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BODY WEIGHT AND RELATIONSHIP QUALITY AMONG WOMEN:
Associations of Obesity and Underweight with Relationship Communication, Conflict, and Happiness

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Entering romantic relationships is difficult for women with high or low body weights. Once partnered relationships are established, it is unclear whether or how weight is related to relationship quality, with mixed findings in prior studies. Analyses of 3824 women in the 1979 National Longitudinal Surveys of Youth (NLSY79) examined associations of mean relative body weight, obesity, and underweight with relationship communication, conflict, and happiness in 1992-1996, considering both directions of association using cross-sectional and two-year longitudinal multiple regression analyses. The findings revealed few statistically significant associations between relative body weight and relationship quality in either direction. Obesity, weight gain, underweight, and weight loss were associated with relationship unhappiness, and changes in relationship conflict and relationship communication were associated with obesity and underweight. Overall, body weight does not appear to consistently influence or result from relationship quality, which is congruent with family systems theory.

Key Words: *Communication, Conflict, Family Systems, Happiness, Marriage, Overweight, Obesity*

INTRODUCTION

In the contemporary U.S. about two-thirds of adults are classified as being overweight, and one-fifth of those individuals are considered to be obese (Ogden *et al.*, 2006). Much of the population is concerned about their weight and many people are attempting to gain or lose weight (Krieger *et al.*, 2004;

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Williamson *et al.*, 1992). A considerable amount of research suggests that weight plays a significant role in dating, courtship, cohabitation, and marriage, particularly among young women (Cawley *et al.*, 2006; Halpern *et al.*, 1999; Sobal, 1984, 2005; Sobal *et al.*, 1995). Whether or how the quality of established partnered relationships is associated with body weight, however, is currently unresolved. Additionally, the direction of such an association is not well understood due to a lack of research about whether and how much body weight influences relationship quality, relationship quality influences body weight, both, or neither. This study addressed these questions by examining the association of body weight, obesity, and underweight with several measures of relationship quality among women.

Body weight is an important aspect of interpersonal attractiveness that influences the formation of romantic relationships (Alicke *et al.*, 1986; Nevid, 1984). Obese individuals are strongly stigmatized and discriminated against in contemporary post-industrial societies (Goffman, 1963; Puhl and Brownell, 2003; Sobal, 1991,2008; Brownell, *et al.*, 2005), including stigmatization that inhibits the formation of romantic relationships (Reagan, 1996; Sobal, 2005). Women who are obese are perceived as undesirable dating partners, begin to date later, and date less frequently (Halpern *et al.*, 1999; Harris, 1990; Harris *et al.*, 1991; Kallen and Doughty, 1984; Pearce *et al.*, 2002; Sobal *et al.*, 1992, 1995). Obese women marry later and attract less desirable partners (Fu and Goldman, 1996; Garn, *et al.*, 1989a, 1989b; Gortmaker *et al.*, 1993). Extremely thin women with anorexia nervosa are also stigmatized (Chiodo *et al.*, 1984; Schwarzer and Weiner, 1990; Way, 1995), and women with anorexia nervosa are seen as undesirable dating partners (Sobal and Bursztyn, 1998; Smith *et al.*, 1986). Women with anorexia nervosa are less likely to have partners and spouses than bulimic women or women without eating disorders (Tiller *et al.*, 1997). Overall, existing research suggests that forming relationships and getting married are more difficult for people who have deviant weights, both those who are obese and those who are thin due to anorexia nervosa.

There is less consensus, however, about the quality of relationships of people who are obese and underweight once relationships are formed. Relationship quality is a topic that has received increasing attention (Bradbury *et al.*, 2000; Glenn, 1990) and some work has examined relationship quality and body weight. Past research about body weight and quality of marriage presents mixed findings, in part depending on the type of research: clinical/laboratory investigations or community/population surveys (Sobal *et al.*, 1995).

Clinical and laboratory studies of body weight and relationship problems are based on limited and select samples of patients and clients, which makes it difficult to generalize to the broader population (Lilienfeld and Lilienfeld, 1980). People in weight loss programs often report marital conflict (Felitti,

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1993). Weight loss surgery sometimes leads to later marital problems (Hafner, 1991; Hafner *et al.*, 1990, 1991; Herpetz *et al.*, 2003; Marcias *et al.*, 2004; Rand *et al.*, 1986; Wrobel *et al.*, 1983). Markey, *et al.* (2001) found that wives with higher weights reported lower marital quality, less marital harmony, and less understanding from spouses, while weight was not related to these factors in their husbands. Married individuals with anorexia nervosa report problems with communication (Van den Broucke *et al.*, 1995) and problematic marriages (Friedman *et al.*, 1999; Van den Broucke and Vandereycken, 1989; Van Buren and Williamson, 1988; Woodside *et al.*, 1993). These clinical and laboratory studies suggest that some obese and anorexic patients and clients may have low marital quality and that dramatic weight loss may lead to marital problems.

Community and population studies have also examined body weight and the quality of marital relationships, with mixed findings. Wives' weight gain led to marital problems in a U.S. national sample of 1,509 adults (Margolin *et al.*, 1987). Also, women with low marital satisfaction had slightly higher relative body weights than those with higher satisfaction in a sample of 493 women in one community (Gallo *et al.*, 2003). In contrast, a survey of 374 men and women (Markey *et al.*, 2001), a cross-sectional epidemiological investigation of 399 people (Cohen *et al.*, 1991), and a psychiatric survey of 1,168 people (Klesges *et al.*, 1992) found no relationship between weight and marital quality. Similarly, one U.S. national study of 3,656 adults also reported no significant weight-marital quality associations (Carr and Friedman, 2006). A U.S. national survey of 1,980 adults reported few relationships between weight and marital quality, although obese men reported more marital problems, men losing weight had fewer relationship problems, and obese women reported greater relationship happiness (Sobal *et al.*, 1995). These previous community/population studies suggest that few or inconsistent associations exist between body weight and relationship quality.

Many past analyses of body weight and relationship quality have been limited by lack of sample representativeness, the examination of relatively few components of the many dimensions involved in relationship quality, and a focus on obesity and weight gain without specific consideration of underweight. Additionally, the question of direction of association has not been explicitly examined to consider the extent that body weight influences relationship quality or relationship quality influences body weight. Investigating directionality requires longitudinal data to provide comparative information about the direction of association (Goldman, 1994; Waldron *et al.*, 1996). An absence of an association in a cross-sectional study may mask the operation of conflicting directional influences that counterbalance each other and cancel each other out. Examining longitudinal data and using multiple measures are strategies useful for identifying more complex patterns of association.

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Many perspectives may be used to interpret existing findings about body weight and relationship quality (Boss *et al.*, 1993; Klein and White, 1996). Family systems theory is an extensively developed and widely used perspective for examining families (Broderick, 1993; Cox and Paley, 1997; Mikesell *et al.*, 1995; Minuchin *et al.*, 1978), and offers a useful framework for examining body weight (Doherty and Harkaway, 1990; Ganley, 1986; Killian, 1994; Schlundt and Johnson, 1990). Family systems theory suggests that characteristics of family members, such as obesity and underweight, may be adaptive in maintaining family dynamics (Killian, 1994; Minuchin *et al.*, 1978) and that the family system seeks homeostasis when changes occur (Doherty and Harkaway, 1990; Ganley, 1986; Sobal, *et al.*, 1995).

The analyses conducted in this study extend and elaborate prior research by examining a representative national sample of women that (1) included three aspects of relationship quality (communication, conflict, and happiness), (2) studied multiple measures of body weight (normal weight, over-weight, and under-weight), and (3) was longitudinal in design to permit analysis of direction of associations between relationship quality and body weight.

METHODS

Data

This analysis used data from the National Longitudinal Survey of Youth 1979 (NLSY79), a nationally representative sample of young adults (Center for Human Resource Research, 1997a,1997b). NLSY79 data have been used in prior studies of other aspects of body weight (e.g. Gortmaker *et al.*, 1993).

The NLSY79 data offer several advantages for examining body weight and relationship quality. NLSY79 is a larger data set than used by most prior studies of this topic, overcoming limitations of small sample sizes and offering more cases for combinations of relationship quality and weight variables than most previous surveys. It includes longitudinal data that permits examination of the direction of association. It also assesses partner communication, which contributes to relationship quality because couples with better communication have more satisfactory marriages (Schaap, 1982), as well as relationship happiness and relationship conflict. This NLSY79 cohort was at high risk of weight changes, with the likelihood of women experiencing major weight gain greatest between age 25 and 35 (Williamson *et al.*, 1990).

The NLSY79 sample was first recruited and interviewed in 1979, and that baseline sample included 6283 women age 14-22 (a nine year age span) selected to be nationally representative. The retention rate of baseline respondents was 90% in 1992. The analytical sample used in this report is based on the 3824 women who were living with a partner. Both married and unmarried cohabiting

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women were included here to incorporate a range of types of relationships. Respondents were asked a series of questions about relationship quality in 1992, 1994, and 1996. We excluded those who had missing values for the variables used in the multivariate models in this analysis. We also excluded women who were pregnant in the years when body weight was used in the models because of the temporary weight gains involved in pregnancy.

Measures

A variety of measures were available in the NLSY79 data to examine relationships between body weight and relationship quality. Considerable attention has been given to operationalizing relationship quality, suggesting that it is a complex and multidimensional concept with many possible measures (Glenn, 1990). In particular, past studies suggest that it is important to examine both positive and negative dimensions of relationship quality (Carr and Friedman, 2006; Moen *et al.*, 2001; Orbuch *et al.*, 1996). Questions assessing relationship quality available in the NLSY79 data included positive relationship communication, negative relationship conflict, and positive relationship happiness.

Relationship communication was measured by the three questions in the data set that asked respondents about communication with their partners: "How often do you: (1) calmly discuss something, (2) laugh together, and (3) tell about your troubles." Response options were 4=almost every day, 3=once or twice a week, 2=once or twice a month, 1=less than once a month. Responses to the three questions were summed to produce a relationship communication scale that could range in value from 3 to 12 and had an internal reliability of alpha = .73. While self-reported relationship communication may be subject to reporting bias (Heyman, 2001), observed and reported assessments of relationship communication provide similar predictions (Rogge and Bradbury, 1999). Mean relationship communication scores were stable from 1992 to 1996, being 11.2 ± 1.8 for all three years.

Relationship conflict was assessed by asking "How frequently do you and your husband/partner have arguments about" nine different areas: chores and responsibilities, money, leisure or free time, showing affection to each other, your in-laws, your partner's in-laws, drinking, religion, and other women. Responses were coded as 4=often, 3=sometimes, 2=hardly ever, 1=never. We did not include the NLSY79 item about conflict over children in this analysis because over one third of the respondents did not have children and would have had missing values for this item and for the scale. Responses to the questions were summed to produce a relationship conflict scale that could range in value from 9 to 36 and had an internal reliability of alpha = .75. Although relationship conflict is difficult to assess in surveys, questionnaire

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data has previously been used to measure this concept (Bradbury *et al.*, 2000). Mean relationship conflict scale scores differed slightly over the years studied, being 17.1 ± 4.7 in 1992, 16.8 ± 4.4 in 1994, and 16.6 ± 4.3 in 1996.

Overall relationship happiness was assessed using one question: "Would you say that your relationship/marriage is: very happy, fairly happy, not too happy." Responses to this happiness item were coded into a dichotomy as 1=very happy versus 0=fairly happy or not too happy for these analyses because of the skew distribution of the variable. While self-reported relationship happiness may be potentially subject to social desirability that may result in under-reporting of poor relationship quality (Donohue and Ryder, 1982), straightforward single-item assessments of relationship quality are appropriate measures of the global concept (Bradbury *et al.*, 2000; Fincham and Bradbury, 1987). Relationship happiness (reporting being very happy) varied slightly during years analyzed here, being 73% in 1992, 71% in 1994, and 70% in 1996.

Body weight variables were based on self-reported weight and height. Self-reports of body weight may involve some social desirability bias (Gorber *et al.*, 2007; Roland, 1989; Stewart *et al.*, 1987), although a meta-analysis of studies of the validity of self-reported weight concluded that it is adequate for population-level research (Bowman and DeLucia, 1992). Reported weights and heights were used to calculate a Body Mass Index (BMI) as weight(kg)/ height(m)^2 which adjusts weight for skeletal, organ, and other lean body mass and is widely used as a measure of body fatness (Unauthored, 1998; WHO, 1998).

BMI was used to categorize women's weights into categories. Women with a BMI less than 18.5 were classified as underweight and those with a BMI of 30.0 or greater were classified as obese (WHO, 1998). BMI values from 18.5 to 24.9 were designated as normal weights, and BMI's 25.0 to 29.9 were considered overweight (WHO, 1998). Most women in this analytical sample were overweight, with mean BMI rising from 25.9 ± 6.0 in 1992 to 26.4 ± 6.2 in 1994, and 26.9±6.4 in 1996. The prevalence of obese women rose from 21% in 1992, to 23% in 1994, and 26% in 1996. Underweight was relatively stable at 3% in 1992 and 2% in subsequent years.

Eleven demographic variables were used as control variables in multiple regression models based on their covariation with body weight and/or relationship quality: Age (years centered at the median), race/ethnicity (two dummy variables for Black and Hispanic with Whites as the comparison group), education (years of schooling), employment (currently employed or not), income (family income in dollars raised to the .4 power to adjust for skewness), marital status (1=married, 0=cohabiting), previous marriage (1=previously married, 0=not), number of children (parity of 0, 1, 2, 3 or more children),

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new child (1=had a new child in the last 2 years, 0=no new child), rural-urban residence (1=rural, 0=not), and region (three dummy variables for Northcentral, South, and West, with the Northeast as the comparison group). Height was also included in regression models simultaneously with the other variables because BMI may not control completely for the relationship between weight and height (Cawley et. al., 2006).

Analytical Strategy

For analysis of continuous outcome variables of BMI, relationship conflict, and relationship communication, multiple linear regression analysis was used. For analysis of categorical outcome variables of underweight, average weight, and overweight and relationship happiness, multiple logistic regression analysis was employed. Two types of multiple regression models were examined to take advantage of the repeated-wave design available in the data. Cross sectional models examined the independent variable and dependent variable at the same point in time. Change models examined how two-year change in the independent variable was associated with the dependent variable. Each of these models examined a different aspect of the association between body weight and relationship quality and offered a distinct perspective. Another part of this analytical strategy was to examine each model in both directions, testing whether weight predicted relationship quality, relationship quality predicted weight, both, or neither.

Examining all of these models permitted consideration of how different types of inquiry may result in different findings (Frongillo and Rowe, 1999). Cross-sectional models portray the relationship of two variables at one point in time, showing current associations but not considering prior influences or the dynamics of change. The system of dynamics of body weight and relationship quality involves a multifaceted set of associations, especially using multiple indicators of relationship quality and weight. It is important to examine several positive and negative components of relationship quality (such as both happiness and conflict) as well as multiple aspects of weight (such as underweight and obesity) to identify possible variations in these associations (Moen *et al.*, 2001). Such multiple hypothesis testing produces a risk of type I error, where some relationships are statistically significant by chance alone (Keselman *et al.*, 1999). We report findings at the 0.05, 0.01, and 0.001 significance levels to seek to identify significance of weight and relationship quality associations while also permitting multiple interpretations about which significance level to apply.

The NLSY79 sampling procedure over-sampled some segments of the population to provide sufficient numbers of respondents in those categories. Therefore, sample weights were applied to the cases in the NLSY79 data

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analyzed here to make the findings nationally representative of the U.S. population (CHRR, 1997a, 1997b).

RESULTS

This sample included a cohort of women in their late 20s and early 30s who were broadly demographically representative of the ethnic, socioeconomic, and regional composition of the U.S. (Table 1). The majority were White, but Blacks and Hispanics were represented. Most had more than a high school education and were employed. The sample's median family income was well over $30,000. Over half of these women were married, but few had been previously married. Most had at least one child, but only a small minority had a new child during the analysis period. Most were urban residents, and these women represented all regions of the U. S.

Table 1
Demographic and Weight Characteristics of the Sample

Demographics (1994, n=3,824)	
Age (years)	33.1±2.8 (range 29-?7)
Race/Ethnicity	
White	81%
Black	13%
Hispanic	6%
Education (years)	13.4±2.8
Employment (employed)	74%
Family Income (dollars)	$36,800±2,319
Marital Status (married)	63%
Prior Marriage (yes)	17%
Number of Children	
None	25%
One	20%
Two	33%
Three or more	23%
New Child (yes)	
1994-1996	11%
Rural-urban (rural)	22%
Region of the Country	
Northeast	18%
North Central	28%
South	37%
West	17%
Weight Variables	
Body Mass Index (BMI)	25.6±7.0
Obesity (BMI ≥ 30.0)	19%
Underweight (BMI < 18.5)	3%

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Body weight variables included three indicators of weight status: BMI, obesity, and underweight. The mean BMI was above the upper limit of the recommended healthy BMI level of 25. Over one in five of these women could be classified as obese, but few were underweight.

Relationship quality measures included three dimensions: Communication, conflict, and happiness (Table 2). Relationship communication distributions revealed that most of these women reported positive communication with their partner almost every day, with an average score of over 11 out of a possible 12 on the relationship communication scale. Only a minority reported that they often experienced conflict about any particular topic, and many reported they never had conflict about these topics, with an average conflict score of about 17 out of a possible 36. Most women reported that they were very happy with their relationships, although about a fourth were only fairly happy and a few not happy.

Table 2
Relationship Quality Variables in 1994 (n = 3,824)

Relationship Variables	*Values*			
	Almost	*Once/Twice*	*Once/Twice*	*Under Once*
Communication#	Every Day	Per Week	Per Month	Per Month
Calmly Discuss Something	78%	17%	3%	2%
Laugh Together	81%	16%	2%	1%
Tell about your Troubles	88%	9%	1%	2%
Marital Communication Scale	11.3±1.8			
Conflict@	*Often*	*Sometimes*	*Hardly Ever*	*Never*
Chores/Responsibilities	14%	44%	34%	8%
Money	11%	35%	39%	15%
Leisure/Free Time	7%	24%	37%	32%
Showing Affection	6%	20%	39%	34%
Respondent's In-laws	3%	21%	34%	41%
Partner's In-laws	4%	19%	31%	45%
Drinking	2%	9%	18%	72%
Religion	1%	5%	20%	74%
Other Women	1%	3%	9%	87%
Marital Conflict Scale	16.7±5.2			
Happiness+	*Very*	*Fairly*	*Not*	
Marital Happiness	73%	24%	3%	

Communication items were coded as 4=almost every day, 3=weekly, 2=monthly, 1=less than monthly, and the responses to the three individual items were summed to form a cumulated scale with possible values from 3 to 12 (scale alpha = .73).

@ Conflict items were coded as 4=often, 3=sometimes, 2=hardly ever, 1=never, and the responses to the three individual items were summed to form a cumulated scale with possible values from 9 to 36 (scale alpha = .75).

+ The happiness item was coded 1=very happy, 0=fairly happy or not too happy.

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Cross-sectional associations were examined for each of the three years studied where body weight was a predictor of relationship quality (Table 3). There were no significant associations between weight and relationship communication or conflict, but in 1992 women with higher BMI's were significantly less happy with their relationships. Also, in 1992 and 1996 both women who were obese and women who were underweight reported lower relationship happiness.

Table 3
Cross Sectional and Change Models of Weight Variables Predicting Relationship Quality Measures, Controlling for Sociodemographics+

	Body Weight Variables					
Relationship Quality Variables	*Cross-Sectional BMI*	*Cross-Sectional Obesity*	*Cross-Sectional Underweight*	*Change in BMI*	*Change in Obesity*	*Change in Underweight*
Communication						
1992	-.006	-.025	-.171	.002	.047	-.202
1994	-.006	.033	-.259	.017	.185	-.109
1996	.003	.090	.258	-.009	-.103	.287
Conflict						
1992	.027	.142	-.160	-.024	-.178	.026
1994	-.001	-.205	.400	-.021	.160	-.309
1996	.024	.528	.417	.006	1.064*	1.852*
Happiness						
1992	-.024**	-.441***	-.658**	-.033	-.165	-.745**
1994	-.003	-.011	-.074	-.006	.010	.362
1996	-.002	-.233*	-.592*	-.042*	-.503**	-1.24***

+ Values in the table are unstandardized multiple linear regression coefficients for communication and conflict, and logistic regression coefficients for happiness. Sociodemographic variables controlled in these models include age, race/ethnicity, education, employment, income, marital status, number of children, new child, rural-urban residence, region, and height. These analyses are based on an analytical NLSY79 data sample of 3,824 women, with each coefficient based on about 1,300 women per year who had non-missing values for the particular variables used in each in each model.

* $p < .05$, ** $p < .01$, *** $p < .001$

Change in weight as a predictor of relationship quality revealed that increased BMI was associated with lower relationship happiness in 1996, which was paralleled by the finding that becoming obese was also associated with lower relationship happiness in 1996 and more conflict in 1996. Additionally, women who reported becoming underweight reported significantly more relationship conflict in 1996 and lower relationship happiness in 1992 and 1996.

Cross-sectional analyses of relationship quality as a predictor of body weight revealed no significant relationships with relationship communication

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for any of the weight variables in any of the years examined (Table 4). Women with greater relationship conflict were significantly more likely to be obese only in 1996. Women with greater relationship happiness tended to be significantly less likely to be obese and underweight in both 1992 and 1996.

Change in relationship quality as a predictor of body weight revealed that women who increased their communication score were more likely to be obese in 1994. Women who reported an increase in relationship conflict were more likely to be obese and more likely to be underweight in 1996, and women who experienced an increase in relationship happiness were less likely to be underweight in 1996.

Table 4
Cross Sectional and Change Models of Relationship Quality Measures Predicting Weight Variables, Controlling for Sociodemographics+

	Marital Quality Variables					
Weight Variables	*Cross-Sectional Communi-*	*Cross-Sectional Conflict cation*	*Cross-Sectional Happiness*	*Change in Communi-*	*Change in Conflict cation*	*Change in Happiness*
Body Mass Index						
1992	-.125	.028	-.452	X	X	X
1994	.001	.007	-.219	.111	.011	-.128
1996	.015	.017	-.036	-.006	.047	.063
Obesity						
1992	-.035	.010	-.363***	X	X	X
1994	.062	-.012	-.053	.104	-.009	.091
1996	.039	.028*	-.241*	.043	.038*	-.210
Underweight						
1992	-.129	.009	-.755***	X	X	X
1994	-.110	.043	.074	-.146	.075	-.119
1996	.135	.052	-.583*	.174	.085*	-1.035***

+ Values in the table are unstandardized multiple linear regression coefficients for Body Mass Index, and logistic regression coefficients for obesity and underweight. Sociodemographic variables controlled in these models include age, race/ethnicity, education, employment, income, marital status, number of children, new child, rural-urban residence, region, and height. These analyses are based on an analytical NLSY79 data sample of 3,824 women, with each coefficient based on about 1,300 women per year who had non-missing values for the particular variables used in each in each model.

X = Prior year data was unavailable because it was not collected in the data set

* $p < .05$, ** $p < .01$, *** $p < .001$

Summary of Results

Nineteen of 99 (19%) of all the cross-sectional and change associations between weight and relationship quality examined here were statistically significant at the .05 level, 9 (9%) at the .01 level, and 5 (5%) at the .001 level. The cross-

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sectional models included 10 of 54 (19%) and change models 9 of 45 (20%) significant relationships at the .05 level, suggesting little difference between cross-sectional and longitudinal analyses. Associations that were significant revealed that obesity and weight gain as well as underweight and weight loss were negatively associated with relationship happiness, and changes in relationship conflict and relationship communication were positively associated with obesity and underweight.

DISCUSSION

Body weight and relationship quality is an issue of considerable substantive and theoretical interest. Popular books about marriage and weight attest to public concern about the topic (Abramson, 1999,2000; Sutkamp and Mason, 1992), although the public does not necessarily believe that obese and thin people differ in the number of family problems they experience (Neumark-Sztainer *et al.*, 1999). This study used several different analytical strategies to examine body weight and relationship quality. Overall, few significant associations existed between weight and relationship quality, and those that were significant differed according to the type of analysis that was used. Cross-sectional analyses most often revealed no association between body weight and relationship quality, but sometimes found that both obese and underweight women reported less relationship happiness, with one association showing greater relationship conflict associated with obesity. Analysis of change models echoed the cross-sectional results, overwhelmingly finding that body weight and relationship quality were not associated except in a few cases where weight gains and losses were associated with relationship unhappiness. Additionally, some negative changes in relationship conflict and communication were associated with obesity and underweight.

The overall lack of associations between body weight and relationship quality in these findings is congruent with most past survey research (Carr and Friedman, 2006; Cohen *et al.*, 1991; Klesges *et al.*, 1990; Sobal *et al.*, 1995). Also, some of the significant associations parallel earlier work that found obese women have more marital problems (Margolin *et al.*, 1987; Markey *et al.*, 2001). Some of the differences in findings between studies may be due to characteristics of particular study samples. The current analysis examined one specific cohort of younger women who were in partnered relationships, as opposed to a cross-section of women of all ages. These women were in a young cohort which matured as adolescents in the 1970s when public emphasis on slimness was intensifying (Garner *et al.*, 1980).

The findings of the current analysis suggest that being underweight tended to be associated with poor relationship quality. Some underweight women appear to report significantly greater relationship unhappiness even though

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thinness is an attribute desired and sought by most women in the U.S. (Rodin *et al.*, 1985).

This study only examined relationship quality in intact relationships, and did not examine the dissolution of relationships. Existing studies provide mixed findings about weight and relationship termination. Marital dissolution has been reported to lead to weight loss (Mastekaasa, 1997), and separation/divorce was observed to trigger eating disorders in some patients (Kiriike *et al.*, 1996). A small cross-sectional study found that at the time of separation from their spouse 13% of people reported they gained weight and 7% reported they lost weight, with both gains and losses more frequent for women than men (Chiriboga and Cutler, 1977). In contrast, a large longitudinal study found no effect of divorce on average body weight after marriages were dissolved (Fu and Goldman, 2000), although it did not differentiate those who lost weight from those who gained weight.

Several limitations existed in this study. The design examined weight and relationship quality longitudinally at several time points two years apart, but weight-quality relationships may operate on shorter or longer time cycles. The unit of analysis was the individual, and weight and relationship quality of the partner was not assessed. All measures were self-reported and assumed to have face validity, although selective reporting and imperfect recall may have occurred, particularly among the marital quality measures (Bradbury et. al., 2000; Fincham and Bradbury, 1987). Also, some of the measures, such as relationship communication, had limited variability that reduced the ability to detect associations. The sample was limited to one cohort of relatively young U.S. women in the 1990s, and the findings may not be generalizable to women of other ages in other places or other historical periods. The analysis only examined body weight and relationship quality among women because the relationship happiness, communication, and conflict questions were not asked of men in the NLSY79 data. Prior studies have suggested that for men there is relatively little association between marital quality and weight (Markey *et al.*, 2001; Sobal *et al.*, 1995), but additional examination of that issue is needed.

The limitations of this study suggest that additional research about body weight and relationship quality would be useful. Future investigations would benefit from examination of other samples drawn from different places and populations. More extensive longitudinal analysis is needed to confirm findings about direction of associations, including use of shorter and longer measurement periods than the 2 year intervals available in the data analyzed here. More extensive assessments and measures of other dimensions of weight variables and relationship quality would add additional insight, including weight perceptions and relationship stress. Assessment of partner data and matched couple data would provide additional levels of understanding. Also, qualitative

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research may offer additional depth of insight about processes involved in interpreting and managing body weight and relationship quality.

This investigation examined both directions of associations—body weight predicting relationship quality as well as relationship quality predicting body weight—but few major differences between the two were apparent. The direction of relationship that is assumed, however, makes a difference in interpretations and interventions. Assuming that weight influences relationship quality suggests that obese or underweight women may want to either change their weight or persuade their partner to accept their weight to help prevent relationship unhappiness. In contrast, assuming that relationship quality influences weight change suggests that relationship difficulties may be a risk factor for either being obese or being underweight, with low relationship quality influencing eating, activity levels, or dieting behaviors (Markey *et al.*, 2001).

A family systems perspective (Broderick, 1993; Cox and Paley, 1997; Mikesell *et al.*, 1995) is congruent with the findings of this study that current body weight and relationship quality are not consistently associated because the weights of family members fulfill functions within the family system, and changes in body weight are adapted to by the family system through homeostatic adjustments that move towards an equilibrium that readjusts and stabilizes after disruptions (Sobal *et al.*, 1995). Systems theory does not predict that any direction of association between weight and relationship quality predominates, which was the finding observed in these NLSY79 data. Family systems appear to adapt to the weights of family members, and family members seem to maintain weights congruent with family standards (Sobal *et al.*, 1995). Women in this analysis appear to be successful in using relationship maintenance behaviors (Weigel and Ballard-Reisch, 1999). Benjamin and Kamin-Shaaltiel (2004) find that overweight women perform emotion work to avoid anger about negative evaluations of their appearance by their husbands. In some cases, however, disruptions of the family system that lead to conflict may lead to body dissatisfaction and extreme dieting behaviors to adjust body weights to return to more harmonious family dynamics (Markey *et al.*, 2001; Pole, Crowther and Schell, 2004).

In conclusion, body weight was not associated with relationship quality in this sample of young adult U.S. women except for a few bi-directional linkages such as both higher and lower body weights being related to relationship unhappiness. Body weight is an important issue for many women in the U.S. (Bordo, 1993), and these results suggest that there are few (but may be some) grounds for concerns about weight and quality of relationships with romantic partners. Overall these findings suggest that weight and relationship quality are not usually strongly associated.

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