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Effects of a Cognitive Dissonance-Based Eating Disorder Prevention Program Are Similar for Asian American, Hispanic, and White Participants

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Abstract

Objective—This study explored the effects of participating in a dissonance-based eating disorder prevention program on changes in thin ideal internalization, body dissatisfaction, and eating symptoms among White, Asian American, and Hispanic participants.

Method—Participants were (*n* = 394), 13 to 20-year-old adolescent girls and young women who reported being White (*n* = 311), Hispanic/Latina (*n* = 61), or Asian-American/Hawaiian/Pacific Islander (*n* = 33). The current study used data drawn from the pre- and post assessments of an efficacy trial and an effectiveness trial of this eating disorder prevention program.

Results—The intervention reduced disordered eating behaviors and eating disorder risk factors for all three ethnic groups at post-intervention assessment; there was no evidence of significantly stronger effects in any particular ethnic group.

Conclusion—Results suggest that a cognitive dissonance-based prevention program for eating disorders may be equally effective for Asian American, Hispanic, and White adolescent women.

Keywords

ethnicity; prevention program; cognitive dissonance

Introduction

Approximately 1% of US females suffer from anorexia, 2% from bulimia, and 3% from binge-eating disorder.[1] In addition, roughly 16% of adolescent girls engage in unhealthy weight control behaviors and 25% report high body dissatisfaction.[2] Though most eating disorder prevention research has focused on overall reduction of these risk factors, few studies have explored the effectiveness of prevention programs for different ethnic groups.

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Belonging to a non-White ethnic group has been considered a protective factor against the onset of eating disorders. Some proposed reasons for this are that ethnic minority cultural groups may not value an ultra-slim figure as the ideal of beauty and may place less importance on physical appearance as a defining characteristic of femininity and success than their Western-European counterparts.[3]

Past studies have indicated both similarities and differences among ethnic groups in eating disorder risk factors and incidence of eating disturbances. One review concluded that some ethnic minority groups show a similar prevalence of eating disordered behaviors as White Americans, whereas others did not.[4] They concluded that fewer African Americans and Asian Americans engaged in disordered eating behaviors such as dieting or self-induced vomiting than Whites, and that African Americans had higher self-esteem and less body dissatisfaction than Whites. However, they concluded that the frequency of disordered eating behaviors was the same for Hispanics and Whites. Other empirical studies suggest that differences between ethnic minorities and Whites may not be as marked as previously thought, and that ethnic minority groups have a similar risk for developing eating disorders relative to Whites. One study found that African Americans had the same level of body dissatisfaction as Whites after controlling for body mass index, income, and marital status.[5] In addition, risk factors for eating disorders such as body dissatisfaction and prevalence of eating disturbances have been found to be similar for African Americans, Hispanics, Asian Americans, and Whites.[6,7] It may be that high levels of problematic eating behaviors and eating disorders in ethnic minorities are due to the prevailing sociocultural pressure to be thin in addition to the pressure to conform to mainstream society.

Use of unhealthy weight control behaviors is also high among ethnic minorities. Although the majority of studies reviewed by Crago and Shisslak[8] found that dieting behaviors were reported significantly more often by White females than African American, Hispanic, Asian American, and Native American females, they also found the same or higher incidence of binge eating, vomiting, and the use of laxatives or diuretics among ethnic minority females. Other researchers found that more than one-half of girls in each of the ethnic groups surveyed (African American, Asian American, Hispanic, Native American and White) engaged in unhealthy weight control behaviors and were concerned with their weight.[9] French and associates[10] found that dieting and purging are more prevalent in Whites, Hispanics, and Native Americans as compared to African- and Asian Americans. In sum, evidence suggests that prevention programs aimed to decrease risk for eating disorders and engagement of unhealthy eating behaviors is necessary for all ethnic groups.

To our knowledge, only one published article has compared eating disorder prevention program outcomes between cultures, using US and Italian samples.[11] This intervention was a part of a school health education class. Female tenth grade students in each country were divided into two groups. For a six-week period, half of the students (intervention groups) were given five lectures by an expert on eating disorders. The other half of the girls (control groups) received lectures from their health teachers on similar topics. The intervention contents were: (1) healthy lifestyle, (2) healthy/unhealthy media figures, (3) nutritional guidelines, (4) common misconceptions about dieting, (5) review of healthy body, eating and exercise and about valuing oneself rather than focusing on appearance and the

consequences of dieting. Wiseman et al. found that the program produced significant reductions in one risk factor, drive for thinness, in the Italian sample, but no effects were found in the US sample. The authors speculated that the lack of program effectiveness in the US was due to hetereogeneity in the ethnic makeup of the US sample, although this interpretation is debatable because numerous trials that have used heterogeneous samples in the US have found intervention effects.[12]

The present report investigated whether a dissonance-based eating disorder prevention program, which seeks to reduce thin-ideal internalization, would be differentially effective across ethnic groups. In the 3–4 h dissonance-based intervention adolescent girls with body image concerns who have internalized the thin-ideal are asked to voluntarily engage in verbal, written, and behavioral exercises in which they critique this ideal (e.g., they write counter-attitudinal essays and conduct counter-attitudinal role-plays). These activities theoretically result in psychological discomfort (cognitive dissonance) that motivates participants to reduce their internalization of the thin-ideal, which is thought to decrease eating disorder risk factors and bulimic symptoms. This intervention produced significantly greater reductions in thin-ideal internalization, body dissatisfaction, negative affect, bulimic symptoms, risk for obesity onset, and mental health care utilization than an assessment-only condition, with many effects persisting through 1-year follow-up, and significantly greater reductions in thin-ideal internalization, body dissatisfaction, negative affect, and bulimic symptoms than alternative interventions, though most of the latter effects fade by 1-year follow-up.[13–15] Independent research groups have replicated many of these effects for the dissonance intervention, including providing additional evidence that dissonance prevention programs produce significantly larger effects than alternative prevention programs.[16–21]

Although the samples used in the previous trials of the dissonance prevention program have been ethnically heterogeneous, none of these trials had sufficient numbers of participants from ethnic minority groups to permit a test of whether the intervention effects differed significantly for White participants versus participants from individual ethnic minority groups. It is important to test for ethnic differences in eating disorder prevention to determine whether prevention programs need to be modified to fit the particular needs of different ethnic groups.[8,9] Accordingly, the aim of the current report is to test the effects of an eating disorder prevention program among Asian American, Hispanic, and White adolescent females. On the one hand, the evidence that there are more similarities than differences in risk factors and eating pathology across ethnic groups implies that the dissonance-based intervention will be similarly effective for these three different ethnic groups.[5–7] On the other hand, the limited evidence that White women engage in more dieting and unhealthy eating behaviors than many other ethnic groups and the fact that the thin beauty ideal may be more culturally relevant for White women than other ethnic groups, implies that the intervention may be more effective for White participants than for Asian American and Hispanic participants.

Method

Participants

Participants were 405, 13 to 20-year-old adolescent girls and young women recruited from public high schools and a university in a large US southwestern city and a mid-sized US northwestern city. The current analyses consider only the subsample of students who reported being White (*n* = 311), Hispanic/Latina (*n* = 61), or Asian-American/Hawaiian/Pacific Islander (*n* = 33). Recruitment of participants of other ethnicities was not sufficient to provide statistical power for group comparisons, therefore students identifying as Black or African-American (*n* = 21), Native American (*n* = 13), or other ethnic backgrounds (*n* = 15) were excluded from the analyses.

Participants were from an efficacy trial or an effectiveness trial of a dissonance-based eating disorder prevention program, approved by the institutional review board at each site. The efficacy trial tested whether this intervention produced effects when delivered under highly controlled conditions by research staff. The effectiveness trial tested whether this intervention produced effects under real-world conditions in which school staff were responsible for participant recruitment and intervention delivery. Group facilitators from each school received 4 h of training in intervention delivery. Facilitators utilized the treatment manual when leading group sessions. A subset of sessions were audiotaped and reviewed by the principal investigator.

In each trial, the ethnic diversity of participants was proportionate to that of the surrounding communities. In the efficacy trial, the demographics of the participants were 10% Asian/Pacific Islander, 6% African American, 19% Hispanic, 58% Caucasian, and 7% who specified "other."[14] The effectiveness trial thus far includes 4% Asian/Pacific Islander, 1.8% African American, 10.4% Hispanic, 85% Caucasian, 3.6% Native American or Alaska Native, and 4.3% of participants who specified more than one ethnic group membership. A comparison of data from the completed efficacy trial and preliminary data from the ongoing effectiveness trial suggests that the intervention produces similar effects when delivered by school and research staff. For example, the effect for eating pathology in the effectiveness trial at 1-year follow-up (*r* = .17) is similar to the parallel effect from the efficacy trial (*r* = .20).

The current study examines pre- and postintervention data measured one month apart. Most (97%) participants were retained at one-month follow-up. Those who were unable to be reached or who withdrew from the study did not differ from the participants who remained in the study on demographic or outcome variables. Full information maximum likelihood estimation was used to impute missing data because this approach produces more accurate and efficient parameter estimates than list-wise deletion or alternative imputation approaches such as last-observation-carried-forward.[22]

Procedure

In the efficacy trial, research staff recruited participants using direct mailings, fliers, and leaflets inviting young women with body image concerns to participate in a study evaluating interventions designed to "help females accept their bodies." Participants were randomized

to four arms of the trial: dissonance intervention, healthy weight intervention, expressive writing control intervention, or assessment-only control condition. With the exception of the initial delivery of each intervention, which was facilitated by Eric Stice for training purposes, one graduate student delivered all of the dissonance interventions and another delivered all of the healthy weight interventions. A detailed and scripted treatment manual was developed for both interventions. Both interventions consisted of three weekly 1 h group sessions. The expressive writing control condition consisted of three weekly 45 min individual writing sessions.

In the effectiveness trial, school personnel handled recruitment and intervention delivery. School personnel mailed information packets to eligible students and posted fliers in school buildings, similar to recruitment techniques used by research staff in the efficacy trial. As in the efficacy trial, mass mailings in the effectiveness trial to all female students and fliers posted on campuses invited students with body image concerns to participate in a trial of a body acceptance intervention.[14] The research group provided sample recruitment materials, including letters. In the effectiveness trial, eligible participants were randomized to either an intervention or control group. The control group received a brochure about healthy body image in the mail. Those in the intervention group participated in four 1 h weekly group meetings focusing on resisting media pressures to be thin, or a control group.

For both the efficacy and effectiveness trials, trained assessors collected survey and interview data at each assessment time point. Assessors attended training workshops, coded practice interview tapes, and observed interviews conducted by other trained assessors and attained inter-rater agreement ($k > .80$) before conducting assessments.

Measures

Thin-Ideal Internalization—The 8-item Ideal-Body Stereo type Scale-Revised assessed thin-ideal internalization (IBSS-R).[14] Items used a response format ranging from 1 = strongly disagree to 5 = strongly agree. Items were averaged for this scale and those described below. This scale has shown internal consistency ($\alpha = 0.91$), 2-week test-retest reliability ($r = .80$), and predictive validity for bulimic symptom onset.[14]

Body Dissatisfaction—Body dissatisfaction was assessed with nine items from of the Satisfaction and Dissatisfaction with Body Parts Scale that assessed body parts that are often of concern to females (e.g., stomach, thighs, and hips).[23] Participants indicate their level of dissatisfaction with body parts on scales ranging from 1 = extremely satisfied to 5 = extremely dissatisfied. This scale has shown internal consistency ($\alpha = 0.94$), 3-week test-retest reliability ($r = .90$), and predictive validity for bulimic symptom onset.[14]

Eating Disorder Symptoms—The diagnostic items from an adapted version of the Eating Disorder Examination (EDE),[24] a semi-structured investigator-based interview, assessed DSM-IV bulimia nervosa and anorexia nervosa symptoms. Items assessing the symptoms in the past month were summed to create an overall bulimic symptom composite for each assessment point, as done in previous studies.[25,26] Because this composite was skewed, a normalizing square root transformation was applied. The adapted symptom composite showed internal consistency ($\alpha = 0.86–0.92$), 1-week test-retest reliability ($r =$

0.90), 1-month test-retest reliability (r = 0.81), sensitivity to detecting treatment and prevention program effects, and predictive validity for future onset of depression in past studies of adolescent and young adult females.[14,25,26] The eating disorder diagnoses from this adapted interview showed high 1-week test-retest reliability (κ = 0.96) and inter-rater agreement (κ = 0.86) in the efficacy trial and other studies conducted by our research group.[14,26]

Data Analysis

Data were entered twice by independent research assistants and screened for errors. Each ethnic group was assigned a contrast code of 1 = Asian, 3 = Hispanic, and 5 = White. Contrast weights were calculated for the following planned comparisons: (a) comparing White to minority participants, (b) comparing Asian to Hispanic participants, (c) comparing Asian to White participants, and (d) comparing Hispanic to White participants. Contrast weights and vectors were calculated taking into account unequal cell sizes according to the procedure described by Pedhazur.[27] Treatment condition was coded 0 = control and 1 = treatment. To reduce multicollinearity among variables, preintervention variable scores were centered by subtracting the grand mean for each variable from each participant's raw score.[28] Centered variables were used in all analyses. Finally, interaction terms were computed for the interactions between condition (treatment or control) and each of the planned comparisons described above.

Results

Descriptive Statistics

Table 1 displays demographic information. At baseline across both conditions, Asian, Hispanic, and White participants did not differ on thin ideal internalization or body dissatisfaction, but did differ on eating disorder symptoms. Hispanic participants (M = 16.97, SD = 14.89) reported more eating disorder symptoms at baseline than White participants (M = 12.30, SD = 13.32), $t(370) = 2.45$, $p = .02$. There was no difference in eating disorder symptom pretest scores between Asian participants (M = 15.45, SD = 14.92) compared to Hispanic or White participants. There were no differences on parental education, age, or other demographic variables among the ethnic minority groups. Table 2 presents pre- and post-test scores for each subgroup of participants in the intervention group.

Hierarchical Multiple Regression Analyses

Prior to conducting analyses, data were examined for assumptions and conditions necessary for hierarchical multiple regression. All assumptions and conditions were satisfied. Regression analyses were run separately for each of the three outcomes. Variables were entered into the regression equation in the following order: (1) preintervention variable score, (2) treatment condition, (3) ethnicity contrast, and (4) interaction between condition and ethnicity contrast. A total of 12 regression models were estimated. The alpha of 0.05 was not adjusted in order to preserve adequate power for detecting effects with the small cell sizes for Asian and Hispanic participants. Post-hoc analysis of achieved power using G*Power three statistical power analysis program[29] indicated that for comparisons of the smallest samples (Hispanic and Asian American; total n = 94), this study had an 85%

probability of detecting a medium effect (r = .30), but a 16% probability of detecting a small effect (r = .10).

Ethnic Minority Participants Compared to White Participants—The first planned comparison contrasted Hispanic and Asian participants, as a group, to White participants. Results of the regression models for thin-ideal internalization, body dissatisfaction, and eating disorder symptoms are shown in Table 3. In each case, the ethnicity contrast-by-condition interactions were not significant, indicating that the effect of intervention condition on change in the outcomes did not differ between White and ethnic minority participants.

Asian Participants Compared to Hispanic Participants—Table 4 shows the results of regression analyses for thin-ideal internalization, body dissatisfaction, and eating disorder symptoms for the contrast between Asian and Hispanic participants. The ethnicity contrast-by-condition interaction was not significant for any outcome, indicating that the intervention effects on all outcomes were similar for Asian and Hispanic participants.

Asian Participants Compared to White Participants—Table 5 displays regression coefficients for the contrast between Asian and White participants on the outcome variables. For all three outcomes the ethnicity contrast-by-condition interactions were not statistically significant, suggesting that intervention effects were similar for both ethnic groups.

Hispanic Participants Compared to White Participants—Table 6 displays regression coefficients for the contrast between Hispanic and White participants on each variable. Again, none of the ethnicity contrast-by-condition interaction reached significance, suggesting that the intervention effects on these three outcomes were similar for Hispanic and White participants.

Conclusion

The aim of this study was to test for differences among ethnic groups in response to the dissonance-based eating disorder prevention program on thin ideal internalization, body dissatisfaction, and eating symptoms. Results indicated that the reduction in thin ideal internalization, body dissatisfaction, and disordered eating symptoms for intervention participants relative to control participants were not significantly different for the three ethnic groups. Thus, it appeared that the intervention effects on all outcomes were consistent regardless of ethnicity. The intervention effects found here were similar to those reported in previous trials.[13,15,16,19] The ethnicity-by-condition interaction effects in the current study were small and not statistically significant, ranging in magnitude from r = .01 to .06.

Collectively, results seem to imply that it may not be necessary to develop ethnicity-specific versions of the program. However, the ethnic composition of an intervention group may influence the specific topics, concerns, and comments brought up by the participants. Skillful facilitators should acknowledge and encourage discussion of these issues in the context of the core tenets of the intervention.

It is possible that participants from the three ethnic backgrounds included here responded similarly to the intervention because the risk factor targeted were similar for all groups. Analysis of pre-test data suggested no ethnic differences in thin-ideal internalization at baseline—echoing the effects from Shaw et al.,[7] who found no difference in thin-ideal internalization based on ethnicity. It may be that Asian, Hispanic, and White adolescents in the US experience similar sociocultural pressures to be thin. Thus, targeting this widely experienced risk factor with this dissonance-based intervention may account for the observed similarity of intervention effects across ethnic groups.

It is possible that interventions that focus on risk factors or pre-existing disturbed eating patterns that vary between ethnic groups may find differential intervention effects. For example, in the current sample, Hispanic participants reported significantly greater pre-intervention disordered eating symptoms than did White participants. Had our intervention focused on directly altering symptoms, it is possible that the intervention effects would have been significantly greater for ethnic groups with higher initial symptoms because they would have more room for improvement. Additionally, the dissonance intervention has always recruited participants with elevated body dissatisfaction. These adolescents may differ from larger, more representative samples of their particular ethnic group; they may have more eating- and body-related factors in common with other body-dissatisfied adolescents than with body-satisfied members of their ethnic group. Future research of universal eating disorder prevention trials, recruiting a range of body-satisfied and dissatisfied girls, should assess whether risk factors and intervention effects differ across ethnicity with unselected samples.

It is important to consider the limitations of this study when interpreting these effects. First, the sample size for this study was small for certain ethnic minority groups. Although the effect sizes for the ethnicity contrast-by-condition interactions were consistently trivial, it would be useful to replicate these results with a larger sample. Second, only three ethnic sub-groups were investigated. Testing this intervention among other ethnic groups could be particularly useful, particularly African Americans because this ethnic group tends to report less thin ideal internalization.[7] A test of this intervention with other ethnic groups, such as Native American adolescent girls, would also be informative, given that Native Americans experience disproportionate rates of poverty and type-2 diabetes and often lack access to health care and other services.[30] Another limitation is that the ethnic minority categorizations used here and in many studies focusing on ethnic minorities ignore the cultural heterogeneity within such categories and thus, could have obscured noteworthy differences within an ethnic group. For instance, East Asian cultures (e.g. China or Japan) historically have values and beliefs different from Southeast Asian cultures, which may influence eating disorder risk factors such as body satisfaction and thin ideal internalization. Finally, because participants self-selected to participate in the study, identifying themselves as having concerns about their body image, the inferences that can be made about the broader population of ethnic minority women at risk for developing an eating disorder are limited.

With regard to future directions, although we found no evidence of ethnic differences in response to this intervention, it might be informative for future research to test whether

acculturation, socioeconomic status, cultural concepts of beauty, and the cultural sensitivity of measures moderate intervention effects.[8] Whereas the current literature examining the relation among acculturation, ethnicity, and eating disorders is mixed, there is evidence that a higher level of acculturation is associated with an increased risk of developing an eating disorder in some ethnic groups. Chinese American and Hispanic women who are more acculturated tend to be more dissatisfied with their body image, demonstrate a higher drive for thinness and engage in more disordered eating behavior than their less acculturated counterparts.[31,32] This relationship between acculturation and risk factors for eating disorders has been found in studies including immigrants to the US as well as American-born ethnic minorities.[33–36] It might also be useful to investigate factors that contribute to body dissatisfaction in various ethnic groups. For instance, prior studies have tended not to distinguish among Asian subgroups. Yates et al.[37] found that while Chinese women reported a low BMI and correspondingly low body dissatisfaction, Japanese women were as lean as their Chinese counterparts, but reported high body dissatisfaction. Future research including ethnic minorities should consider how cultural differences within an ethnic group could affect eating attitudes and behavior. Finally, it will be important to investigate additional factors, beyond ethnicity, which may moderate the effect of this intervention, thereby identifying groups for whom this intervention is particularly effective and groups for whom this intervention is not effective. However, based on the current results, it appears that a dissonance-based preventive intervention can be helpful to adolescents from diverse ethnic backgrounds.

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TABLE 1

Demographic variables

	Asian/Asian-American/ Hawaiian/Pacific Islander	Hispanic/ Latina	White
Sample size	33	61	311
Age (SD)	17.0 (1.53)	16.3 (1.43)	16.4 (1.41)
Maternal Education (SD)	4.6 (1.23)	3.8 (1.34)	4.7 (1.10)
Paternal Education (SD)	5.2 (.99)	3.8 (1.45)	4.6 (1.28)

TABLE 2

Pre and post-test values of outcome variables by ethnicity for the intervention group

	Asian/Asian-American/ Hawaiian/Pacific Islander		Hispanic/Latina		White	
Sample size	16		27		161	
Mean (SD)	Pre	Post	Pre	Post	Pre	Post
Thin-ideal internalization	3.63 (.58)	3.22 (.63)	3.64 (.61)	2.86 (.76)	3.60 (.53)	3.10 (.63)
Body dissatisfaction	3.41 (.84)	2.86 (.72)	3.61 (1.00)	2.92 (.90)	3.51 (.78)	3.03 (.82)
Eating symptoms	17.25 (19.07)	6.27 (7.05)	19.89 (17.89)	10.58 (11.28)	13.58 (14.46)	8.27 (10.52)

TABLE 3

Regression coefficients for ethnic minority vs. White contrast on post-intervention thin-ideal internalization, eating disorder symptoms, and body dissatisfaction

Variable	Unstandardized beta (*β*)	SE	*t*	Effect size (*r*)	*p*
Thin-ideal internalization (TII)					
Preintervention TII	.725	.048	15.271	.580	<.001
Condition	−.383	.069	−5.554	−0.211	<.001
Minority vs. White contrast	.000	<.001	.839	.032	.402
Ethnicity contrast × condition interaction	.000	<.001	.562	.021	.574
Body dissatisfaction (BDS)					
Pre-intervention BDS	.348	.048	7.260	.337	<.001
Condition	−.406	.110	−3.678	−.171	<.001
Minority vs. White contrast	.000	<.001	−.955	− .044	.340
Ethnicity contrast × Condition interaction	.000	<.001	1.314	.061	.190
Eating disorder symptoms (EDS)					
Pre-intervention EDS	.516	.027	19.417	.693	<.001
Condition	−3.279	1.017	−3.223	−.115	.001
Minority vs. White contrast	.000	<.001	−.618	−.022	.537
Ethnicity contrast × Condition interaction	.000	<.001	1.382	.049	.168

TABLE 4

Regression coefficients for Asian vs. Hispanic contrast on post-intervention thin-ideal internalization, eating disorder symptoms, and body dissatisfaction

Variable	Unstandardized beta (*β*)	SE	*t*	Effect Size (*r*)	*p*
Thin-ideal internalization (TII)					
Pre-intervention TII	.722	.047	15.240	.576	<.001
Condition	−.344	.050	−6.951	−.263	<.001
Asian vs. Hispanic contrast	.000	<.001	.579	.022	.563
Ethnicity contrast × Condition interaction	.000	<.001	1.454	.055	.147
Body dissatisfaction (BDS)					
Preintervention BDS	.350	.048	7.293	.339	<.001
Condition	−.296	.080	−3.706	−.172	<.001
Asian vs. Hispanic contrast	.000	<.001	−.762	−.035	.447
Ethnicity contrast × Condition interaction	.000	<.001	.730	.034	.466
Eating disorder symptoms (EDS)					
Pre-intervention EDS	.511	.026	19.375	.693	<.001
Condition	−2.270	.734	−3.094	−.111	.002
Asian vs. Hispanic contrast	.000	.001	−.526	−.019	.599
Ethnicity contrast × Condition interaction	.000	.001	−.311	−.011	.756

TABLE 5

Regression coefficients for Asian vs. White contrast on post-intervention thin-ideal internalization, eating disorder symptoms, and body dissatisfaction

Variable	Unstandardized beta (*β*)	SE	*t*	Effect Size (*r*)	*p*
Thin-ideal internalization (TII)					
Pre-intervention TII	.725	.048	15.180	.579	<.001
Condition	−.345	.074	−4.664	−.178	<.001
Asian vs. White contrast	.000	<.001	−.608	−.023	.543
Ethnicity contrast × Condition interaction	.000	<.001	.130	.005	.897
Body dissatisfaction (BDS)					
Preintervention BDS	.348	.048	7.265	.337	<.001
Condition	−.395	.118	− 3.351	−.155	.001
Asian vs. White contrast	.000	<.001	.638	.030	.524
Ethnicity contrast × Condition interaction	.000	<.001	−1.022	−.047	.307
Eating disorder symptoms (EDS)					
Pre-intervention EDS	.517	.026	19.552	.697	<.001
Condition	−3.596	1.084	− 3.318	−.118	.001
Asian vs. White contrast	.000	<.001	.398	.014	.691
Ethnicity contrast × Condition interaction	.000	<.001	−1.588	−.057	.113

TABLE 6

Regression coefficients for Hispanic vs White contrast on post-intervention thin-ideal internalization, eating disorder symptoms, and body dissatisfaction

Variable	Unstandardized beta (*β*)	SE	*t*	Effect Size (*r*)	*p*
Thin-ideal internalization (TII)					
Pre-intervention TII	.725	.047	15.302	.580	<.001
Condition	− .393	.064	−6.101	−.231	<.001
Hispanic vs. White Contrast	.000	<.001	− .879	−.033	.380
Ethnicity contrast × Condition interaction	.000	<.001	−.856	−.032	.392
Body dissatisfaction (BDS)					
Preintervention BDS	.348	.048	7.264	.337	<.001
Condition	−.393	.103	− 3.811	−.177	<.001
Hispanic vs. White contrast	.000	<.001	1.023	.047	.307
Ethnicity contrast × Condition interaction	.000	<.001	−1.343	−.062	.180
Eating disorder symptoms (EDS)					
Pre-intervention EDS	.515	.027	19.358	.692	<.001
Condition	−3.000	.953	−3.148	−.113	.002
Hispanic vs. White contrast	.000	<.001	.671	.024	.503
Ethnicity contrast × Condition interaction	.000	<.001	−1.172	−.042	.242