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**Thinness Pressures in Ethnically Diverse College Women in the United States**

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Thinness pressures in ethnically diverse college women in the United States

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Abstract
While research consistently supports the negative impact of thinness pressures on body image, this work has primarily utilized White samples in the United States, limiting generalizability to other ethnicities. Further, limited research has examined ethnic differences in thinness pressures from distinct sociocultural influences. This study examined distinct sources of thinness pressures in 598 White, 135 Black, and 131 Hispanic college women in the United States. Mean levels of thinness pressures significantly differed across ethnicity, with Black women generally reporting the lowest levels of each pressure. Additionally, distinct sources of thinness pressures were more highly related to negative outcomes within ethnic groups. For White women, each source was salient for disordered eating. For Black women, family pressure was particularly salient for appearance evaluation. For Hispanic women, family pressure was particularly salient for disordered eating and appearance evaluation. Findings suggest possible ethnic differences in the relative salience of some pressures over others.

Keywords
Thinness pressures; Ethnicity; Appearance evaluation; Body dissatisfaction; Disordered eating

1. Introduction
Although research examining rates of disordered eating in ethnic groups in the United States has produced mixed results (Shaw, Ramirez, Trost, Randall, & Stice, 2004; Wildes, Emery, & Simons, 2001), evidence generally suggests comparable rates of disordered eating in White and Hispanic women, and lower rates of disordered eating in Black women (Gordon, Castro, Sitnikov, & Holm-Denoma, 2010). Examinations of proposed risk factors in ethnically diverse women have also produced mixed results. For example, some studies have suggested significantly lower levels of body checking, body avoidance, and thin ideal internalization in Black and Hispanic women compared to White women (Shaw et al., 2004; White & Warren, 2013), while other work suggests comparable levels of proposed risk factors among women of different ethnicities (Shaw et al., 2004). As research regarding

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ethnic differences in risk factors remains equivocal, more work is needed to clarify the role
of proposed risk factors in the development of disordered eating and body dissatisfaction in
ethnically diverse women.

Sociocultural theories, highlighting the role of cultural influences in the development of
body image and eating disturbance, may provide a useful framework for understanding the
unique experiences of individuals of differing ethnicities. Two well-supported sociocultural
theories, the Tripartite Influence Model (Thompson, Heinberg, Altabe, & Tantleff-Dunn,
1999) and the Dual Pathway Model (Stice, Nemeroфф, & Shaw, 1996), implicate appearance-
related pressures in the development of negative outcomes. Briefly, the Dual Pathway Model
proposes that thinness pressures and thin ideal internalization combine to produce negative
effects on body image and eating patterns. The Tripartite Influence Model offers a slightly
more elaborated framework. Specifically, it posits that thinness pressures from family, peers,
and media lead to internalization of the thin ideal and appearance comparisons, resulting in
body dissatisfaction and disordered eating. Research supports the influence of thinness
pressures on negative outcomes (Stice et al., 1996). Indeed, evidence suggests that thinness
pressures represent a strong and reliable risk factor for eating and body image disturbances
(Culbert, Racine, & Klump, 2015). Importantly, however, this research has been
predominantly conducted with White women. Moreover, existing work has tended to
examine the combined impact of thinness pressures from multiple sources or only a single
isolated source.

Research examining overall thinness pressures in women in the United States is mixed, with
some studies suggesting higher thinness pressures in White women compared to Black
(Striegel-Moore, Wilfley, Caldwell, Needham, & Brownell, 1996) and Hispanic women
(McKnight Risk Factor Study, 2000), and other studies suggesting comparable thinness
pressures among these groups (Shaw et al., 2004). Research examining more specific forms
of thinness pressure indicates significantly lower levels of media appearance pressure in
Black women compared to White and Hispanic women (Quick & Byrd-Bredbenner, 2014).
Despite possible ethnic differences in thinness pressures, research largely supports the
proposed negative impact of these experiences on body image and disordered eating (Rogers
Wood & Petrie, 2010; Shaw et al., 2004) in women of color.

To date, no study has examined the relative contribution of distinct sources of thinness
pressure (i.e., family, peer, and media) in White, Black, and Hispanic women in the United
States. Given research suggesting that different sources of social influence may be more
impactful within some ethnic groups (Gibbons et al., 2010), it is possible that thinness
pressures from specific sources may be more strongly related to disordered eating and body
image disturbance in specific ethnic groups. In particular, evidence suggests that peer and
media influence may be particularly impactful for White individuals (Gibbons et al., 2010),
while family influence may be particularly salient for Black and Hispanic individuals
(Gaines et al., 1997).

Accordingly, the goals of the current study were to examine: (a) mean level differences in
perceived thinness pressures from family, peers, and media in White, Black, and Hispanic
women, and (b) the predictive power of such pressures on appearance evaluation and

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disordered eating within each ethnic group. Based on the limited research available, we hypothesized that Black women would report significantly less perceived pressure than White women. Additionally, we hypothesized that family pressures would be most strongly related to appearance evaluation and disordered eating in Black and Hispanic women, while peer and media influence would be most strongly related to these outcomes in White women.

2. Method

2.1. Participants

Participants were 864 female undergraduate students attending a large Southeastern university in the United States who self-identified as White (n = 598), Black (n = 135), and Hispanic (n = 131). Participants ranged in age from 18 to 35, with a mean age of 20.33 years (SD = 2.73). The mean body mass index (BMI) of the sample was 23.49 kg/m² (SD = 4.95). Characteristics of this sample and mean-level analysis of group differences on appearance evaluation and disordered eating have been reported elsewhere (Schaefer, Thibodaux, Krenik, Arnold, & Thompson, 2015).

2.2. Measures

2.2.1. Demographic information—Participants were asked to indicate age, ethnicity, height, and weight. Self-reported height and weight were used to calculate BMI.

2.2.2. Sociocultural Attitudes Towards Appearance Questionnaire-4 (SATAQ-4) —The three pressures subscales of the SATAQ-4 (Schaefer, Burke, et al., 2015) measure perceived thinness and appearance pressures from family, peers, and media. Each subscale consists of 4 items rated on a 5-point Likert-type scale, ranging from 1 (Definitely disagree) to 5 (Definitely agree). Higher scores indicate higher perceived pressure. Cronbach’s alphas within ethnic groups ranged from .88 to .91 for the Pressures: Family subscale, .88 to .96 for the Pressures: Peers subscale, and .93 to .96 for the Pressures: Media subscale.

2.2.3. Multidimensional Body-Self Relations Questionnaire – Appearance Evaluation Subscale (MBSRQ-AE)—The Appearance Evaluation subscale of the MBSRQ (Brown, Cash, & Mikulka, 1990; Cash, 2002) was designed to measure positive appearance evaluation. The measure consists of 7 items rated on a 5-point Likert-type scale, ranging from 1 (Definitely disagree) to 5 (Definitely agree). Higher scores indicate more positive appearance evaluation. Cronbach’s alpha within ethnic groups ranged from .88 to .92.

2.2.4. Eating Disorder Examination – Questionnaire (EDE-Q)—The EDE-Q (Fairburn & Beglin, 2008) was designed to measure disordered eating attitudes and behaviors. The measure consists of 28 items and four subscales assessing dietary restraint, eating concern, shape concern, and weight concern. Items are rated on a 7-point Likert scale ranging from 0 (No days/not at all) to 6 (Every day/markedly). The global score (i.e., mean of the four subscales) was used. Higher scores indicate greater disordered eating. Cronbach’s alpha within ethnic groups ranged from .93 to .96.
2.3. Procedure
All individuals enrolled in the University’s psychology research participant pool were invited to participate in an IRB-approved anonymous survey examining appearance attitudes. Interested participants provided digital informed consent and completed questionnaires online as part of a larger study. The full set of 13 scales were designed to be completed within approximately 30 minutes. The three scales utilized in the current study were among the first four scales presented and were completed in a set order (i.e., SATAQ-4, EDE-Q, MBSRQ-AE). Upon completion, participants were debriefed online and received extra course credit for their participation.

2.4. Statistical Analyses
Separate one-way analyses of variance (ANOVAs) were conducted to examine differences in family pressures, peer pressures, and media pressures. Effect size was assessed via eta-squared; an effect of .01 is considered small, .06 is medium, and .14 is large (Cohen, 1988). A significant omnibus test was followed by post hoc pairwise-comparisons, which were performed using Tukey’s HSD when the assumption of equal variances was not violated and Dunnett’s C test in cases where the homogeneity of variances assumption was violated. Six multiple regression analyses were conducted to examine thinness pressures in the prediction of appearance evaluation and disordered eating within each ethnic group. Listwise deletion was used to handle missing data, with missing data from examined variables ranging from 10% to 19%. To determine if data was missing completely at random (MCAR), Little’s MCAR test was used for pressure variables. This test was significant, \( p < .05 \), suggesting that data was not MCAR. Therefore, mean differences between participants who provided complete versus incomplete responses on all examined variables were examined using \( t \)-tests and chi-square tests. All \( t \)-tests and chi-square tests were non-significant, \( p > .05 \), indicating no relation between variables and missing data. No problems of multicollinearity or homoscedasticity were detected. Variance inflation factors (VIF) ranged from 1.12 to 1.34 for White women, from 1.11 to 1.51 from Black women, and from 1.30 to 1.81 from Hispanic women, and Levene’s test of equality of variances was not significant for all model variables, \( p > .05 \). However, the EDE-Q did not meet the normality assumption for White women using Shapiro-Wilk’s test of normality \( (p < .5) \), and as a result, the variable was log-transformed. All other indices of normality were well within limits, with the greatest level of skewness reaching 0.30 for disordered eating in Black women and the greatest level of kurtosis reaching 0.66 for appearance evaluation in Black women. Regression results for the EDE-Q used the log-transformed variable. All analyses were conducted using SPSS 23.0.

3. Results
ANOVA results indicated group differences in family pressure, peer pressure, and media pressure (see Table 1). All effect sizes were small. Pairwise comparisons indicated significantly higher perceived family pressure in Hispanic women compared with White women. White and Hispanic women both reported higher perceived media pressure compared with Black women, but did not differ from one another. White women reported higher peer pressure compared with both Black and Hispanic women, who were comparable on this variable.

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Table 2 presents results from the regression analyses. In White women, thinness pressures accounted for 28% of the variance in appearance evaluation and 54% of the variance in disordered eating. All pressure variables were significant predictors of proposed outcomes. Family and media pressures were the strongest predictors of appearance evaluation, while peer pressure was the strongest predictor of disordered eating. In Black women, appearance pressure accounted for 16% of the variance in appearance evaluation and 43% of the variance in disordered eating. Only family pressure significantly predicted appearance evaluation, while family and peer pressures were the strongest predictors of disordered eating. In Hispanic women, thinness pressures accounted for 30% of the variance in appearance evaluation and 46% of the variance in disordered eating. Family and media pressures, but not peer pressure, significantly predicted appearance evaluation and disordered eating.

4. Discussion

Overall, results of the current study support previous research indicating variability in the amount of appearance pressure perceived by women of different ethnicities (McKnight Risk Factor Study, 2000; Striegel-Moore et al., 1996), and suggest varied salience of pressure sources within ethnic groups. Consistent with both study hypotheses and previous work (Gibbons et al., 2010; Quick & Byrd-Bredbenner, 2014), Black women reported less perceived appearance pressure from peers and media. Moreover, family pressures emerged as the single significant predictor of appearance evaluation among Black women. Although scarce, media representations of Black women are often relatively curvaceous (Hazell & Clarke, 2008), potentially reducing thinness pressures targeting Black women. While Black women did not report high levels of thinness pressures from family members, the amount of family pressure was highly related to their eating and body image concerns. These results are consistent with research suggesting that family is a central and guiding force for many Black individuals (Gaines et al., 1997), and highlight the salience of family in shaping appearance and eating attitudes for Black women.

Results with White women were generally consistent with study hypotheses. As expected, White women demonstrated higher levels of peer and media pressures compared to Black women. However, White and Black women reported similar levels of family pressures. Compared to media representations of Black women, White women in the media are often more slender (Hazell & Clarke, 2008), potentially increasing thinness pressures among this group. In addition, research suggests higher levels of negative body talk – one facet of peer thinness pressures – among White women (Fiery, Martz, Webb, & Curtin, 2016). Further work suggests that White girls may be more strongly impacted by experiences of peer weight-based teasing than girls of other racial/ethnic backgrounds (van den Berg, Neumark-Sztainer, Eisenberg, & Haines, 2008). As hypothesized, peer and media pressures emerged as significant predictors of White women’s body image and eating concerns. However, family pressures appear to play a similarly important role, suggesting that all three forms of thinness pressures inform the eating and appearance concerns of White women.

Results with Hispanic women suggest the potential importance of family and media pressures in the development or maintenance of body image and eating disturbance,
demonstrated by elevated levels of family and media pressure relative to their peers. In addition, family and media pressures were both significant predictors of appearance evaluation and disordered eating, while peer pressures were not. These findings are consistent with previous studies suggesting increased experiences of family weight-based teasing among Hispanic girls (van den Berg et al., 2008), and support previous work regarding the central role of family in the development of body image and eating behaviors within Hispanic culture (Altabe and O’Garo, 2002). Media representations of Hispanic women frequently portray a thin yet curvy body type, which is often difficult to attain (Stokes, Clemens, & Rios, 2016). Additionally, Hispanic girls report using mainstream media images of thin White women to evaluate their own appearance (Schooler, 2008), which may further increase thinness pressures.

Limitations of the current study include use of a cross-sectional design and a college female sample. Future work may seek to examine causal associations between variables and to include additional underrepresented groups (e.g., males, Asian Americans). Second, as previous research has indicated that acculturation and ethnic identity may influence body image and disordered eating in diverse samples (Wildes et al., 2001), future research may bene-fit by examining these as potential moderators of the examined relationships. Additionally, other variables such as self-esteem are known to influence body image, and including such variables in future research is warranted. Lastly, differences in levels of reported appearance pressures were small in magnitude. Despite these small effects, within group comparisons revealed interesting patterns for the salience of each source on appearance evaluation and disordered eating. This might suggest that women in the United States endorse similar levels of appearance pressure from multiple sources, but each source’s influence varies within ethnic groups.

In sum, although women of all ethnic backgrounds endorsed experiences of thinness pressures, the specific source of this pressure varied in salience for women of different ethnicities. As evidence suggests that culturally-adapted interventions may lead to improved treatment outcomes (Hall, Ibaraki, Huang, Marti, & Stice, 2016), understanding these differences may aide in the continued evolution of culturally-sensitive interventions. For example, assessing and targeting family pressure may prove particularly beneficial for Black women, while an emphasis on both family and media pressures may particularly benefit Hispanic women. White women may benefit from a discussion of all three sources of pressure. Overall, this study adds to a growing body of literature indicating ethnic differences in thinness pressures among women, and further suggests that specific sources of thinness pressures may be more predictive of negative outcomes within different ethnic groups. Lastly, these findings suggest avenues for adapting existing interventions to more readily respond to the unique characteristics of women from diverse cultural backgrounds.

References


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Table 1

Mean (SDs) and Results of Analyses of Variance (ANOVA) Examining Predictor Variables by Ethnic Group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>White (n = 598)</th>
<th>Black (n = 135)</th>
<th>Hispanic (n = 131)</th>
<th>F</th>
<th>p</th>
<th>η²</th>
<th>Pairwise Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Pressures</td>
<td>2.29 (1.11)</td>
<td>2.48 (1.17)</td>
<td>2.78 (1.23)</td>
<td>9.77</td>
<td>&lt;.001</td>
<td>.02</td>
<td>H &gt; W, B</td>
</tr>
<tr>
<td>Peer Pressures</td>
<td>3.71 (0.77)</td>
<td>3.29 (0.74)</td>
<td>3.39 (0.79)</td>
<td>21.50</td>
<td>&lt;.001</td>
<td>.05</td>
<td>W &gt; B, H</td>
</tr>
<tr>
<td>Media Pressures</td>
<td>3.76 (1.19)</td>
<td>3.09 (1.30)</td>
<td>3.69 (1.14)</td>
<td>16.52</td>
<td>&lt;.001</td>
<td>.04</td>
<td>W, H &gt; B</td>
</tr>
</tbody>
</table>

Note: Pairwise comparisons were performed using the Dunnett’s C test when the assumption of equal variances was violated, Tukey’s HSD test when the assumption was not violated. All pairwise comparisons listed were significant at least at p < .05.
Table 2

Multiple Regression Analyses with Adjusted R² Predicting Appearance Evaluation and Disordered Eating for Each Ethnic Group.

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Appearance Evaluation</th>
<th>Disordered Eating</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adj. R²</td>
<td>F (dfs)</td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>White</td>
<td>.28</td>
<td>71.73***</td>
<td>(3, 552)</td>
<td></td>
</tr>
<tr>
<td>Family Pressures</td>
<td></td>
<td></td>
<td>-1.74***</td>
<td>.22</td>
</tr>
<tr>
<td>Peer Pressures</td>
<td></td>
<td></td>
<td>-0.92**</td>
<td>.33</td>
</tr>
<tr>
<td>Media Pressures</td>
<td></td>
<td></td>
<td>-1.48***</td>
<td>.22</td>
</tr>
<tr>
<td>Black</td>
<td>.16</td>
<td>8.57***</td>
<td>(3, 119)</td>
<td></td>
</tr>
<tr>
<td>Family Pressures</td>
<td></td>
<td></td>
<td>-1.64***</td>
<td>.53</td>
</tr>
<tr>
<td>Peer Pressures</td>
<td></td>
<td></td>
<td>-0.71</td>
<td>.76</td>
</tr>
<tr>
<td>Media Pressures</td>
<td></td>
<td></td>
<td>-0.70</td>
<td>.50</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.30</td>
<td>18.09***</td>
<td>(3, 116)</td>
<td></td>
</tr>
<tr>
<td>Family Pressures</td>
<td></td>
<td></td>
<td>-1.87***</td>
<td>.38</td>
</tr>
<tr>
<td>Peer Pressures</td>
<td></td>
<td></td>
<td>1.13</td>
<td>.61</td>
</tr>
<tr>
<td>Media Pressures</td>
<td></td>
<td></td>
<td>-1.25*</td>
<td>.49</td>
</tr>
</tbody>
</table>

Note: Adj. R² = adjusted R².
*  p < .05.
** p < .01.
*** p < .001.