



Brief research report

# Adopting a dyadic perspective to better understand the association between physical attractiveness and dieting motivations and behaviors



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## ABSTRACT

The relationship between women's objective physical attractiveness and their dieting motivations and behaviors may depend upon their social environment—specifically, their romantic partners' attractiveness—such that less attractive women with more attractive partners may be particularly motivated to diet. Theoretically, men's dieting motivations should not depend on their partners' attractiveness. We tested this possibility using a sample of 223 U.S. newlywed spouses. After completing measures assessing dieting motivations, each participant was photographed; we used those photographs to code spouses' objective facial and body attractiveness. Results demonstrated that own and partner attractiveness interacted to predict only women's dieting motivations and behaviors. Less attractive wives married to more (versus less) attractive husbands reported more dieting motivations and behaviors. In contrast, men's dieting motivations were not significantly associated with their own and their partners' attractiveness. These findings highlight the value of adopting a dyadic approach to understanding dieting motivations.

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## 1. Introduction

Women experience greater appearance dissatisfaction than do men (Lowery et al., 2005). Although numerous risk factors influence such dissatisfaction, one notable factor may be women's objective physical attractiveness. Indeed, some studies have demonstrated that objectively more (versus less) attractive women (as judged by independent raters) reported greater weight concerns (Colabianchi, levers-Landis, & Borawski, 2006). Other research using objective correlates of physical attractiveness (e.g., BMI), however, has demonstrated that more (versus less) attractive women report less dieting (Gillen, Markey, & Markey, 2012). Considering the social context may help reconcile this apparent discrepancy in the literature.

Romantic relationships may be one salient context that influences body-related attitudes (Morrison, Doss, & Perez, 2009). Although most research has examined factors associated with dieting motivations and behaviors outside the context of romantic relationships, contextual dyadic perspectives (McNulty & Fincham, 2012) suggest that the association between attractiveness and

dieting motivations may be more nuanced in the context of ongoing heterosexual romantic relationships. Indeed, research is beginning to examine associations between relationships and weight-maintenance behaviors (see Morrison et al., 2009).

Both theory and empirical findings suggest that the association between people's attractiveness and their dieting motivations may depend on their partners' attractiveness—and this may be particularly true for women. Although men and women equally desire attractive partners in some contexts (e.g., short-term relationships, during the early, attraction stage of relationships; Asendorpf, Penke, & Back, 2011; Buss, 1989), men (versus women) place greater importance on and are more affected by partner attractiveness in the context of long-term relationships (Meltzer, McNulty, Jackson, & Karney, 2014). It is worth noting that there is debate regarding the source of this sex difference—whereas some scholars argue that men's greater emphasis on partner attractiveness stems primarily from the broader cultural narrative (see Eagly & Wood, 1999), others argue that it stems primarily from the notion that women's (versus men's) appearance is more closely tied to fertility (see Buss, 1989). Regardless of the source, however, research demonstrates sex-differentiated implications of objective partner attractiveness in long-term relationships. For example, both men and women experience better relationship outcomes when more attractive women are paired with less attractive men

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(McNulty, Neff, & Karney, 2008; Meltzer, McNulty, Novak, Butler, & Karney, 2011); such women receive more support from and are more satisfied with their partners (McNulty et al., 2008; Meltzer et al., 2011). Notably, people report explicit awareness of such outcomes—predicting that heterosexual relationships in which women are less (versus equally or more) attractive than their partners are less satisfying and more likely to dissolve (Garcia & Kheronsky, 1996).

Given the explicit awareness of these potential relationship risks, less attractive women paired with more attractive partners may be particularly motivated to enhance their attractiveness. Because social convention dictates that feminine, attractive women are thin (Voracek & Fisher, 2002; particularly in Westernized and modernized regions, see Swami, 2015), women in these discrepant pairings may be motivated to lose weight. Indeed, not only is women's weight negatively associated with their overall attractiveness (Swami, 2015), women perceive their weight as particularly controllable (Furnham & Greaves, 1994). Not surprisingly then, one of women's most common appearance-enhancing strategies is dieting (Meltzer, McNulty, Miller, & Baker, 2015). Men, in contrast, may be less likely to direct their motivations and behaviors toward weight reduction (though they may direct their motivations toward muscle attainment) when paired with more attractive partners because thinness is less strongly associated with perceptions of masculinity or male attractiveness (see Swami, 2006).

The goal of the current investigation was to examine whether objective partner attractiveness moderates the association between people's own objective attractiveness and their dieting motivations and behaviors. We used an existing study of newlywed couples (e.g., French, Meltzer, & Maner, 2017) to explore this possibility and the possibility that this interactive effect would be moderated by participant sex. Based on theory and prior research, we predicted that the interaction between own and partner attractiveness would be associated with women's dieting motivations such that less attractive wives married to more (versus less) attractive husbands would report greater dieting motivations; we did not expect own and partner attractiveness to be significantly associated with men's dieting motivations.

## 2. Method

### 2.1. Participants

We recruited first-married newlywed couples to participate in a study examining the early years of marriage by mailing invitations to couples who applied for marriage licenses in Dallas County, Texas (U.S.). In total, 389 couples responded and were screened by telephone for eligibility (based on broader study goals): couples were married less than four months, neither spouse had been previously married, both spouses were 18 years of age or older, and both spouses read and spoke English fluently. Of those, 159 couples were eligible. Of the 113 couples (226 individuals) who participated, one husband and two wives failed to complete the motivation measures and were excluded from analyses. Because we obtained objective ratings of these three individuals' attractiveness, however, their partners were included. Thus, the final sample consisted of 223 individuals (comprising 113 couples; see the online Supplementary Data for demographic information).

### 2.2. Procedure

Prior to their laboratory sessions, participants completed questionnaires online or by mail. These questionnaires included a consent form approved by the local IRB, measures assessing dieting motivations and behaviors, marital satisfaction, and commitment,

additional measures beyond the scope of the current analyses (see Supplementary Data for full list), and a letter instructing spouses to complete questionnaires independently. At their sessions, we took two photographs of each spouse in front of a plain, white wall—one of their head and shoulders and one of their full body. Couples received \$100 for participating.

## 2.3. Measures

**2.3.1. Dieting motivations and behaviors.** We used two measures to assess spouses' dieting motivations and behaviors (order not randomized). The first was the 13-item dieting subscale of the Eating Attitudes Test (EAT-26; Garner & Garfinkel, 1979). The second was the 7-item drive for thinness subscale of the Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983). Across both measures, spouses reported how frequently they (a) engaged in dieting behaviors and (b) desired to be thinner, using a 6-point scale ranging from 1 = *Never* to 6 = *Always*. This scoring system (as opposed to the original EAT-26) allows for more sensitive capture of low-level pathology in non-clinical populations (Keel, Baxter, Heatherton, & Joiner, 2007). Both subscales demonstrated high reliability (EAT-26: husbands'  $\alpha = .86$ , wives'  $\alpha = .89$ ; EDI: husbands'  $\alpha = .84$ ; wives'  $\alpha = .87$ ). One husband failed to complete the EAT-26 and one wife failed to complete the EDI.

**2.3.2. Objective physical attractiveness.** Trained coders ( $N = 5$ ; 4 women; 20% Hispanic, 80% Caucasian) rated spouses' facial attractiveness using the head-and-shoulders photographs on a 10-point scale ranging from 1 = *Not at all attractive* to 10 = *Extremely attractive*. A second, independent group of trained coders ( $N = 5$ ; 2 women; 40% Hispanic, 60% Caucasian) rated spouses' body attractiveness using the full-body photographs (cropped to exclude faces) on the same 10-point scale. Coders demonstrated adequate reliability for facial [husbands' intraclass correlation coefficient (ICC) = .82, wives' ICC = .92] and body attractiveness (husbands' ICC = .90, wives' ICC = .94). Thus, we computed participants' mean facial and body attractiveness ratings.

**2.3.3. Covariates.** To ensure that any effects were not due simply to lower levels of marital satisfaction or commitment, we assessed participants' satisfaction and commitment using the 7-item Quality Marriage Index (Norton, 1983) and the 60-item Commitment Inventory (Stanley & Markman, 1992), respectively. Internal consistency was high for both measures (satisfaction: husbands'  $\alpha = .92$ , wives'  $\alpha = .93$ ; commitment: husbands' and wives'  $\alpha = 0.90$ ). Two husbands failed to complete the commitment measure.

## 3. Results

Descriptive statistics of and correlations among all variables are presented in the Supplementary material. Given that we utilized two measures each of dieting motivations and behaviors and objective attractiveness, we conducted four analyses<sup>1</sup> to test our key predictions. For all analyses, we used multilevel modeling to account for the dyadic nature of our data (HLM 7.01; Raudenbush, Bryk, & Congdon, 2013). The first analysis regressed participants' average EAT-26 scores onto a dummy code of sex (wives coded 0), the standardized scores of their own and partners' facial attractiveness, all necessary two-way interactions, and the crucial Sex  $\times$  Own

<sup>1</sup> Tests of normality demonstrated that our key predictor variables—objective facial and body attractiveness—were not normally distributed. Analyses using log-transformed variables revealed a similar pattern of effects. Results of these analyses are provided in the Supplementary Data.

**Table 1**  
Interactive effects of sex, own objective attractiveness, and partner objective attractiveness on dieting motivations and behaviors.

	Dieting subscale of the EAT			Drive for thinness subscale of the EDI		
	$\beta$	SE	<i>r</i>	$\beta$	SE	<i>r</i>
<b>Objective Facial Attractiveness</b>						
Intercept	2.92	0.10	–	3.12	0.11	–
Sex (SX)	0.61	0.13	.41***	–0.80	0.14	.50***
Own Facial Attractiveness (OFA)	–0.14	0.08	.17 <sup>†</sup>	–0.23	0.09	.26**
Partner Facial Attractiveness (PFA)	0.20	0.10	.18 <sup>†</sup>	0.09	0.12	.07
SX × OFA	0.08	0.11	.07	0.02	0.15	.02
SX × PFA	–0.14	0.13	.11	0.14	0.16	.09
OFA × PFA	–0.20	0.07	.26**	–0.24	0.08	.27**
SX × OFA × PFA	0.27	0.10	.26**	0.28	0.10	.26**
<b>Objective Body Attractiveness</b>						
Intercept	2.93	0.11	–	3.13	0.13	–
Sex (SX)	–0.53	0.15	.33***	–0.77	0.15	.45***
Own Body Attractiveness (OBA)	–0.06	0.12	.05	–0.12	0.15	.10
Partner Body Attractiveness (PBA)	0.02	0.13	.02	–0.12	0.15	.08
SX × OBA	–0.02	0.14	.02	–0.07	0.16	.04
SX × PBA	0.00	0.15	.00	–0.01	0.18	.00
OBA × PBA	–0.19	0.09	.20 <sup>†</sup>	–0.20	0.11	.18 <sup>†</sup>
SX × OBA × PBA	0.10	0.11	.09	0.16	0.13	.12

Note. Sex was coded such that women were coded 0 and men were coded 1—thus, lower-order effects should be interpreted for women. For all analyses,  $df=112$  for the Intercept and  $df=102$  for all other parameters. Effect size  $r$  is reported.

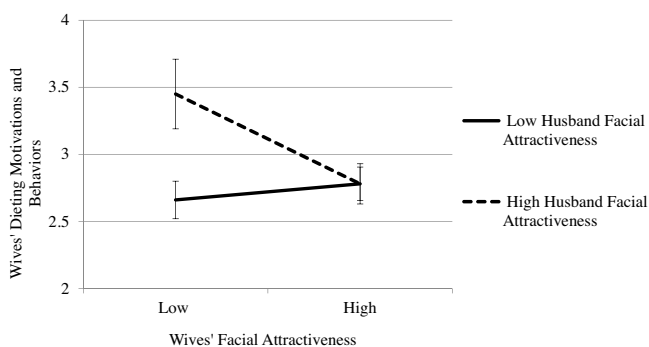
<sup>†</sup>  $p < .10$ .

\*  $p < .05$ .

\*\*  $p < .01$ .

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

Facial Attractiveness × Partner Facial Attractiveness interaction in Level 1 of a two-level model. In Level 2, we controlled the shared variance between spouses' data (for detailed information regarding analyses, see Supplementary Data). Results are shown in the upper left quadrant of Table 1. As predicted, the three-way interaction emerged as significant. To deconstruct this interaction, we first examined the Own Facial Attractiveness × Partner Facial Attractiveness interaction independently for wives and husbands. Among wives, again as predicted, the Own Facial Attractiveness × Partner Facial Attractiveness interaction was associated with their dieting motivations (see Table 1; also see Fig. 1). To deconstruct this two-way interaction, we estimated the associations between own attractiveness and dieting motivations for wives married to less (1 SD below the mean) versus more (1 SD above the mean) attractive husbands. Whereas own attractiveness was not significantly associated with dieting motivations among wives with less attractive husbands,  $\beta=0.06$ ,  $t(102)=0.65$ ,  $p=.519$ , it was negatively associated among wives with more attractive husbands,  $\beta=-0.34$ ,  $t(102)=-2.74$ ,  $p=.007$ , effect size  $r=.26$ , such that less attractive wives reported higher dieting motivations ( $M=3.46$ ,  $SE=0.22$ ) than more attractive wives ( $M=2.78$ ,  $SE=0.13$ ). Further, among less attractive wives, partner attractiveness was positively associ-



**Fig. 1.** The association between wives' own objective facial attractiveness, their husbands' objective facial attractiveness, and wives' dieting motivations and behaviors (assessed with the dieting subscale of the EAT-26).

ated with wives' dieting motivations,  $\beta=0.40$ ,  $t(102)=2.64$ ,  $p=.010$ , effect size  $r=.25$ , such that those married to more (versus less) attractive husbands reported higher dieting motivations. Among husbands, the two-way interaction and both attractiveness simple effects were non-significant (all  $ps > .256$ ). Notably, a supplemental analysis demonstrated that the three-way interaction continued to emerge as significant when controlling participants' marital satisfaction and commitment,  $\beta=0.25$ ,  $t(98)=2.46$ ,  $p=.016$ , effect size  $r=.24$ .

The second analysis re-estimated the same two-level model but replaced the EAT-26 with the EDI. Results are shown in the upper right quadrant of Table 1. Again, the key three-way interaction emerged as significant. Additional analyses examining the simple interactions and effects revealed the same pattern of effects that emerged using the EAT-26 (for brevity, we report these simple interactions and effects in the Supplementary material).

The third and fourth analyses re-estimated the two previous models but replaced objective facial attractiveness ratings with objective body attractiveness ratings. Results are shown in the bottom half of Table 1. The three-way interaction emerged as non-significant in both analyses. Although these findings are inconsistent with predictions and the results of the previous two analyses, the simple Own Body Attractiveness × Partner Body Attractiveness interaction emerged as significant among wives (see Table 1), suggesting that our predictions were partially supported. Additional analyses examining the simple interaction among husbands and the simple main effects for all participants revealed the same pattern of effects that emerged in the first two analyses (again, for brevity, we report these in the online Supplementary Data). Taken together, the results from these two analyses suggest that although the predicted pattern of effects emerged among wives, the key Own Body Attractiveness × Partner Body Attractiveness effect did not statistically differ across wives and husbands.

#### 4. Discussion

The current study examined the associations between own attractiveness, romantic partner attractiveness, and dieting motivations and behaviors. Consistent with predictions, objectively

less attractive women paired with objectively more (versus less) attractive men reported greater dieting motivations. Men's dieting motivations, in contrast, were not significantly associated with their own and their partners' objective attractiveness. Although these effects emerged more robustly using participants' objective facial (versus body) attractiveness, the key interactive effect among women emerged using both facial and body attractiveness.

The current findings have both theoretical and practical implications. Theoretically, they highlight the importance of using a dyadic approach to better understand dieting motivations and behaviors. Although prior research has demonstrated both positive and negative associations between women's own attractiveness and their thinness pursuits (Colabianchi et al., 2006; Gillen et al., 2012), the current study suggests a negative association may emerge in a particular dyadic context—when women are paired with objectively more attractive partners. Notably, the current study failed to demonstrate a positive association between women's attractiveness and thinness pursuits. Future research may benefit from exploring other aspects of romantic relationships and other close relationships (e.g., family, peers) that might moderate the association between women's appearance and their dieting motivations and behaviors.

Practically, the current findings highlight an important factor that may help identify those at risk of disordered eating—less attractive women paired with more attractive men, who may fear falling short of their partners' standards. It is possible, however, that there are protective factors for these women, such as partner support or commitment. Although we were able to demonstrate in the current study that the results emerged independent of participants' marital satisfaction and commitment, we unfortunately were underpowered to examine whether they were further moderated by these variables. Thus, future research may benefit from examining the extent to which various relationship-quality indices function as protective factors.

Several strengths and limitations are worth noting. Regarding strengths, in contrast to newly formed or hypothetical relationships, the sample consisted of young, married couples for whom the measured outcomes were real and consequential. Additionally, rather than using own or partner reports of attractiveness, we procured objective measures of attractiveness, ensuring that results were not spurious due to biases associated with subjective attractiveness ratings (see Meltzer et al., 2014). It is worth noting that subjective ratings of own attractiveness are likely also associated with dieting motivations—though we were unable to assess this in the current research. Future research may benefit from examining the extent to which objective and subjective attractiveness uniquely predict appearance-enhancing behaviors (see Davis, Shuster, Dionne, & Claridge, 2001).

Regarding limitations, whereas the relative homogeneity of our sample enhances our confidence in our results, this lack of variability limits our ability to generalize to other samples. Second, although men and women who are paired with relatively more attractive partners likely engage in various behaviors aimed at reducing the potential negative implications associated with such discrepant partnerships, the current research examined only one of these—dieting motivations and behaviors. It is possible that women in these pairings engage in other appearance-enhancing behaviors such as wearing makeup. Likewise, although men in such pairings did not report greater dieting motivations in our sample, these men may nonetheless enhance their appearance through efforts more congruent with the masculine ideal, such as weight lifting (see Lowery et al., 2005). Future research may benefit from exploring other such appearance-enhancing behaviors. Third, although it is possible that less attractive women are motivated to diet to maintain their relationships with attractive partners, we did not directly assess women's relationship-maintenance motiva-

tions (see Oltmanns, Markey, & French, in press). Future research may benefit from examining the extent to which women's dieting behaviors influence relationship outcomes (for a related discussion, see Meltzer et al., 2015). Last, the data examined here are correlational and therefore cannot support strong causal conclusions.

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## Appendix Supplementary data

Supplementary data associated with this article can be found, in the online version, at [10.1016/j.bodyim.2017.05.001](https://doi.org/10.1016/j.bodyim.2017.05.001).

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