Continuity and Change in the Evaluation of Ideal and Acceptable Body Sizes Across a Wide Age Span

Colleen S.W. Rand¹* and Beatrice A. Wright²

¹ Department of Psychiatry, University of Florida, Gainesville, Florida

Accepted 3 August 1999

Abstract: Objective: Continuity and change in the evaluation of ideal and acceptable body sizes across a wide subject age span were examined. Method: Ratings of ideal and socially acceptable body sizes were elicited from 303 children, 427 adolescents, 261 young adults, and 326 middle-age adults. Line drawing arrays of babies, children, young adults, middle-age, and older adults were portrayed, ranging in size from very thin to very obese. Results: All subject groups selected, in all arrays, similar ideal body sizes, rated sizes in the midrange of fatness as socially acceptable, and were least accepting of very thin and obese body sizes. Tolerance for body size variations increased with subject age. Discussion: Continuity throughout a wide subject age span was observed in evaluations of body sizes. However, adults were more accepting of body size variations than younger subjects, especially children. Implications of endorsing midrange body sizes for the fashion industry are discussed. © 2000 by John Wiley & Sons, Inc. Int J Eat Disord 28: 90–100, 2000.

Key words: ideal body size; body size evaluation; children; adolescents; adults; fashion

INTRODUCTION

Agreement in the selection of ideal body sizes across various age groups has been generally found in spite of assessment with different stimulus materials. Age groups studied include elementary school children (Collins, 1991; Tiggermann & Wilson-Barrett, 1998; Rolland, Farnill, & Griffiths, 1997; Thompson, Corwin, & Sargent, 1997), adolescent high school students (Kemper, Sargent, Drane, Valois, & Hussey, 1994; Thompson, Sargent, & Kemper, 1996; Wilson, Sargent, & Dias, 1994), young adult university students, and middle-age adults (Fallon & Rozin, 1985; Rozin & Fallon, 1988; Lamb, Jackson, Cassiday, & Priest, 1993; Rand & Macgregor, 1995; Zellner, Harner, & Adler, 1989).

Only a few studies have evaluated social approval of body sizes that are not ideal. In

² Department of Psychology, University of Kansas, Lawrence, Kansas

a culture that values thinness, sizes thinner but not heavier than the ideal size might be expected to be considered acceptable. According to the limited research available, however, neither very thin nor very heavy adult body sizes receive approval. When asked to rate the attractiveness of line drawings of different body sizes, children, adolescents, and adults rate body sizes with a moderate amount of fat more positively than other body sizes. As body sizes become progressively thinner or heavier, attractiveness ratings decrease (Feldman, Feldman, & Goodman, 1988; Furnham & Radley, 1989; Furnham & Baguma, 1994). The limited data suggest that there may be continuity across the life span of reactions toward body sizes in addition to ideal body sizes.

The present research extends the investigation of body size evaluation by including drawings portraying five age groups, by involving four subject age groups, and by eliciting subject selection of *all* socially acceptable sizes in addition to that of the ideal. We hypothesized there would be consistency in evaluations from childhood through adulthood.

METHOD

Subjects

Four groups of subjects participated in this study: 303 fourth and fifth-grade elementary school children, 427 high school adolescents, 261 young adult university students, and 326 middle-age adults. Criteria for middle-age adults were that they be older than age 26 and not enrolled at the university. Subjects in each group were predominantly female, White, and middle class (Table 1). Two hundred of the 261 university students were enrolled in an introductory psychology course at a large university and volunteered for the study in partial fulfillment of course requirements. Written parental consent was obtained from elementary and high school students. The study was approved by the University Institutional Review Board.

Table 1	Domographic	characteristics	of subject groups
Table 1.	Demographic	characteristics	of Subject groups

	Elementary $(n = 303)$	High School (n = 427)	University $(n = 261)$	Middle-Age Adult $(n = 326)$		
Age (years)	9.9 ± 0.8	15.5 ± 1.0	19.5 ± 2.3	45.9 ± 13.3		
Gender						
Male	38.9%	43.6%	33.7%	36.2%		
Female	61.1%	56.4%	66.3%	63.8%		
Race						
White	76.6%	74.7%	75.1%	82.5%		
Black	13.2%	14.8%	8.8%	11.0%		
Other	10.2%	10.5%	16.1%	6.5%		
Socioeconomic status ^{a,b}						
I	37.5%	27.7	39.0	22.3		
II	28.3	27.4	26.3	27.7		
III	20.1	25.6	25.4	28.1		
IV	9.2	16.4	8.5	21.5		
V	4.9	2.9	0.8	0.4		

^aSocioeconomic status (SES) class was estimated by use of the Hollingshead-Redlich index (Hollingshead, 1965). Class I represents high SES, II and III represent middle SES, and IV and V, lower SES.

^bThirty-nine percent (119) of elementary students did not provide SES information; the actual percentage of SES I elementary students is probably much lower.

Materials

Body sizes of five different age groups were represented by line drawings in nine separate arrays. Each array depicted nine body sizes ranging from very thin to very fat (Figure 1). The five age groups represented babies, children (ages 6–10), young adults (ages 16–25), middle-age adults (ages 35–45), and older adults (ages 55–65). The baby array did not specify gender, whereas the other age groups had separate arrays for males and females, yielding a total of nine arrays. Arrays depicting each age group were presented on a separate page.

Ratings

Subjects were asked to indicate two kinds of evaluations in each array by 1) writing down the number of the ideal body size (most attractive) and 2) circling the numbers of

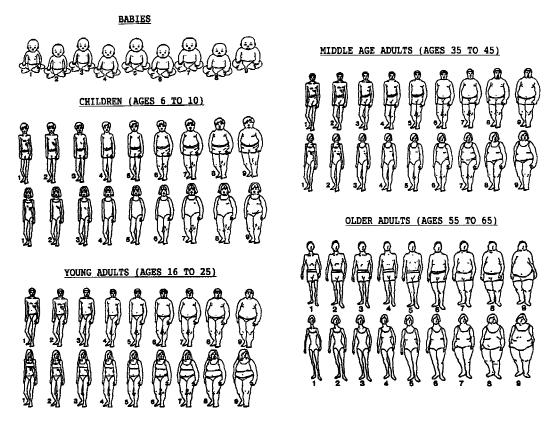


Figure I. Line drawings of the nine arrays in the five age groups. Arrays were presented on 20.7×28 cm ($8\ 1/2 \times 11$ in.) paper. Each age group was presented on a separate page. Height of drawings for babies was 3.4 cm high and for drawings in the other age groups, between 6.0 and 6.3 cm high. (All line drawings, except those of the babies and body sizes 8 and 9, were from "Body figure perceptions and preferences among preadolescent children," by M.E. Collins, 1991, International Journal of Eating Disorders. Copyright 1991 by John Wiley & Sons, Inc. Modified with permission of the author; and from "The accuracy of reports of weight: Children's recall of their parents' weights 15 years earlier," by T.I.A. Sorensen, A.J. Stunkard, T.W. Teasdale, and M.W. Higgins, 1983, International Journal of Obesity. Copyright 1983 by Stockton Press. Modified with permission of the author.)

all body sizes they considered socially acceptable. In the latter case, the specific instructions were, "When you see people at school, at the mall, or on the beach, what body sizes do you think look O.K.? Circle the number under all body sizes you think are acceptable in addition to the size you like best." Practice ratings by elementary, high school, and psychology 1 university students were checked for task comprehension.

Reliability

When used with both children and adults, the validity and reliability of line drawings in assessing ideal body sizes are considered good (Ben-Tovim & Walker, 1991; Collins, 1991; Rand, Resnick, & Seldman, 1997; Rand, Resnick, & Macgregor, 1999; Thompson & Altabe, 1991; Wood, Becker, & Thompson, 1995). In the present study, reliability of acceptable body sizes was determined by a 1–3 week test-retest procedure using body size ratings of 59 elementary school children, 71 high school students, and 57 middle-age adults. A total of 81 body size ratings for each subject was involved (9 body sizes \times 9 arrays). Test-retest agreement for the mean of the acceptable body sizes of the 81 body size ratings was 91% \pm 9% for elementary students, 90% \pm 8% for high school students, and 92% \pm 8% for middle-age adults.

Questionnaire and Instructions

All subjects filled out a questionnaire requesting demographic information. Instructions for the questionnaire and other procedures were read aloud to elementary and high school students. University students and middle-age adult subjects were given written instructions concerning the questionnaire and rating materials.

Data Analyses

Data were analyzed using SAS 6.04 (Cary, NC). Data are reported as mean \pm standard deviation. The Bonferroni correction was used to adjust significance levels according to the number of tests made. Only when an overall Group \times Body Size chi-square analysis was significant were paired group comparisons made.

RESULTS

Table 2 presents the mean ideal body size in each array by subject group. Each of the four subject groups selected the midrange of body sizes as the ideal in almost all the nine arrays. Of the 36 mean ratings (9 arrays \times 4 groups), 75% (27) indicated a midrange preference for ideal body size (4.0–4.8). The smallest mean ideal body size was 3.3 and the largest was 4.8.

Table 3 shows that significant group differences were obtained in ratings of mean ideal body size in every array. However, of the 54 paired group comparisons, 78% (42) of the means differed by 0.2 of a body size or less, and only one difference reached as much as 0.5 body size. (Because of the large number of subjects, paired group differences as small as 0.1 or 0.2 of a body size, depending on the particular array, were all that was needed to reach $p \le .05$.)

Figure 2 presents the range of the percentages of subjects in each group who rated each body size socially acceptable, across all arrays. For example, for body size 3, the range of

Table 2. Mean ideal size in each array, by subject group

	Subject Group							
Array	Elementary	High School	University	Middle-Age Adult				
Babies	4.0 ± 0.8	4.3 ± 0.9	4.4 ± 0.8	4.2 ± 0.8				
Boys	4.2 ± 0.5	4.2 ± 0.5	4.2 ± 0.6	4.4 ± 0.6				
Girls	4.1 ± 0.5	4.0 ± 0.5	3.9 ± 0.5	4.2 ± 0.5				
Young men	4.0 ± 0.5	4.0 ± 0.4	3.9 ± 0.4	3.9 ± 0.5				
Young women	3.7 ± 0.5	3.6 ± 0.5	3.3 ± 0.6	3.6 ± 0.6				
Middle-age men	4.2 ± 0.5	4.2 ± 0.5	4.1 ± 0.4	4.0 ± 0.5				
Middle-age women	4.0 ± 0.6	4.0 ± 0.6	3.7 ± 0.6	3.8 ± 0.5				
Older men	4.8 ± 0.8	4.7 ± 0.7	4.6 ± 0.6	4.5 ± 0.6				
Older women	4.6 ± 0.9	4.4 ± 0.7	4.1 ± 0.6	4.2 ± 0.6				

the percentages of elementary students rating this size socially acceptable was 35% (in the older adult men array) to 79% (in the young adult women array).

The four groups were most similar in the ratings of body size 1 (representing extreme thinness), 4 (representing the midrange of body fatness), and 8 and 9 (representing very obese body sizes). The majority of subjects in each group approved of body sizes 4 and 5 but not body sizes 1, 2, 8, or 9. Percentages of subjects, by subject group, rating each of the 81 body sizes socially acceptable, and the statistics reporting significant differences, are presented in the Appendix.

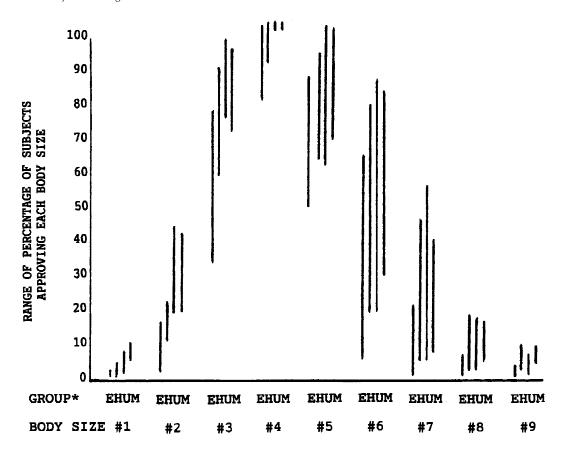
Differences among all groups were significant in ratings of 80% (65 of 81) of the body sizes. Elementary students emerged as being most different from other groups. The mean number of body sizes rated acceptable across arrays for each subject group was 2.7 ± 0.7 for elementary students, 3.6 ± 1.2 for high school students, 3.9 ± 1.1 for university students, and 4.0 ± 1.5 for middle-age adults, F(3, 1268) = 77.13, p < .001. Elementary students rated fewer body sizes acceptable than all other groups, whereas high school students rated fewer body sizes acceptable than university students and middle-age adults (Tukey's studentized range test, p < .05). The difference between university students and middle-age adults was not significant.

It should be noted that although elementary students rated fewer body sizes acceptable than the other groups, many subjects in the other groups also endorsed relatively few

Table 3. Group differences, analyzed by ANOVA, and the minimum mean difference between pairs of groups within each array needed for significance (Tukey's studentized range test, p < .05)

Array	ANOVA	p	Minimum Mean Difference
Baby	F(3,1300) = 9.61	.0001	.2
Boys	F(3,1302) = 8.79	.0001	.1
Girls	F(3,1303) = 10.52	.0001	.1
Young men	F(3,1297) = 4.96	.002	.1
Young women	F(3,1298) = 27.44	.0001	.1
Middle-age men	F(3,1301) = 9.94	.0001	.1
Middle-age women	F(3,1300) = 19.64	.0001	.1
Older men	F(3,1289) = 7.76	.0001	.2
Older women	F(3,1290) = 30.77	.0001	.2

Note: ANOVA = analysis of variance.



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* E = elementary students (children)
H = high school students (adolescents)
U = university students (young adults)
M = middle-age adults
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Figure 2. Range of percentages of subjects rating each body size socially acceptable, across all arrays, by age group.

body sizes. An average of three or fewer body sizes were rated acceptable across arrays by 89% of elementary students, 59% of high school students, 40% of university students, and 43% of middle-age adults. It is also worthy of note that the body sizes of babies received a greater latitude of endorsement than any other targeted group. Baby body sizes 3, 4, 5, and 6 were approved by a majority of each subject group.

DISCUSSION

In addition to the traditional focus on selection of the ideal body size from an array of line drawings, the present study elicited the selection of all socially acceptable body sizes.

Appendix. Percentage of elementary school children (N = 303), high school adolescents (N = 427), university young adults (N = 261), and middle-age adults (N = 326) rating each body size in each array socially acceptable.

				1	Body Size				
Array	1	2	3	4	5	6	7	8	9
Babies									
Elementary	3.3	16.9	60.9	98.3	89.4	65.6	22.5	7.0	4.3
High school	5.2	23.4	78.0	99.3	96.5	81.3	47.1	18.7	9.8
University	4.6	34.0	82.6	100.0	98.5	87.6	57.1	17.8	6.6
Middle-age adult	9.7	37.5	83.4	99.7	94.4	79.7	40.9	17.2	10.3
GSD PSD	*	*	*	ns	*	*	*	*	ns
E-H	ns	ns	*		*	*	*	*	
E-U	ns	*	*		*	*	*	*	
E-MA	*	*	*		ns	*	*	*	
H-U	ns	*	ns		ns	ns	ns	ns	
H-MA	ns	*	ns		ns	ns	ns	ns	
U-MA	ns	ns	ns		*	ns	*	ns	
Boys (ages 6-10)									
Élementary	0.7	2.6	40.4	97.4	84.8	17.5	3.3	1.0	1.0
High school	1.9	13.2	67.3	99.3	96.0	44.0	11.1	4.5	2.8
University	3.0	37.4	87.0	100.0	95.4	51.4	12.0	3.5	1.9
Middle-age adult	5.6	20.1	73.4	98.8	97.5	55.7	14.2	6.5	5.6
GSD	*	*	*	ns	*	*	*	*	*
PSD									
Е-Н	ns	*	*		*	*	*	ns	ns
E-U	ns	*	*		*	*	*	ns	ns
E-MA	*	*	*		*	*	*	*	*
H-U	ns	ns	*		ns	ns	ns	ns	ns
H-MA	*	ns	ns		ns	*	ns	ns	ns
U-MA	ns	ns	ns		ns	ns	ns	ns	ns
Girls (ages 6-10)									
Elementary	0.7	3.7	43.9	97.7	78.7	15.0	2.3	1.0	1.0
High school	2.1	16.0	70.1	99.1	89.2	34.4	9.9	4.0	2.8
University	3.9	30.6	83.3	100.0	88.4	34.1	8.9	3.1	1.9
Middle-age adult	5.6	26.8	77.6	99.4	91.0	44.2	11.2	6.2	5.0
GSD	*	*	*	ns	*	*	*	*	ns
PSD									
Е-Н	ns	*	*		*	*	*	ns	
E-U	ns	*	*		*	*	*	ns	
E-MA	*	*	*		*	*	*	*	
H-U	ns	*	*		ns	ns	ns	ns	
H-MA	ns	*	ns		ns	*	ns	ns	
U-MA	ns	ns	ns		ns	ns	ns	ns	
Young men (ages 16-25)									
Elementary	0.7	4.7	78.3	98.0	58.5	6.7	1.7	1.0	0.7
High school	1.9	15.5	89.2	99.8	82.8	26.4	6.4	3.8	2.8
University	2.7	28.5	97.3	99.6	83.8	30.8	6.5	2.7	1.5
Middle-age adult	7.8	33.7	94.4	99.7	85.0	36.6	10.0	5.6	5.3
GSD	*	*	*	ns	*	*	*	ns	*
PSD									
E-H	ns	*	*		*	*	*		ns
E-U	ns	*	*		*	*	*		ns
E-MA	*	*	*		*	*	*		*
H-U	ns	*	*		ns	ns	ns		ns
H-MA	*	*	*		ns	*	ns		ns
U-MA	ns	ns	ns		ns	ns	ns		ns

(continued)

Appendix Continued

	Body Size								
Array	1	2	3	4	5	6	7	8	9
Young women (ages 16–25)									
Elementary	0.7	7.6	79.1	98.0	50.8	6.3	1.3	1.0	0.7
High school	2.4	23.1	98.1	98.6	65.4	20.2	5.6	3.1	2.8
University	5.8	45.4	99.6	98.1	62.7	20.0	6.5	2.7	1.5
Middle-age adults	6.5	43.3	96.6	99.4	70.7	25.5	8.4	5.6	5.3
GSD PSD	*	*	*	ns	*	*	*	ns	*
E-H	*26	*	*		*	*	*		12.0
E-U	ns *	*	*		*	*	*		ns
E-MA	*	*	*		*	*	*		ns *
H-U		*	*						
H-MA	ns *	*			ns	ns	ns		ns
U-MA	ns	ns	ns ns		ns ns	ns ns	ns ns		ns ns
		113	113		113	113	113		113
Middle age men (ages 35–4: Elementary	1.7	4.0	69.4	98.7	71.4	14.6	2.0	1.3	1.0
High school	1.7	12.2	74.1	98.4	91.4	50.1	13.6	5.2	3.5
University	2.3	24.3	90.3	99.6	91.5	55.2	12.4	6.2	1.9
Middle-age adults	7.4	32.8	92.6	100.0	90.7	46.4	13.0	6.8	6.2
GSD	7. 1 *	*	×	ns	*	*	*	ns	*
PSD				113				113	
E-H	ns	*	ns		*	*	*		ns
E-U	ns	*	*		*	*	*		ns
E-MA	*	*	*		*	*	*		*
H-U	ns	*	*		ns	ns	ns		ns
H-MA	*	*	*		ns	ns	ns		ns
U-MA	*	ns	ns		ns	ns	ns		ns
Middle age women (ages 35	5–45)								
Elementary	1.0	5.7	71.7	98.3	65.3	12.3	2.3	1.3	1.0
High school	1.6	13.4	79.5	98.8	84.0	40.2	10.8	6.1	3.5
University	4.6	32.0	95.0	99.6	84.9	38.6	12.7	5.8	2.3
Middle-age adults	6.5	38.7	93.8	99.4	83.0	37.8	11.8	6.5	5.9
GSD	*	*	*	ns	*	*	*	ns	*
PSD									
E-H	ns	*	ns		*	*	*		ns
E-U	ns	*	*		*	*	*		ns
E-MA	*	*	*		*	*	*		*
H-U	ns	*	*		ns	ns	ns		ns
H-MA	*	*	*		ns	ns	ns		ns
U-MA	ns	ns	ns		ns	ns	ns		ns
Older men (55-65 years)									
Elementary	0.7	2.3	34.6	81.7	89.4	45.5	9.3	1.7	1.3
High school	5.2	20.0	63.3	92.7	96.5	71.8	25.9	9.2	4.0
University	7.0	34.9	76.0	98.4	98.9	79.8	31.4	8.9	3.5
Middle-age adult	11.4	31.2	80.4	97.5	96.5	70.0	26.2	9.1	6.0
GSD	*	*	*	*	*	*	*	*	ns
PSD									
E-H	*	*	*	*	*	*	*	*	
E-U	*	*	*	*	*	*	*	*	
E-MA	*	*	*	*	*	*	*	*	
H-U	ns	*	*	*	ns	ns	ns	ns	
H-MA	*	*	*	*	ns	ns	ns	ns	
U-MA	ns	ns	ns	ns	ns	ns	ns	ns	

(continued)

Appendix Continued

	Body Size								
Array	1	2	3	4	5	6	7	8	9
Older women (55–65 years)									
Elementary	0.7	3.0	34.6	85.7	84.7	41.2	7.0	2.3	1.7
High school	5.0	17.7	59.9	94.6	94.6	63.4	20.8	6.1	4.1
University	7.8	32.6	76.4	99.2	95.0	66.7	24.4	7.0	3.9
Middle-age adults	8.2	34.4	80.1	98.4	92.1	64.7	22.4	7.3	6.3
GSD	*	*	*	*	*	*	*	ns	ns
PSD									
E-H	*	*	*	*	*	*	*		
E-U	*	*	*	*	*	*	*		
E-MA	*	*	*	*	*	*	*		
H-U	*	*	*	*	ns	ns	ns		
H-MA	ns	*	*	ns	ns	ns	ns		
U-MA	ns	ns	ns	ns	ns	ns	ns		

Note: Statistically significant differences between all age groups (groups significantly different, GSD) and pairs of age groups (pairs significantly different, PSD) in body size ratings are indicated.

Although most studies have examined responses of one or two subject age groups, the present study surveyed four: children, adolescents, young, and middle-age adults. Moreover, extending the usual use of drawings portraying one or two age groups, the present study included drawings portraying five: babies, children, and young, middle-age, and older adults. These additions provide needed data to attempt a broader understanding of body size evaluations.

The data suggest both continuity and change in body size evaluations across a wide age range. With respect to continuity, the midrange of body sizes was clearly preferred in selecting both ideal and acceptable body sizes. In each of the nine arrays of line drawings, there were nine potential candidates for the ideal body size. It would appear upon inspection of the arrays that the difference between adjacent body sizes (a 1.0 difference) is perceptibly small, whereas a clearly noticeable difference would require a difference of at least two (2.0) body sizes. The findings show that the mean ideal body size rating for all subject groups in six of the nine arrays was within 0.3 body size, and the largest difference between any pair of groups was only 0.5 body size. This striking uniformity was not dependent on the age represented by a particular set of drawings as subject groups selected similar ideal body sizes in all arrays.

Not only was there continuity in the selection of the ideal body size, but also in the ratings of social acceptability of other body sizes. A majority of children, adolescents, young adults, and middle-age adults approved body sizes in the midrange of most arrays (body sizes 3, 4, 5 in the Appendix). Less than 10% of subjects in any age group considered the very thin or very heavy body sizes acceptable (body sizes 1, 8, 9 in Figure 1).

The most dramatic change in ratings of body sizes across the age groups was the increase in tolerance of body size variations between children and older subjects. Elementary school children appeared less accepting of both plump and thin body sizes than all other subjects, whereas high school students were somewhat less accepting of thin body sizes than young and middle-age adults.

One possible explanation for the difference in tolerance of body sizes between children

E-H, elementary students vs. high school students; E-U = elementary students vs. university students; E-MA = elementary students vs. middle-age adults; H-U = high school vs. university students; H-MA = high school students vs. middle-age adults; U-MA = university students vs. middle-age adults.

^{*}Bonferonni correction, $p \le .05/9 \le .006$; ns = not significant.

and older subjects could be the greater importance young children attach to adhering to rules (i.e., piagetian concrete operational thought; Flavell, 1977). Loosely, if ideal size represents the rule for what constitutes an acceptable body size, acceptance of additional body sizes breaks this rule. Older subjects would be less rule bound, hence willing to entertain more possibilities in their ratings (i.e., piagetian formal operational thought). The small difference between high school students and older subjects might reflect slightly less tolerance of body size variation by adolescents because of their increased concerns with dating and appearance (Sobal, Nicolopoulos, & Lee, 1995).

Almost all subjects of all ages considered more than one body size acceptable in all arrays. This is reassuring because greater potential for body size dissatisfaction (and subsequent eating disorders) would exist if only a single ideal body size was considered acceptable. Many subjects, however, in all age groups were more restrictive in their judgments of socially acceptable body sizes than would be warranted based on medical health norms. There is often a 30–40 lb medically healthy weight range for a given height for adults (Metropolitan Life Insurance tables, 1983). Although there are no charts relating weight to outline drawings of body size, visual inspection of the arrays in Figure 1 suggests that four or five body sizes would probably represent medically acceptable body sizes. In the present study, 40%–89% of subjects (depending on subject group) rated three or less body sizes acceptable.

Over the last 25 years, increasingly thin standards for females have emerged (reviewed in Fallon, 1990). Not only is this true for adult women, but also for female children (Davis & Oswalt, 1992). Current attitudes toward body size, however, do not match the standards. Based on the results of this study, we question why the fashion industry and media select as ideal, models who would be considered too thin by most people. The midrange of body sizes within which the ideal is selected by subjects in the present study is rarely used as models. When they do appear, it is not in standard magazines but in catalogues like Lane Bryant, a publication targeted for larger women! (Male fashion models have thinner body sizes than those the subjects selected as ideal, but differences are not as extreme). Even a 30-min exposure to models with normal body sizes can improve how women evaluate themselves (Myers & Biocca, 1992). From a marketing as well as mental health perspective, it would seem advantageous to promote use of midrange rather than very thin body sizes for fashion models.

In brief, this study demonstrated a continuity across a wide age range in approval of body sizes in the midrange of very thin to obese body sizes and consistency in selecting ideal body sizes from within this midrange. Few subjects considered either "Twiggy" fashion-thin body sizes or obese body sizes attractive. It also demonstrated a growth in the tolerance for body size variations, with the largest increase occurring between childhood and adolescence. The fashion industry could well take heed and consider selecting models to accord with both health requirements and with the choice of ideal body sizes by most people.

We thank P.K. Young Laboratory School and the elementary and high schools in the Alachua County School District that took part in this study for their participation.

REFERENCES

Ben-Tovim, D.I., & Walker, M.K. (1991). Women's body attitudes: A review of measurement techniques. International Journal of Eating Disorders, 10, 155–167.

Collins, M.E. (1991). Body figure perceptions and preferences among preadolescent children. International Journal of Eating Disorders, 10, 199–208.

Davis, J., & Oswalt, R. (1992). Societal influences on a thinner body size in children. Perceptual and Motor Skills, 74, 697–698.

- Fallon, A.E. (1990). Culture in the mirror: Sociocultural determinants of body image. In T.C. Cash & R. Pruzinsky (Eds.), Body images, development, deviance and change (pp. 80–109). New York: Guilford Press.
- Fallon, A.E., & Rozin, P. (1985). Sex differences in perceptions of desirable body shape. Journal of Abnormal Psychology, 94, 102–105.
- Feldman, W., Feldman, E., & Goodman, J.T. (1988). Culture versus biology: Children's attitudes toward thinness and fatness. Pediatrics, 81, 190–194.
- Flavell, J.D. (1977). Cognitive development. Englewood Cliffs, NJ: Prentice-Hall.
- Furnham, A., & Baguma, P. (1994). Cross-cultural differences in the evaluation of male and female body shapes. International Journal of Eating Disorders, 15, 81–89.
- Furnham, A., & Radley, S. (1989). Sex differences in the perception of male and female body shapes. Personality and Individual Differences, 10, 653–662.
- Hollingshead, A.B. (1965). Two factor index of social position. New Haven, CT: Yale Station.
- Kemper, K.A., Sargent, R.G., Drane, J.W., Valois, R., & Hussey, J.R. (1994). Black and white females' perceptions of ideal body size and social norms. Obesity Research, 2, 117–126.
- Lamb, C.S., Jackson, L.A., Cassiday, P.B., & Priest, D.J. (1993). Body figure preferences of men and women: A comparison of two generations. Sex Roles, 28, 345–358.
- Metropolitan height and weight tables. (1983). In: Statistical Bulletin of the Metropolitan Life Insurance Company, 64, 2–9.
- Myers, P.N., & Biocca, F.A. (1992). The elastic body image: The effect of television advertising and programming on body image distortions in young women. Journal of Communications, 42, 108–133.
- Rand, C.S.W., & Macgregor, A.M.C. (1995). Body size preferences and desired weight of patients who have received obesity surgery and of comparison adults. Obesity Research, 3, 427–434.
- Rand, C.S.W., Resnick, J.L., & Seldman, R.S. (1997). Assessment of socially acceptable body sizes by university students. Obesity Research, 5, 425–429.
- Rolland, K., Farnill, D., & Griffiths, R.A. (1997). Body figure perceptions and eating attitudes among Australian school children aged 8 to 12 years. International Journal of Eating Disorders, 21, 273–278.
- Rozin, P., & Fallon, A. (1988). Body image, attitudes to weight, and misperceptions of figure preferences of the opposite sex: A comparison of men and women in two generations. Journal of Abnormal Psychology, 97, 342–345
- Sobal, J., Nicolopoulos, V., & Lee, J. (1995). Attitudes about overweight and dating among secondary school students. International Journal of Obesity, 19, 376–381.
- Sorensen, T.I.A., Stunkard, A.J., Teasdale, T.W., & Higgins, M.W. (1983). The accuracy of reports of weight: Children's recall of their parents' weights 15 years earlier. International Journal of Obesity, 7, 115–122.
- Thompson, J.K., & Altabe, M.N. (1991). Psychometric qualities of the Figure Rating Scale. International Journal of Eating Disorders, 10, 615–619.
- Thompson, S.H., Corwin, S.J., & Sargent, R.G. (1997). Ideal body size beliefs and weight concerns of forth-grade children. International Journal of Eating Disorders, 21, 279–284.
- Thompson, S.H., Sargent, R.G., & Kemper, K.A. (1996). Black and white adolescent males' perceptions of ideal body size. Sex Roles, 34, 391–406.
- Tiggermann, M., & Wilson-Barrett, E. (1998). Children's figure ratings: Relationship to self-esteem and negative stereotyping. International Journal of Eating Disorders, 23, 83–88.
- Wilson, D.B., Sargent, R., & Dias, J. (1994). Racial differences in selection of ideal body size by adolescent females. Obesity Research, 2, 38–43.
- Wood, K.C., Becker, J.A., & Thompson, J.K. (1995). Assessment of body image. In D.B. Allison (Ed.), Handbook of assessment methods for eating behaviors and weight related problems (p.123). Thousand Oaks, CA: Sage.
- Zellner, D.A., Harner, D.E., & Adler, R.L. (1989). Effects of eating abnormalities and gender on perceptions of desirable body shape. Journal of Abnormal Psychology, 98, 93–96.