Body Image Perceptions and Dieting Among African-American Pre-Adolescent Girls and Parents/Caregivers

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This study describes body image and weight concern attitudes of pre-adolescent African-American (AA) girls and their parent/caregivers. Cross-sectional survey data were collected from 189 low-income 8- to 10-year-old AA girls and 179 parents/caregivers of AA girls from 2 urban areas, Memphis and Minneapolis/St. Paul. Results demonstrated that most AA girls were either happy with their weight, or did not think about it at all. However, 20% of girls would like to be larger than their current size, and 50% would like to be smaller. Girls in Minneapolis/St. Paul were more likely than Memphis girls to report weight dissatisfaction. One third of parents reported concerns that their daughters were too heavy. Seventy-two percent of parents reported that they were trying to lose weight. Discussions include possible regional differences in weight concern among AA girls, and implications for obesity prevention programs. (*Ethn Dis*. 2003;13:200–207)

Key Words: Body Image, Dieting, Obesity, Ethnicity, African American

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Introduction

Obesity in African-American (AA) women and girls is an important public health problem in terms of its prevalence, increasing trend, and health consequences. Approximately one third of AA women are obese (BMI≥30), compared to one fourth of women across all races; an additional 29% of AA women are overweight (25≤BMI<30), compared to 25% of women across all racial/ethnic groups.[1] African-American (AA) girls are also at increased risk for obesity. Eighteen percent of AA girls aged 6–11 years are overweight (1991) compared to 12% and 16% of their Caucasian and Mexican American counterparts, respectively.[2,3] Of particular concern is that the prevalence of obesity has been increasing over time, leading to projected increases in morbidity and mortality related to obesity.[1,4,5] Health consequences of obesity are well documented,[6] and appear to be compounded for AA women. Specifically, AA compared to Caucasian women show elevated risk for cardiovascular disease, hypertension, and type 2 diabetes.[7–11] Given the high prevalence, increasing trends, and associated health consequences of obesity among AA women and girls, it is important to develop culturally appropriate prevention approaches to this problem. In order to guide the development of prevention approaches, researchers must not only understand how AA women and girls perceive overweight and obesity, but also must determine the potential barriers to addressing the problem of obesity.

Cultural and racial differences between AA and Caucasian women in perceptions of body image have been well-documented. Evidence suggests that AA women experience less social pressure about their weight, tend to be more satisfied with their bodies, and have fewer negative attitudes about overweight compared to Caucasian women.[12–18] African-American (AA) girls have attitudes similar to AA women regarding body image.[19–23] Some researchers hypothesize that these perceptions may be related to a lack of healthy weight regulation in AA women.[13,24] Although there is evidence that AA women and girls are less likely than their Caucasian counterparts to try to attain lower body weights,[17] data also suggest sizable heterogeneity among AA girls and women in their concerns about overweight and dieting. Although levels of dieting and weight concern may be lower for AA females, on average, compared to those observed among Caucasian females, body image dissatisfaction and dieting are fairly common among AA women and girls.[25–30] For example, one recent study demonstrated that the majority (61%) of obese AA adults participating in the study were trying to lose weight,[26] and data from the National Growth and Health Study (NGHS) reported that approximately 40% of AA girls aged 9 and 10 were trying to lose weight.[30]

Most research on body image issues in minority women has focused on differences between AAs and Caucasians. Although such studies have been informative, they may neglect important within-group differences, or lead to over-generalized impressions about AA women.[31] In contrast, studies that focus within groups of AA females are valuable because they tend to highlight no-

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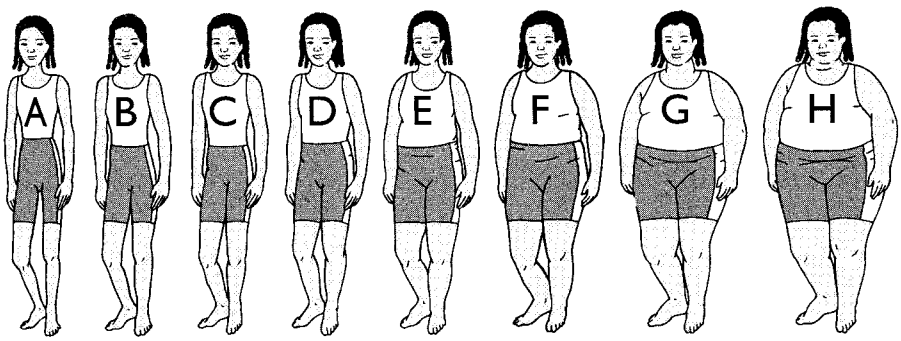

Fig. 1. Body image silhouettes

table differences between sub-groups of the AA female population.[31] Heterogeneity in weight-related concerns among AA women and girls may be related to several factors, including their social environment and geographic location. For example, AA women and girls living in geographic areas with predominantly Caucasian households may be more likely to experience social pressures regarding thinness, to internalize the Caucasian beauty ideal of thinness, and to engage in more weight control behaviors, compared to AA females living in areas with a high percentage of AA individuals. Evidence suggests that greater internalization of a "Caucasian beauty ideal" is associated with higher levels of depression, low self-esteem, and less satisfaction with body size and shape among AA women.[32]

The current study was conducted to describe the body image and weight concern attitudes of young AA girls and parents/caregivers of AA girls as part of the development of a culturally appropriate obesity prevention program. Data were collected as part of a larger formative evaluation at 2 field centers taking part in the Girls health Enrichment Multi-Site (GEMS) study, which researched obesity prevention for 8- to 10-year-old AA girls, and was funded by the National Institutes of Health/National Heart, Lung, and Blood Institute. The study objectives were to:

- Examine weight concerns, body size preferences, body satisfaction, and dieting behavior among 8- to 10-year-old AA girls.
- Examine weight concerns for daughters, as well as personal weight concerns and dieting behaviors among parents/caregivers of 8- to 10-year-old AA girls.
- Examine regional differences in weight concerns among 8- to 10-year-old AA girls, and parents/caregivers of 8- to 10-year-old AA girls, who lived in a Midwestern city, as compared to those residing in a Southern city.

METHODS

Design and Sample

This paper reports findings from the University of Memphis and the University of Minnesota field centers of the Phase I GEMS study. Cross-sectional survey data were collected from 189 low-income AA 8- to 10-year-old girls, and 179 parents/caregivers of 8- to 10-year-old AA girls. Girls and parents/caregivers were recruited through community centers, community organizations (eg, Girls Inc, Welfare to Work programs), and schools in the Minneapolis/St. Paul and Memphis metropolitan areas. The sample in Minnesota included the parents/caregivers of the girls described in this report. In contrast, the data in Memphis came from separate samples of 8- to 10-year-old AA girls, and parent/caregivers of 8- to 10-year-old AA girls. Although the girls and the parents were drawn from separate samples, both groups were recruited from a similar geographic area, and were demographically representative of the overall population recruited for the GEMS pilot study.

Measures

Surveys completed by AA girls and caregivers included questions regarding demographic information, weight satisfaction, dieting, and body image. Questions were developed based on previous work in the area of body image and weight concerns.[20,33]

Girls' Body Size Perception

Line drawings, similar to those developed by Stunkard et al,[33] depicting body sizes ranging from very thin to very heavy, were adapted to characterize AA girls. These were presented to the girls to ascertain their perceptions of their own current size, body shapes/sizes they considered ideal, and body shapes/sizes they considered healthy. Each silhouette was designated using a letter from A to H (Figure 1). Participants were asked to circle the letter of the silhouette for: 1) the girl that looks most like me; 2) the girl that I wish I looked like; and 3) the girl that looks the healthiest. For analytic purposes, the sil-

houette data were examined in several ways. First, silhouette ratings were collapsed to create 4 categories (ie, A & B, C & D, E & F, G & H), approximating a range from underweight (A & B), to normal weight C & D), to overweight (E & F), and to obese (G & H). The mean silhouette rating for "looks like me," "look best," and "looks most healthy" were also computed. Body size satisfaction/discrepancy was examined by categorizing girls according to whether they preferred a larger body size ("looks like me"<"looks best"), preferred their current body size ("looks like me"="looks best"), or preferred a smaller body size ("looks like me">"looks best"). A similar approach was used to categorize girls according to whether they thought a heavier body size was healthier ("looks like me"<"looks most healthy"), their current size was most healthy ("looks like me"="looks most healthy"), or whether they thought a smaller size was most healthy ("looks like me">"looks most healthy").

Girls' Weight Perceptions

Girls responded to several questions asking about body size satisfaction, dieting, and body image. Specifically, the following question was asked: "How do you feel about your weight?" Response options were: 1) very happy; 2) happy; 3) never think about it; 4) unhappy; or 5) very unhappy. In addition, girls at the Minnesota site were asked: "I think I am . . ." with response options: 1) much too thin; 2) a little thin; 3) about the right weight; 4) a little heavy; or 5) much too heavy. Minnesota girls were also asked for yes/no responses to the following: "Have you ever gone on a diet to lose weight?" and "I am on a diet to lose weight right now."

Parent Weight Concerns for Daughter

Parents/caregivers responded to the question, "Do you worry about your daughter's weight?" Response options included: 1) No, not at all; 2) Yes, I worry that she is too skinny; or 3) Yes, I worry that she is too heavy.

Parent Weight Perceptions and Dieting

Parents/caregivers rated perceptions of their own size by responding to the question, "I think I am . . ." with the following response options: 1) much too thin; 2) a little thin; 3) about the right weight; 4) a little heavy; or 5) much too heavy. Parents also responded to the question, "Which of the following are you trying to do about your weight?" Response options included: 1) not trying to do anything; 2) trying to lose weight; 3) trying to keep from gaining weight; and 4) trying to gain weight.

Demographic Information

Girls self-reported their age, grade in school, and race/ethnicity. Parents/caregivers reported their own race/ethnicity, gender, relationship to girl (eg, parent, grandparent, etc), highest level of education obtained, and employment status.

Data Analysis

Analyses were conducted using the Statistical Analysis System (SAS)[34] Descriptive statistics were computed as the frequency (% of total) responding to the various categories of body size preference, body size perception, body satisfaction, dieting, parental concerns about daughter weight, parent weight satisfaction, and dieting. Body dissatisfaction and preference scores were computed using responses to the body silhouette questions addressing current, ideal, and "looks most healthy" body sizes. Chi-square analyses and *t* tests were used to examine site differences on these same variables.

RESULTS

Demographic data for the girls and caregivers/parents are shown in Table 1. The average age of girls in the sample was 9.1 (SD=0.8) years. Girls in Minnesota were marginally more likely than girls in Memphis to be 8 years old. The majority of the girls were in third and fourth grades. Compared to Memphis participants, girls in Minnesota were more likely to be bi-racial, and Minnesota parents/caregivers were more likely to report a race/ethnicity other than AA (eg, Caucasian, American Indian). Parents/caregivers in Minnesota were also more likely to report levels of education beyond high school, and to be employed full- or part-time, compared to parents/caregivers in Memphis. Although the vast majority of parents/caregivers at both sites were women, primary caregivers in Minnesota were more likely to be parents, while caregivers in Memphis were more likely be other relatives (eg, aunt, sister).

Description of body satisfaction and weight concern ratings among 8- to 10-year-old AA girls are presented in Table 2. Across the 2 sites, the majority of girls (55%) reported looking most like the normal weight silhouettes (figures C and D), while approximately one fifth reported looking most like the 2 thinnest, or underweight, silhouettes (figures A and B), and about one fourth reported looking the most like the overweight silhouettes (figures E and F). Only 1 girl reported that she looked the most like the heaviest silhouettes. The mean "looks like me" scores were 3.6 (SD=3.8) and 3.7 (SD=3.0) for girls in Memphis and Minnesota, respectively, indicating an average in the "normal weight" range. Response to the probe "I would most like to look like" yielded a similar pattern of results. The mean scores for this category were 3.3 (SD=3.6) and 3.0 (SD=3.3) for girls in Memphis and Minnesota, respectively, indicating an average preferred shape in the "normal weight" range. No site differences were observed for responses to these questions; however, there was a trend for girls in Minnesota to report a lower "looks best" score (t=1.63, $P<$ .10).

Table 1. Sample demographic characteristics

Variable	Overall (*N*=189 girls, 179 parents) Mean (SD)/%	Memphis (*N*=106 girls, 100 parents) Mean (SD)/%	Minnesota (*N*=83 girls, 79 parents) Mean (SD)/%	*P* value
Girl age	9.1 (0.8)	9.1 (0.7)	9.0 (0.8)	.230
Girl age				.089
8	27.5	21.7	34.9	
9	37.0	42.5	30.1	
10	35.5	35.8	34.9	
Girl grade				.283
1st & 2nd grade	14.4	13.4	15.7	
3rd & 4th grade	59.4	55.8	63.9	
5th & 6th grade	26.2	30.8	20.5	
Girl race				.047
AA	88.4%	92.5%	83.1%	
Biracial	11.6%	7.5%	16.9%	
Parent/caregiver race				.035
AA	97.2%	100.0%	93.7%	
Other	2.8%	0.0%	6.3%	
Parent/caregiver sex				.283
Female	95.0%	97.0%	93.6%	
Relationship to girl				.001
Parent	74.4%	67.4%	83.3%	
Stepparent	1.75	1.0%	2.6%	
Grandparent	3.4%	1.0%	6.4%	
Other relative (eg, aunt, sister)	15.9%	25.5%	3.8%	
Guardian	2.8%	2.0%	3.8%	
Other	1.7%	3.1%	0.0%	
Parent/caregiver education				.001
<High school	12.0%	10.0%	14.3%	
High school grad	33.3%	47.0%	15.6%	
Some college/vocational training	43.5%	35.0%	54.6%	
College degree/graduate education	11.3%	8.0%	15.6%	
Parent/caregiver employment status				.001
Employed	50.6%	32.3%	74.0%	

Discrepancies between ratings of current and ideal body sizes were examined by categorizing girls according to whether they preferred a larger body size ("looks like me"<"looks best"), preferred their current body size ("looks like me"="looks best"), or preferred a smaller body size (''looks like me">"looks best"). Results presented in Table 2 demonstrate that about 20% of the girls preferred a larger body size, one third preferred their current size, and about 50% preferred a thinner size. No significant site differences were observed.

A significant site difference was observed for ratings of "most healthy" body size. Approximately 26% of Minnesota girls, compared to 11% of Memphis girls, reported that the smallest (A & B) "underweight" silhouettes looked most healthy. Girls were also categorized according to whether they thought: 1) a larger body size was most healthy ("looks like me"<"most healthy"); 2) their current size was most healthy ("looks like me"="most healthy"); or 3) a smaller body size was most healthy ("looks like me">"most healthy"). A marginally significant site difference was observed, with girls in Minnesota being more likely to report that a body size smaller than their current body size would be most healthy ($P<.079$).

Girls' reports of weight satisfaction and dieting are presented in Table 2. More than half the girls reported being either happy or very happy about their body weight. Girls in Memphis, however, more frequently reported being happy about their weight (77.9%), compared to girls in Minnesota (47.6%). Girls in Minnesota were more likely to report either never thinking about their weight, or being unhappy about their weight.

Associations between girls reported weight concern variables were examined. Girls' weight satisfaction ratings were positively associated with their current body size (r=.26, $P<.001$) indicating that girls who rated themselves as heavier were more likely to be unhappy about their weight. Girls who preferred a smaller body size (mean=2.3, SD=0.1) were more likely to be unhappy about their weight, compared to girls who preferred their current size (mean=1.8, SD=0.1, $P<.01$). No significant differences in weight satisfaction were observed between girls who preferred a larger body size (mean=2.1, SD=0.2) and the other 2 groups. Girls who thought a smaller body size was healthier (mean=2.5, SD=0.6) were more likely to be unhappy about their weight, compared to girls who thought their current size was healthiest (mean=2.0, SD=0.1, $P<.03$), and girls who thought a larger size was healthier (mean=1.9, SD=0.1, $P<.01$).

Site differences indicating that girls in Minnesota reported greater weight concern compared to girls in Memphis were further analyzed. Demographic data demonstrate that girls in Minnesota were more likely to be bi-racial, leading to a plausible hypothesis that bi-racial girls (primarily girls with one Caucasian parent) exhibit greater weight concern, perhaps because of greater exposure to pressures regarding thinness in the mainstream culture. Sixty-eight percent of the bi-racial girls (*N*=15) pre-

Table 2. Prevalence of weight concern among 8- to 10-year-old African-American girls

Variable	Overall (*N*=188) %	Memphis (*N*=106) %	Minnesota (*N*=82) %	*P* Value
Body silhouettes				
The girl that looks most like me				.197
Underweight (A & B)	19.9	24.3	14.5	
Normal weight (C & D)	55.4	50.5	61.5	
Overweight & obese (E, F, G, & H)	24.7	25.2	24.1	
I would like it best if I looked like				.183
Underweight (A & B)	29.9	24.5	36.6	
Normal weight (C & D)	56.5	59.8	52.4	
Overweight & obese (E, F, G, & H)	13.6	15.7	11.0	
The girl that looks most healthy is				.038
Underweight (A & B)	17.6	11.3	25.6	
Normal weight (C & D)	50.0	53.8	45.1	
Overweight & obese (E, F, G, & H)	32.4	34.9	29.3	
Preferred body size				.300
Prefer larger size	18.5	21.6	14.6	
Prefer current size	33.7	35.3	31.7	
Prefer smaller size	47.8	43.1	53.7	
Healthiest body size				.079
Healthier to be larger	36.2	37.9	34.1	
Healthiest at current size	33.0	37.9	26.8	
Healthier to be smaller	30.8	24.3	39.0	
Weight perception and satisfaction				
How do you feel about your weight?				.001
Very happy or happy	64.5	77.9	47.6	
Never think about it	27.3	11.5	34.2	
Unhappy or very unhappy	15.0	10.6	18.3	

Table 3. Prevalence of weight concern among parents/caregivers of 8- to 10-year-old African-American girls

Variable	Overall (*N*=179) %	Memphis (*N*=100) %	Minnesota (*N*=79) %	*P* Value
Do you worry about your daughter's weight?				.695
No, not at all	59.3	58.8	60.3	
Yes, I worry that she is too skinny	12.6	14.4	10.3	
Yes, I worry that she is too heavy	28.0	26.8	29.5	
Do you think of yourself as				.886
Much too thin or a little thin?	10.2	11.0	9.1	
Just about the right weight?	30.5	31.0	29.9	
A little heavy or much too heavy?	59.3	58.0	61.0	
Which of the following are you trying to do about your weight?				.979
Not trying to do anything	18.2	16.6	20.8	
Trying to lose weight	40.9	41.4	40.3	
Trying to keep from gaining weight	31.3	31.3	31.2	
Trying to gain weight	9.7	11.1	7.8	

ferred a smaller body size, compared to 45% (*N*=73) of AA girls (*P*<.078). No significant differences between the 2 groups of girls were observed for "looks like me," "looks best," "most healthy," and weight satisfaction.

Finally, parents/caregiver concerns about their daughter's weight and their own weight concerns are presented in Table 3. No site differences in parents/caregivers concerns about their daughters' weight, or their personal weight concerns, were observed. The majority (59%) of parents/caregivers reported not being concerned about their daughter's weight. However, about 30% of the parents reported being concerned that their daughters were too heavy, and 13% were concerned that their daughters were too thin. In contrast, the majority (59%) of parents/caregivers rated their own body weight as either a little heavy or much too heavy, approximately 40% were trying to lose weight, with an additional 30% trying to keep from gaining weight. Parents/caregivers' personal weight concerns and weight loss status were not significantly associated with their concern about their daughters' weight (data not shown).

DISCUSSION

Weight concern and body satisfaction in a sample of 8- to 10-year-old AA girls and parents/caregivers in 2 geographic locations, a large Midwestern city and a large Southern city, were investigated. We found that while most AA girls were either happy about, or did not think about their weight, a significant minority, about 15%, experienced some concern about their weight. In contrast, body size preferences demonstrated that a majority of girls would prefer to have a different body size, with approximately 20% preferring to be a larger size, and about 50% preferring to be smaller than their current size. Data also demonstrated that girls who perceived themselves to be heavier were

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more likely to be unhappy about their weight and more likely to prefer a smaller body size, although these associations were moderate. These findings differ from earlier studies that showed that AA girls chose as their ideals body images heavier than their current sizes, indicating their desire to be larger.[22,31] Taken together, the body satisfaction and body size preference data suggest that although girls may prefer a different size body, this preference does not necessarily lead to distress or unhappiness regarding their bodies. These data are consistent with research suggesting that AA women who are dissatisfied with their weight still consider their bodies attractive.[13,15]

Parent/caregiver data revealed that although the majority (59%) of parents/caregivers of 8- to 10-year-old AA girls were not concerned about their daughters' weight, approximately one third reported being concerned that the daughters were too heavy. Further, the majority (72%) of the parents/caregivers rating their own behavior reported either attempting to lose weight, or trying not to gain. This is consistent with previous research examining weight concern among AA females,[25–30] and further dispels the myth that AA women and girls are unconcerned about body weight. Moreover, these findings suggest that there may be considerable heterogeneity among AA women and girls regarding weight-related issues.

Of interest, significant site differences in the weight concern and body satisfaction were observed among the girls. Girls in Minnesota were more likely to report weight dissatisfaction compared to girls in Memphis. These data suggest that one source of heterogeneity may be related to regional differences in norms about body weight. Although Memphis and Minnesota differ from each other in many ways, a significant difference is the concentration of African Americans living in the 2 metropolitan areas. The AA population in the Minneapolis/St. Paul metropolitan area has grown; census data from 2000 estimated the proportion of African Americans to be about 15%.[35] In contrast, the AA population in Memphis is 61%, the 8th largest African-American population in a city with a population over 100,000.[36] AA girls in Minneapolis are more likely to be exposed to non-AA girls within their school environments and community programs. Within these settings, girls may be more likely to adopt social norms regarding the value of thinness, compared to girls who live in primarily AA settings. Of interest, analysis of data found that girls who self-identified as bi-racial, another potential indicator of exposure to different cultural norms, were more likely to experience weight concerns, compared to girls who identified as AA alone. Site differences were not observed among parents/caregivers, suggesting that adult perceptions may be more influenced by broader norms, or health concerns related to obesity.

Data from a recent meta-analysis examining racial differences in weight concern and disordered eating behaviors supported the idea of heterogeneity among AA women.[37] Results from the meta-analysis demonstrated that effect sizes for racial differences in disordered eating behaviors and weight concern were smaller in non-clinic and high school samples of women, compared to college samples. In fact, AA women in non-clinic samples had a prevalence of weight and dieting concerns equal to or greater than that for Caucasian women. Individual, social, and behavioral predictors of weight concern among AA girls and women should be explored in future research to increase our understanding of this heterogeneity.

Strengths of the current study include the assessment of weight-related constructs in an under-studied group, namely a sample of 8- to 10-year-old AA girls and parents/caregivers of 8- to 10-year-old AA girls in 2 different geographical areas. Since convenience samples of low-income AA girls were studied, our findings may not be representative of all AA girls. However, demographic data demonstrate that the sample is heterogeneous in terms of girl's age, and parent/caregiver education and employment status, increasing the probability of externally valid conclusions. The lack of a matched parent-daughter population in Memphis was an additional limitation; however, girls and parents were recruited from similar areas in Memphis and were representative of the target population for the Memphis GEMS site. Since body weight was not measured, we cannot assess whether girl and parent self-ratings about their weight were accurate. Despite this limitation, this data provided important insights into the complex relationships among ethnicity, weight concern, and body image, and results suggest important within -group differences among AA girls and women regarding these attitudes.

Results of this study yield valuable information for the development of obesity prevention programs for pre-adolescent AA girls and families. Specifically, parents/caregivers of AA girls may be highly motivated to participate in obesity prevention programs for their daughters and families, given that a significant number express concern about their daughters' and their own body weight. Girls may be interested in participating in prevention programs that

emphasize ideas of health and healthy shapes, since our results indicated that few were either trying to control weight, or were dissatisfied with their bodies.

A major health promotion challenge is decreasing the prevalence of obesity, without compromising the high levels of body satisfaction and generally positive body images that we observed among these girls. Further study is needed to determine relationships between body image and behaviors related to body weight, such as eating and physical activity. Emerging evidence suggests that adolescents with higher body satisfaction are more likely to engage in physical activity,[38] and that physical activity may be related to improved self-esteem among young girls,[39] dispelling the myth that we need to increase body dissatisfaction to motivate individuals to change their health behaviors. Obesity prevention programs for AA girls will be considered effective if they promote positive body image and self-esteem, as well as encouraging healthy eating and physical activity, in order to prevent accelerated or excessive weight gain.

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