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Cognitive dissonance-based eating disorder prevention: pilot study of a cultural adaptation for the Orthodox Jewish community

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ABSTRACT

The Body Project (BP) is a cognitive dissonance-based eating disorders (ED) prevention program that targets thin-ideal internalization and reduces ED risk factors and onset for higher-risk adolescent/young adult females. Although the more insular Orthodox Jewish communities reduce exposure to mainstream secular media, they are not immune to thin-ideal internalization and EDs. The present uncontrolled study evaluated the preliminary effects of a cultural adaptation of the BP for Orthodox Jewish girls. The modified manual improved fit with ultra-Orthodox Jewish norms, practices, and values. Eighty-nine 11th-graders in a private, all-female religious high school participated. ED risk factors and symptoms were assessed at baseline, end of 4-week intervention, and 6-month follow-up. Multi-level modeling showed that body dissatisfaction and negative affect significantly decreased across time. Findings demonstrate potential for the BP to be adapted for and implemented in cultural and religious communities wherein interactions with societal influences on thin-ideal internalization differ from dominant culture.

Clinical implications

- This study adapted the Body Project protocol to more closely align with ultra-Orthodox Jewish norms and practices, and examined its implementation for female adolescents in a private, religious high school.
- The program was associated with a significant reduction in certain risk factors associated with eating disorders, specifically body dissatisfaction and negative affect, at the end of treatment and at 6-month follow-up. Smaller reductions in some outcomes may be partially due to universal and mandatory implementation of the intervention.
- The within-condition effect sizes from baseline to post-intervention for body dissatisfaction ($r = 0.29$) and negative affect ($r = 0.39$) parallel the

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small to moderate within-condition effects found in benchmark randomized controlled trials of the Body Project protocol.

The Body Project (BP) is a cognitive dissonance-based eating disorders (ED) prevention program that targets thin-ideal internalization (Stice, Rohde, & Shaw, 2013), an established risk and maintaining factor for body dissatisfaction and eating pathology (e.g., Schaefer, Burke, & Thompson, 2018; Stice, 2002; Stice & Desjardins, 2018). Extending the dual pathway model, Stice and colleagues hypothesized that reducing thin-ideal internalization, should, in turn, reduce body dissatisfaction, negative affect, and ED symptoms (Stice, 2001). To accomplish this, they developed the BP, a prevention program designed to reduce the thin ideal through mechanisms of cognitive dissonance (Festinger, 1957).

The BP has been studied extensively with many high school girls and college-age women (e.g., McMillan, Stice, & Rohde, 2011; Stice, Rohde, Shaw, & Gau, 2011; Stice, Shaw, Burton, & Wade, 2006). It is a group-based intervention that includes verbal, written, and behavioral activities critiquing and challenging the societal pressures for women to conform to the thin ideal during four weekly sessions (Stice et al., 2013). A robust body of literature has demonstrated that the BP significantly reduces ED risk factors and future ED onset when aimed at high-risk adolescent and young adult women (e.g., Le, Barendregt, Hay, & Mihalopoulos, 2017; Watson et al., 2016). As hypothesized, reductions in thin-ideal internalization mediate the effects of the BP on reductions in ED symptoms (e.g., Seidel, Presnell, & Rosenfield, 2009; Stice, Presnell, Gau, & Shaw, 2007). In comparison to control conditions, participation in the BP significantly reduced valuation of the thin ideal, which was supported by pre-to-post reduction in fMRI-assessed reward region response to images of thin models (Stice, Yokum, & Waters, 2015). In addition, this prevention program has produced significantly larger reductions in outcomes than alternative interventions, such as healthy weight and media advocacy interventions, and its effects have been replicated by numerous independent research teams around the world (e.g., Becker, Smith, & Ciao, 2006; Halliwell & Diedrichs, 2014; Mausek, Wendt, & Wiseman, 2004).

There has been a discussion in the literature debating whether membership within a religious community, such as the ultra-Orthodox Jewish community, serves as a protective factor against EDs. In a literature review, Akrawi, Bartrop, Potter, and Touyz (2015) found mixed results regarding the association between religiosity, spirituality, and eating disorder symptomatology. Specifically reviewing studies utilizing Jewish samples, these researchers found that some studies reported a negative association between religion and disordered eating, with Orthodox Jewish women identifying as more religious reporting lower levels of eating pathology, compared to secular Jewish women and Orthodox Jewish women identifying as less religious (e.g., Gluck & Geleibter, 2002; Latzer,

Tzischinsky, & Gefen, 2007). However, other studies have been unable to support this link, such that there were no significant differences in eating pathology among women identifying with different levels of Jewish practice (e.g., Feinson & Meir, 2012; Pinhas, Heinmaa, Bryden, Bradley, & Toner, 2008). Of particular relevance to the present study, the ultra-Orthodox community observes the most stringent interpretations of religious traditions and practices, and strives to prevent outside social influence from infiltrating the culture (Feinson & Meir, 2012). Regardless of the sociocultural differences between varying levels of religiosity, young ultra-Orthodox Jewish women are not protected against eating disturbances more than other observance categories (Feinson & Meir, 2012), and some research has found that young Jewish females are at an even higher risk for abnormal eating beliefs and pathological behaviors than non-Jewish adolescents (Pinhas et al., 2008).

Thus, although the Orthodox Jewish community has several buffers in place to reduce exposure to mainstream secular media, young women within this community are not immune to thin-ideal internalization and EDs (Rabin, 2011). The present study evaluated the preliminary effects of a cultural adaptation of the BP. Specifically, the manual was modified to improve relevance to and consistency with ultra-Orthodox Jewish norms, practices, and values. For instance, access to the Internet and other forms of technology are more restricted; therefore, thin-ideal online images and postings to a group website were eliminated from the manual. Additionally, program material related to popular American fashion magazines and models, to which the students would have limited to no exposure, were replaced with content from Orthodox Jewish advertisements and editorials. Further, references to religious values, history, and text were added to the program as thematically appropriate.

We hypothesized that the program implementation would be associated with a reduction in levels of key risk factors for eating disorders, including thin-ideal internalization, body dissatisfaction, dietary restraint, and negative affect. Our collaborating school elected to have all students within a cohort complete this adaptation of the BP as part of a health curriculum. Given that over a dozen randomized trials have found that the BP produces larger reductions in eating disorder-related outcomes than minimal intervention control conditions, in this pilot investigation, we aimed to benchmark the within-condition changes over time in comparison to those reported in past trials with high-school aged participants (e.g., Stice, Rohde, Gau, & Shaw, 2009).

Method

Participants

The 11th grade cohort consisted of 89 adolescents between the ages of 14 years, 10 months and 16 years, 6 months from a private, all female Orthodox Jewish

high school. Attendance in the program was mandatory as part of a broader school curriculum related to behavioral health during the Spring 2017 academic semester, with follow-up data collected in December 2017. No exclusionary criteria were used. Active participation in the program's group exercises, completion of homework, and completion of the study survey were voluntary. Facilitators did not evaluate or grade student performance in the program, nor did they convey feedback about individual students' level of participation to the school.

Adaptation process

Manual development

Our culturally-aligned Orthodox Jewish version of the BP was developed using an iterative adaptation process. Once the need was identified, co-author DL and senior author KLL, with permission from the BP developer and co-author ES, came together to identify areas of concern in the original manual and corresponding culturally compatible adaptations. We approached the development of the adaptation under the assumption that the purported mechanisms of action would be applicable to this community. From the cultural adaptation literature, we followed the model of Lau (2006), which assumes a similar set of risk factors to the general population in the absence of clear evidence to support the contrary. Collaboratively, we went through a process of making both surface-level (e.g., removing references to popular print and social media and substituting more modestly-dressed images of thin women for standard photos) and structural-level (e.g., conducting group sessions in a school setting by providers from religious community) changes to the original manual to appropriately accommodate cultural diversity as previously described in the cultural adaptation literature (Lau, 2006). We took a conservative approach to align with Lau (2006) and to preserve program fidelity, limiting the manual changes only to text and exercises considered unsuitable for the religious community. Changes to the original protocol were made visible in the document for full awareness of all modifications (i.e., additions, deletions, and substitutions). Adaptation was then reviewed by co-author SM before submitting to ES for feedback to determine whether any changes compromised the purported mechanisms of action. The manual was further edited collaboratively from there and introduced to potential schools for implementation.

Training on the implementation of the BP was provided directly and formally from ES to co-authors AC, KH, DL, SM, and KLL. The adapted manual can be viewed for reproducibility at the official BP website (www.bodyprojectsupport.org). While this is the first cultural adaptation of the BP, it has previously been adapted for select populations (e.g., men, athletes, sorority members) and translated into multiple languages, which can also be found on this website.

Group facilitators

Co-author DL functioned as both a cultural expert in her role as director of the ED Division of Relief Resources, a non-profit, Jewish community-based mental health referral and advocacy organization for 11 years, as well as a female member of the community to guide changes toward acceptability and uptake by the Orthodox Jewish community. Co-author SM, also a female member of the Orthodox Jewish community, as well as a doctoral-level clinical psychologist, acted as an additional cultural expert for the adaptation and implementation process. Co-authors DL and SM acted as group facilitators, as members of the community who were unaffiliated with the participating school.

Procedures

The participating high school was independently interested in implementing a cultural adaptation of the BP prevention program. Given that the data component was (a) requested by the school for post-hoc program evaluation purposes only, (b) separate from the program implementation in procedure, personnel, and timing, and (c) absent of any and all person-level identifiers, the IRB deemed the project to be exempt. Nevertheless, we implemented the following procedures, in collaboration with the school, to align with a positive ethics approach. First, the school sent a letter alerting parents to the upcoming BP curriculum, consistent with standard operating procedure for this type of programming. The letter also outlined how de-identified data would be used for program evaluation purposes, in collaboration with the research team. Parents were instructed to contact the school office with any concerns. Because the prevention program was implemented as part of the curriculum, the school operated under the assumption that all 11th graders would participate.

Second, although attendance was mandatory, verbal assent was obtained for active participation in the program curriculum and no student was compelled to actively participate. Moreover, the facilitators did not provide grades or feedback to the school. In addition, written assent was obtained for an exercise at session two of the BP, per standard BP protocol. Third, at the conclusion of the program implementation, the school sent letters to students, parents, and teachers alerting them to appropriate referrals should the BP have raised awareness of any possible eating disorder concerns. Finally, after the data were analyzed, the school sent a letter to families of the participating cohort describing the preliminary results of the program implementation.

All program evaluation data entry and analysis procedures were conducted independently of program implementation. Facilitators provided a random code to each participant to ultimately link within-subject completed questionnaires. In addition, they collected the questionnaires with procedures that

maintained participants' privacy and confidentiality, and did so in the students' presence so that the girls were reassured that facilitators would not be reviewing or tracking their responses. Similarly, participants were made aware that school personnel were not privy to any student identifiers or forms to further encourage candid reporting. Following program completion, facilitators provided the researchers with the fully de-identified data forms. The researchers, in turn, provided aggregate data and results to the school at its request, so that administrators could decide whether to continue the program for future student cohorts. The Fairleigh Dickinson University Institutional Review Board deemed the project exempt.

Groups were all run by one of the two facilitators, co-authors DL and SM, both of whom were trained in the BP program by ES. The assigned eight groups ranged from 10–12 students ($M = 11.125$, $SD = 0.83$), with each facilitator running four groups concurrently. Participation involved four sequential weekly group sessions that ran for 1.5 hours each week. Consistent with the original BP protocol, the sessions were interactive and involved discussions about, criticisms against, and activities that challenged the thin ideal of attractiveness and media representations of women. Measures of thin-ideal internalization, dietary restraint, body dissatisfaction, negative affect, and ED symptoms were collected at baseline, at the end of the 4-week intervention, and at 6-month follow-up. Group facilitators distributed and collected measures in the classroom.

Measures

All participants were assessed using the following self-report measures of ED risk factors, symptoms, or diagnosis, which the BP materials combine in a single packet (see Stice et al., 2009 for evidence that these scales all show test-retest reliability and sensitivity to detecting the effects of eating disorder prevention programs):

The *Ideal Body Stereotype Scale-Revised* (Stice et al., 2006) is an 8-item self-report measure that assesses thin-ideal internalization using a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree*. Items are averaged and the scale has shown internal consistency ($\alpha = .91$; Stice et al., 2006). Cronbach's alpha was .81 at baseline, .88 at post-intervention, and .87 at follow-up.

The *Dutch Restrained Eating Scale* (DRES; van Strien, Frijters, Van Staveren, Defares, & Deurenberg, 1986) is a 10-item measure developed to assess dietary restraint and the frequency of dieting behaviors. Participants rate the extent to which they engage in each behavior using a 5-point scale from 1 = *never* to 5 = *always*. Items are averaged and the scale has shown internal consistency ($\alpha = .95$; van Strien et al., 1986). Cronbach's alpha was .94 at baseline, .95 at post-intervention, and .95 at follow-up.

The *Satisfaction and Dissatisfaction with Body Parts Scale* (Berscheid, Walster, & Bohrnstedt, 1973) is a 9-item measure of body dissatisfaction. Participants rate how satisfied they are with certain body attributes using a 5-point scale ranging from 1 = *extremely satisfied* to 5 = *extremely dissatisfied*. Items for this measure are averaged. This scale has shown internal consistency ($\alpha = .94$; Stice et al., 2006). Cronbach's alpha was .93 at baseline, .94 at post-intervention, and .95 at follow-up.

The *Positive Affect and Negative Affect Scale-Revised* (PANAS-X; Watson & Clark, 1992) is a 60-item measure assessing positive and negative emotions. In the current study, 20 of the items were used to assess negative affect and various negative emotional states throughout the past week on a 5-point scale from 1 = *not at all* to 5 = *extremely*. Items are averaged and the scale has shown internal consistency ($\alpha = .95$; Stice et al., 2006). Cronbach's alpha was .94 at baseline, .93 at post-intervention, and .94 at follow-up.

The *Eating Disorder Diagnostic Scale* (EDDS; Stice, Fisher, & Martinez, 2004) is a 20-item measure developed to assess eating disorder symptoms. Responses can be used to generate DSM-IV diagnoses for anorexia nervosa, bulimia nervosa, and binge eating disorder. Responses can also be summed to control for different response formats to create an overall eating disorder symptom composite. The current study used the overall eating disorder symptom composite.¹ The EDDS has been shown to be internally consistent ($\alpha = .89$) and valid in prior studies of young women (Stice et al., 2004). Cronbach's alpha was .82 at baseline, .79 at post-intervention, and .76 at follow-up.

Statistical analyses

The SPSS 25.0 statistical software package (IBM SPSS Statistics, Version 25.0. Armonk, NY: IBM Corp) was used for data analysis. Descriptive analyses assessed the mean and standard deviation of demographic variables. Multi-level modeling analyses were used to evaluate changes for all measures across three time points.

Results

Table 1 reports descriptive statistics and associated effect sizes (r) for self-reported height, weight, and questionnaire measures at all three time points. At baseline, the sample had a mean BMI of 22.13 ($SD = 3.24$). Absentee data was obtained from the school for this cohort to assess attendance at each of the four group sessions. The number of absences on each day ranged from two to eight students ($M = 4.75$, $SD = 2.5$). Seventy of 89 participants (79%) completed the study survey at post-intervention, and 76 (85%) completed the measures at 6-month follow-up. While these statistics are the same for the majority of main variables across time points, negative affect had slightly lower completion rates,

Table 1. Demographic and clinical assessment of the sample with effect sizes (*r*).

	Baseline			Post-Intervention				Follow-up			
	N	<i>M</i>	<i>SD</i>	N	<i>M</i>	<i>SD</i>	<i>r</i>	N	<i>M</i>	<i>SD</i>	<i>r</i>
Height (in inches)	81	63.51	2.58	67	63.59	3.01	-	74	63.73	2.42	-
Weight (in pounds)	79	126.78	17.79	64	126.72	19.19	-	72	127.65	17.49	-
IBSS-R ^a	82	3.01	0.59	70	2.87	0.73	0.20	76	2.90	0.65	0.22
DRES ^a	82	2.21	0.96	70	2.03	1.00	0.22	76	2.14	0.89	0.13
SDBPS ^a	82	2.91	0.87	70	2.68	0.92	0.29	76	2.68	0.89	0.29
PANAS-X ^a	80	1.88	0.79	69	1.61	0.66	0.39	75	1.63	0.67	0.42
EDDS ^b	82	9.68	9.40	68	8.60	9.91	0.12	75	8.61	9.03	0.16

IBSS-R = Ideal Body Stereotype Scale-Revised; DRES = Dutch Restrained Eating Scale; SDBPS = Satisfaction and Dissatisfaction with Body Parts Scale; PANAS-X = Positive Affect and Negative Affect Scale-Revised; EDDS = Eating Disorder Diagnostic Scale

^aEach of these measures utilized a rating scale of 1–5 with higher scores indicating more problems in that domain.

^bSummed overall EDDS composite scores ranged from 0–100 with higher scores indicating more eating disorder symptoms.

with 80 participants (90%) at baseline, 69 (78%) at post-intervention, and 75 (84%) at follow-up. Additionally, 68 participants (76%) completed data for eating disorder symptoms at post-intervention and 75 (84%) at follow-up.

Multi-level modeling allowed for missing data across time points by making use of all available data. As illustrated in [Figure 1](#), multi-level modeling showed that body dissatisfaction significantly decreased from baseline ($M = 2.91 \pm 0.87$) to post-intervention ($M = 2.68 \pm 0.92$, $p = .015$) and from baseline to 6-month follow-up ($M = 2.68 \pm 0.89$, $p = .011$). Calculating the reliable change index (RCI) determined that fifteen participants (17%) exhibited a clinically significant decrease in body dissatisfaction from baseline to post-treatment given measurement error, and similar changes were seen for 22 participants (25%) from baseline to follow-up.

Negative affect also significantly decreased from baseline ($M = 1.88 \pm 0.79$) to post-intervention ($M = 1.61 \pm 0.66$, $p = .001$) and from baseline to follow-up ($M = 1.63 \pm 0.67$, $p < .001$). According to RCI, eighteen participants (20%) had a clinically significant decrease for negative affect from baseline to post-treatment, with 19 participants (21%) from baseline to follow-up. Results indicated no statistically significant differences across time for thin-ideal internalization, dietary restraint, or ED symptoms.

The within-condition effect sizes (see [Table 1](#)) from baseline to post-intervention parallel the small to moderate within-condition effects found in the benchmark RCT of the BP protocol with high-school aged participants [i.e., body dissatisfaction ($r = 0.27$), thin-ideal ($r = 0.24$), dietary restraint ($r = 0.20$), and eating disorder symptoms ($r = 0.24$; Stice et al., 2009)].² The Fisher *r*-to-*z* transformation was calculated, which showed there were no significant differences on corresponding risk factors between this study and the Stice et al. (2009) trial.

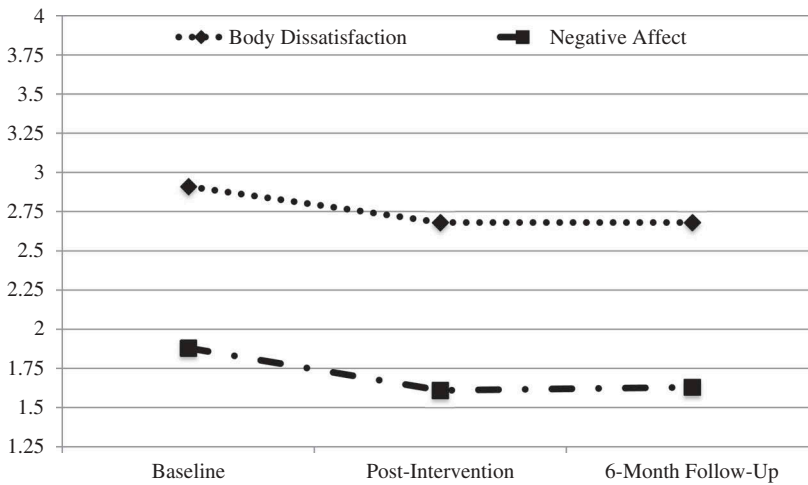


Figure 1. Significant changes in target variables across time. *Note.* Each of these two measures utilized a rating scale of 1–5 with higher scores indicating more problems in that domain.

Discussion

It is often assumed that level of religiosity positively correlates with mental health outcomes in Judaism due to beliefs about the sacred qualities of the human body, as well as the limited exposure to secular media (Feinson & Hornik-Lurie, 2016). However, research suggests that ultra-Orthodox Jewish women do not significantly differ from secular, traditional, and modern Orthodox women in regards to body dissatisfaction and eating disorder symptoms, which might be explained by women's tendency to be self-critical regardless of degree of religiosity across the spectrum (Feinson & Hornik-Lurie, 2016; Feinson & Meir, 2012).

The purpose of this research was to investigate the preliminary effects of a cultural adaptation of the BP for the Orthodox Jewish community. The program was implemented with all 11th-grade girls at a religious high school, as part of a mandatory health curriculum. Study findings partially supported the hypothesis that the adaptation would be associated with a reduction in ED risk factors over time, similar to benchmark data from RCTs of the BP. Specifically, body dissatisfaction and negative affect significantly decreased at the end of treatment and was still significantly lower at 6-month follow-up. Thin-ideal internalization, dietary restraint, and ED symptoms did not significantly change over the course of the program and follow-up.

Of note, the program was implemented with the utilization of media images more aligned with cultural expectations and school regulations; however, in actuality, participants reported familiarity with mainstream images alluding to the thin ideal. Thus, stimuli designed to activate and invite challenges to participants' naturalistic exposure to the thin ideal may have been inadequate.

By extension, program effects on thin-ideal internalization may have been attenuated due to this difference between presumed vs. actual exposure to media-depicted images of the thin ideal. Additionally, because the program was implemented universally across the 11th grade, with participants not selected or self-selected for body dissatisfaction, the study sample had relatively low baseline scores on measures of thin-ideal internalization, dietary restraint, and ED symptoms. While there was a decrease, reductions in these risk factors may not have reached statistical significance due to the moderate sample size and universal, mandatory participation. Thus, the limited findings regarding those factors may be partially attributable to floor effects.

Voluntary participation in the BP represents the ideal condition in which to test the approach in that it maximizes the likelihood of activating cognitive dissonance-based mechanisms of change. While active participation in group exercises, homework, and study assessments were voluntary, attendance in this school-based program was mandatory. Informal, qualitative feedback from students to the program facilitators and school personnel suggests that some students objected to the approach and engaged only minimally with the program. The majority of homework was completed as assigned; however, at times, the group facilitators indicated that they allowed participants the opportunity to complete unfinished homework prior to the start of the next group. Although there is a precedent in the literature for successful results with mandatory participation in the BP (Becker et al., 2006, 2010), this is a limitation in our research. Given that the program was implemented naturalistically within a school health curriculum, another key limitation of this study is its lack of a randomized comparison condition that could control for the effects of time. Similarly, fidelity and adherence measures, as well as potential religious and demographic moderators, were not collected since the school was primarily interested in outcomes for students, as opposed to approaching this from an a priori research framework. Lastly, generalization to other schools and communities should be done with caution given that this study involved one local school. Overall, universal implementation of this intervention results in an attenuation of effects, particularly if participation is mandated, which has implications for dissemination strategies, from a public health perspective.

Nevertheless, the within-condition effect sizes in the present trial parallel the small to moderate within-condition effects found in the benchmark RCT of the BP protocol with high-school aged participants (Stice et al., 2009). For this study, there was no exact fit for a benchmark study in terms of procedures and population, so we selected the closest match (Stice et al., 2009), which was discrepant with regard to self-selection for body image concerns. It should also be noted that in the current study, intervention facilitators were not associated with the high school as was the case with the benchmark

study. Specifically, school personnel were not trained in the delivery of the BP and thus partnered with the facilitators. The school and facilitators also regarded this aspect of implementation as a potential benefit to increase candor among the students in their verbal and written participation.

Overall, findings demonstrate the potential for the BP to be adapted for and implemented in cultural and religious communities in which the interaction between societal influences and thin-ideal internalization differs from the dominant culture. Notably, however, several ultra-Orthodox Jewish schools that considered implementing this adaptation of the BP protocol ultimately rejected it, citing its secular origins outside the community as a deterrent. Future RCT-level research is needed to determine the efficacy of the adaptation, and community-based participatory research models may need to be employed to reduce barriers to dissemination and uptake of the approach.

Notes

1. Using the EDDS composite score for those who participated at all time points, 26% met or exceeded the established clinical cut-off score (e.g., 16.5; Krabbenborg et al., 2012) at baseline. At post-intervention, 16% still met this threshold, while 10% no longer did and 3% did anew. At follow-up, 16% still met the cut-off, while 9% no longer did and 3% did anew. While this threshold corresponds to DSM-IV, examining binge/purge criteria between DSM-IV and DSM V cutoffs suggests this would only have had an effect on one participant across each time point.
2. Post hoc analysis was conducted to test the program's effects on those participants who presented with levels of body dissatisfaction similar to those in the Stice et al. (2009) study ($M = 3.47$, $SD = 0.83$). We removed participants ($n = 9$) whose body dissatisfaction scores fell 2 SD below this mean because this should have equated the samples of body dissatisfaction. All result patterns remained identical.

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References

- Akrawi, D., Bartrop, R., Potter, U., & Touyz, S. (2015). Religiosity, spirituality in relation to disordered eating and body image concerns: A systematic review. *Journal of Eating Disorders*, 3(29), 1–24. doi:10.1186/s40337-015-0037-3
- Becker, C. B., Smith, L. M., & Ciao, A. C. (2006). Peer facilitated eating disorders prevention: A randomized effectiveness trial of cognitive dissonance and media advocacy. *Journal of Counseling Psychology*, 53(4), 550–555. doi:10.1037/0022-0167.53.4.550
- Becker, C. B., Wilson, C., Williams, A., Kelly, M., McDaniel, L., & Elmquist, J. (2010). Peer-facilitated cognitive dissonance versus healthy weight eating disorders prevention: A randomized comparison. *Body Image*, 7(4), 280–288. doi:10.1016/j.bodyim.2010.06.004

- Berscheid, E., Walster, E., & Bohrnstedt, G. (1973). The happy American body: A survey report. *Psychology Today*, 7, 119–131.
- Feinson, M. C., & Hornik-Lurie, T. (2016). Body dissatisfaction and the relevance of religiosity: A focus on ultra-orthodox Jews in a community study of adult women. *Clinical Social Work Journal*, 44(1), 87–97. doi:10.1007/s10615-016-0574-5
- Feinson, M. C., & Meir, A. (2012). Disordered eating and religious observance: A focus on ultra-orthodox Jews in an adult community study. *The International Journal of Eating Disorders*, 45, 101–109. doi:10.1002/eat.20895
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Gluck, M. E., & Geleibter, A. (2002). Body image and eating behaviors in Orthodox and secular Jewish women. *Journal of Gender Specific Medicine*, 5, 19–24.
- Halliwell, E., & Diedrichs, P. C. (2014). Testing a dissonance body image intervention among young girls. *Health Psychology*, 33(2), 201–204. doi:10.1037/a0032585
- Krabbenborg, M. A., Danner, U. N., Larsen, J. K., van der Veer, N., van Elburg, A. A., de Ridder, D. T., ... Engels, R. C. (2012). The eating disorder diagnostic scale: Psychometric features within a clinical population and a cut-off point to differentiate clinical patients from healthy controls. *European Eating Disorders Review*, 20(4), 315–320. doi:10.1002/erv.1144
- Latzer, Y., Tzischinsky, O., & Gefen, S. (2007). Level of religiosity and disordered eating-psychopathology among modern-orthodox Jewish adolescent girls in Israel. *International Journal of Adolescent Medicine and Health*, 19, 511–521.
- Lau, A. S. (2006). Making the case for selective and directed cultural adaptations of evidence-based treatments: Examples from parent training. *Clinical Psychology: Science and Practice*, 13, 295–310.
- Le, L. K., Barendregt, J. J., Hay, P., & Mihalopoulos, C. (2017). Prevention of eating disorders: A systematic review and meta-analysis. *Clinical Psychology Review*, 53, 46–58. doi:10.1016/j.cpr.2017.02.001
- Matussek, J. A., Wendt, S. J., & Wiseman, C. V. (2004). Dissonance thin-ideal and didactic healthy behavior eating disorder prevention programs: Results from a controlled trial. *International Journal of Eating Disorders*, 36, 376–388. doi:10.1002/(ISSN)1098-108X
- McMillan, W., Stice, E., & Rohde, P. (2011). High- and low-level dissonance-based eating disorder prevention programs with young women with body image concerns: An experimental trial. *Journal of Consulting and Clinical Psychology*, 79(1), 129–134. doi:10.1037/a0022143
- Pinhas, L., Heinmaa, M., Bryden, P., Bradley, S., & Toner, B. (2008). Disordered eating in Jewish adolescent girls. *The Canadian Journal of Psychiatry*, 53, 601–608. doi:10.1177/070674370805300907
- Rabin, R. C. (2011, April 12). Rabbis sound an alarm over eating disorders. *New York Times*, p. D1.
- Schaefer, L. M., Burke, N. L., & Thompson, J. K. (2018). Thin-ideal internalization: How much is too much? *Eating and Weight Disorders*, 1–5. doi:10.1007/s40519-018-0498-x
- Seidel, A., Presnell, K., & Rosenfield, D. (2009). Mediators in the dissonance eating disorder prevention program. *Behaviour Research and Therapy*, 47, 645–653. doi:10.1016/j.brat.2009.04.007
- Stice, E. (2001). A prospective test of the dual-pathway model of bulimic pathology: Mediating effects of dieting and negative affect. *Journal of Abnormal Psychology*, 110, 124–135. doi:10.1037/0021-843X.110.1.124
- Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin*, 128(5), 825–848.
- Stice, E., & Desjardins, C. D. (2018). Interactions between risk factors in the prediction of onset of eating disorders: Exploratory hypothesis generating analyses. *Behaviour Research and Therapy*, 105, 52–62. doi:10.1016/j.brat.2018.03.005

- Stice, E., Fisher, M., & Martinez, E. (2004). Eating disorder diagnostic scale: Additional evidence of reliability and validity. *Psychological Assessment*, 16, 60–71. doi:10.1037/1040-3590.16.1.60
- Stice, E., Presnell, K., Gau, J., & Shaw, H. (2007). Testing mediators of intervention effects in randomized controlled trials: An evaluation of two eating disorder prevention programs. *Journal of Consulting and Clinical Psychology*, 75, 20–32. doi:10.1037/0022-006X.75.1.20
- Stice, E., Rohde, P., Gau, J., & Shaw, H. (2009). An effectiveness trial of a dissonance-based eating disorder prevention program for high-risk adolescent girls. *Journal of Consulting and Clinical Psychology*, 77(5), 825–834. doi:10.1037/a0016132
- Stice, E., Rohde, P., & Shaw, H. (2013). *The body project: A dissonance-based eating disorder prevention intervention. Facilitator guide* (Updated ed.). New York, NY: Oxford University Press.
- Stice, E., Rohde, P., Shaw, H., & Gau, J. (2011). An effectiveness trial of a selected dissonance-based eating disorder prevention program for female high school students: Long-term effects. *Journal of Consulting and Clinical Psychology*, 79(4), 500–508. doi:10.1037/a0024351
- Stice, E., Shaw, H., Burton, E., & Wade, E. (2006). Dissonance and healthy weight eating disorder prevention programs: A randomized efficacy trial. *Journal of Consulting and Clinical Psychology*, 74(2), 263–275. doi:10.1037/0022-006X.74.2.263
- Stice, E., Yokum, S., & Waters, A. (2015). Dissonance-based eating disorder prevention program reduces reward region response to thin models: How actions shape valuation. *PloS One*, 10(12), e0144530. doi:10.1371/journal.pone.0144530
- van Strien, T., Frijters, J. E., Van Staveren, W. A., Defares, P. B., & Deurenberg, P. (1986). The predictive validity of the Dutch restrained eating scale. *International Journal of Eating Disorders*, 5, 747–755. doi:10.1002/1098-108X(198605)5:4<747::AID-EAT2260050413>3.0.CO;2-6
- Watson, D., & Clark, L. A. (1992). Affects separable and inseparable: On the hierarchical arrangement of the negative affects. *Journal of Personality and Social Psychology*, 62, 489–505. doi:10.1037/0022-3514.62.3.489
- Watson, H. J., Joyce, T., French, E., Willan, V., Kane, R. T., Tanner-Smith, E. E., ... Egan, S. J. (2016). Prevention of eating disorders: A systematic review of randomized, controlled trials. *The International Journal of Eating Disorders*, 49(9), 833–862. doi:10.1002/eat.22577