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Andrea L. Meltzer¹, James K. McNulty¹, Sarah A. Novak²,
Emily A. Butler³, and Benjamin R. Karney⁴

Abstract

Body weight plays a significant role in attraction and relationship formation, but does it continue to shape more established relationships? The current 4-year longitudinal study of 169 newlywed couples addressed this question by examining the implications of own and partner body mass index (BMI) for the trajectory of marital satisfaction. In contrast to findings from studies of attraction and mate selection, own and partner BMI demonstrated inconsistent effects on the trajectory of satisfaction. However, consistent with predictions derived from interdependence theory, normative resource theories, and evolutionary perspectives, husbands were more satisfied initially and wives were more satisfied over time to the extent that wives had lower BMIs than their husbands, controlling for depression, income, education, and whether the relationship ended in divorce. These findings suggest that a dyadic perspective may be more appropriate than an individual one for understanding how partners' qualities shape established relationships such as marriage.

Keywords

body weight, marriage, physical attractiveness, evolutionary psychology, interdependence theory

Both men and women prefer partners with thin bodies. In a recent speed-dating study, for instance, potential partners' body mass indexes (BMIs), a key measure of body weight that controls for height, predicted both men's and women's desires to see those people again, controlling for numerous other important factors (Kurzban & Weeden, 2005). The desire to have a thin partner appears to be so strong, in fact, that an obese partner is considered less desirable than a partner reporting a history of a curable sexually transmitted disease, suffering from mental illness, or missing a limb (Chen & Brown, 2005).

Nevertheless, the association between BMI and people's satisfaction with their actual relationships is less clear. Some evidence suggests that thinner women and their partners are happier in their relationships than are larger women and their partners (Boyes & Latner, 2009; Meltzer & McNulty, 2010; Sheets & Ajmone, 2005). Other studies have found no association between BMI and relationship satisfaction among men and women (Billmann & Ware, 2002; Carr & Friedman, 2006; Markey & Markey, 2006). And at least one study reported that larger men were *more* satisfied with their relationships than were smaller men (Sheets & Ajmone, 2005).

One reason for these inconsistencies may be that prior research on the implications of weight for relationships has focused exclusively on the weight of one partner, without consideration of the weight of the other partner. In an ongoing

relationship, however, the *comparison* between partners' BMIs may affect the relationship more than each individual's BMI alone. This dyadic perspective on the implications of partners' weight is consistent with interdependence theory (Thibaut & Kelley, 1959). According to that theory, partners are motivated to maximize the rewards they receive from their relationships. Therefore, partners may be less satisfied to the extent that they believe the qualities they contribute to the relationship are more valuable than the qualities their partners contribute in return. Indeed, several highly valued individual qualities appear to operate this way in established relationships (e.g., Banse, 2004; Gallo & Smith, 2001; Gonzaga, Campos, & Bradbury, 2007; Harrell, 1990; McNulty, Neff, & Karney, 2008; Rogers & DeBoer, 2001). For example, although people prefer mates who exhibit more positive emotions (e.g., Botwin, Buss, &

¹ University of Tennessee, Knoxville, USA

² Hofstra University, Hempstead, NY, USA

³ University of Arizona, Tucson, USA

⁴ University of California, Los Angeles, USA

Corresponding Author:

Andrea L. Meltzer, University of Tennessee, 1404 Circle Drive, Austin Peay Building, Knoxville, TN 37996, USA
Email: ameltzer@utk.edu

Shackelford, 1997), Gonzaga et al. (2007) reported that satisfaction with a marriage depends on how two spouses' emotional expressions compare with each other, regardless of the absolute level of each individual's expressions.

There is reason to expect that the difference between partners' BMIs may similarly affect their evaluations of their relationships more than the absolute level of each individual's BMI. Specifically, BMI is correlated with perceptions of physical attractiveness (for a review, see Swami, 2006). Not only is physical attractiveness itself a reward that matters in new relationships (e.g., Eastwick & Finkel, 2008; Walster, Aronson, Abrahams, & Rottman, 1966), but people believe that attractive individuals possess other desirable qualities that matter in established relationships (e.g., kindness, occupational competence; Langlois et al., 2000). Accordingly, to the extent that one partner has a higher BMI than the other, that partner may be relatively less attractive and thus may be perceived to be contributing less to the relationship.

To the extent that partners are indeed sensitive to the comparison between their BMIs, there is reason to believe that the effects of discrepancies in partners' BMIs may differ depending on which partner has a higher BMI. Normative resource theories (e.g., Rodman, 1967) suggest that disparities in the rewards that each partner receives in a relationship are especially likely to lead to problems when partners feel underbenefited with respect to a reward that is particularly important to them. Several studies indicate that partner thinness is more important to men than to women (e.g., Chen & Brown, 2005; Harris, Harris, & Bochner, 1982; Legenbauer et al., 2009; for an exception, see Carmalt, Cawley, Joyner, & Sobal, 2008), possibly because BMI is more strongly correlated with women's physical attractiveness than it is with men's (see Swami, 2006). Accordingly, regardless of each partner's absolute level of BMI, men with partners who have BMIs that are lower than their own may be more satisfied with their relationships because they are overbenefited with respect to a resource that is particularly important to them, whereas men with partners who have BMIs that are higher than their own may be less satisfied with their relationships because they are underbenefited with respect to a resource that is particularly important to them. In contrast, because partner BMI is relatively less important to women, relative BMI may affect them only through its effect on men. That is, women who have lower BMIs than their partners should maintain higher levels of satisfaction with the relationship because their partners are more satisfied, whereas women who have higher BMIs than their partners may become less satisfied with the relationship because their partners are less satisfied.

Although no research has examined this issue directly, at least two lines of research are consistent with it. First, McNulty et al. (2008) demonstrated similar associations between differences in partners' facial attractiveness and partners' supportive behavior. Specifically, husbands and wives behaved more positively during supportive discussions to the extent that wives were more attractive than their husbands but behaved more negatively during those discussions to the

extent that husbands were more attractive than their wives. Second, the inconsistent effects of absolute BMI for relationship satisfaction that have emerged in previous research on established relationships support the possibility that discrepancies in partners' BMIs may be related to relationship satisfaction in the same way. Specifically, Sheets and Ajmere (2005) reported that women's BMIs were negatively associated with their own relationship satisfaction, whereas men's BMIs were positively associated with their own relationship satisfaction. It may be that larger men were more satisfied with their relationships because they were most likely to have had partners with BMIs that were lower than their own, whereas larger women were dissatisfied because they were most likely to have had BMIs that were higher than their partners'. Nevertheless, because these associations were assessed with bivariate correlations, rather than simultaneous regression analyses, such dyadic conclusions cannot be drawn with confidence (see Edwards, 1994).

Study Overview

The current longitudinal study drew on (a) self-reports of newlyweds' heights and weights at baseline and (b) repeated assessments of their marital satisfaction to examine the association between differences in husbands' and wives' BMIs and the trajectory of marital satisfaction over the first 4 years of marriage. We predicted that both men and women would be more satisfied with their relationships to the extent that wives had BMIs that were lower than their husbands' but less satisfied with their relationships to the extent that wives had BMIs that were higher than their husbands'. Because discrepancies in important resources should begin to matter most as relationships become particularly interdependent (i.e., at marriage), there is reason to expect the effects of discrepancies between partners' BMIs to be apparent in men at the beginning of the marriage. Because discrepancies between partners' BMIs should affect women only through their effects on men, in contrast, the effects of discrepancies between partners' BMIs on women should take time to emerge.

Method

Participants

Participants were drawn from a broader longitudinal study of 169 newlywed couples. Four couples in which the wives reported being pregnant were dropped from all analyses, resulting in a final sample of 165 couples. At baseline, husbands were 25.41 years of age ($SD = 3.96$ years). Fifty-eight percent were employed full-time, and 36% were full-time students. Wives were 23.78 years of age ($SD = 3.55$ years). Forty-six percent were employed full-time, and 42% were full-time students. Consistent with the large number of students in the sample, the average combined income of couples was less than \$15,000 per year. Slightly over 60% of the sample was Christian, and 94% of the husbands and wives were White.

Table 1. Descriptive Statistics and Correlations

Variable	1	2	3	4	5	6	7	8
1. Husbands' BMIs	—							
2. Wives' BMIs	.29**	—						
3. Relative BMI	.61**	-.59**	—					
4. Husbands' education	-.25**	-.15 [†]	-.09	—				
5. Wives' education	-.13 [†]	-.12	-.02	.56**	—			
6. Husbands' incomes	.07	.12	-.04	.20*	.28**	—		
7. Wives' incomes	.14 [†]	.16*	-.01	.20**	.33**	.27**	—	
8. Dissolution	.11	.04	.06	-.16*	-.21**	-.09	-.05	—
M	25.88	23.18	2.70	8.36	8.26	\$5,000 to \$10,000	\$0 to \$5,000	10%
SD	4.55	4.37	5.25	2.31	2.01	\$7,240	\$5,330	0.30

[†] $p < .10$. * $p < .05$. ** $p < .01$.

Procedure

As part of the broader study, couples completed a packet of questionnaires at home that they brought to a laboratory appointment. This packet included self-report measures of demographics, height, weight, depression, and marital satisfaction, and a letter instructing spouses to complete all questionnaires independently of one another. All couples provided informed consent and were paid \$70 for participating in this first phase of the study.

At approximately 6-month intervals subsequent to the initial assessment, couples were contacted again by phone and again mailed marital satisfaction and depression questionnaires, along with postage-paid return envelopes and a letter of instruction reminding partners to complete forms independently of each other. This procedure was used at all follow-up procedures except Time 5, which resembled the baseline assessment. After completing each phase, couples were mailed a check for participating (\$40 to \$50).

Materials

Body size. We calculated indexes of absolute body size by converting participants' self-reported heights and weights into a standard index, BMI (kilograms per square meter).

Marital satisfaction. Spouses completed two measures of marital satisfaction at every assessment. One measure was the Quality Marriage Index (Norton, 1983), which contains six items that ask spouses to report the extent of their agreement with general statements about their marriage. The other measure was a version of the semantic differential (Osgood, Suci, & Tannenbaum, 1957), which asks spouses to rate their perceptions of their relationship on 7-point scales between 15 pairs of opposing adjectives (e.g., "dissatisfied-satisfied"). The internal consistency of both measures was high (across all phases of the current study, coefficient α was at least .90 for husbands and wives). To avoid results that were specific to one measure, we created an index of marital satisfaction for each spouse by averaging the two measures after standardizing each one across assessments. Supporting this decision, the two scales were highly correlated at each assessment (r values ranged from .78 to .91 for husbands and from .79 to .93 for wives).

Covariates. To ensure that absolute or relative levels of BMI did not appear to be associated with marital satisfaction only because they are associated with related factors, several covariates were assessed. First, given that depression is associated with BMI (Bjerkset, Romundstad, Evans, & Gunnell, 2008) and marital satisfaction (Whisman, 2001), we assessed and controlled for spouses' depressive symptoms at every wave of measurement using the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh 1961). The Beck Depression Inventory assesses depressive symptoms experienced in the past week using 21 items. Scores range from 0 (no depressive symptoms) to 63 (most extreme depressive symptoms). Internal consistency was high across all phases (coefficient α was at least .81 for both husbands and wives). Second, given that other resources may be associated with BMI and marital satisfaction, we assessed and controlled two indexes of the ability to offer resources to the partner that may be correlated with BMI: years of education and income. Specifically, partners reported the number of years of education they had received and the \$5,000 range of their income (or whether they earned more than \$50,000). Finally, given that 16 couples divorced over the 4 years of the study, and given that such couples may differ from couples who did not divorce in important ways, we controlled for whether the marriage ended in divorce across the study.

Results

Preliminary Analyses

Table 1 presents descriptive statistics for and correlations among all independent variables. As the table reveals, husbands on average had BMIs in the overweight range, whereas wives on average had BMIs in the normal range. Nevertheless, the standard deviations of both partners' BMIs indicated that there was substantial variability in those reports. Husbands had higher BMIs than their wives, $t(168) = 6.81$, $p < .001$. With respect to demographics, husbands and wives had received relatively high levels of education but did not earn much money annually at baseline (likely because a large percentage of individuals were students). Although husbands earned significantly more income than did wives,

Table 2. Trajectories of Marital Satisfaction, Controlling for Depression

Variable	1	2	3	4	5	6
1. Husbands' intercepts	—					
2. Wives' intercepts	.88	—				
3. Husbands' slopes	-.13	-.10	—			
4. Wives' slopes	-.13	-.04	.90	—		
5. Association between husbands' depression and satisfaction	.43	.11	.16	.32	—	
6. Association between wives' depression and satisfaction	.06	-.07	.06	.38	.80	—
<i>M</i>	.15	.29	-.08	-.07	-.06	-.05
<i>SD</i>	.61	.52	.12	.12	.05	.05
<i>t</i>	2.67**	5.74***	-6.20***	-5.71***	-7.76***	-6.84***
χ^2 test of variance	337.57***	227.62***	373.89***	378.64***	254.62***	251.47***

Note: For *t* tests, *df* = 164; for χ^2 tests, *df* = 140.

** *p* < .01. *** *p* < .001.

$t(168) = 5.41$, $p < .001$, husbands' levels of education did not differ significantly from wives', $t(168) = 0.64$, $p > .50$. Notably, as has been true in other samples of couples (e.g., Carmalt et al., 2008), husbands' and wives' BMIs were positively associated with each other ($r = .29$, $p < .01$).

Is BMI Associated With Trajectories of Marital Satisfaction?

The dependent variable in all subsequent analyses was the trajectory of marital satisfaction over the first 4 years of these marriages (i.e., the initial satisfaction of each spouse and the rate of linear change over time). To ensure that analyses addressed only the variance in spouses' satisfaction trajectories that was independent of spouses' reports of their own levels of depression, spouses' depression scores at each wave of data collection were entered as a time-varying covariate using growth curve modeling (e.g., Bryk & Raudenbush, 1987) with the Hierarchical Linear Modeling 6.08 (HLM) computer program (Bryk, Raudenbush, & Congdon, 2004). Given that our prediction suggested different effects for men and women, husbands' and wives' parameters were estimated separately but simultaneously using a multivariate technique suggested by Raudenbush, Brennan, and Barnett (1995) with the following level 1 equation:

$$\begin{aligned}
 Y_{ij} (\text{marital satisfaction}) = & \pi_{1j} (\text{dummy code for husbands}) \\
 & + \pi_{2j} (\text{dummy code for wives}) \\
 & + \pi_{3j} (\text{husbands' time of assessment}) \\
 & + \pi_{4j} (\text{wives' time of assessment}) \\
 & + \pi_{5j} (\text{husbands' depression}) \\
 & + \pi_{6j} (\text{wives' depression}) + e_j,
 \end{aligned} \quad (1)$$

where the eight waves of assessment were coded from 0 to 7 (so that the intercept represented initial satisfaction), and individuals' depression scores were centered around the sample mean. Notably, whereas 125 husbands (74%) and 125 wives (74%) (124 couples [73%]) reported their satisfaction at Time 8, growth curve

analyses were based on the entire sample because estimates used empirical Bayes theory to compute trajectories for all spouses who participated in at least one assessment. All effects were treated as random, we used restricted maximum likelihood estimation, and no restrictions were placed on the autoregressive error structures. Tests for curvilinear change in satisfaction were nonsignificant, suggesting that the linear model was appropriate for this sample. The results of this analysis are reported in Table 2.

In the first set of analyses, we examined whether each spouse's BMI was related to the trajectory of their marital satisfaction. Prior research on BMI and relationship satisfaction suggests that both spouses should be more satisfied with their marriages to the extent that they or their spouses have lower BMIs. To examine this possibility, we conducted two separate analyses. In the first, all parameters estimated in Equation 1 (i.e., husbands' and wives' intercepts, husbands' and wives' slopes, and associations between each spouse's own satisfaction and depression) were regressed onto each spouse's own BMI in the second level of the model, controlling for dissolution and own income and education. In the second, all parameters estimated in Equation 1 were regressed onto each spouse's partner's BMI in a second level of the model, controlling for dissolution and partner income and education.

The results of these analyses are presented in Table 3. As can be seen in the top half of Table 3, wives' BMIs were associated with initial levels of their own satisfaction and changes in their own satisfaction over time, but not always in the direction suggested by prior studies. In contrast with prior findings, heavier wives tended to be more satisfied with their relationships at the outset of the marriages. However, consistent with prior findings that weight is negatively associated with relationship satisfaction, heavier wives tended to become less satisfied over time. Husbands' BMIs were unrelated to the trajectory of their own satisfaction. Notably, direct tests (using the hypothesis testing option in the HLM program) revealed that neither effect actually differed across husbands and wives; for intercepts, $\chi^2(1) = 1.51$, $p = .22$; for slopes, $\chi^2(1) = 1.97$, $p = .16$.

Table 3. Associations Between BMI and the Trajectory of Marital Satisfaction

Variable	Husbands			Wives		
	B	SE	r	B	SE	r
Own BMI						
Initial satisfaction	1.11 ⁻²	1.00 ⁻²	0.09	2.75 ⁻²	1.10 ⁻²	0.21**
Change in satisfaction	-0.13 ⁻²	0.24 ⁻²	-0.05	-0.54 ⁻²	0.21 ⁻²	-0.20*
Partner's BMI						
Initial satisfaction	-2.58 ⁻²	1.25 ⁻²	-0.16*	0.04 ⁻²	0.93 ⁻²	0.00
Change in satisfaction	0.27 ⁻²	0.25 ⁻²	0.08	0.15 ⁻²	0.21 ⁻²	0.06

Note: Effect size *r* reported.

p* < .05. *p* < .01.

Table 4. Estimating the Effects of Relative BMI on the Trajectory of Marital Satisfaction

Variable	Husbands' BMIs			Wives' BMIs		
	B	SE	r	B	SE	r
Husbands' initial satisfaction	2.32 ⁻²	1.14 ⁻²	0.16*	-1.94 ⁻²	1.17 ⁻²	-0.13*
Wives' initial satisfaction	0.88 ⁻²	1.06 ⁻²	0.07	1.78 ⁻²	1.03 ⁻²	0.14†
Husbands' changes in satisfaction	0.13 ⁻²	0.26 ⁻²	0.04	0.11 ⁻²	0.31 ⁻²	0.03
Wives' changes in satisfaction	0.45 ⁻²	0.24 ⁻²	0.15*	-0.51 ⁻²	0.27 ⁻²	-0.15*

Note: Effect size *r* reported.

†*p* < .10 (two-tailed). **p* < .05 (one-tailed).

As can be seen in the bottom half of Table 3, wives' BMIs were also negatively associated with initial levels of husbands' satisfaction. Nevertheless, wives' BMIs were not associated with changes in husbands' satisfaction, and husbands' BMIs were not associated with either component of wives' marital satisfaction trajectory. Notably, the significant association between wives' BMIs and husbands' initial satisfaction was marginally stronger than the nonsignificant association between husbands' BMIs and wives' initial satisfaction, $\chi^2(1) = 3.55, p = .06$.

Are Differences Between Spouses' BMIs Associated With Trajectories of Marital Satisfaction?

In the second set of analyses, we tested the prediction that husbands and wives should be more satisfied to the extent that husbands have BMIs that are higher than their wives' BMIs but less satisfied to the extent that wives have BMIs that are higher than their husbands' BMIs. Given that analyses using raw difference scores have been criticized (e.g., Griffin, Murray, & Gonzalez, 1999), we followed Edwards' (1994) recommendations for estimating the association between the raw difference between two variables and an outcome with polynomial regression equations. According to Edwards,

If the model implied by the algebraic difference index is tenable, then the increment in variance explained by both coefficients entered simultaneously will be significant, each component will exhibit a significant independent effect, and the

coefficients on the components will be opposite in sign and not significantly different in absolute magnitude. (p. 57)

In terms of the current hypotheses, if the raw difference between husbands' and wives' BMIs accounts for initial marital satisfaction among husbands and changes in marital satisfaction among wives, regressing the trajectory of satisfaction onto both spouses' BMIs will reveal that wives' and husbands' BMIs have equal but opposite significant effects on husbands' initial satisfaction and changes in wives' satisfaction.

Consistent with this prediction, as can be seen in the top row of Table 4, husbands' BMIs positively predicted husbands' initial marital satisfaction, and wives' BMIs negatively predicted husbands' initial marital satisfaction. Furthermore, although a test of the difference between these two effects (again using the hypothesis testing option in the HLM program) indicated that they were significantly different from each other, $\chi^2(1) = 5.78, p < .05$, a test that compared the absolute value of each effect (formed by estimating the same effects after multiplying wives' BMIs by -1) indicated that they did not differ in absolute magnitude, $\chi^2(1) = 0.06, p > .50$. Likewise, as can be seen in the bottom row of Table 4, husbands' BMIs positively predicted change in wives' marital satisfaction, and wives' BMIs negatively predicted change in wives' marital satisfaction. And again, although these two effects were significantly different from each other, $\chi^2(1) = 7.13, p < .01$, a test that compared the absolute value of each effect indicated that they did not differ in absolute magnitude, $\chi^2(1) = 0.02, p > .50$. In other words, consistent with predictions, husbands were more satisfied initially

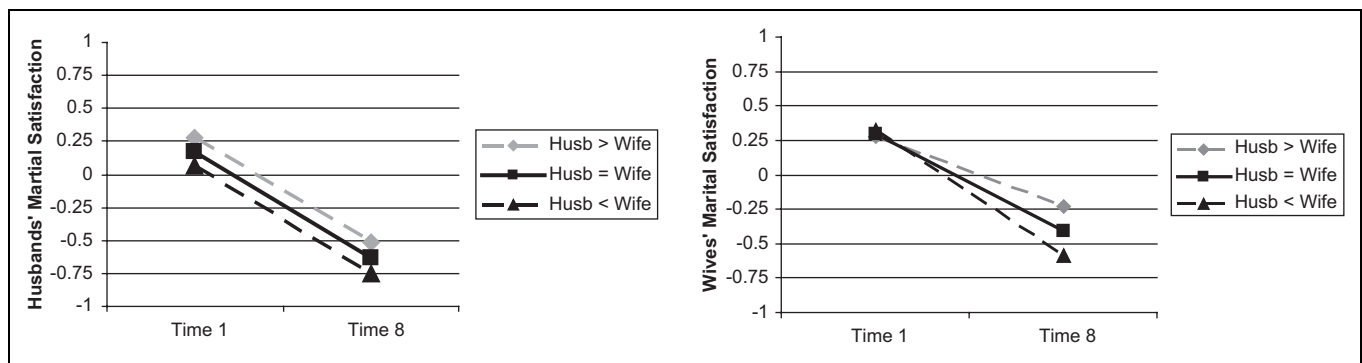


Figure 1. Effects of relative body mass index on the trajectory of marital satisfaction

and over the course of the study to the extent that their wives had BMIs that were lower than their own, and wives emerged as more satisfied over time to the extent that they had BMIs that were lower than their husbands', independent of each spouse's absolute BMI. Notably, no other effects in Table 4 emerged as significant, with the exception that wives' BMIs remained marginally positively associated with their own satisfaction after controlling for husbands' BMIs.

Given that these polynomial regressions provided support for an association between the signed difference score and initial levels of husbands' satisfaction and changes in wives' satisfaction, we conducted one final analysis to clearly demonstrate that association. Specifically, we entered the signed difference score (formed by subtracting wives' BMIs from husbands' BMIs) at level 2 to account for all parameters estimated by Equation 1, controlling for dissolution and both partners' income and education. The signed difference score was positively associated with initial levels of husbands' satisfaction, $t(158) = 2.68, p < .01$, and positively associated with changes in wives' satisfaction, $t(158) = 2.68, p < .01$. Plots of couples one standard deviation above and below the mean on the raw difference between husbands' and wives' BMI are depicted in Figure 1. As the figure reveals, husbands were more satisfied initially to the extent that their wives had BMIs that were lower than their own but less satisfied initially to the extent that their wives had BMIs that were higher than their own. These differences remained across the 4 years of the study. In contrast, wives were equally satisfied with their relationships initially, regardless of whether they had lower or higher BMIs than their husbands. However, wives remained more satisfied over time to the extent that they had BMIs that were lower than their husbands' but became less satisfied over time to the extent that they had BMIs that were higher than their husbands'. Notably, these difference score correlations can only be interpreted because they were supported by the more rigorous polynomial regressions described in the previous paragraph.

Discussion

Given the powerful influence of BMI on attraction between strangers (Chen & Brown, 2005), some have speculated that partners' BMIs may have a similar influence on established

intimate relationships (Boyes & Latner, 2009; Carr & Friedman, 2006). Yet the results of prior studies of the implications of BMI for evaluations of ongoing relationships have been inconsistent. BMI has been sometimes negatively associated with satisfaction (Boyes & Latner, 2009; Meltzer & McNulty, 2010; Sheets & Ajmere, 2005), sometimes unrelated to satisfaction (Billmann & Ware, 2002; Carr & Friedman, 2006; Markey & Markey, 2006), and sometimes positively associated with satisfaction among men (Sheets & Ajmere, 2005). The results of the current study reconcile these inconsistent effects by revealing that the implications of BMI for established relationships such as marriage depend on the comparison between partners' BMIs. Consistent with predictions that we derived from interdependence theory, normative resource theories, and evolutionary perspectives, husbands were more satisfied at the time of marriage and remained more satisfied over time to the extent that their wives had lower BMIs than their own, whereas husbands were less satisfied at the time of marriage and remained less satisfied over time to the extent that their wives had higher BMIs than their own. Furthermore, although the raw difference between partners' BMIs was unrelated to wives' satisfaction at the beginning of these marriages, the difference between partners' BMIs was associated with changes in wives' marital satisfaction over time, such that wives who had lower BMIs than their husbands remained more satisfied over time, whereas wives who had higher BMIs than their husbands demonstrated steeper declines in their satisfaction over time. These effects of relative BMI emerged even after individuals' levels of depression, whether the couple divorced during the study, and individuals' and partners' levels of education and income were controlled. Furthermore, and crucially, subsequent analyses confirmed that these effects were also independent of either partner's absolute level of BMI. In other words, husbands with wives who had lower BMIs than their own were more satisfied with their marriages, regardless of those husbands' and wives' absolute BMIs, and wives who had lower BMIs than their husbands remained more satisfied with their marriages, regardless of those wives' and husbands' absolute BMIs.

These findings have at least two theoretical implications. First, the fact that absolute levels of BMI appear to matter for partner preferences, whereas the comparison between partners'

BMI's mattered more in these marriages, highlights the importance of adopting a dyadic perspective to understand how spouses' qualities are likely to affect established relationships. Indeed other studies indicate that a variety of individuals' qualities and experiences that matter in terms of their absolute levels in the beginning of the relationship, such as education, income, commitment, socioeconomic status, attachment style, social support, and personality, begin to matter in more relative terms as the relationship deepens and develops (e.g., Banse, 2004; Gallo & Smith, 2001; Frye, McNulty, & Karney, 2008; Gonzaga et al., 2007; Harrell, 1990; McNulty et al., 2008; Neff & Karney, 2007; Rogers & DeBoer, 2001). Accordingly, findings from studies of partner preferences and dating relationships may not always provide the best insights into the processes that characterize more established relationships such as marriage.

Second, the current findings highlight the importance of normative resource and evolutionary theories to understanding how differences in partners' qualities may shape the outcomes of more established relationships by suggesting that disparities in qualities can actually benefit couples when those qualities are differentially important to partners. Specifically, wives were not adversely affected by having lower BMIs than their husbands, presumably because partner's BMI is less important to women (e.g., Chen & Brown, 2005; Harris et al., 1982; Legenbauer et al., 2009). In contrast, men were positively affected by having higher BMIs than their wives, presumably because BMI is more important to men. Alternatively, given that the acquisition of economic resources is more important to women than men (e.g., Buss, 1989), women may be positively affected by being less able to acquire resources than are their husbands, such that women may be more satisfied to the extent that they have husbands who offer more earning potential than they offer in return but less satisfied to the extent that they have husbands who offer less earning potential than they offer in return. And given that partner's earning potential is less important to men than it is to women, men also might be more satisfied to the extent that they offer more earning potential than their wives because those wives should be more satisfied, and less satisfied to extent that they offer less earning potential than their wives because those wives should be less satisfied. Indeed, Harrell (1990) reported that husbands and wives experienced less conflict in marriages in which husbands earned more income than their wives. In contrast, given that emotional stability, for example, is equally important to both men and women (Karney & Bradbury, 1995), both partners may be more satisfied to the extent that they have similar levels of emotional stability but less satisfied to the extent that either partner is more emotionally stable than the other. Indeed, Gonzaga et al. (2007) reported that husbands and wives were more satisfied with their marriages to the extent that they were more similar to one another in neuroticism, a trait-level measure of emotional stability.

Finally, the current findings also have important practical implications. Specifically, given that men have a stronger preference for and are more likely to choose thin partners than

women (Chen & Brown, 2005; Legenbauer et al., 2009), women may experience increased pressures to achieve a thin physical appearance. Indeed, women strive harder than men to be thin for their partners and are, consequently, more prone to developing body dissatisfaction than men (Sanchez & Kwang, 2007). Nevertheless, the findings of the current study indicate that the absolute levels of thinness for which women strive do not actually influence their relationships. Rather, women of any size can be happy in her relationship if they find the right partner. Accordingly, educating women about these findings may help alleviate the pressures to be extremely thin that plague women today. Of course, other adverse effects of absolute overweight and obesity continue to highlight the importance of maintaining a healthy weight.

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References

- Banse, R. (2004). Adult attachment and marital satisfaction: Evidence for dyadic configuration effects. *Journal of Social and Personal Relationship, 21*, 273-282. doi:10.1177/0265407504041388.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry, 4*, 561-571.
- Billmann, S. J., & Ware, J. C. (2002). Marital satisfaction of wives of untreated sleep apneic men. *Sleep Medicine, 3*, 55-59. doi:10.1016/S1389-9457(01)00118-6.
- Bjerkset, O., Romundstad, P., Evans, J., & Gunnell, D. (2008). Association of adult body mass index and height with anxiety, depression, and suicide in the general population: The HUNT study. *American Journal of Epidemiology, 167*, 193-202. doi:10.1093/aje/kwm280.
- Botwin, M. D., Buss, D. M., & Shackelford, T. K. (1997). Personality and mate preferences: Five factors in mate selection and marital satisfaction. *Journal of Personality, 65*, 107-136. doi:10.1111/j.1467-6494.1997.tb00531.x.
- Boyes, A. D., & Latner, J. D. (2009). Weight stigma in existing romantic relationships. *Journal of Sex & Marital Therapy, 35*, 282-293. doi:10.1080/00926230902851280.
- Bryk, A. S., & Raudenbush, S. W. (1987). Application of hierarchical linear models to assessing change. *Psychological Bulletin, 101*, 147-158. doi:10.1037/0033-2909.101.1.147.
- Bryk, A. S., Raudenbush, S. W., & Congdon, R. T. (2004). *HLM: Hierarchical linear modeling with the HLM/2L and HLM/3L programs*. Chicago: Scientific Software International.

- Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral & Brain Sciences*, 12, 1-49. doi:10.1017/S0140525X00023992.
- Carmalt, J. H., Cawley, J., Joyner, K., & Sobal, J. (2008). Body weight and matching with a physically attractive romantic partner. *Journal of Marriage and Family*, 70, 1287-1296. doi:10.1111/j.1741-3737.2008.00566.x.
- Carr, D. & Friedman, M. A. (2006). Body weight and the quality of interpersonal relationships. *Social Psychology Quarterly*, 69, 127-149. doi:10.1177/019027250606900202.
- Chen, E. Y., & Brown, M. (2005). Obesity stigma in sexual relationships. *Obesity Research*, 13, 1393-1397. doi:10.1038/oby.2005.168.
- Eastwick, P. W., & Finkel, E. J. (2008). Sex differences in mate preferences revisited: Do people know what they initially desire in a romantic partner? *Journal of Personality and Social Psychology*, 94, 245-264. doi:10.1037/0022-3514.94.2.245.
- Edwards, J. E. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Processes*, 58, 51-100. doi:10.1006/obhd.1994.1029.
- Frye, N. E., McNulty, J. K., & Karney, B. R. (2008). When are constraints on leaving a marriage related to negative behavior within the marriage? *Journal of Family Psychology*, 22, 153-161. doi:10.1037/0893-3200.22.1.153.
- Gallo, L. C., & Smith, T. W. (2001). Attachment style in marriage: Adjustment and responses to interaction. *Journal of Social and Personal Relationships*, 18, 263-289. doi:10.1177/0265407501182006.
- Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, 6, 505-518. doi:10.1111/j.1475-6811.1999.tb00206.x.
- Gonzaga, G. C., Campos, B., & Bradbury, T. (2007). Similarity, convergence, and relationship satisfaction in dating and married couples. *Journal of Personality and Social Psychology*, 93, 34-48. doi:10.1037/0022-3514.93.1.34.
- Harrell, W. A. (1990). Husband's masculinity, wife's power, and marital conflict. *Social Behavior and Personality*, 18, 207-215. doi:10.2224/sbp.1990.18.2.207.
- Harris, M. B., Harris, R. J., & Bochner, S. (1982). Fat, four-eyed, and female: Stereotypes of obesity, glasses, and gender. *Journal of Applied Social Psychology*, 12, 503-516. doi:10.1111/j.1559-1816.1982.tb00882.x.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods, and research. *Psychological Bulletin*, 118, 3-34. doi: 10.1037/0033-2909.118.1.3.
- Kurzban, R., & Weeden, J. (2005). Do advertised preferences predict the behavior of speed daters? *Personal Relationships*, 14, 623-632. doi:10.1037/0033-2909.118.1.3.
- Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, 126, 390-423. doi:10.1037/0033-2909.126.3.390.
- Legenbauer, T., Vocks, S., Schäfer, C., Schütt-Strömel, S., Hiller, W., Wagner, C., & Vögele, C. (2009). Preference for attractiveness and thinness in a partner: Influence of internalization of the thin ideal and shape/weight dissatisfaction in heterosexual women, heterosexual men, lesbians, and gay men. *Body Image*, 6, 228-234. doi:10.1016/j.bodyim.2009.04.002.
- Markey, C. N., & Markey, P. M. (2006). Romantic relationships and body satisfaction among young women. *Journal of Youth and Adolescence*, 35, 271-279. doi:10.1007/s10964-005-9013-6.
- McNulty, J. K., Neff, L. A., & Karney, B. R. (2008). Beyond initial attraction: Physical attractiveness in newlywed marriages. *Journal of Family Psychology*, 22, 135-143. doi:10.1037/0893-3200.22.1.135.
- Meltzer, A. L., & McNulty, J. K. (2010). Body image and marital satisfaction: Evidence for the mediating role of sexual frequency and sexual satisfaction. *Journal of Family Psychology*, 24, 156-164.
- Neff, L. A., & Karney, B. R. (2007). Stress crossover in early marriage: A longitudinal and dyadic perspective. *Journal of Marriage and the Family*, 69, 594-607. doi:10.1111/j.1741-3737.2007.00394.x.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 45, 141-151.
- Osgood, C. E., Suci, G., & Tannenbaum, P. (1957). *The measurement of meaning*. Urbana: University of Illinois Press.
- Raudenbush, S. W., Brennan, R. T., & Barnett, R. C. (1995). A multivariate hierarchical model for studying psychological change within married couples: Methodological advances in family psychology. *Journal of Family Psychology*, 9, 161-174. doi:10.1037/0893-3200.9.2.161.
- Rodman, H. (1967). Marital power in France, Greece, Yugoslavia, and the United States: A cross-national discussion. *Journal of Marriage and the Family*, 29, 320-324. doi:10.2307/349693.
- Rogers, S. L., & DeBoer, D. D. (2001). Changes in wives' income: Effects on marital happiness, psychological well-being, and the risk of divorce. *Journal of Marriage and the Family*, 63, 458-472. doi:10.1111/j.1741-3737.2001.00458.x.
- Sanchez, D. T., & Kwang, T. (2007). When the relationship becomes her: Revisiting women's body concerns from a relationship contingency perspective. *Psychology of Women Quarterly*, 31, 401-414. doi:10.1111/j.1471-6402.2007.00389.x.
- Sheets, V., & Ajmere, K. (2005). Are romantic partners a source of college students' weight concern? *Eating Behaviors*, 6, 1-9. doi:10.1016/j.eatbeh.2004.08.008.
- Swami, V. (2006). The influence of body weight and shape in determining female and male physical attractiveness. In M. V. Kines (Ed.), *Body image: New research* (pp. 35-61). Hauppauge, NY: Nova.
- Thibaut, J., & Kelley, H. H. (1959). *The social psychology of groups*. New York: John Wiley.
- Walster, E., Aronson, V., Abrahams, D., & Rottman, L. (1966). Importance of physical attractiveness in dating behavior. *Journal of Personality and Social Psychology*, 4, 508-516. doi:10.1037/h0021188.
- Whisman, M. A. (2001). The association between depression and marital dissatisfaction. In S. R. H. Beach (Ed.), *Marital and family processes in depression: A scientific foundation for clinical practice* (pp. 3-24). Washington, DC: American Psychological Association.

Bios

Andrea L. Meltzer is a social psychology PhD candidate in the Department of Psychology at the University of Tennessee. She studies women's issues in the context of intimate relationships.

James K. McNulty is an associate professor in the Department of Psychology at the University of Tennessee. He received his PhD in social psychology at the University of Florida and studies processes involved in the maintenance and deterioration of relationship satisfaction.

Sarah A. Novak is an assistant professor in psychology at Hofstra University. She received her PhD in health and social psychology at Carnegie Mellon University and studies the influence of body weight on perceptual processes and behavior within social networks.

Emily A. Butler is an assistant professor in family studies and human development at the University of Arizona. She received her PhD in personality and abnormal psychology at Stanford University and studies emotion regulation and health in interpersonal contexts.

Benjamin R. Karney is a professor in the Department of Psychology at the University of California, Los Angeles. He studies stability and change in intimate relationships, with a particular focus on marriages in diverse populations.