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Running Head: PEER FACILITATED EATING DISORDER PREVENTION

Peer Facilitated Eating Disorder Prevention:

A Randomized Effectiveness Trial of Cognitive Dissonance and Media Advocacy

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Abstract

This study investigated the effectiveness of two interventions in reducing eating disorder risk factors under naturalistic conditions in sororities. Based on previous research, the campus sororities chose to implement a semi-mandatory, two-session eating disorder prevention program to all new sorority members ($N=90$) during sorority orientation. To facilitate evaluation, sororities agreed to random assignment of new members to either a cognitive dissonance or media advocacy intervention. Undergraduate peer facilitators ran the groups. Although both interventions had an effect, cognitive dissonance generally was superior at eight-month follow-up. Results further support the utility of cognitive dissonance in reducing eating disorder risk factors, and suggest that non-doctoral level leaders can deliver the program. Results also indicate that a semi-mandatory format does not reduce effectiveness.

Eating disorders (EDs) represent a significant problem for college campuses. Although full syndrome EDs occur rarely, subsyndromal EDs are relatively common in college women (Kurth, Krahn, Nairn, & Drewnowski, 1995; Mintz & Betz, 1988). Moreover, many students with eating pathology doubt that their symptoms warrant treatment and/or do not pursue therapy (A. E. Becker, Franko, Nussbaum, & Herzog, 2004; Meyer, 2005). Given the difficulty of treatment and the substantial medical and psychological complications that co-occur with EDs (Wilson, Becker, & Heffernan, 2002), efforts to prevent EDs appear warranted.

Although early prevention efforts produced few positive results (Pearson, Goldklang, & Striegel-Moore, 2002), promising effects have emerged recently. In particular, research supports use of cognitive dissonance in reducing ED risk factors and in preventing onset of bulimic behaviors (Stice, Shaw, Burton & Wade, in press). According to dissonance theory, inconsistent cognitions create psychological discomfort that is resolved when cognitions are altered to restore consistency (Festinger, 1957). Cognitive dissonance prevention of EDs (CD) is based on the dual pathway model of bulimia nervosa (Stice, 2001). According to this model, internalization of the thin-ideal standard of female beauty leads to body dissatisfaction, which in turn results in dietary restraint and negative affect, both of which increase risk for ED behaviors such as binge eating and purging. CD targets thin-ideal internalization by encouraging participants to speak and act counter to this ideal (Stice, Mazotti, Weibel, & Agras, 2000).

In a series of studies (Stice, Chase, Stormer, & Appel, 2001; Stice et al., 2000; Stice, Trost, & Chase, 2002), Stice and colleagues demonstrated that CD reduced ED risk factors including: thin-ideal internalization, dietary restraint, body dissatisfaction, negative affect, and eating pathology. More recently, in one of the most well-controlled ED prevention trials to date, Stice et al. (in press) randomized 481 high-risk, adolescent girls to CD; a healthy weight

intervention; an expressive writing placebo; or an assessment only group. Results indicated that CD significantly reduced internalization, body dissatisfaction, dieting, and negative affect compared to control conditions. CD also produced greater reductions in bulimic symptoms than either control condition, and resulted in lower onset of binge eating and obesity.

Other labs also have succeeded in implementing CD. For example, Matussek, Wendt, and Wiseman (2004) compared one session of CD to healthy weight management and waitlist control in college women with body image concerns. Both interventions resulted in improvement in thin-ideal internalization, body image, and eating behaviors.

Our lab conducted two studies aimed at establishing the effectiveness of CD in college women. The pilot study ($N=24$) targeted high-risk sorority members (C. B. Becker, Jilka, & Polvere, 2002) and compared two sessions of CD to a media advocacy intervention (MA). MA content was similar to that of CD, but replaced dissonance activities (e.g., role plays) with videos targeting the role of the media in the maintenance of the thin-ideal. We designed MA to tease apart the content of CD from the active, dissonance components. Both CD and MA reduced restraint, eating pathology, and body dissatisfaction. CD also resulted in decreased thin-ideal internalization, and yielded a greater reduction in dissatisfaction compared to MA.

The second trial targeted both higher- and lower-risk sorority members (C. B. Becker, Smith, & Ciao, 2005). Sorority volunteers ($N=149$) were randomized to CD, MA, or waitlist control. Results showed that both CD and MA reduced body dissatisfaction, restraint, and overall ED pathology at one month follow-up. Both lower- and higher-risk members also benefited from both CD and MA. Only CD, however, reduced internalization compared to waitlist.

Although the results from the above trials are promising, questions remain regarding the effectiveness of CD in preventing EDs, particularly on college campuses under naturalistic

conditions. Thus, the purpose of this study is to move further along the efficacy/effectiveness continuum by investigating four issues. First, it is important to determine if CD is effective when implemented in the universal, semi-mandatory format that universities often prefer. This question is particularly relevant for a dissonance intervention given that mandatory participation may reduce the dissonance produced by CD. More specifically, participants might reduce dissonance by noting that they are speaking against the thin-ideal because they are required to do so through mandatory participation, rather than by decreasing investment in the thin-ideal. Second, it remains unclear to what degree efficacious interventions, such as CD, can be incorporated into existing social systems in a manner that will be viable over a significant time period. A related third concern relates to the testing of such social system based programs. Many of the priorities of such systems (e.g., required participation, low desire for control groups) clash with demands of empirical methodology (e.g., randomized assignment, voluntary participation), making it difficult to assess programs adapted to particular social systems. A final question pertains to the feasibility of implementing CD on a moderately large scale under naturalistic conditions, which include the use of natural providers (e.g., health educators or peer facilitators). For example, Stice and colleagues implemented most groups using doctoral-level psychologists and/or doctoral-level graduate students. It is critical, however, to determine if CD, which is moderately challenging to deliver, can be successfully implemented by natural providers. It also is important to determine whether an intervention that is less challenging to implement, such as MA, might prove superior when delivered by natural providers.

In this study, we examined the effectiveness of CD and MA when they were integrated into an existing social system event (i.e., sorority new member orientation); implemented on a universal, semi-mandatory basis; and delivered by natural providers (i.e., peer-facilitators). This

study differs from C. B. Becker et al. (2005) in that the interventions were semi-mandatory and delivered by peer-facilitators (i.e., versus a psychologist with undergraduate co-leaders). We also eliminated the waitlist control for pragmatic reasons (i.e., sororities were unwilling to support randomization to a waitlist group as part of new member orientation).

Whereas CD is moderately difficult to implement, MA requires less skill given the reliance on video recordings. Thus, although we hypothesized that both interventions would significantly reduce restraint, body dissatisfaction, and eating pathology, we hypothesized that MA would do so to a greater degree than CD when delivered by peer-facilitators. Based on our previous studies, however, in which MA failed to significantly reduce thin-ideal internalization, we hypothesized that only CD would significantly reduce internalization. We also hypothesized that effect sizes would be lower in this study compared to C. B. Becker et al. (2005; MA range $d = .28-.39$; CD range $d = .31-.40$), because we used both peer-facilitators (as opposed to a licensed PhD provider) and semi-mandatory participation.

Method

Participants

New sorority members to the six campus sororities¹ ($N = 90$) of a private, liberal arts university participated in this study. Most students were first-year or sophomore students. The mean age was 18.66 ($SD=.62$), and the mean body mass index (BMI), calculated from self-report weight and height, was 22.28 ($SD=2.39$), which is in the normal adult weight range. A BMI of 18.5 to 24.9 is considered healthy. Seventy-eight percent of the sample was Caucasian, 9% Hispanic, 6% Asian, and 1% African American. Six percent of the sample did not respond to this question. The ethnic diversity of the sample is comparable to the ethnic diversity of the university where the study was conducted.

Procedure

Overview and Participant Flow

All new members were required to participate in the intervention groups unless they were excused by a sorority officer. Because it is unethical to semi-mandate participation in a study, the “study” was separated from the “program.” Hereafter the study is referred to as the study and the program is referred to as the Sorority Body Image Program (SBIP). Study participation consisted of voluntary completion of baseline and follow-up measures. Both the study and SBIP were approved by Student Affairs. The study also was approved by the university IRB.

Of the 108 women who accepted new member offers, seven did not pursue membership and one deferred orientation. Ten women were granted excused absences for various reasons (e.g., orchestra practice). Of the remaining 90 women, 100% agreed to participate in the study.

New members were randomly assigned into MA or CD. The sororities coordinated their orientations around the SBIP, which was delivered to new members simultaneously in 12 groups (6 MA and 6 CD). Members from different sororities were mixed in the individual groups. To ensure equal representation of all sororities in each of the 12 groups, undergraduate research assistants (RAs) stratified participants by sorority before randomizing members to one of the 12 groups. Because the RAs knew many of the participants, they assigned members to the 12 groups prior to randomly assigning the groups to condition so as to reduce selection bias.

SBIP

At the start of SBIP, new members were led to a lecture hall by a sorority officer and then oriented to the program en masse. Orientation included the history and rationale of the SBIP, along with orientation to the study, which emphasized the optional nature of study participation.

Interventions

CD and MA consisted of two 2-hour sessions. Groups were staffed with three or four unpaid peer-facilitators. Most reported participating as facilitators because they believed the program was “important.”

Following an introduction, which included group members verbally expressing their willingness to participate, all CD and MA groups engaged in a group task of identifying and analyzing the thin-ideal. Other common components of the CD and MA interventions included watching a 7-minute video highlighting the use of digital enhancement in the media, and viewing “before and after” photos that demonstrated the changes in a photo that can be created by spending \$100 on professional digital editing.

Components unique to Cognitive Dissonance.²

The remainder of the first session consisted of members individually writing the costs of pursuing the thin ideal, and then discussing these costs and the realistic attainability of the thin-ideal as a group. Participants were next given a counter-attitudinal homework assignment³, which consisted of standing in front of the mirror in as little clothing as possible (at home, and in private) and noting positive mental, physical, and emotional attributes about themselves.

In session two, members shared positive attributes from the mirror exercise. Members were then divided into subgroups for a role-play exercise. Facilitators played the following roles: a compulsive exerciser, an “herbal weight loss product junkie,” or an excessive/unhealthy dieter. Subgroup tried to convince each facilitator to give up pursuit of the thin-ideal. Next, members practiced making statements counter to pursuit of the thin-ideal, and created a top-ten list of strategies for resisting the thin-ideal. Finally, they chose a take home self-affirmation exercise (e.g., making a pact with a friend to stop negative body talk).

Components unique to Media Advocacy²

The remainder of session one consisted of members watching a video of the portrayal of women in advertisements. Discussions were conducted at designated points during the video.

Session two started with a discussion of the attainability of the thin-ideal. Next, participants discussed ways to resist media messages regarding the thin-ideal, and the costs of pursuing the thin-ideal. Members then viewed an edited video on EDs and body image, which included testimonials from women who had ceased pursuit of the thin-ideal. It also demonstrated the long-term effects of EDs. Information regarding ED behaviors (e.g., vomiting) was removed to reduce the probability of normalizing such behaviors. After discussing the video, members generated strategies to resist thin-ideal media messages.

The Study

Study participants completed a consent form and a baseline questionnaire packet during orientation. Post-intervention measures were administered after session two. Follow-up packets were collected seven weeks and eight months after the end of the program. Follow-up data were collected at the sororities' regular meetings.

Peer-Facilitators and Facilitator Training

We recruited sorority peer-facilitators through informational sessions. Facilitator requirements included sorority membership and having completed either CD or MA during a previous study. We granted exceptions to the second criteria for two sorority leaders to maintain a collaborative relationship with sorority leaders. Prospective facilitators were asked to not participate if they had any active ED concerns. Review of facilitator data collected for a related study suggests that facilitators were free of major body image concerns and/or eating pathology.

Thirty-eight facilitators completed two 4.5-hour experiential training sessions, one training session for each intervention session. We assigned facilitators to a "team," consisting of

three to four co-facilitators. Each team was assigned to a training group, consisting of three teams, yielding two CD and two MA training groups and 12 facilitator teams. We planned to train former CD participants as facilitators in CD, and the same with MA. This was not possible for scheduling reasons. Thus, some MA participants were trained in CD and vice versa.

During training, facilitator teams administered a slightly abbreviated version of each session once and were participants twice. Thirty minutes of supervision was provided after each team administered the session. Supervision was provided by a licensed doctoral level psychologist, and by four sorority RAs, who had previous experience as co-facilitators in the Becker et al. (2005) study. In sum, each peer-facilitator in the present study received supervision specific to her experience running the group, and she heard supervision for two other sessions.

The protocols included suggested amounts of time for each section. We emphasized the importance of balancing being a group leader (e.g., paying attention to group dynamics) while at the same time adhering to the protocol and the specified time guidelines. We also highlighted sections that had to be delivered verbatim to maintain standardization, versus sections where facilitators could interject their own style to a greater degree. Sessions during SBIP were audio-taped to assess adherence. Tapes were rated by trained RAs (kappa range = .76-1.00, $M = .82$ on training tapes), who used a measure with specific tasks facilitators were supposed to complete (e.g., “asked ‘has this thin-ideal always been the standard of beauty;’” “Discussed origin of the thin-ideal and elicited such sources as media, fashion industry, weight loss industry” etc.). RAs rated each item on a 4-point Likert scale ranging from “did not complete at all” to “fully completed.” With the exception of session one in one CD group, all groups demonstrated acceptable adherence. The lower adherence CD group included a vocal member who was highly invested in the thin-ideal. After session one, facilitators in this group sought additional

supervision. Session two for this group evidenced good adherence. Because of the naturalistic nature of the study and because it is realistic to expect undergraduate facilitators to encounter resistant participants in a semi-mandatory program, we included this group in all analyses.

Measures

Our primary dependent variables were restraint, eating pathology, body dissatisfaction, and thin-ideal internalization. We assessed dietary restraint with the Dutch Restrained Eating Scale (van Strien, Frijters, van Staverson, Defares, & Deurenberg, 1986), which is a 10-item measure. Participants respond to questions such as “do you deliberately try to eat foods that are slimming” on a 5-point Likert scale. Research supports the internal consistency ($\alpha = .95$) and predictive validity of the DRES (Stice & Agras, 1998; van Strien et al., 1986). Internal consistency in the present sample also was good ($\alpha = .95$).

We assessed eating pathology with a composite bulimic scale created by summing the diagnostic items (e.g., “over the past 28 days how many times have you taken laxatives as a means of controlling your shape or weight?”) of the Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994). The EDE-Q is a self-report version of the Eating Disorders Examination (EDE; Fairburn & Cooper, 1993), a semi-structured interview considered to be the gold standard in the assessment of eating disorders. We did not use the EDE in this study because all members of the research team were either fellow students or a potential professor who might know the participants. Thus, we relied on self-report to protect participants’ confidentiality. The EDE-Q assesses eating behaviors and attitudes over one-month. Research supports the two week test-retest reliability, internal consistency, and temporal stability of the EDE-Q (Luce & Crowther, 1999; Mond, Hay, Rodgers, Owen, & Beumont, 2004). The EDE-Q

bulimic scale provides a self-report comparison to the EDE bulimic composite used by Stice et al. (in press). The bulimic composite had adequate internal consistency ($\alpha = .69$) at baseline.

Thin-ideal internalization was assessed using the Ideal-Body Stereotype Scale-Revised (IBSSR: Stice, Ziemba, Margolis, & Flick, 1996), which is a 10-item measure. Participants respond to questions such as “thin women are more attractive” on a 5-point Likert scale. The IBSS-R has acceptable test-retest reliability ($r = .63$) (Stice, 2001) and good internal consistency ($\alpha = .89$) (Stice & Agras, 1998). Internal consistency was also good in this sample ($\alpha = .91$)

We used the Body Shape Questionnaire (BSQ: Cooper, Taylor, Cooper, & Fairburn, 1987) to assess body dissatisfaction. Participants complete 34 items that ask such questions as “have you felt ashamed of your body.” Responses from a 6-point Likert scale are summed. Research indicates that BSQ scores differ for ED patients compared to non-patients, and that scores correlate with scores from the Eating Attitudes Test (Cooper et al., 1987). The latter finding provides some evidence of concurrent validity. Other research also supports the concurrent validity and test-retest reliability in a United States sample (Rosen, Jones, Ramirez, & Waxman, 1996). In the present sample, internal consistency was good ($\alpha = .97$).

Results

This study investigated prevention of EDs, not treatment. Thus, we excluded members who met criteria for an ED based on EDE-Q responses to diagnostic items. The EDE-Q has previously been used to identify likely ED cases (e.g., (C. B. Becker et al., 2005; Hulley & Hill, 2001). Six likely cases were randomized to CD and four to MA. Although this difference was not significant, we excluded these cases from analyses, yielding a final sample of 80 participants.

One-way analysis of variance (ANOVA) revealed no significant differences between CD and MA in age or BMI. One-way ANOVAs also indicated no significant baseline differences on

dependent variables. Despite this, we used repeated measures ANOVAs to control for possible dependent variable baseline differences. Eight-nine percent of analyzed CD participants (i.e., 34 of 38) and 88% (37/42) of analyzed MA participants completed the 7-week follow-up, and 74% (28/38) and 69% (29/42) completed 8-month follow-up. Analyses were conducted as intent-to-treat by carrying forward last scores for participants who did not complete follow-ups. Baseline analyses comparing participants who did and did not complete follow-up yielded no significant differences.

Table 1 shows dependent variable means by group and assessment period. To facilitate comparison with our earlier study, intent-to-treat Cohen's d is included for each group from baseline to 7-week and 8-month follow-up. We conducted 2 x 4 (group x time) repeated measure ANOVAs to examine differences between the groups over time on each of the dependent variables. We used eta-squared values for effect sizes. We conducted follow-up paired t-tests (one-tailed) between baseline and each post-intervention assessment to determine significant within group changes from baseline (see Table 1). These latter analyses should not be used to infer differences between groups beyond those evidenced by the repeated measure ANOVAs.

Dietary Restraint (DRES)

The ANOVA for the DRES yielded a time effect, $F(1, 78) = 6.92, p = .01, \eta^2 = .08$, and a group by time interaction, $F(1, 78) = 5.86, p = .02, \eta^2 = .07$. There was no group effect, $F(1, 78) = .00, p = .99, \eta^2 = .00$. CD differed significantly over time compared to MA. CD evidenced a small to moderate effect at 8-months ($d = .31$), versus no effect in MA ($d = -.03$).

Eating Pathology (EDE-Q Bulimic composite)

The ANOVA for the EDE-Q bulimic composite produced a time effect, $F(1,72) = 13.30$, $p = .0001$, $\eta^2 = .16$. There was no group effect, $F(1,72) = .02$, $p = .88$, $\eta^2 = .00$, or interaction, $F(1,72) = .32$, $p = .58$, $\eta^2 = .00$. Both groups significantly improved on bulimic pathology, with small to moderate effect sizes at 8-month follow-up (MA $d = .35$, CD $d = .44$).

Thin-ideal Internalization (IBSS-R)

The IBSS-R ANOVA yielded a time effect, $F(1, 70) = 9.64$, $p = .003$, $\eta^2 = .11$, and an interaction, $F(1, 70) = 5.50$, $p = .02$, $\eta^2 = .06$. There was no group effect, $F(1, 70) = .11$, $p = .74$, $\eta^2 = .00$. At 8-month follow-up CD produced a moderate to large within group effect ($d = .61$). In contrast, MA produced a very small effect ($d = .14$).

Body Dissatisfaction (BSQ)

For the BSQ, we found a time effect, $F(1, 77) = 9.28$, $p = .003$, $\eta^2 = .10$, an interaction, $F(1, 77) = 3.91$, $p = .05$, $\eta^2 = .04$, but no group effect, $F(1, 77) = .002$, $p = .98$, $\eta^2 = .00$. The 8-month effect for CD was small to moderate ($d = .36$), and very small for MA ($d = .12$).

Discussion

This study investigated the effectiveness of two ED prevention interventions when they were incorporated into an existing social system, implemented on a semi-mandatory basis, and delivered by undergraduate peer-facilitators. Results for CD were promising. Peer-facilitated CD resulted in 8-month reductions in restraint, eating pathology, thin-ideal internalization and body dissatisfaction. These findings provide additional support for the effectiveness of CD.

Results also suggest that CD can be implemented by natural providers such as peer-facilitators. Contrary to our hypothesis that this study would produce lower effect sizes, 8-month within group effect sizes ($d = .31-.61$) were comparable to the effect sizes found at one month in

our previous study (C. B. Becker et al., 2005; $d = .31-.40$). Although CD is not an overly challenging intervention for doctoral level providers, delivering it competently requires some skill. Thus, we were pleased to find that undergraduates were able to implement the intervention with reasonably intensive training.

We were also pleased to find positive results given the semi-mandatory format. Although a recent meta-analysis suggests that targeted prevention produces larger effects (Stice & Shaw, 2004), it often is not viable to selectively target high-risk students. With one exception (i.e., C. B. Becker et al., 2005), previous studies of CD recruited high-risk volunteer samples. Yet, if CD is to be broadly disseminated, it must be recognized that university officials often want to include both low- and high-risk students through *required* attendance (e.g., mandatory seminar on student drinking) due to the logistical difficulties of identifying high-risk students. In this study many participants reported entering the program reluctantly, and most participated in SBIP because they didn't believe they had a choice. Thus, it is promising to see lasting improvement in CD participants given that a semi-mandatory format a) tends to appeal to university decision makers yet b) had the potential to disrupt a dissonance based intervention.

As noted by Levine and Piran (1999), most prevention research, including most CD research, has targeted individuals by attempting to create change in the individual, not a larger social system. Yet, prevention efforts with individuals may be more effective when accompanied by simultaneous efforts to engage social systems that influence individuals (Levine & Piran, 1999). Engagement of social systems also may facilitate long term implementation of programs because social systems may employ significant resources to maintain useful programs. The present study provides a useful replication of our previous studies, and further supports the viability of incorporating CD into a relevant social system, namely a sorority system.

In contrast to our hypotheses, MA performed relatively poorly. Within group effect sizes indicate minimal change in restraint, internalization, and body dissatisfaction at 8-months, and MA did not outperform CD. MA did, however, result in sustained reductions in bulimic pathology at follow-up. This is important given that the bulimic composite score corresponds to the most pathological behaviors (i.e., binge eating, purging). The relatively poor performance of MA may indicate that the active dissonance activities are an important component of CD in maintaining gains over time. Results also suggest that the ease of implementing MA did not confer it a significant advantage over CD, even with peer-facilitators.

This study has a number of limitations, many of which are commonly associated with effectiveness studies. Assessment was limited to self report, and we were unable to include a no-treatment control group for comparison. The use of an 8-month follow-up was an improvement on our previous studies, but a longer follow-up would be better, as would a larger, more diverse sample. Finally, although we believe that spillover effects between the two interventions are minimal, this is a possible confound. Anecdotal information suggests that sorority members have a tendency to discuss the common elements of both programs (i.e., the information) and have minimal awareness of the differences between the two groups. Nonetheless, the risk of spillover in a study such as the present one cannot be completely discounted.

In sum, the present study provides additional support for the effectiveness of CD when delivered in a semi-mandatory format which appeals to many social systems. Results also suggest that CD may be an effective prevention program that could be of use at other universities, particularly given the finding that CD can be adequately delivered by peer-facilitators. The present study needs replication, however, both in sorority systems and in other social systems.

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Footnotes

¹ Campus sororities are non-residential and not affiliated with national sororities. According to the Trinity University Student Affairs Office, the existence of only local and non-residential sororities is somewhat unusual. Most university Greek systems, however, are quite unique. To our knowledge, there is no data regarding the frequency of local versus national sororities.

² Protocols for both interventions were created by modifying, with permission, an unpublished four session cognitive dissonance protocol developed by Stice and Presnell.

³The inclusion of both higher- and lower-risk participants raises the question as to whether lower-risk participants experience dissonance during the mirror exercise, and whether it is truly counter-attitudinal. Review of audiotaped sessions, however, indicates that virtually all participants reported finding this task unusual and to some degree difficult because they all were used to critiquing themselves in the mirror. This included participants who reported being able to say positive things about themselves in other contexts.

Table 1

Means and Standard Deviations for Dependent Measures and BMI

	Baseline	Posttest	7-Week Follow-up	8-Month Follow-up	7W <i>d</i>	8M <i>d</i>
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>		
Restraint						
DRES CD _a	2.57 (.91)	2.35 (.90) ***	2.34 (.87) ***	2.29 (.89) **	.26	.31
DRES MA _b	2.41 (.85)	2.29 (.92) *	2.40 (.91)	2.45 (.92)	.01	-.03
Eat Pathology						
Bulimic CD _a	18.54 (13.53)	14.38 (12.69) **	13.73 (13.01) ***	12.54 (13.66) ***	.36	.44
Bulimic MA _a	17.68 (12.81)	13.69 (11.54) **	13.91 (11.59) **	13.21 (12.58) **	.31	.35
Internalize						
IBSS-R CD _a	3.61 (.56)	3.19 (.93) ****	3.23 (.93) **	3.08 (1.10) **	.50	.61
IBSS-R MA _b	3.41 (.72)	3.25 (.78) **	3.39 (.72)	3.30 (.83)	.03	.14
Body Dissat						
BSQ CD _a	87.17 (33.16)	80.10 (28.46) ***	75.74 (30.58) ***	75.31 (32.47) ***	.36	.36
BSQ MA _b	85.15 (29.00)	75.92 (27.72) ****	78.32 (27.36)	81.31 (33.40)	.24	.12

Note: Cognitive Dissonance (CD) *n* = 38. Media Psychoeducation (MP) *n* = 42. All analyses are intent to treat. 7W *d* = Cohen's *d* for baseline to 7-week follow-up. 8M *d* = Cohen's *d* for baseline to 8-month follow-up. Bulimic = EDE-Q Bulimic Composite. Internalize = Thin-ideal Internalization. Groups with different subscripts were statistically significantly different over time ($p < .05$). Within group differences comparing baseline to post-treatment and follow-ups with paired t-test are indicated by superscript: * = $p < .05$; ** = $p < .01$; *** = $p < .001$; **** = $p < .0001$