Stability of body image and body image dissatisfaction in American college students over about the last 15 years

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It is widely assumed that body image dissatisfaction is increasing, particularly in females. We examined data from comparable samples, University of Pennsylvania introductory psychology students, over a span of about 15 years (1983–1984 versus 1995–1998). Ratings of current and ideal body figure were obtained using silhouettes, along with self-reported height and weight. While males always had a much smaller discrepancy between current and ideal than females, levels of dissatisfaction and gender differences in satisfaction have remained the same in these samples. This finding contrasts with the conclusion of a meta-analysis by Feingold and Mazzella in 1998 (Psychological Science 9(3), 190–195), which indicates an increased difference in body image satisfaction between men and women over the last two decades. Possible accounts for this difference in results are discussed.

Keywords: body image, historical, USA, gender

Introduction

Several authors have noted that the prevalence of eating disorders has been increasing, particularly among women (Rodin, 1992; Goleman, 1995; Muth & Cash, 1997) and this seems to resonate with the current American ethos with regard to eating and body shape. A recent meta-analysis substantiated these observations by concluding that the mean difference in body dissatisfaction between women and men has increased over the last 50 years (Feingold & Mazzella, 1998). The Feingold and Mazzella (1998) meta-analysis integrated 730 effect sizes from 222 studies, for a total N of over 140,000 subjects. The studies reviewed used disparate types of measures, including participants' objectively-rated physical attractiveness, self-rated physical attractiveness, body image, and also studies which employed combinations of such measures. These authors only presented data on body satisfaction differences between males and females from before 1970, and from the 1970s, 1980s, and 1990s.

There was a clear trend for women to become more dissatisfied with their bodies relative to males over time. Separate values of the various measures for males and females were not presented in this analysis. As a result, there are a number of alternative accounts of the reported effect; it is possible that the increasing difference resulted only from increased dissatisfaction in females, or only from decreased dissatisfaction in males, or both.

By their nature, meta-analyses deal with a heterogeneous group of studies, and must develop criteria for inclusion and exclusion of studies (see Chalmers, 1991, for a discussion of the merits and problems of meta-analysis). Feingold and Mazzella (1998), for example, excluded many types of studies from their analysis, such
as those that they deemed used nonrepresentative samples (obese, intellectually gifted, fashion models and athletes). Because of the diversity of the literature, it is necessary in the meta-analysis to compare studies on different samples using different techniques at different times, in order to come to a conclusion about changes over time. Most important for the current purposes, for reasons that are not clear to us, Feingold and Mazzella (1998) did not include studies which explored gender differences in body distortion or any of the many studies which employed silhouettes to measure body satisfaction or weight satisfaction. It is common in such studies (e.g. Rozin and Fallon, 1988) to record the disparity between the silhouette chosen as representing current appearance and that representing the ideal appearance. One possible reason for excluding such studies is that there is no standardization of the male and female silhouette scales with respect to one another, so that differences between male and female ratings cannot be compared directly, although changes in body image within either gender over time can be reliably determined.

Results reported by Feingold and Mazzella (1998) were classified in terms of age of participants, decade in which the data were collected, and gender of participants. Only one other characteristic of participants was coded: USA vs not USA. Hence, in that meta-analysis, no distinction was made among participants with respect to race, religion, ethnic group, social class, or region of the United States. One might hope that with the large number of findings integrated, these factors might balance out, but this may not be the case, especially since undergraduates almost certainly constitute a substantial part of the database, and the representation of minority groups in this data base has been growing throughout the later 20th century.

We report here data about silhouette judgements in University of Pennsylvania undergraduates, using the same instrument, with comparable samples, over a period of about 15 years. In comparison to the review by Feingold and Mazzella (1998), this information is less methodologically broad and covers a much narrower range of participants, but has the advantage of comparable sample and comparable measuring instrument.

The figures we used come from a paper by Stunkard, Sorenson and Schlusinger (1983). These figures have been widely used in the study of body image. They consist of nine male and nine female silhouettes ranging from underweight to overweight. Subjects are usually asked to mark their current appearance and their ideal appearance, with allowance for indication of intermediate values; a typical set of findings is that American, undergraduate males’ current weight is similar to their ideal weight (or even a little lower), while American, undergraduate females report much lower ideal weights than their current weights (e.g. Fallon & Rozin, 1985; Rozin & Fallon, 1988). There are problems with these figures and the scale they comprise, as elucidated by Gardner, Friedman and Jackson (1998). However, even in that study, the results from these figures correlate highly with some improved silhouette measures.

Methods

Participants

Participants were students from five sections of Introduction to Psychology at the University of Pennsylvania from 1983 to 1998. Data from 1983 and 1984 were combined to create an “early” sample of 191 males and 200 females. Data from 1995, 1996, and 1998 were combined to create a “recent” sample of 173 males and 300 females. Participants completed the questionnaire, anonymously, as an in-class project. Introductory psychology is taken by approximately 60% of University of Pennsylvania undergraduates. However, University of Pennsylvania students may be representative neither of Americans, nor of American college students. The University is one of the more selective academic institutions in the United States, and the student body is biased toward the upper middle class, residents of the northeastern United States, people of Jewish origin (some 30–40%) and people of Asian origin. In spite of these disparities, Rozin, Bauer & Catanese (2001), in a study of body image of undergraduates at six college campuses across the United States, found that the values for University of Pennsylvania were quite similar to those at other universities.

Questionnaire

The questionnaire consisted of figures from Stunkard, Sorenson and Schlusinger (1983). Participants could indicate any figure or any intermediate number from 10 (thinnest) to 90 (largest). Participants indicated their current and ideal ratings, and we calculated the current minus ideal difference. They also reported their current weight and height, and some other information not employed in this report.

Results

A positive current–ideal difference would indicate that the participant is heavier than he or she would like to be, while a negative current–ideal difference would indicate that the participant would like to be heavier than he or she is. Data for current-ideal were analyzed
with a two (sex: male or female) by two (sample: early or recent) ANOVA.

The data from the early and recent samples were remarkably similar to each other (Table 1). For current-ideal differences, there was a main effect of sex: \( F(1,859) = 151.27, p < 0.001 \), with males showing a very small and negative mean difference between current and ideal figures, while females showed a large, positive difference between current and ideal figures, indicating that females were consistently heavier than their ideal. There was no significant effect of time (sample) and no interaction between sample and sex \( (F < 1) \). Males showed a difference of \(-1.2\) and \(-0.3\) for the early and late periods, respectively, while females showed differences of \(7.3\) and \(7.0\), respectively. There is not even a trend in these data suggesting increased relative body dissatisfaction for females across the two time intervals in current, ideal, or current–ideal measures, and no evidence for a significant change in males or females. In the early sample, these differences correspond to an effect size \( d = 0.94 \) for a female–male difference, and an effect size of \(0.77\) in the recent sample. A positive effect size indicates greater current–ideal differences for females relative to males and so in terms of (non-significant) direction of effect, the male–female difference seems to be decreasing.

It is possible that our failure to show an expected increase in body dissatisfaction over time results from the masking of a true increase in Caucasians by a change in the racial/ethnic composition of University of Pennsylvania undergraduates, so we adjusted the 1995–1998 figures by increasing above, we have a number of information sources that allow us to estimate the effect of a changing ethnic/racial composition. This requires two types of information: (1) the change in ethnic composition of University of Pennsylvania students over the 15 year period in question, and (2) the levels of body image dissatisfaction in the major non-Caucasian groups.

We obtained figures from the University of Pennsylvania on ethnic composition of entering classes in the 1983–1984 and 1995–1998 periods. There was indeed a drop in proportion of Caucasians, from about 90% in the early 1980s to about 71% in the mid to late 1990s. The major part of this change was an increase in enrollment from students of Asian origin, from about 3% in the early 1980s to about 18% in the mid to late 1990s. By good fortune, we had collected a second set of data on body image from University of Pennsylvania introductory psychology students \((N = 268)\) in 1998, and included racial information. These data are not included in the present report, and were part of a comparative study on body image and attitudes to food across six American college campuses \((\text{Rozin, Bauer \\& Catanese, 2001})\). In these data, we generally found that South Asian and East Asian females were modestly lower \((7-7)\) in dissatisfaction \((C-I)\) than whites \((9-3)\), and South and East Asian males were modestly higher \((2-6)\) in dissatisfaction than white males \((0-1)\).

These reference values allow for a compensation for ethnic changes in the data we report. For females, the difference between the Caucasian difference and the Asian difference was \(1.6\) (with Asians less dissatisfied), so we adjusted the 1995–1998 figures by increasing the difference by \(1-6\) points for 15% of the female participants. Similarly, the Asian males were \(2-6\) units higher (more dissatisfied) than the Caucasian males, so we made the equivalent compensating adjustment for 15% of male participants. The net effect was to slightly increase the female C-I discrepancy, but it still remains less than the estimate from the mid 1980s (Table 1). The male very slightly negative C-I becomes

### Table 1. Participants’ ratings of current, ideal, and current-ideal body images

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<tr>
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<tbody>
<tr>
<td></td>
<td>M (n = 191)</td>
<td>M (n = 200)</td>
<td>M (n = 173)</td>
<td>M (n = 302)</td>
</tr>
<tr>
<td>Current</td>
<td>38.0 0.86</td>
<td>34.7 0.62</td>
<td>38.5 0.93</td>
<td>34.5 0.57</td>
</tr>
<tr>
<td>Ideal</td>
<td>39.2 0.54</td>
<td>27.5 0.40</td>
<td>38.8 0.62</td>
<td>27.4 0.35</td>
</tr>
<tr>
<td>Current–Ideal</td>
<td>-1.2 0.73</td>
<td>7.3 0.55</td>
<td>-0.3 0.86</td>
<td>7.0 0.46</td>
</tr>
<tr>
<td>Current–Ideal*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>22.4 0.21</td>
<td>20.9 0.20</td>
<td>23.1 0.21</td>
<td>21.2 0.17</td>
</tr>
<tr>
<td>Height</td>
<td>1.8 0.005</td>
<td>1.6 0.005</td>
<td>1.8 0.005</td>
<td>1.6 0.004</td>
</tr>
<tr>
<td>Weight</td>
<td>70.5 0.68</td>
<td>56.1 0.67</td>
<td>73.4 0.72</td>
<td>56.9 0.55</td>
</tr>
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* Compensated for 15 percentage point increase in Asian students, replacing Caucasians.
closer to zero, and the male–female difference in dissatisfaction is essentially unchanged (Table 1). Thus, the critical conclusion for females, that there has been no increase in body dissatisfaction measured by silhouettes, still holds, as does the conclusion that male–female disparity has not been increasing, in this sample.

Body mass index (BMI), based on self-reported height and weight, increased modestly for both males and females over the 10–15 year period (Table 1). A 2-way (sex by sample) on BMI yielded a significant effect of sample \( F(1,849) = 7.35, p < 0.01 \), an expected large effect of sex \( F(1,849) = 69.46, p < 0.001 \), and no significant interaction. Separate analyses of height and weight (Table 1) indicate, as expected, that the larger later BMI results from a significant increase in weight in both genders, with no change in reported height. Thus, the lack of an increase in reported dissatisfaction with body shape that we report occurs in the face of an increased BMI.

**General discussion**

Despite recent findings that gender discrepancies in body image have been getting larger (Feingold & Mazzella, 1998), we did not find an effect of recency of sample on current body image, ideal body image, or the difference between current and ideal body images. Feingold and Mazzella did not include the silhouette measures in their study, so we cannot generate strictly comparable figures.

Feingold and Mazzella report the largest change over time in gender differences in body dissatisfaction, as opposed to three other measures (e.g. self rated physical attractiveness). The gender difference d score they report for all ages (most respondents were between 14 and 23 years) was 0.38 in the 1980s and 0.58 in the 1990s. This significant 0.20 difference compares to our result of a very small negative difference (slight decrease in gender disparity) over these two decades. In this study, our effect sizes (d) for relative body dissatisfaction in the early sample was 0.94, and the comparable size in the recent sample was 0.77. As a positive effect size indicates greater current-ideal differences for females relative to males, our data indicate that females “dissatisfaction, relative to males”, has decreased over time. In all, the current data suggest that at least within a particular type of sample, University of Pennsylvania undergraduates, body image as assessed by figure ratings has not declined either for men or women over the past 15 years. This is somewhat surprising, in light of both the Feingold and Mazzella results and, more directly, the fact that BMIs in both genders, in our same sample, increased significantly from the 1980s to 1990s.

There are a number of accounts of why we showed no effect, in contrast to Feingold and Mazella (1998). The two explanations we find most compelling are, first, that there is a complete difference in type of instrument used, since the silhouettes we used were excluded from Feingold and Mazzella. Second, the studies reviewed by Feingold and Mazzella may be biased with respect to decade, because of a change in racial, socioeconomic, ethnic and geographic makeup of the samples over the different decades. Our data represent a narrower scope and much smaller sample size than theirs, but are less subject to differences in sampling over the decades, and we attempted directly to compensate for changes in sample characteristics over time.

This study is hardly the last word on changes in body image over recent decades, but it is a word, and offers the most closely matched sample over the decades in the literature. It is clear from the Feingold and Mazzella meta-analysis that in some important ways, the disparity in body images between females and males is getting larger over recent decades. The questions our study raises are: (1) in what respects is the difference growing? and (2) in what groups is it growing?

**References**


