

Select Parent and Family System Correlates of Adolescent Current Weight Status: A Pilot Study

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In this exploratory, correlational study, the researchers examined the extent to which select family systems theory constructs were associated with self-reported current weight among a sample of 77 primarily non-Hispanic Black adolescents. We also explored the extent to which select parental and familial constructs (family cohesion, family conflict, family resources, and perceptions of weight), and parents' current weight status separately and taken together predicted adolescents' current weight. Bivariate analyses suggested that adolescents' self-reported weight status is correlated with factors from multiple levels in which the adolescent is embedded; adolescent weight status was positively associated with parent- and family-level factors. Furthermore, the exploratory regression model established the existence of a small significant relationship (22% of the variance) between the parent- and family-level constructs and adolescent weight status, with parents' perception of his or her own weight status and family resources being the strongest unique predictors. These findings point to the potential importance of systemic factors related to adolescent weight status.

Keywords: *family systems theory; family environment; family functioning; adolescent weight status; parent weight status*

Obesity is a significant public health threat, and obesity in childhood and adolescence serves as a precursor to obesity in adulthood (Ebbeling, Pawlak, & Ludwig, 2002; Hedley, Ogden, Johnson, Carroll, Curtin, & Flegal, 2004; Institute of Medicine, 2005). According to the Surgeon General's report (U.S. Department of Health and Human Services, 2001), there are nearly twice as many overweight children and three times as many overweight adolescents as there were in 1980. Researchers have suggested that 16% (more than 9 million) of children and teenagers aged 6 to 19 years in the United States are obese (Centers for Disease Control and Prevention, 2005; Hedley et al., 2004).

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Among the potential trends evidenced in the increase in incidence and prevalence rates of obesity among children and adolescents are demographic and cultural factors. For example, race is a demographic factor that appears to be associated with differing rates of adolescent obesity (Gordon-Larsen, Adair, & Popkin, 2003; Hanson & Chen, 2007; Kumanyika & Grier, 2006; Ogden, Flegal, Carroll, & Johnson, 2002). Specifically, non-Hispanic Black children and adolescents have shown the greatest increase in rates of obesity. Similarly, socioeconomic status appears to correlate with rates of obesity as well. Several large national studies—derived from the National Health and Nutrition Examination Survey database (Boutmeje, Huang, & Lin, 2005), the National Longitudinal Survey of Youth database (Strauss & Pollack, 2001), and the National Heart, Lung, and Blood Institute Growth and Health Institute database (Kimm et al., 1996), among others—have found a relationship between low-income status and rates of child and adolescent obesity.

Although prevalence rates and negative outcomes associated with obesity seem to be clear, causative factors of, or correlates with, obesity remain far less clear. Toward this end, researchers have put forward many perspectives to help explain and predict the significant explosion in rates of obesity among children and adolescents.

From a biological perspective, it is fairly easy to explain how a person becomes obese. Obesity results from an energy imbalance that occurs when the number of calories consumed consistently exceeds the number of calories used by the body (Fairburn & Brownell, 2001; U.S. Department of Health and Human Services, 2001). However, genetics and family history may also help explain rates of obesity among children and adolescents (Burrage & McCandless, 2007; Stunkard, 1993). For example, findings from twins, adoption, and family studies found evidence that suggested childhood obesity may be related to specific genes (e.g., leptin, melanocortin-4 receptor gene; Burrage & McCandless, 2007; Farooqi et al., 2003; Hilbert et al., 2008). Other family studies have established that rates of obesity are two to three times higher among family

members who have a family history of obesity as compared to those family members with no family history of obesity. Seminal studies derived from the National Health and Nutrition Examination Survey III (NHANES III) support this finding. Lee, Reed, and Price (1997) found that “participants of NHANES III showed that the prevalence of obesity is twice as high in families of obese individuals than in the population at large” (p. 935). Yoon, Scheuner, and Khoury (2003) found that family history reflects the relationship between genes and obesity and the shared family context (e.g., similar cultural values, beliefs, and behaviors). They also found that risk of obesity is five times greater if the participant has a first-degree relative who was severely obese. Similarly, Garn and Clark (1976) found that, in families where both parents are obese, the risk of the child being obese was increased from 60% to 80%.

Even in light of these findings, Loos and Bouchard (2003) contended that the magnitude of the association between genes and obesity remains unclear. In other words, single genes and several genes are unlikely the cause for current rates of obesity. Although the percentage of explained variance for obesity that can be accounted for by genetic heritability has not increased, rates of obesity have increased, suggesting that other factors must contribute to the widespread increase in obesity.

Therefore, the genetic or hereditary explanation for how an individual becomes obese does not explain why more adolescents than ever are becoming obese. The dramatic increase in obesity in the United States cannot likely be explained by a single gene- and individual-focused perspective (Davison & Birch, 2001; Harkaway, 2000; Hewitt, 1997; Institute of Medicine, 2005; Wadden, Foster, & Brownell, 2002). Obesity research must look for multiple factors, such as family, community, culture, and society (Harkaway, 2000). Research on obesity is limited because it overwhelmingly focuses on individuals and individual-level factors. Furthermore, much of the current intervention research on pediatric and adult obesity uses samples consisting primarily of non-Hispanic White participants, thereby limiting the generalizability of those findings (Wadden et al., 2002). Obesity research that includes racial and ethnic minority populations is needed.

The present study helps fill the obesity research gaps by investigating multiple explanatory factors and using a racially and ethnically diverse sample. Importantly, we recognize that obesity is a multifactorial disease that is likely the result of the additive, interactive, and synergistic effects of many systems: biological, genetic, environmental, societal, and familial. This study focuses on familial factors. We explore to what extent select family system factors are related to and predictive of current weight status among adolescents.

THEORETICAL FRAMEWORK

Because the current study considers the adolescent, the parent-adolescent subsystem, and the family interaction system, it is best guided by family systems theory.

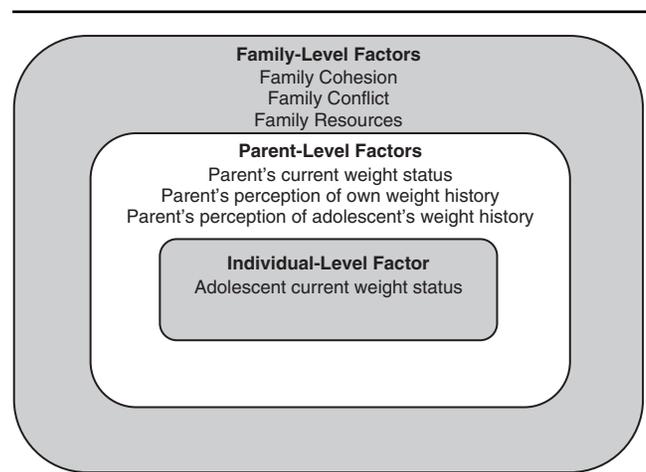


FIGURE 1: The Adolescent System: Factors That May Correlate With Rates of Adolescent Obesity

Clinicians and researchers have long contended that the family systems approach is traditionally quite effective when working with children and adolescents (Kumpfer & Adler, 2003). Children and adolescents are influenced by the behaviors within the family; therefore, they are best understood within the context of their family system and its interactional patterns (Kumpfer & Alavarado, 2003).

The relationship between the family system and other outcomes among adolescents has long been evinced in the literature on psychopathology and wellness (see Friedman & Brownell, 1995, for a review). Family system researchers have examined the extent to which the family system and individual- and family-level factors influence eating disorders such as anorexia nervosa and bulimia (Harkaway, 2000; Minuchin, Rosman, & Baker, 1978; Robin, Siegel, Koepke, Moye, & Tice, 1994; Russell, Szmulker, Dare, & Eisler, 1987). However, few studies have attempted to examine the link between the family environment and select family system and subsystem (e.g., parent, sibling) constructs and adolescent weight status (Gable & Lutz, 2000; Harkaway, 2000). Consequently, the family system and family constructs must be examined in order to best identify factors that contribute to issues such as obesity (St. Jeor, Perumean-Chaney, Sigman-Grant, Williams, & Foreyt, 2002).

As part of its family systems approach, this study uses Bronfenbrenner's (1979) ecological systems model to explore the interactions between and among many contexts. See Figure 1 for an illustration of the multiple levels and subsystems that may be correlated with adolescent weight status. Figure 1 reveals that, while select family-level constructs are the focus of the current study, individual-level factors are recognized as being important and thus considered.

PURPOSE OF THE CURRENT STUDY

Undergirded by a systems framework and previous research, this quantitative, descriptive study examines the

extent to which select family system factors—above and beyond individual factors—are associated with self-reported current weight status among adolescents. An exploratory, correlational research design was used to address the dearth of research examining family systems theory constructs. The principal research questions that guided this exploratory study were as follows: (a) To what extent are select family system factors correlated with weight status among adolescent family members? and (b) To what extent do select family system factors predict weight status among adolescent family members? Given the extant literature base, briefly reviewed in this article, we put forward the following exploratory hypotheses:

Hypothesis 1: There will be a significant association between family cohesion, family conflict, family resources, parent weight status, parent's attitude, and perception about own weight history, and parent's attitude and perception about adolescent's weight history and adolescent current weight status (as measured by body mass index [BMI]).

Hypothesis 2: The following variables will uniquely predict the variation in adolescent current weight status (as measured by BMI) among adolescents: family cohesion, family conflict, family resources, parent weight status, parent's attitude and perception about own weight history, and parent's attitude and perception about adolescent's weight history.

METHOD

Research Participants

Participants were a sample of 77 adolescents (primarily non-Hispanic Black; 67.9% non-Hispanic Black and 28.6% non-Hispanic White) and one parent from select schools in a southeastern state. For the purposes of this study, the term "parent" means legal guardian and may include a non-parental guardian (e.g., a grandparent). The student participants were primarily girls and attended middle school. Adolescent participants ranged in age from 10 to 15 years, with the total student sample's mean age being 12.80 ($SD = 1.12$). Almost half of the adolescents were either overweight or obese (23% were overweight, and 23% were obese). Parent participants were also primarily women (73%) and either overweight or obese (27% were overweight, and 46% were obese). Parent participants ranged in age from 20 to 66 years, with the total adult sample's mean age being 40.41 ($SD = 8.53$).

We did not put forth any hypothesis about differences related to demographic variables. However, analyses (e.g., ANOVA, t tests, chi-square) were performed to examine the potential for differences related to demographic variables (e.g., age, gender, race, and ethnicity) on the study variables; these analyses revealed no significant differences between the subgroups and the study variables.

Procedure

After all Institutional Review Board guidelines for research with human subjects were met, study recruitment took place

from March through May 2006. An invitation letter introduced the project to potential study participants. The letter contained a description of the study, including goals and objectives, and an introduction of the principal investigator. The research team visited schools for data collection. After a 1-hr educational seminar on family health—broadly defined—the team distributed survey packets to a convenience sample of participants (student and parent). Parent-adolescent pairs received US\$20 in gift cards (US\$10 for the adolescent and US\$10 for the parent) and family-focused educational material related to mental, physical, and nutritional health. The complete study protocol took approximately 2 hrs.

Measures

Demographic surveys. These instruments, developed for our study, asked for information regarding the adolescent's year in school, race, ethnicity, current age, weight, and height. The parents were asked to report on their education completed, age, weight, and height in a separate survey.

Family environment. The Family Environment Scale (FES; Moos & Moos, 1981) was completed by the parent of the adolescent participant and used to measure family members' perceptions of the climate and interactions of the family system. The FES consists of 90 true–false items with 10 subscales. Taken together, scores derived from the subscales create a profile or typology of the participants' family environment and interaction patterns. Specific to the current study, two subscales were used to assess the family environment and interaction patterns: family cohesion and family conflict. Higher scores on each of the scales indicate a greater level of family cohesion and a greater level of family conflict, respectively. A sample item for family cohesion is "There is a feeling of togetherness in our family." A sample item for family conflict is "Family members sometimes get so angry they throw things." Reliability for these two subscales used in the current study was assessed using Cronbach's alpha, and the scores for the sample were .78 and .60, respectively—similar to scores found in other studies with normative data for the FES (e.g., .64 to .79; Chipuer & Villegas, 2001; Lohman & Jarvis, 2000; Moos, 1984, 2002; Santisteban, Suarez-Morales, Robbins, & Szapocznik, 2006) as well as the validation study (Boyd, Gullone, Needleman, & Burt, 1997; Moos & Moos, 1981). Importantly, the FES is one of the most widely used instruments to assess family context or climate among clinical and community samples. Researchers using the FES have reported reliable and valid psychometric properties for racially diverse samples such as non-Hispanic Black families and Latino families (e.g., Puerto Rican and Mexican participants; Negy & Snyder, 2006).

Family resources. The Family Resource Scale (FRS; Dunst & Leet, 1987), which is a 31-item, self-report survey, was developed to assess the extent to which various resources are adequately available to families. Dunst and Leet (1987) stated that the FRS "measures the adequacy of a family's tangible

and intangible resources using a five-point scale, ranging from (1) not at all adequate to (5) almost always adequate." Sample items for this scale include "Time for family to be together" and "Enough clothes for the family." Higher scores on the FRS reflect a greater level and number of resources to families. Cronbach's alpha was very good in the current study ($\alpha = .90$; average interitem $r = .24$), slightly higher than scores evidenced in other studies (Dunst & Leet, 1987, p. 39). The parent of the adolescent-participant completed this survey.

The FRS was created for, and has long been used with, racially diverse and low-income samples (Brannan, Manteuffel, Holden, & Heflinger, 2006; Brody & Flor, 1997; Dunst & Leet, 1987; Van Horn, Bellis, & Snyder, 2001). For example, Brannan and colleagues (2006), in their study comprising racially and economically diverse participants ($N = 984$), found that the FRS demonstrates good validity (correlated with and predictive of hypothesized variables such as caregiver strain, family problem solving, and family income) and reliability with very few exceptions (i.e., Cronbach's alphas ranged from .67 to .90). Consistent with other studies, Brannan et al. were able to confirm and replicate psychometric properties evinced in other studies among their clinical study sample.

Parent and adolescent weight history. The Child Feeding Questionnaire (CFQ; Birch et al., 2001) was completed by the parent of the adolescent-participant and used to capture specific perceptions of weight-related behaviors and history. Two subscales of the instrument were used for the analyses in the present study. Parents responded to questions related to their own weight status history using a 5-point Likert-type scale (1 being *markedly underweight* to 5 being *markedly overweight*). A sample item related to this subscale reads, "Please indicate how you would classify your weight when you were 5-10 years old." A similar set of questions related to the adolescent participant's weight status history are asked: for example, using the same 5-point Likert-type scale, a sample item reads, "Please indicate how you would classify your child's weight." Consistent with other studies, the obtained reliability (i.e., Cronbach's alpha) for the two subscales used in the current study was as follows: The parent's perception of own weight status was .60, and the parent's perception of adolescent's weight status was .59. In previous studies, the CFQ has reported reliability in a range of .58 to .69 (Birch et al., 2001).

The psychometric literature related to the cultural appropriateness and validity of the CFQ scores have been established. Kaur et al. (2006) examined the factor structure of the CFQ among a multiethnic sample. The seven-factor solution was similar to the findings of the original validation study (Birch et al., 2001), with most items loading on the hypothesized factor. Differences between racial groups (non-Hispanic White, Black, and Other) were consistent with the literature base; non-Hispanic Black parents were more controlling of their feeding practices with their children as compared to non-Hispanic White parents.

Importantly, Kaur and colleagues confirmed construct validity of the CFQ scores among their multiethnic sample; parental perceptions and feeding behavior was, as intended, associated with adolescent weight status.

Current weight status. The BMI was used to quantify weight status among the study participants. Height and weight were assessed by self-report. For the present study, both adolescents and adults, BMI was calculated using the following standardized formula: $BMI = \text{weight (in kg)} / \text{height squared (in m)}$. The BMI was treated as a continuous variable in all described analyses. Both adolescent participants and their parents self-reported their own current height and weight status.

All study variables were consistent with the range of scores evidenced among community samples in other studies. Alpha coefficient scores, although low for some scales (e.g., family conflict; Nunnally, 1978), were also consistent for all scale and subscale scores used in the study analyses.

Statistical Analytic Procedures

Statistical procedures generated from the Statistical Package for the Social Sciences 15.0 were used in this study. We first examined bivariate relationships between adolescent weight status, as measured by BMI, and six predictor variables: parent's perception of own weight status, parent's perception of adolescent's weight status, family cohesion, family conflict, family resources, and parent's current weight status. We subsequently examined the effect of all predictor variables concurrently through the use of a simple linear regression: $Y = a + b1*X1 + b2*X2 + b3*X3 + b4*X4 + b5*X5 + b6*X6$, where a is the intercept, $b1$ through $b6$ are the coefficients, Y is the adolescent weight, and $X1$ through $X6$ are the predictor variables. Because of the exploratory nature of the study, all variables were entered simultaneously.

Preliminary Analyses

Means, standard deviations, and Pearson product-moment correlations for all study variables are presented in Tables 1 and 2. Regression analysis was used to assess the contribution of the predictor variables, taken separately and together, on adolescent weight status. We examined the bivariate correlations for Research Question 1 (Hypothesis 1) and findings from the regression analysis for Research Question 2 (Hypothesis 2).

RESULTS

Research Question 1: To what extent are select parent and family system factors correlated with weight status among adolescent family members?

Bivariate relationships among all the study variables—which produced low to medium correlation coefficients—were found (see Table 2). The parent's perception of weight

TABLE 1
Mean, Standard Deviation, Obtained Range, and Cronbach's Alpha of Scores for Main Study Variables (N = 77)

Measure	Mean	SD	Obtained Range	Cronbach's Alpha
1. Parent's perception of own weight history	3.189	0.475	0.50–4.25	.60
2. Parent's perception of adolescent's weight history	3.082	0.465	1.83–4.17	.59
3. Family level of cohesion	3.062	1.236	0.00–7.00	.66
4. Family level of conflict	2.712	1.670	0.00–7.00	.48
5. Family resource scale	5.091	0.682	3.37–6.00	.95
6. Parent's current weight status (BMI)	31.246	7.395	17.64–54.32	—
7. Adolescent's current weight status (BMI)	23.339	6.091	13.07–47.87	—

NOTE: BMI = body mass index.

TABLE 2
Correlations Among the Parent, Family, and Adolescent Weight Status

Variables	Study Variables						
	1	2	3	4	5	6	7
1. Parent's perception of own weight history	—						
2. Parent's perception of adolescent's weight history	.256**	—					
3. Family level of conflict	.206	.272*	—				
4. Family level of cohesion	-.090	.081	-.049	—			
5. Family resource scale	-.135	.196	-.154	.081	—		
6. Parent's current weight status (BMI)	-.472**	-.028	.233*	-.015	-.122	—	
7. Adolescent's current weight status (BMI)	.322**	.381**	.338**	-.075	.256*	.163	—

NOTE: BMI = body mass index.

* $p < .05$. ** $p < .01$ (2-tailed).

status history among family members (his or her own weight status history and the adolescent's weight status history) was positively correlated with the adolescent's current weight status ($p < .01$). Family-level factors—with the exception of family cohesion—were also associated with adolescent weight status; as family conflict increased in the family system, current weight status among adolescents increased ($p < .01$). Similarly, as resources increased in the family system, current weight status among adolescents increased ($p < .05$).

Research Question 2: To what extent do select parent and family system factors predict weight status among adolescent family members?

The adolescent raw BMI score was regressed on six predictor variables. Because of the exploratory nature of the study, all variables were entered simultaneously. The regression model revealed a significant relationship between the six predictor variables and the criterion variable ($F = 2.396$, $p < .05$). The R value ($r = .473$) for this regression equation meets the criteria for a large effect size (Cohen, 1992). The R^2 value reveals that 22% of the variance observed in the criterion variable of BMI was explained by the proposed conceptual model. Examination of the beta weights showed that the parent's perception of his or her weight both status history and the resources available to the family made significant, unique contributions above and beyond the other

variables. Valence of the beta weight showed that concern over the parent's own weight status among parents indicated a stronger relationship with their adolescent's current weight status: $\beta = .404$, $t(1, 56) = 2.486$, and $p < .016$. In other words, as parents perceived their own weight history as a concern, actual rates of current weight status increased among adolescents. Similarly, family resources were positively related to current weight status among adolescents; that is, as more resources were available to the family system, rates of current weight status increased among adolescents: $\beta = .315$, $t(1, 56) = 2.390$, and $p < .021$. Thus, some support was found for this exploratory conceptual model (see Table 3).

DISCUSSION

The purpose of this study was to examine the association between select family system factors and current adolescent weight status. The study data, derived from a convenience community sample of 77 adolescent participants and their parents, suggested several preliminary findings and further evidence that the family system is important when considering adolescent weight status and, thus, intervention and treatment strategies.

The first preliminary finding was that all select parent and family system constructs were significantly associated with current adolescent weight status, with the exception of

TABLE 3
Regression Analysis Summary for Predictor Variables and Current Weight Status Among Adolescents

Predictor Variable	Unstandardized		Standardized	
	β	SE B	β	Significance
1. Parent's perception of own weight history	5.526	2.223	.404	.016
2. Parent's perception of adolescent's weight history	0.606	1.683	.051	.720
3. Family level of conflict	0.187	0.474	.395	.695
4. Family level of cohesion	0.092	0.531	.022	.864
5. Family resource scale	2.348	0.982	.315	.021
6. Parent's current weight status (BMI)	-0.145	0.132	-.182	.278

NOTE: Adjusted $R^2 = .22$. BMI = body mass index.

family cohesion and parent's weight status. The significant bivariate associations among the study variables were consistent with a family systems theory (Birch & Davison, 2001; Bronfenbrenner, 1979; Santisteban et al., 2006) and consistent with the illustrated model proposed in our study (see Figure 1). For example, the positive significant relationships evidenced between family resources and current adolescent weight status and between family conflict and current adolescent weight status were expected. Although preliminary in nature, these data also support the notion that providers of obesity treatment for adolescents ought to consider the system in which adolescent family members are embedded. In addition, the inclusion of family members in the treatment plan may affect whether interventions are effective among adolescent patients.

Our results are consistent with other studies (e.g., Repetti, Taylor, & Seeman, 2002; Santisteban et al., 2006) that have examined the extent to which family interactions and processes are related to both adolescent behaviors and outcomes and the family environment. For example, Santisteban and colleagues (2006) found that family-focused interventions improved not only adolescent substance use but also the family environment in which the adolescent was embedded. In our study, as family conflict increased, self-reported current adolescent weight status increased. Thus, assessing the level of family functioning is relevant to understanding adolescent weight status. Moreover, in the context of future obesity research, it may be worthwhile to focus on family functioning and behavior rather than, or in addition to, family eating and exercise behavior (Kitzmann & Beech, 2006).

The lack of association between family cohesion, parent's current weight status, and adolescent's current weight status in our study is inconsistent with Walker and Greene's (1987) findings, which revealed a relationship between family cohesion and adolescent health. Because researchers have found evidence linking poor family functioning and poor psychological and physical health (Wood & Miller, 2002), we believed that the inverse relationship would be evidenced—that there would be a positive relationship between positive family functioning (i.e., cohesive, close families) and healthy current

weight status among adolescents. Finally, the lack of association between family cohesion, parent's current weight status, and adolescent's current weight status in our study could be explained by the small sample size.

The second preliminary finding revealed support for our second research question. The regression model established significant relationships between the six predictor variables (parent's perception of own weight status, parent's perception of adolescent's weight status, family cohesion, family conflict, family resources, and parent's current weight status) and the criterion variable of current adolescent weight status. This finding is consistent with other studies where the family environment predicted adolescents' health (Lohman & Jarvis, 2000). However, only two constructs—family resources and parent's perception of his/her own weight status history—made a significant unique contribution above and beyond the other four predictor variables. As expected—and similar to other studies examining the effects of family members' health status and behavior on adolescent health (Walker & Greene, 1987)—we found that the parent's perception of his or her own weight status history had a unique effect on the adolescent's current weight status.

These findings suggest that individually focused interventions among adolescents may be less effective in the treatment of obesity than multiple-factor interventions. Although exploratory in nature, the study suggests that all systems (individual, parental, and familial) may have some relationship with weight status among adolescent participants. Our findings are consistent with other studies that have considered system factors and their influence on weight-related behaviors (Ata, Ludden, & Lally, 2007).

The results of the current study indicate the importance of considering the effect of multiple system factors on obesity rates among a racially diverse adolescent population. For example, this study revealed that, to understand the weight status of adolescents, several system factors ought to be considered. Our study findings seem to support the assertion made by others (Davison & Birch, 2001; Kitzmann & Beech, 2006) that obesity treatment for adolescents ought to consider the system in which adolescent family members are embedded. Although this study focused on the family

system, Gold (2000), Miranda, Bilot, Peluso, Berman, and Van Meek (2006), and other researchers contended that to best understand family functioning and its influence on behaviors, we must extend research to a broader context. Stated another way, borrowing from Bronfenbrenner's (1979) ecological model, an exploration at the micro level alone is insufficient in exploring rates of obesity among family members; thus, future research must include macro-level factors (i.e., societal-level factors) as well. Finally, racial and ethnic factors, although not significant in the current study—possibly due to the sample size and biracial composition—need to be considered so that culturally tailored interventions may be established.

The study has several limitations that must be considered. First, the study results were derived from a convenience sample. Therefore, although the findings are informative, they may not be generalizable to other families and ought to be interpreted with caution. Second, given the correlational design used in the study, causation cannot be established. Third, all data collected in this study were derived from self-report. Self-reporting of current weight status among study participants—as compared with actual measured weight—could have significantly influenced the results of the study. Underreporting or overreporting of weight status can exist (Davis & Gergen, 1994; Strauss, 1999; Tienboon, Wahlqvist, & Rutishauser, 1992). Fourth, the study used only one dimension of family assessment: paper-and-pencil questionnaires. A multidimensional approach, including such things as family interviews and observation of family interactions, would likely provide a more comprehensive view of family system dynamics.

CONCLUSION

We agree with Harkaway (2000) that there is no single cause or solution to the significant problem of obesity among adolescent and adult family members. Thus, researchers and counselors are encouraged to consider multiple pathways—including the consideration of genetics and family history—that lead to obesity (Douthit, 2006). Extending investigations to include family- and broader system-level factors (e.g., cultural systems, societal systems, and public health systems) may uncover modifiable constructs that ought to be included in culturally tailored, ecologically valid intervention and treatment modalities (Jeffery, 1991; Morissette & Taylor, 2002). Researchers investigating explanatory factors that account for the significant increase in obesity must look for multiple factors from varied perspectives and include racial and ethnic minority populations. This study attempted to preliminarily fill these gaps.

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