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Assessing Program Sustainability in an Eating Disorder Prevention Effectiveness Trial Delivered by College Clinicians

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Abstract

Sustainability of the *Body Project*, a dissonance-based selective eating disorder prevention program supported by efficacy and effectiveness trials, has not previously been examined. This mixed-methods study collected qualitative and quantitative data on training, supervision, and the intervention from 27 mental health clinicians from eight US universities who participated in an effectiveness trial and quantitative data on 2-year sustainability of program delivery. Clinicians, who were primarily masters-level mental health providers, had limited experience delivering manualized interventions. They rated the training and manual favorably, noting that they particularly liked the role-plays of session activities and intervention rationale, but requested more discussion of processes and group management issues. Clinicians were satisfied receiving emailed supervision based on videotape review. They reported enjoying delivering the *Body Project* but reported some challenges with the manualized format and time constraints. Most clinicians anticipated running more groups after the study ended but only four universities (50%) reported providing additional *Body Project* groups at the 1-year follow-up assessment and sustained delivery of the groups decreased substantially two years after study completion, with only one university (12%) continuing to deliver groups. The most commonly reported barriers for conducting additional groups were limited time and high staff turnover.

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Keywords

eating disorder; prevention; group interventions; sustainability; dissemination

Assessing Program Sustainability in an Eating Disorder Prevention Effectiveness Trial Delivered by College Clinicians Approximately 13% of young women experience eating disorders by age 20 (e.g., Stice, Marti, & Rohde, 2013a). Eating disorders are marked by chronicity, distress, functional impairment, comorbidity, and early mortality (Arcelus, Mitchell, Wales, & Nielsen, 2011; Swanson, Crow, Le Grange, Swendsen, & Merikangas, 2011), suggesting the need for prevention efforts to both reduce suffering and because treatment has limited efficacy and reach (Bulik, 2013). The *Body Project*, a selective prevention program targeting women who report body image concerns, is one of only two prevention interventions shown in an efficacy trial to reduce risk for future onset of eating disorders over 3-year follow-up (Stice, Marti, Spoor, Presnell, & Shaw, 2008; Stice, Rohde, Shaw, & Marti, 2012). The intervention is brief (four 1-hour sessions) and relies on dissonance-induction to reduce internalization of the thin ideal through verbal, written, and behavioral exercises. Extensive evidence supports its efficacy, both compared to controls receiving no intervention and those in alternate interventions across independent research labs (e.g., Becker, Smith, & Ciao, 2005; Halliwell & Diedrichs, 2014; Stice et al., 2008; Stice, Shaw, Burton, & Wade, 2006).

As the first step towards disseminating the *Body Project*, we conducted two effectiveness trials, which are critical to understanding whether prevention programs with empirical support from highly controlled efficacy trials produce effects when delivered by endogenous providers under more ecologically valid conditions. Effectiveness trials can also provide information on the cost of program delivery and the degree of training and supervision necessary to achieve intervention effects, which is critical for program dissemination and sustainability. In the first effectiveness trial wherein clinicians in seven US high schools were responsible for recruitment and intervention delivery, participants who were randomly assigned to the *Body Project* showed greater reductions than educational brochure control participants in eating disorder risk factors and symptoms through 3-year follow-up (Stice et al., 2009; Stice et al., 2011). In the second effectiveness trial, clinicians at eight US universities were responsible for recruitment and intervention delivery of the *Body Project*. Eating disorders often emerge during this age period (Stice et al., 2013a; Hudson, Hiripi, Pope, & Kessler, 2007) and colleges represent a large population that can be reached with eating disorder prevention programs. In the second effectiveness trial, participants assigned to the *Body Project* showed greater reductions in eating disorder risk factors and symptoms relative to educational brochure controls through 3-year follow-up (Stice, Rohde, Butryn, Shaw, & Marti, 2015). Effects were larger in the second effectiveness trial, potentially due to the use of an enhanced-dissonance intervention, improved selection, training, and supervising of clinicians, or higher levels of body dissatisfaction in the university sample.

The second effectiveness trial collected qualitative and quantitative data from clinicians on training, supervision, and barriers to program delivery and assessed continued delivery of the *Body Project* once it was not offered as part of the research trial, which is the focus of

the present report. Attention to program sustainability has increased as policy makers and funders have become concerned with how to most effectively allocate limited resources (Nilsen, Timpka, Nordenfelt, & Kindqvist, 2005). The sustainability of prevention interventions is seldom examined (Goodson, Murphy Smith, Evans, Meyer, & Gottlieb, 2001), and there are concerns that intervention delivery will stop once external research support ends (Tierney, Miller, Overhage, & McDonald, 1993) and competing time demands emerge (Jaén et al., 2001). With the growing evidence-base for effective prevention programs for a variety of health and mental health problems (e.g., Griffin & Botvin, 2010; Swisher, 2000), attention is shifting to studying the process of dissemination and sustainability (Botvin, 2004; Elliott & Mihalic, 2004; Scheirer, 2005). Sustainability has been defined as “the process of ensuring an adaptive prevention system and a sustainable innovation that can be integrated into ongoing operations to benefit diverse stakeholders” (Johnson, Hays, Center, & Daley, 2004).

Current Study

The present mixed-method study sought to provide an initial step to understanding the specific factors that influence the sustainability of a successful and efficacious eating disorder prevention program, by (a) collecting qualitative and quantitative data on the reactions of college clinicians to their experience delivering the *Body Project* and (b) evaluating the degree to which universities continued to offer the program during the two years following their involvement in the research. The report has three aims: (1) Describe the reactions of participating clinicians to the intervention, training, and supervision processes; (2) Examine the extent to which the *Body Project* continued to be delivered in the two years following study involvement; and (3) Describe perceived barriers to program sustainability. Following the practice generally used in sustainability research (e.g., Swain, Whitley, McHugo, & Drake, 2010), we created qualitative and quantitative items specific to the setting, assessing the occurrence of barriers related to three main categories: students (e.g., student lack of interest, stigma associated with participation, competing time demands for students), staff (e.g., insufficient training, inadequate supervision, time constraints), and the system (e.g., cost, staff availability, space limitations). To our knowledge, no previous research has focused on the sustainability of eating disorder prevention programs. Our intention is that lessons learned may apply to sustainability efforts with other types of evidence-based prevention and treatment interventions.

Method

Clinician Recruitment and Descriptive Information

The study took place at eight universities in Oregon, Texas, and Pennsylvania, USA. In 2009 – 2010, we recruited two or more clinicians at each university. Based on procedures we had successfully employed in the high school effectiveness trial, we asked to meet with the director of the college health or mental health center to discuss (a) the prevalence of eating disorders, (b) the associated functional impairment and elevated morbidity and mortality, and (c) empirical support for the *Body Project*. We then asked if the center would partner with us to evaluate whether this eating disorder program produces effects when real-

world providers recruited participants, and delivered the intervention. If agreeable, the director was asked to provide contact information for potential clinicians (several of the sites had already identified staff members interested in this project). We asked the clinicians at each school to recruit a minimum of 48 student participants during an academic year (to be randomized by research staff to the scripted four-hour *Body Project* group or an education brochure control) and conduct a minimum of three *Body Project* groups. Additional details regarding the student participants, consent, content of the *Body Project* intervention and the brochure condition, assessor training and supervision, and student participant compensation are provided in Stice, Butryn, Rohde, Shaw, & Marti (2013b).

A total of 27 clinicians were recruited and completed the training workshop. Descriptive information of the sample is provided in Table 1. The vast majority were women (81%) of non-Hispanic White race/ethnicity (96%). Approximately half were MA-level clinicians, generally with a clinical or counseling psychology background (reported theoretical orientation was 40% cognitive-behavioral, 30% psychodynamic, 30% humanistic/client-centered). Two-thirds had a self-reported body mass index (BMI; kg/m²) in the healthy range and 15% had a history (not recent) of eating disorders. Indicative of a high degree of job turnover, more than half had been in the current position for one year or less and only 8% had been in their current position for five years or longer, though 44% had worked with this age group for 5 years or more. Given that therapists were self-selected, it was not surprising that they tended to view eating disorders as a highly significant problem in their student population. Five questions were assessed at baseline to rate degree of experience (0 = no experience at all; 100 = extensive experience) in (a) conducting prevention or treatment interventions, (b) using manual-based interventions, (c) providing interventions in a group format, (d) eating disorder prevention or treatment, and (e) conducting programs with adolescents/young adults. The clinicians were most experienced intervening with this age group, followed by experience conducting prevention interventions, group programs, and eating disorder interventions (treatment or prevention); ratings of experience delivering manualized interventions were considerably lower, with 41% reporting no past experience using a manual-based approach.

Clinician Training and Supervision

Clinicians were provided a free onsite training workshop on recruitment and delivery of the *Body Project* (many were able to apply this training to their continuing education requirements). Training, which was conducted by the third or fourth author, involved reading key trials of the *Body Project* (Stice et al., 2006, 2008) and the scripted manual, and attending a 4-hour workshop to learn the intervention rationale, role-play intervention components, and discuss process issues. The *Body Project* is generally conducted by pairs of leaders, so that if one leader is unable to attend a session, the other can lead it. However, it was permissible to have only one facilitator at a university, if necessary due to staff availability and preference. Clinicians were not paid for attending the training or conducting groups, but received \$50 for completing the three project assessments (see below).

To provide clinical supervision and obtain data on intervention fidelity, one of three supervisors (the first, second, and third authors) reviewed videotapes of all four sessions of a

clinician's first group and a randomly selected 50% of sessions from subsequent groups. Clinicians were sent supervisory e-mail messages offering praise and constructive suggestions. Reviewed sessions were also coded for intervention fidelity and competence. Key components of each session were rated for presentation accuracy (10-point scale). Clinical competence was rated with 12 items using 10-point scales with five behavioral anchors for each item. Half of the rated sessions were independently coded by pairs of supervisors; ratings were reviewed and discrepancies resolved by consensus. Inter-rater agreement between pairs of rating supervisors was adequate for fidelity ($ICC = .65$) and competence ($ICC = .72$).

Assessments

Exit interview: Assessing satisfaction with training and supervision—

Standardized exit interviews were conducted by telephone (by the second author) with clinicians after they had completed two group cohorts. These interviews took between 15–20 minutes, and were transcribed via laptop computer during the interview by the interviewer; grammatical edits were made directly following the interviews, and copies of the interviews were electronically archived. Although interviews were not audio-recorded, the content and meaning of the interviews was preserved in the transcription process. What is important in transcription is that the verbal responses stay true to their original content (Poland, 2002) and that the transcription convention is suitable for analysis (Edwards, 1993); both aspects were achieved given the nature of the interview questions. Completed interviews were also sent to the research team so that any pertinent issues regarding facilitators' experiences could be considered for the next round of *Body Project* groups. These interviews were conducted with a total of 19 (70%) clinicians from seven of the eight universities (four therapists at the 8th university had conducted only one group cohort each). The interview included open-ended questions on what they did or did not like about the training, what they did or did not like about running *Body Project* groups, and ideas regarding how to improve the intervention. In addition, the following items were rated from 0–100, with higher scores indicating a more positive response: (1) how well do you feel you facilitated groups for this study; (2) how satisfied were you with the training you received in this intervention; (3) how enjoyable was the training you received in this intervention; (4) how valuable were each of the following components of the training you received: facilitator's guide, presentation about rationale for intervention, role-plays, discussion of process issues; (5) how much preparation did the training provide you in the following areas: understanding the conceptual basis for the intervention, being ready to deal with common problems that come up in groups, having general group management skills, being able to make appropriate referrals for participants with eating disorders or other psychiatric problems; (6) how satisfied were you with the supervisory feedback you received by email during the intervention; (7) how enjoyable was running the intervention groups; (8) how effective do you think the groups were for prevention eating disorders; (9) how likely do you think you will be to want to conduct these groups again; and (10) how likely will you be to recommend this intervention to other staff in your counseling center or other counseling centers.

One and Two-Year Follow-up interviews: Assessing sustainability and perceived barriers—

Additional phone interviews were conducted by the second author

with the most senior and/or knowledgeable facilitators at 1- and 2-year follow-up to estimate how many universities continued to deliver the intervention. These interviews, which assessed 6 of 8 universities at 1-year follow-up ($n = 10$ facilitators) and all 8 universities at 2-year follow-up ($n = 8$ facilitators), examined whether the centers had continued to conduct *Body Project* groups, and if not, what barriers emerged. We asked facilitators to state which of the following 9 factors created the greatest challenges to conducting additional *Body Project* groups: (1) Student lack of interest, (2) Stigma associated with participation for students, (3) Students' competing time demands, (4) Insufficient staff training for the intervention, (5) Inadequate staff supervision for the intervention, (6) Staff time constraints, (7) Costs to the organization to deliver the intervention, (8) Insufficient availability of staff to deliver the intervention, and (9) Insufficient space to deliver the interventions. Because the interview questions were structured and the number of facilitators contacted relatively small, the open-ended interview responses were coded manually, rather than electronically, according to common themes that emerged (Bisit, 2003); all data were relevant to the study and were used in the coding. The six phases of thematic analysis, as outlined by Braun & Clarke (2006), guided the analysis of the interview data: (1) Familiarizing yourself with the data through repeated reading; (2) Generating initial codes for potential themes; (3) Searching the coded data for candidate themes; (4) Reviewing and refining themes; (5) Defining and naming themes; and (6) Producing the report. An inductive and semantic approach to coding was used, whereby themes (i.e., patterns of responses or meaning in the data set) were strongly linked to the data and were coded at the explicit meaning of the recorded information, rather than a theoretical and latent approach, as our coding categories were not driven by any pre-existing theories or coded for underlying assumptions or conceptualizations (Braun & Clarke, 2006). Codes and themes from the data as transcribed were reviewed by the first author before final codes were agreed upon; almost no discrepancies were noted.

Results

Aim 1: Clinician Reactions to Training, Supervision, and Intervention

Quantitative data from the exit interviews (conducted after clinicians had conducted two group cohorts) appear in Table 2. Ratings regarding the *Body Project* training are shown in the upper portion of Table 2. Satisfaction with the training was generally very high and clinicians reported the role-plays (which covered all 4 sessions), the facilitator's guide, and the intervention rationale as most valuable. Components of the training that received the lowest ratings concerned preparation to make appropriate referrals if needed, adequate discussion of common process issues in the intervention, and a discussion of general group management skills.

When asked qualitatively what they liked about the training, many clinicians reported appreciating running through the entire script and getting feedback ($n = 13$ of 19), that experienced facilitators/researchers were present ($n = 5$), that the trainers were supportive and interested in our opinions ($n = 4$), and that the training was very thorough ($n = 3$). When asked what they did not like about the training, the most common responses were "nothing"

($n = 7$), followed by that it was too long ($n = 3$), and that it covered too much/was rushed ($n = 3$).

The clinicians were highly satisfied with the supervision process used in this trial ($M = 92.7$ of 100, Table 2). When asked qualitatively what they liked about the supervision, the majority of responses ($n = 14$ of 19) related to the attention to detail (e.g., that the feedback was specific, tangible, applicable, provided structured areas of improvement). Other common responses were the positive nature of supervision ($n = 12$; the process was affirming, honest, constructive, supportive, encouraging), its timeliness ($n = 6$), and that fact that the supervisors had clearly watched the entire video ($n = 4$). When asked what they did not like about the supervision process, the most common response was “nothing” ($n = 8$). Others reported issues with emailed supervision ($n = 3$, emails are different than in-person supervision, getting multiple emails if two supervisors watched a session, emails being too long), and the videorecording process ($n = 3$, being videotaped, difficulty uploading the video).

The clinicians had high ratings of enjoyment in running *Body Project* groups ($M = 86.7$, though scores varied considerably) and perceived the program to be effective ($M = 78.0$; Table 2). When asked specifically what they liked about running the groups, responses were quite varied. The most frequently reported category involved aspects of the intervention content (noted by 16 of 19 respondents; e.g., importance of topic for young women, ease of program delivery, participatory nature of the intervention, use of homework). The second most frequently mentioned category ($n = 14$) consisted of personal satisfaction factors (e.g., it was fun to run the group, they enjoyed helping at-risk young women through college, they enjoyed watching the empowering behavioral and attitudinal changes participants made in the group). The third most frequently mentioned category ($n = 12$) involved participant factors (e.g., participants were open, positive, engaged).

When asked what they did not like about the running the groups, the most frequently mentioned response ($n = 12$ of 19) involved difficulties following a manualized intervention (e.g., hard to stick to script, felt constrained or bored by script, found script transitions awkward, wanted to do more process work), followed by feeling rushed to present all the session content ($n = 8$), and wanting smaller groups ($n = 3$).

When asked how to make the groups more effective, the only two suggestions made by more than one clinician were to have more time, both to feel less rushed and because change takes longer ($n = 4$) and to have follow-up sessions ($n = 4$). The last two questions involved anticipated future delivery of the *Body Project*; almost all clinicians said it was extremely likely that they would want to conduct more groups ($M = 95.5$) and that they would recommend the program to other staff in their clinic or center ($M = 92.2$).

We conducted exploratory analyses to examine whether either clinician age or number of years in the position was associated with reactions to the training, supervision, or future plans to conduct *Body Project* groups. We divided the sample on the basis of age (younger [30 years of age or less, $n = 8$] vs. older [31 or older, $n = 11$]) and number of years on the job (shorter [1 year or less, $n = 10$] vs. longer [more than 1 year, $n = 8$; 1 did not report]). T-

tests were conducted comparing the two dichotomous outcomes and we report large effect sizes ($d > .50$; none of the t-tests were statistically significant with the small sample size). Regarding perceived success in facilitating *Body Project* groups, older therapists ($d = .70$) rated themselves as more effective. In the category of training, clinicians who had been in their current job longer were more satisfied with the training they received ($d = .96$) and found the presentation about intervention rationale to be more valuable ($d = .78$); younger clinicians found the role-plays a more valuable component of the training ($d = .76$) and felt the training did a better job of preparing them to make appropriate referrals ($d = .54$). Clinicians who had been in their current position longer were more satisfied with the supervisory feedback they received ($d = .63$) and had a higher likelihood of wanting to conduct *Body Project* groups in the future ($d = .81$).

Aim 2: Degree of Sustainability Post-Study Involvement

One year after their involvement in the research ended, four of the eight universities (50%; one or more schools in each of the three participating states) reported having conducted additional *Body Project* groups: three universities conducted multiple additional groups (2–4 group cohorts per university) as part of the student counseling or health promotion services (i.e., the program was embedded in standard services) and the fourth university had a graduate student training clinician who conducted one additional *Body Project* group on her own due to her high level of enthusiasm for the program.

At 2-year follow-up, only one of the eight universities (12%) reported still conducting *Body Project* groups: the program was embedded in the campus health promotion center, where 6 cohorts of *Body Project* groups had been conducted since study completion. The director of that center, who had her doctorate in a public health education discipline, was a facilitator we had trained and worked with in the research trial.

Aim 3: Perceived Barriers to Sustainability

At both the 1- and 2-year follow-up assessments, we probed for the key barriers to sustainability, which are reported in rank order of frequency in Table 3. The primary barrier stated at 1-year follow-up was a student factor (competing demands on the college students' time), followed by staff- and system-factors (staff time constraints and lack of staff available to deliver the intervention). Possible perceived stigma by the students for participating in a body acceptance/eating disorder prevention intervention and organizational costs were the third stated barriers. Barriers in addition to those listed in the 9 categories (each mentioned by a single clinician) included: the cognitive dissonance model was incongruent with the counseling center's approach, the small size of the school made it difficult to recruit participants, and the intervention did not pertain to older students.

Key barriers to sustainability at the 2-year follow-up are reported in the last column of Table 3. The most frequent barrier shifted from a student factor to a system factor: the lack of staff to deliver the program, followed by constraints on staffs' time. Although not assessed as a barrier per se, an important contributing factor to poor sustainability may have been significant staff turnover. Of the 27 original clinicians, only 9 (33%) were still at the facility two years later (including 1 of 3 staff at the only school that continued to conduct *Body*

Project groups); none of the universities had retained all of their staff trained in the *Body Project* and 3 of the 8 (38%) had none of the clinicians still present two years later.

Discussion

The primary goals of this study were to describe the experience of clinicians who agreed to participate in an effectiveness trial evaluating the *Body Project* eating disorder prevention program on college campuses, using a mix of qualitative and quantitative methods, examine the unassisted continuation, or sustainability, of intervention delivery once the research study ended, and explore potential barriers to sustainability. To our knowledge, this is the first study to investigate the sustainability of an efficacious eating disorder prevention program. Participating clinicians appeared to be fairly typical of those providing treatment and prevention to US college students. Most were MA-level clinicians with a psychology background who had not been with the clinic or center long. Approximately one in seven reported a personal history with eating disorders, which is close to the prevalence of eating disorders in the female population (Stice et al., 2013a); this may have contributed to their motivation to participate.

Reactions to Study Participation

Participating clinicians were generally very satisfied with the training they received, though some low scores of satisfaction and enjoyment were reported. The training, like the manual, is highly structured and involves role-playing the entire *Body Project* intervention, breaking for discussion and feedback only after a complete session has been presented. This very practical, interactive training procedure appeared to be positively received by most participating clinicians. The training is brief (four hours), which was designed to facilitate adoption, though some clinicians felt under-prepared to provide referrals, anticipate process issues, and enhance their general skills in conducting a group-based intervention. Some felt the training was too long whereas others felt it was too short. These differences may be related to the degree of previous experience of the facilitator. Overall, the balance of responses suggests that the training duration is appropriate for the majority of clinicians. It is recommended that trainers explicitly assess the experience level of trainees before training and perhaps extend training, especially to address process and general group management skills, if the trainees are very inexperienced.

Supervision consisted of review of video-recorded sessions with emailed feedback provided before the next session. This supervision process is labor-intensive but was consistently well received. After their graduate training, few clinicians obtain observation-based supervision and we suspect that this process greatly increased their comfort in conducting the groups. The feedback was specifically designed to be supportive – it was generally provided by long-distance supervisors who had never met the clinician, which is potentially awkward for both the clinician and the supervisor. There were some concerns expressed regarding the supervision process, mainly involving the use of email rather than phone/in-person and the process of videotaping group sessions. Sessions were videotaped to promote accountability, which increases dissonance induction, but this process also appeared stressful to some of the clinicians. Our perception is that videotape review was critical to identifying and correcting

errors in facilitator understanding and effective delivery of the intervention, although the time demands of this approach for both clinicians and supervisors reduces its potential for scalability and sustainability.

Clinicians reported enjoying delivering the *Body Project* groups, and perceived the program to be generally effective. Though only a small portion of the clinicians had any prior knowledge of the *Body Project*, almost all valued aspects of the intervention content. At the time they joined the project, many (41%) were inexperienced with manualized interventions. Though this could have hindered sustainability, qualitative feedback suggested that the most commonly reported factor that facilitated their ability to deliver the intervention was the structure, detail, and ease of using the manual, combined with the training they received. Nonetheless, the most frequently noted dislike with the *Body Project* was its manualized format, which some clinicians found constraining or awkward or even boring to deliver. Many had a psychodynamic (30%) or client-centered/humanistic (30%) background and wanted more time to process material that came up in session or while reviewing home exercises. Occasionally clinicians would deviate from the protocol into process work, which interestingly appeared counterproductive because it often undermined the intended cognitive dissonance induction process (e.g., instead of publically arguing against the thin-ideal, which is a core task of the *Body Project*, the processing would involve the group member publically acknowledging their support for the thin-ideal and their doubt about the possibility of change). The second dislike was that it could be difficult to cover all of the activities contained in a session. Conducting a 60-minute group session does require effective time management to present all session content in a professional and sensitive manner, but it is possible. Again, the decision regarding the session duration was purposefully intended to ease both facilitator burden and time demands on the busy college student participants.

Degree of Continued Delivery of Eating Disorder Prevention Post-Study Involvement

A major focus of this report was the degree to which clinicians providing mental health or health promotion services at college centers continued to provide *Body Project* groups once the support provided by the researchers ended. After conducting two cohorts of prevention groups, almost 100% of clinicians stated that they wanted to conduct more groups in the future. It was encouraging that half of the universities reported providing one or more *Body Project* groups in the year following study involvement. However, by 2-years post-study, only one of eight universities continued to conduct these prevention groups and this occurred at an education/prevention center (rather than student mental health clinic) where the director had been trained and supervised in the intervention as part of the research study. Training the director may be critical for sustainability: in three of the four universities that provided *Body Project* groups at 1-year follow-up, we had trained the director. Training the center director may have resulted in an informal train-the-trainer approach (Zandberg & Wilson, 2012) in which initial training and supervision support of the director cultivated an internal expert and program advocate to maintain the intervention and train new facilitators after our training contact with them ended. Of the other four universities that did not provide future prevention groups, three had not involved the director and the fourth university was

the smallest and had a one-person advising center (and the person had left the state for a new position).

Perceived Barriers to Sustainability

Perceived barriers to sustainability differed over time. One year after study completion, the most frequently mentioned barrier was time constraints on the students who would be potential group members, whereas at two-year follow-up, the most significant barrier was staff turnover. At both follow-up assessments, clinician staff time constraints were a significant barrier, implying that college mental health centers may prioritize treatment delivery over prevention, which represents a key barrier to sustainability of evidence-based prevention programs. Our future research will examine cost effectiveness data of the *Body Project*, which may show that investing in prevention programs results in a reduction in treatment needs at university mental health centers. A second key barrier to sustainability was substantial staff turnover. Of the 27 original clinicians, only 9 (33%) were still at the university two years later; none of the 8 universities had retained all of the staff originally trained in the *Body Project* and 3 of the 8 (38%) had none of the clinicians still present two years later. The high rate of staff turnover may be a function of the clinical training provided at these settings or may imply that universities need to ease the workload of clinicians, which is often quite high, and increase clinician pay for more sustained delivery of evidence-based prevention (and treatment) interventions. The very limited staff time and high degree of clinician staff turnover both raise significant concerns for this method of dissemination and implementation. The high staff turnover, in particular, increases the need for repeated trainings and supervision, which would significantly increase the cost and difficulty of sustainability.

Though the literature on sustainability is limited, others have noted sustainability failures. August, Bloomquist, Lee, Realmuto, and Hektner (2006) evaluated the sustainability of an evidence-based program to prevent conduct problems that had shown success in a previous effectiveness trial. Relative to the effectiveness trial, program attendance was much lower and only one positive outcome was replicated. The authors noted that poor attendance may have been due to organizational barriers (e.g., high staff turnover, agency downsizing, collaboration difficulties between the agency and schools) and concluded that both program developers and those who will provide the intervention need to proactively plan for its sustainability.

Conclusions

Several limitations should be noted. First, the participating therapists were a self-selected group, rather than randomly selected, which may reduce generalizability. Second, we did not follow all of the participating clinicians, especially those who left the center where they had been trained; some who left expressed an interest in providing future *Body Project* groups at their new work setting but we have no systematic data on that (though one clinician who had taken a job at a new university requested permission to offer *Body Project* groups there). Third, we did not have a sufficiently large sample size for inferential tests of the factors that predict sustained delivery of this prevention program, although we felt it was important to describe the degree and nature of program sustainability to inform future dissemination and

implementation research. Fourth, the follow-up interviews were not audio-recorded for post-interview transcription but were transcribed as they occurred; thus, some details may have been omitted and inter-rater reliabilities are based on the transcribed rather than audio data.

Given the general lack of prevention intervention sustainability, there is a consensus that sustainability guidance is critical (Backer, 2000; Swisher, 2000). Basic components proposed to facilitate sustainability include program usefulness, cost effectiveness, fit with agency mission and the skills of available providers, program adaptability, and natural sources of funding (Hans & Weiss, 2005; Jana, Basu, Rotheram-Borus, & Newman, 2004; Scheirer, 2005; Swain et al., 2010). Johnson et al. (2004) proposed a conceptual model to guide sustainability, which begins with two causal factors of an existing infrastructure (e.g., internal resources and policies, internal leaders championing innovation) and innovation attributes such as the program aligning with perceived needs, positive relations among the key implementers, and ownership by the prevention stakeholders. The model continues with a sustainability action plan of assessment, planning, implementation, evaluation, and reassessment with modification, if needed. The model, which shares factors and strategies noted by others when planning for sustainability (Evashwick & Ory, 2003; Shediach-Rizkallah & Bone, 1998), illustrates the numerous issues that are important for sustainability of evidence-based interventions. The present mixed-method study suggested some positive features that should enhance sustainability of prevention interventions (e.g., brevity and structure of both the training and the intervention, perceived need by staff to offer the intervention, the offsite supervision process which was labor-intensive but positively received) but also several significant factors that appeared to be key barriers to sustainability, including the high degree of college staff turnover combined with competing time demands.

Although the college mental health clinicians in this effectiveness trial were previously found to achieve very strong outcomes, data from the present report strongly suggest that this method of intervention training and delivery will be not sustainable in many universities. Thus, alternative approaches need to be considered. In addition to the train-the-trainer approach noted earlier, one solution to the major dissemination barrier of relying on trained clinicians is to take a more cost effective task-shifting approach and train students in college peer-educator programs to recruit students and deliver prevention programs. Peer educators have effectively delivered universal, selective, and indicated prevention programs targeting substance misuse, sexual health/risk reduction, and eating disorders (e.g., Becker, Bull, Schaumberg, Cauble, & Franco, 2008; White et al., 2009) and recent pilot work suggests that peer educators can successfully deliver the *Body Project* (Stice, Rohde, Durant, Shaw, & Wade, 2013). Results of that study, in which 171 female undergraduates were randomized to peer-led or clinician-led versions of the *Body Project* or to an educational brochure control condition (using nonparallel measures), suggested that dissonance-based eating disorder prevention groups led by undergraduate peers are feasible and produce greater reductions in both eating disorder risk factors and symptoms relative to a minimal-intervention (education brochure) control condition though effects were smaller for peer-led versus clinician-led groups (e.g., M pre-post $d = .64$ and $.98$, respectively).

A second solution to the dissemination barriers identified in the present study is the use of internet-delivered approaches. Internet-delivered or other forms of eHealth programs are a very active area of research attention and often achieve results comparable to in-person approaches for various health/mental health conditions (e.g., Barak, Hen, Boniel-Nissim, & Shapira, 2008). Internet-based eating disorder prevention programs have been found to reduce eating disorder risk factors (e.g., Winzelberg et al., 2000) and our recent pilot work (Stice, Durant, Rohde, & Shaw, 2014) suggests an Internet-delivered version of the *Body Project* produced significant effects. In that pilot study, we compared the effects of a new Internet-based version of this prevention program to the group-based (clinician-led) program and to educational video and educational brochure control conditions to 2-year follow-up in 107 college women with body image concerns. Internet participants showed reductions in eating disorder risk factors and symptoms relative to the two control conditions at 1- and 2-year follow-up ($M d = .34$ and $.17$, respectively), but the effects were smaller than parallel comparisons for group *Body Project* participants ($M d = .48$ and $.43$, respectively). Thus, both alternate delivery intervention approaches suggest longterm prevention effects that are superior to minimal controls but less robust than those obtained by clinician-led efforts. However, given the barriers to sustainability identified in the present report, these lower cost approaches that achieve significant albeit less robust change may ultimately achieve a broader public health impact (e.g., Glasgow et al., 2014).

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Highlights

- We describe reactions of clinicians to evidence-based eating disorder prevention
- 27 clinicians from 8 universities were recruited and delivered the group program
- Clinicians were very satisfied with the manual, training and supervision they received
- Half of the schools conducted groups 1 year later but only 1 continued after 2 years
- Key barriers to sustainability were competing staff time demands and high turnover

Table 1Descriptive information of the clinicians ($N = 27$) from the baseline assessment

<u>Highest Educational Degree</u>		
15% Bachelors (BA/BS)	48% Masters (MA/MS)	
26% Ph.D.	11% Other	
<u>Area of Undergraduate/Graduate Study</u>		
41% Clinical psychology	30% Counseling psychology	
7% Nutrition	22% Other/not provided	
<u>Primary Theoretical Orientation</u>		
40% cognitive-behavioral	30% psychodynamic	
30% humanistic/client-centered		
<u>Age</u>		
7% 18–25 years of age	26% 26–30 years of age	
33% 31–35 years of age	15% 36–40 years of age	
4% 46–50 years of age	11% 51 years of age or older	
<u>Race/Ethnicity</u>		
96% non-Hispanic White	4% Asian-American	
<u>Gender</u>		
81% female	19% male	
<u>Self-reported BMI ($M = 22.9$; $SD = 4.0$)</u>		
15% BMI < 20	67% BMI 20–24.9	
11% BMI 25–29.9	7% BMI > 30	
<u>Number of Years at Current Job</u>		
58% 1 year or less	35% 2–4 years	
4% 5 years	4% 20 years	
<u>Number of Years Working with College Students, Adolescents, or Young Adults</u>		
7% 1 year or less	37% 2–4 years	
33% 5–9 years	11% 10–20 years	11% 21+ years
<u>Reported History of Eating Disorder or Obesity</u>		
15% reported a past eating disorder (none in the past 5 years)		
11% reported past struggle with obesity (none in the past 5 years)		
<u>Additional Relevant Information</u>		
Perceived importance of addressing eating disorders relative to other problems affecting their student population (1 = not at all important; 5 = somewhat important; 10 = very important):		
Mean = 8.5 (range = 7 – 10)		
Strength of belief that the dissonance-based intervention would help prevent eating problems at their school (1 = not very strongly; 5 = somewhat strongly; 10 = very strongly):		
Mean = 7.3 (range = 2 – 10)		
<u>Degree of previous experience in various areas (0 = no experience; 100 = extensive experience)</u>		
Experience conducting prevention interventions:	$M = 54.4$ ($SD = 33.1$)	11% reported no experience
Experience using manual-based interventions:	$M = 23.3$ ($SD = 28.4$)	41% reported no experience
Experience providing interventions in a group format:	$M = 49.6$ ($SD = 33.2$)	18% reported no experience
Experience with eating disorder prevention or treatment:	$M = 46.4$ ($SD = 39.1$)	21% reported no experience

Experience conducting programs with young adults: $M = 62.3$ ($SD = 27.4$) 7% reported no experience

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Table 2

Reactions to training, supervision, and future plans after conducting two groups.

Question (rated on 100-point scales; higher = more positive)	Mean	SD	Range
How well do you feel you facilitated groups for this study?	81.8	8.0	65–92
Training			
How satisfied were you with the training you received in this intervention?	89.4	13.4	40–100
How enjoyable was the training you received in this intervention?	78.5	21.5	10–100
How valuable was each component of the training:			
Facilitator's guide:	87.5	12.9	65–100
Presentation about rationale for intervention:	86.2	21.7	10–100
Role-plays:	88.6	12.8	50–100
Discussion of process issues:	70.0	23.5	35–85
How much preparation did the training provide in each area:			
Understanding the conceptual basis for the intervention:	90.6	13.9	40–100
Ready to deal with common problems that come up in groups:	79.7	17.2	30–100
Having general group management skills:	71.2	20.1	30–100
Able to make appropriate referrals for participants with eating disorders or other psychiatric problems:	62.3	25.3	0–90
Supervision			
How satisfied were you with the supervisory feedback you received by email during the intervention?	92.7	8.4	70–100
Reactions to Group			
How enjoyable was running the intervention groups?	86.7	16.7	25–100
How effective do you think the groups were for prevention eating disorders?	78.0	10.9	60–100
Future Plans			
How likely do you think you will be to want to conduct these groups again?	95.5	7.0	80–100
How likely will you be to recommend this intervention to other staff in your or other counseling centers?	92.2	12.9	50–100

Table 3

Rank order of most important barriers to sustainability at follow-up assessments.

Barrier	Rank at 1-yr assess	Rank at 2-yr assess
Student-related Factors		
Student lack of interest	4 (tie)	4 (tie)
Student stigma associated with participation	3 (tie)	not mentioned
Students' competing time demands	1	3 (tie)
Staff-related Factors		
Insufficient staff training for intervention	4 (tie)	3 (tie)
Inadequate staff supervision for intervention	not mentioned	4 (tie)
Staff time constraints	2 (tie)	2
System-related Factors		
Costs to the organization to deliver intervention	3 (tie)	4 (tie)
Insufficient availability of staff to deliver intervention	2 (tie)	1
Insufficient space to deliver intervention	4 (tie)	4 (tie)