble and Carels, 2012; Lawler and Nixon, 2011). Whereas research has attempted to examine various moderators (e.g. gender, perceived social pressure) between weight status and body dissatisfaction, limited attention has been placed on the role of interpersonal relationships in the development of body dissatisfaction. Recent research suggests that interpersonal characteristics, such as

engagement in “negative body talk” or excessive discussion of body image or weight-related issues, are related to both weight status and body image problems (Rudiger and Winstead, 2013). Further, although there is an overwhelming focus on women in body image research, researchers have called for more studies that specifically focus on men to provide advancement in theories and clinical practices (Pope et al., 2000; Yang et al., 2005). Thus, this study examined the association between weight status, negative body talk, and body dissatisfaction among male friend dyads.

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## Negative body talk

Negative body talk is an interpersonal interaction that involves excessive discussion of body image- or weight-related issues, which commonly occurs among friends (Nichter and Vuckovic, 1994). Although negative body talk was thought to be primarily prominent among female friends (Arroyo and Harwood, 2012; Tan and Chow, 2014), recent research suggests that such an interpersonal interaction is also common among adolescent boys and young adult men (Engeln et al., 2013; Jankowski et al., 2014; Jones and Crawford, 2005). Research found that women who engage in more negative body talk are more likely to experience negative affect (e.g. guilt and depression) and feel dissatisfied with their bodies (Arroyo and Harwood, 2012; Ousley et al., 2008; Salk and Engeln-Maddox, 2012). Although negative body talk is more common among women (Payne et al., 2011; Tan and Chow, 2014; Wasylikiw and Butler, 2014), it should not be assumed that the impact of negative body talk on men's adjustment is minimal. Indeed, research on adolescent boys and men also show that individuals who engage in more negative body talk suffer from higher drive for muscularity, weight concern, body dissatisfaction, lower appearance evaluation, and higher eating disordered symptoms (Engeln et al., 2013; Jankowski et al., 2014; Jones and Crawford, 2005).

Although a few studies have investigated negative body talk among adolescent boys and men (Engeln et al., 2013; Jones and Crawford, 2005), there are two limitations in the existing research. First, most studies have utilized an individual approach in that only one person from a relationship is assessed, even though negative body talk is inherently dyadic. Thus, we argue that it is crucial to consider two friends when examining negative body talk. The focus on dyadic friendships is important because these friendships play a crucial role in late adolescents' and young adults' psychological development (Chow et al., 2011), including the development of body-related attitudes and behaviors (Shomaker and Furman, 2009; Wang et al., 2006). Furthermore, because adolescents

and young adults often turn to their friends as important sources of social support (Chow et al., 2011), friendships provide an ideal context for the investigation of negative body talk.

Second, although negative body talk is related to body image-related issues (Rudiger and Winstead, 2013), little is known about whether this interpersonal dynamic would play a moderating role in the association between individuals' weight status and body dissatisfaction. We argue that through negative body talk, friends mutually reinforce each other's thin idealization, thereby aggravating the association between the weight status and body dissatisfaction. Being overweight already poses increased risks for suffering from body image issues (Pingitore et al., 1997), and negative body talk that involves excessive co-rumination on body image-related problems might further escalate individuals' thin idealization, leading them to experience even higher body dissatisfaction. Therefore, it is possible that engagement in negative body talk with a friend prompts individuals who are higher in weight to experience even greater than usual levels of body dissatisfaction.

## Partner comparison processes

According to social comparison theory (Festinger, 1954), individuals evaluate their own characteristics by comparing themselves with the characteristics of others. Elaborating on social comparison theory, Markey and Markey (2011) further suggest that body-related issues are often the result of *partner comparison processes*. According to this model, individuals' body dissatisfaction is dependent on three components: (a) their own weight status, (b) their partner's weight status, and (c) the discrepancies between the two partners' weight status. Research on romantic relationships has provided evidence to support this model (Markey and Markey, 2011). Little is known, however, whether such partner comparison processes would be observed in close friendships, especially those of men's. Because friendships and romantic relationships are both intimate in nature and share many features (e.g. mutual

support, disclosure; Chow and Buhrmester, 2011; Chow et al., 2011), it is reasonable to argue that friendships could be an interpersonal context in which partner comparison processes take place. When generalizing the ideas of partner comparison processes to friendships, it is possible that men might experience higher levels of body dissatisfaction when they compare themselves to a friend who is considerably thinner.

## The current study and hypotheses

This study used data from male friend dyads to examine the association among weight status, negative body talk, and body dissatisfaction. This study had three major goals. First, we studied how negative body talk would be related to the emergence of body dissatisfaction among male friends. Second, we examined whether negative body talk would aggravate the negative effects of weight status and body dissatisfaction. Third, we examined how weight status of two friends would interact to predict both partners' body dissatisfaction. Specifically, six hypotheses were proposed:

*Hypothesis 1:* Previous research suggests that individuals with higher weight status also suffer from higher body image-related issues (e.g. desire for thinness, fear of fat; Pingitore et al., 1997). Therefore, we expected that men with higher weight status (measured by body mass index; BMI) would suffer from higher body dissatisfaction.

*Hypothesis 2:* According to partner comparison perspective (Markey and Markey, 2011), a man with a friend who is thin would want to look thinner than a man with a heavy friend. Therefore, we hypothesized that individuals with a friend who is lower in weight status would suffer from higher body dissatisfaction.

*Hypothesis 3:* Previous research suggests that negative body talk was related to higher body dissatisfaction (e.g. Rudiger and Winstead, 2013). Thus, we hypothesized

that engagement in higher negative body talk would be associated with both friends' higher body dissatisfaction.

*Hypothesis 4 and 5:* Negative body talk is considered emotionally contagious in that friends who engage in discussion of body-related concerns may experience increased negative emotions (Rudiger and Winstead, 2013). Thus, we hypothesized that negative body talk would moderate the association between weight status and body dissatisfaction. Specifically, heavier individuals would experience heightened body dissatisfaction when they engage in higher negative body talk, compared to those who engage in lower negative body talk. Further, heavier individuals with a friend who is lower in weight status would experience greater body dissatisfaction when they engage in higher negative body talk, compared to those who engage in lower negative body talk.

*Hypothesis 6:* Based on partner comparison perspective, it is likely that heavier men may evaluate their own body image more negatively when their friend is lower in weight status (Markey and Markey, 2011). Therefore, we hypothesized that men who are higher in weight status, but have a friend who is lower in weight status, would have the greatest body dissatisfaction.

## Method

### Participants and procedure

Male college students attending a local university were recruited from General Psychology classes and asked to bring a close male friend to the laboratory for participation. After obtaining informed consent, both friends completed computer-administered questionnaires separately. The final sample consisted of 55 pairs of friends; majority of these participants were Caucasian (84.5%). The current sample primarily consisted of young adults ( $M_{age} = 20.05$  years,  $SD = 1.25$ ) and the duration of their friendship varied ( $M_{duration} = 34.01$  months,  $SD = 44.52$ ). Participants received credits to fulfill their course requirement.

## Measures

**Negative body talk.** Both friends completed a 3-item scale that measured their tendencies to engage in negative appearance-related dialogue with each other (Rudiger and Winstead, 2013). Participants were asked to consider how often they say negative things about their bodies in front of each other. Items included: (a) How often would this [negative body talk] occur between you and your friend? (b) How often do you say negative things about your physical appearance in front of your friend? and (c) How often does your friend say negative things about his physical appearance in front of you? Participants rated the items on a scale ranging from 1 (*Never*) to 5 (*Very Frequently*). The alpha coefficients for both friends' negative body talk scale were satisfactory, with Cronbach's  $\alpha$ s > .83. Because both friends' reports of negative body talk converged ( $r = .37, p < .01$ ) and negative body talk reflects a dyadic construct, both friends' reports were averaged to form a composite.

**Body dissatisfaction.** Participants' body dissatisfaction was measured using an array of nine male figures, ranging from thin to obese (Rand and Wright, 2000). Participants were asked to choose which figure looked most like them (current), and which figure they would most like themselves to look like (ideal). Numbers were assigned to the figures for data analysis (1 = *thinnest*; 9 = *heaviest*). Participants' body dissatisfaction score was calculated as the difference between current and ideal body sizes (current – ideal). High positive scores indicated greater body dissatisfaction.

**Body mass index ( $\text{kg}/\text{m}^2$ ).** Participants reported their weight in pounds and height in inches. BMI was calculated by dividing weight in pounds by squared height in inches and multiplied by 703.

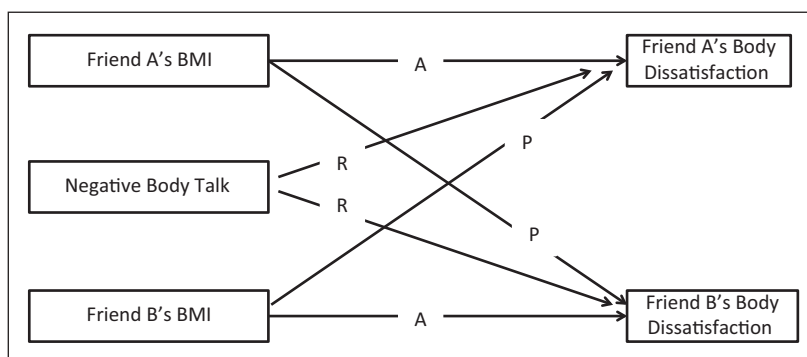
## Data restructuring

Dyadic relationships can be broadly categorized as *distinguishable* versus *indistinguishable*

dyads (Kenny et al., 2006). Whereas there are clear roles that differentiate two members in distinguishable dyads (e.g. parent vs child, husband vs wife), same-sex friends are considered indistinguishable dyads. Therefore, the designation of participants as "Friend A" versus "Friend B" in the data set would be arbitrary. In order to analyze indistinguishable dyadic data, as recommended by Kenny et al. (2006), we first restructured the dyadic data using the "double-entry" method. Specifically, each friend's scores were entered twice, once in the column for Friend A and again in the column for Friend B (e.g. see Kenny et al., 2006). With the restructured data, both Friend A and Friend B would have identical means and variances. Furthermore, the covariance matrix of Friend A and Friend B would be identical. For instance, correlation between Friend A's BMI and body dissatisfaction would be identical to Friend B's BMI and body dissatisfaction.

## Analysis plan

With the restructured dyadic data, exploratory analyses were first conducted to examine the means, standard deviations, and correlations among the study variables. Because this study included friend dyads that are interdependent in nature, our hypotheses were examined according to the Actor–Partner Interdependence Model (APIM; Kenny et al., 2006). The APIM is a statistical model that permits the examination of whether an outcome in a relationship is a function of the target person's characteristic (actor effect), the partner's characteristic (partner effect), and the relationship characteristic (relationship effect). Figure 1 depicts an APIM with weight status, body dissatisfaction, and negative body talk provided by both partners (e.g. Friend A and Friend B). The actor effects represent the association between individuals' weight status and their own perception of body dissatisfaction. In contrast, the partner effects represent the association between individuals' weight status and their friend's body dissatisfaction. The relationship effects represent the association between negative body talk and



**Figure 1.** APIM illustrating BMI predicting body dissatisfaction between friends. Because the dyads are indistinguishable, the effects are equal across partners (e.g. Friend A actor effect is equal to Friend B actor effect). Also, this model can be extended to examine the interaction effect between BMI and negative body talk scores on body dissatisfaction and the interaction effect between two friends' BMI scores on body dissatisfaction.

A: actor effect; P: partner effect; R: relationship effect.

both friends' body dissatisfaction. Similar to regression analysis, the APIM also permits the examination of interaction effects among the predictors. This study proposed a moderation model by including negative body talk as the relationship-level moderator between the actor and partner effects of weight status on body dissatisfaction. To further examine the partner comparison processes, the interaction between two friends' weight status on body dissatisfaction was examined. The APIM was estimated using multilevel modeling (MLM) implemented by SPSS 20.0's Mixed Models. All predictors were standardized to the grand mean to aid interpretation of the regression weights (Aiken and West, 1991). Interaction terms were formed based on the standardized predictors. Pseudo- $R^2$  was estimated to indicate the (approximate) amount of variance explained by the predictors.

## Results

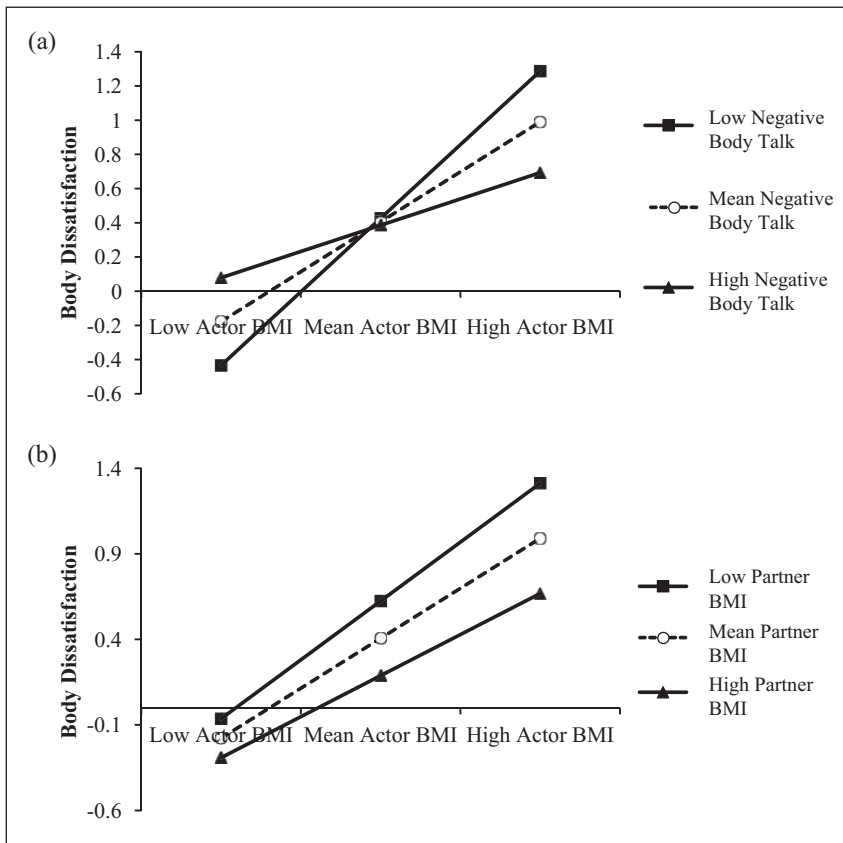
### Descriptive statistics

Means and standard deviations for the study variables were as follows: BMI ( $M=25.2$ ,  $SD=4.26$ ), body dissatisfaction ( $M=.36$ ,  $SD=.98$ ), and negative body talk ( $M=1.69$ ,

$SD=.55$ ). As expected, bivariate correlations revealed that individuals' higher BMI was related to their own higher body dissatisfaction ( $r=.58$ ,  $p<.001$ ), but it was marginally related to their friend's body dissatisfaction ( $r=-.24$ ,  $p=.08$ ). Individuals' higher BMI was not significantly related to their friend's BMI ( $r=.01$ ,  $p=.94$ ) and negative body talk ( $r=.12$ ,  $p=.38$ ). Interestingly, two friends' body dissatisfaction scores were negatively correlated ( $r=-.27$ ,  $p<.05$ ), suggesting that individuals with higher body dissatisfaction would have a friend with lower body dissatisfaction. Although this finding was not expected, it showed that friend dyads were interdependent (in an inverse fashion) and confirmed the needs for a dyadic analytical approach to handle the data.

### Actor-partner interdependence model

An APIM based on the theoretical model (see Figure 1) was estimated. The overall model fit was significant,  $\chi^2(6)=69.45$ , pseudo- $R^2=.48$ ,  $p<.001$ ; the predictors together explained approximately 48 percent of the variance in body dissatisfaction. Consistent with Hypothesis 1, the actor effect showed that individuals who were higher in BMI also reported higher body dissatisfaction ( $b=.58$ ,  $SE=.07$ ,  $p<.001$ ).



**Figure 2.** Effect of actor's BMI on body dissatisfaction moderated by (a) negative body talk (top panel) and by (b) partner's BMI (bottom panel).

Consistent with Hypothesis 2, the partner effect showed that individuals' BMI was related to their friend's lower body dissatisfaction ( $b = -.22$ ,  $SE = .07$ ,  $p = .002$ ). Contrary to Hypothesis 3, negative body talk was not significantly related to body dissatisfaction reported by both friends ( $b = -.02$ ,  $SE = .07$ ,  $p = .76$ ).

Consistent with Hypothesis 4, the interaction between actor-BMI and negative body talk on body dissatisfaction was significant ( $b = -.28$ ,  $SE = .09$ ,  $p = .002$ ). In order to display these interactions, Figure 2(a) presents a graphical representation derived by calculating the simple slopes corresponding to individuals scoring one standard deviation above and below the mean for negative body talk (Aiken and West, 1991). Simple slopes tests revealed that the association

between individuals' BMI and their own body dissatisfaction was stronger when the friend dyads engaged in lower levels of negative body talk ( $b = .86$ ,  $SE = .11$ ,  $p < .001$ ) than when the friend dyads engaged in higher levels of negative body talk ( $b = .31$ ,  $SE = .12$ ,  $p = .01$ ). Although the interaction effect was significant, the patterns of findings were contrary to the hypothesis that negative body talk would aggravate the effect of actor's BMI on actor's body dissatisfaction. Contrary to Hypothesis 5, the partner effect between weight status and body satisfaction was not moderated by negative body talk ( $b = -.07$ ,  $SE = .09$ ,  $p = .40$ ).

Consistent with Hypothesis 6, an actor-partner BMI interaction effect emerged as significant ( $b = -.10$ ,  $SE = .05$ ,  $p = .047$ ). In order to



display this interaction effect, Figure 2(b) presents a graphical representation derived by calculating the simple slopes corresponding to individuals scoring one standard deviation above and below the mean for partner's BMI (Aiken and West, 1991). Simple slopes tests revealed that the association between individuals' BMI and their own body dissatisfaction was stronger when their friend was lower in BMI ( $b = .69$ ,  $SE = .09$ ,  $p < .001$ ) than when their friend was higher in BMI ( $b = .48$ ,  $SE = .08$ ,  $p < .001$ ).<sup>1</sup>

## Discussion

This study had three major goals. First, we extended previous research that primarily focuses on body image that utilized an individual approach by focusing on negative body talk that pertains to the emergence of body dissatisfaction among male friends. Second, because of the contagious effect of negative body talk, this study further examined whether such an interpersonal dynamic might aggravate the negative effects of weight status and body dissatisfaction. Third, this study adopted the partner comparison perspective to examine how weight status of two friends would interact to predict both partners' body dissatisfaction. Overall, findings from this study provided insights into how body image would emerge within the context of male friendships.

### *Direct actor, partner, and relationship effects*

Consistent with the expectation, the actor effect showed that men higher in BMI were also less satisfied with their body size. Although the actor effect was not too surprising, the partner effect revealed that an individual's weight status predicted his friend's body dissatisfaction, even after controlling for the friend's own weight status. In other words, when men have a friend who is thinner, they tend to suffer from more body image issues. Interdependence theory suggests that characteristics of one partner would exert influence on their outcome of another partner

(Kelley and Thibaut, 1978). When relating interdependence theory to the partner effect, it appears that individuals' body dissatisfaction was not only dependent on their own weight status but also their friend's weight status.

Results revealed that negative body talk was not associated with body dissatisfaction reported by both friends. This finding is not consistent with previous research using female participants (Rudiger and Winstead, 2013). Such inconsistent results could be attributable to the different nature of negative body talk in men versus women. Researchers suggest that negative body talk in women has a simpler structure compared to men. Specifically, women's negative body talk tends to focus on feelings of being overweight but men's negative body talk is more variable, alternating between the need to lose fat and gain muscle (Engeln et al., 2013). Another explanation is that compared to previous studies (Rudiger and Winstead, 2013), this study employed a composite score of negative body talk that averaged both friends' reports to examine the dyadic construct. Thus, we argue that this approach better captures the "dyadic" nature of negative body talk between friends.<sup>2</sup>

### *Moderating role of negative body talk and friend's weight*

It was found that negative body talk interacted with weight status to predict body dissatisfaction. Whereas we expected that negative body talk would aggravate the negative impact of being overweight on body dissatisfaction, this assumption was not supported. Instead, we found negative body talk served as a buffer between weight status and body dissatisfaction. Specifically, when individuals with higher weight status engaged in higher negative body talk, they had lower body dissatisfaction compared to their counterparts who engaged in lower negative body talk. One possible explanation for these findings is that friendships serve as important social support during young adulthood (Chow et al., 2011); therefore, negative body talk might have therapeutic purposes for

individuals who are heavier in weight status (Tan and Chow, 2014). Consistent with this possibility, a recent qualitative study also suggests that individuals perceive that engagement in negative body talk makes them feel better about themselves (Salk and Engeln-Maddox, 2011).

According to a partner comparison perspective, the discrepancies in two friends' weight status could be a potential indicator of body dissatisfaction. Supporting this, we found a significant actor-partner interaction effect between two friends' BMI on body dissatisfaction. Specifically, individuals who were heavier, pairing with a thinner friend, would suffer higher body dissatisfaction, compared to those with a heavier friend (see Figure 2(b)). Similar findings were also documented in heterosexual and homosexual romantic couples (Markey and Markey, 2011). This study suggests that similar to romantic couples, partner comparison processes could occur among male friends.

### *Limitations and future directions*

Some limitations of this study are noteworthy. First, this study only focused on the negative aspect of body talk. Past research suggests that individuals also engage in body talk that contains positive elements, such as openly praising the appearance of their bodies and validating their friend's weight concerns (Engeln et al., 2013). Therefore, future research should simultaneously consider positive and negative body talk and examine the unique function of each kind on the development of body dissatisfaction. Second, this study relied on self-report measures. A self-report measure of negative body talk only captures how frequent the friend dyads engage in body-related conversations; specific contents of the interactions are not well documented. For example, this study did not capture whether male friends engage in more muscle or fat-related conversations, and whether male friends criticize or praise each other's appearance. One possible way to examine this would be to include a behavioral observation in which friends are instructed to discuss the concerns they have about their body. The interactions

could be then systematically coded; the coded interactions would yield richer descriptions of negative body talk. Third, this study did not consider the sexual orientation of the participants. It has been documented that gay men tend to suffer more from body image disturbance (Morrison et al., 2004). Thus, future research might consider sexual orientation as a potential variable to improve the generalizability of this study. Fourth, this study was based on a rather small sample. This could lead to insufficient power to detect other potential interaction effect including the interaction between negative fat talk and partner's BMI. Nevertheless, the current findings warrant future research that includes a larger sample size.

### **Conclusion and implications**

This study highlights the importance of investigating the association between young adult men's weight status and body dissatisfaction in the context of close friendships. This study suggests that negative body talk is useful in clarifying the association between weight status and body dissatisfaction. Furthermore, results of this study suggest that the development of body dissatisfaction could be attributable to the discrepancies between two friends' weight status. This study also has potential practical implications. For example, clinicians and practitioners who work with men with body image disturbance might consider the roles of friendships when designing interventions. Because this study represents one of very few studies that target men, the results might provide important foundation for clinicians who work closely with men who suffer from problematic body-related attitudes or behaviors.

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## Notes

1. There were nine individuals who had a negative score on the body dissatisfaction scale (which reflected a higher desire for weight gain). Therefore, a separate set of analysis was conducted in which we squared the original body dissatisfaction scores (in order to convert the negative scores into positive). Using the transformed scores as the dependent variables, the findings were very similar to those reported in the original analysis. The only minor difference was that the partner effect of body mass index (BMI) became marginally significant ( $p=.054$ ) instead of significant as reported in the original manuscript ( $p=.002$ ). Therefore, we decided to report findings based on the original scales.
2. We ran two additional (separate) models in which the combined negative body variable was replaced by the individuals' own report and their friend's report, respectively. The results were very similar to the original findings. All three analyses consistently showed that body talk was not directly related to body dissatisfaction, but body talk moderated the effect of actor's BMI on actor's body dissatisfaction. Therefore, we chose to report the findings based on the combined scores.

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