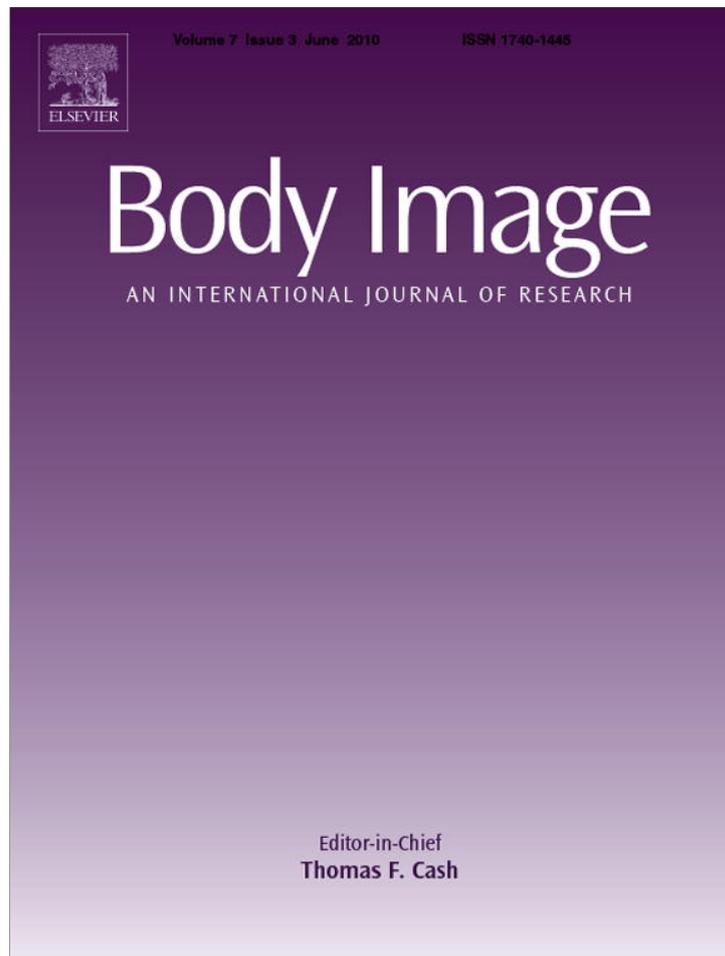


Provided for non-commercial research and education use.
Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

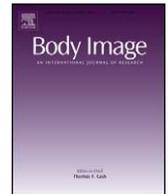
In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



Contents lists available at ScienceDirect

Body Image

journal homepage: www.elsevier.com/locate/bodyimage

Promoting positive body image among university students: A collaborative pilot study

Gail L. McVey^{a,b,*}, Gillian Kirsh^a, Dara Maker^{a,b}, Kathryn S. Walker^{a,c}, Jennifer Mullane^{a,c},
Michelle Laliberte^d, Janis Ellis-Claypool^e, Judy Vorderbrugge^f, Alison Burnett^g, Lydia Cheung^{a,h},
Laura Banks^{a,i}

^a Community Health Systems Resource Group, The Hospital for Sick Children, Toronto, Ontario, Canada

^b Dalla Lana School of Public Health, University of Toronto, Toronto, Canada

^c Department of Psychology, The Hospital for Sick Children, Toronto, Canada

^d Eating Disorder Program, St Joseph's Health Care, Hamilton, Canada

^e Centre for Student Community & Leadership Development, York University, Toronto, Canada

^f Health & Psychiatric Services, University of Toronto, Toronto, Canada

^g Student Health Services, Ryerson University, Toronto, Canada

^h Faculty of Health Sciences, McMaster University, Hamilton, Canada

ⁱ Faculty of Physical Education and Health, University of Toronto, Toronto, Canada

ARTICLE INFO

Article history:

Received 8 July 2008

Received in revised form 28 January 2010

Accepted 4 February 2010

Keywords:

Prevention

Body dissatisfaction

University students

Student health services

ABSTRACT

The purpose of the present study was to pilot a prevention program designed to promote positive body image among university students. Thirty-seven undergraduate students from three Canadian universities were recruited to participate in the study. They were selected from a pool of students enrolled in a peer health education program facilitated by the university-based health promotion staff. Borrowing from the tenets of the non-specific vulnerability stressor model and the disease-specific social cognitive theory, the intervention focused on media literacy, self-esteem enhancement strategies, stress management skills and ways to recognize healthy versus unhealthy relationships. Separate ANOVAs revealed that participants reported significant improvements in body satisfaction and reductions in the internalization of media stereotypes between the baseline and post-program period. The program received a favorable response from the participating students, who appreciated the face-to-face format of the intervention, and from the university staff who expressed interest in embedding the strategies into their routine peer mentoring training activities. Limitations of the study and suggestions for future research are discussed.

Crown Copyright © 2010 Published by Elsevier Ltd. All rights reserved.

Introduction

Body dissatisfaction is prevalent among university students (e.g., Cook-Cottone & Phelps, 2003; McCabe & Ricciardelli, 2003). A meta-analysis has demonstrated body dissatisfaction to be “one of the most consistent and robust risk and maintenance factors for eating pathology” (Stice, 2002, p. 833). Theoretically, body dissatisfaction promotes dieting and negative affect, which in turn increases the risk for eating pathology (Stice, 2002). This can, in turn, set the stage for the development of eating disorders such as anorexia nervosa and bulimia nervosa (Jacobi, Hayward, de

Zwaan, Kraemer, & Agras, 2004; Stice, 2002). Unhealthy practices such as induced vomiting, misuse of laxatives, diuretics, excessive exercise and diet pill use are methods used by university students to enhance their current image of themselves, which further supports the widespread body dissatisfaction in this age group (Johnson, Power, & Dick, 1999; Klemchuk, Hutchinson, & Frank, 1990). These findings underscore the need for prevention.

University is an ideal setting to teach late adolescents and young adults about positive relationships, competencies, values and self-perceptions that can help reduce chronic health conditions (Canadian Institutes of Health Information, 2005). The more of these assets youth possess, the greater their likelihood of engaging in health-enhancing practices, and the less likely they are to engage in practices that are potentially harmful to their health such as eating pathology (Glogowska, Young, & Lockyer, 2007; Turner & Berry, 2000). The non-specific vulnerability stressor model (Cowen & Durlak, 2000) focuses on building resilience

* Corresponding author at: Department of Community Health Systems Resource Group, The Hospital for Sick Children, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8. Tel.: +1 416 813 7250; fax: +1 416 813 7258.

E-mail address: gail.mcvey@sickkids.ca (G.L. McVey).

through the boosting of general self-esteem and other psychological strengths as a way to prevent or decrease multiple problem behaviours (see Levine & Smolak, 2006 for a detailed description of its application to the prevention of disordered eating). With the exception of Franko et al. (2005) this *non-specific vulnerability stressor* approach has yet to be adopted with university students as a way to help promote body satisfaction. Instead, most prevention research conducted with university students has been targeted (i.e., programs carried out with students who have already been identified as having eating disorder symptoms) (Stice & Shaw, 2004). It is equally important to boost resilience among students who have yet to show signs of disordered eating. This primary prevention approach (perhaps for incoming first year students) could complement targeted prevention services already underway by boosting students' overall social emotional competence (Killen et al., 1993; McVey, Davis, Tweed, & Shaw, 2004; McVey, Lieberman, Voorberg, Wardrope, & Blackmore, 2003; Phelps, Johnston, & Augustyniak, 1999; Shisslak, Crago, Neal, & Swain, 1987). Additional strategies, such as those that teach critical analysis of the culturally presented thin ideal, offer additional ways to enhance body satisfaction (Berel & Irving, 1998; Cook-Cottone & Phelps, 2003; Coughlin & Kalodner, 2006; Ghaderi, 2001). These latter strategies are rooted in the *disease specific social cognitive theory* model (Perry, 1999) which focuses on the elimination of risk factors specific to disordered eating such as exposure to (Berel & Irving, 1998; Stice, Spangler, & Agras, 2001; Stice & Shaw, 2004) and the internalization of the thin ideal (Morry & Staska, 2001; Stice, Schupak-Neuberg, Shaw, & Stein, 1994).

The above-mentioned prevention strategies were the focus of the present intervention. The researchers examined whether or not the intervention led to positive outcome changes in body satisfaction and the internalization of media stereotypes as both are correlated with disordered eating. Based on previous intervention studies (McVey et al., 2004), it was hypothesized that students who participated in the health promotion program would show improvements in body satisfaction and decreases in the internalization of media stereotypes. An equally important goal was to collaborate with the health promotion staff who worked at the university study sites to invite their input in the planning and scheduling of the intervention and to seek their assistance with recruitment of study participants. For the sake of convenience, participants for the study were recruited from a peer health educator program facilitated by university-based health promotion staff who gathered routinely throughout the school year for training purposes. The direct line of communication established between the health promotion staff and the peer educators made it feasible to solicit input from both parties on the planning of the intervention. The influence of the intervention on the attitudes of the peer health educators themselves is the focus of the present study, with future plans to measure its impact on their role as *agents of change* towards the rest of the student population.

Method

Participants

The initial sample at baseline included thirty-seven students (6 male, 31 female) (M age = 22.65 years, SD = 3.14 years) who were recruited from three large urban universities in a major Canadian city. The majority of participants (58%) were in third year university, 10% were in second year, 19% were in fourth year, and 13% were in graduate school. About half (56.8%) of the participants were born in Canada and the remainder were born in Afghanistan, Bosnia, Bulgaria, Hong Kong, India, Ireland, Israel, Philippines, Poland, Saudi Arabia, Sri Lanka, and the United States. A total of 73% reported English as their first language with the

remainder reporting as their first language Bulgarian, Cantonese, French (bilingual), Hebrew, Hindi, Pashto, Polish, Serbian, and Tamil. Forty-two percent were Caucasian, 18% were South Asian, 18% were Asian, 7% were Middle Eastern, and 13% were either Indian (n = 1), European (n = 2), or African Canadian (n = 1). By Time 2, there were 31 male (n = 6) and female (n = 25) university students. The most common reason for attrition was conflict in schedule. Data analyses are limited to students who attended both sessions. To further describe the sample at baseline, based on a categorical response format, 9.7% felt *Somewhat underweight*, 51.6% felt *Just the right weight*, 25.8% felt *Somewhat overweight*, and 12.9% felt *Overweight*. A total of 38.7% answered "Yes" to the question *Are you currently doing anything to lose weight?* and 48.4% answered "Yes" to *Are you doing anything to gain muscle?*

Recruitment

Participants were drawn from a peer health educator training program facilitated by university-based health promotion staff. An invitation to participate in the study was announced at a routine face-to-face orientation session hosted at the beginning of the school year and attended by peer health educators from three local universities. Recruitment continued at each study site through a flyer and reminder emails sent out by the university-based health promotion staff. Of the sixty peer health educators, over half elected to participate in the study. There were 10–13 participants from each of the three study sites enrolled in the study.

Measures

Demographic information

Information was collected on the age, gender and ethnicity of the participants as well as birth country and first language.

Internalization of the thin ideal

The Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ) (Heinberg, Thompson, & Stormer, 1995) was used in the present study to measure the degree of internalization of sociocultural stereotypes of weight and appearance. Level of internalization was measured using an eight item, 5-point scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). Scores ranged from 8 to 40 with higher scores reflective of greater internalization of the thin ideal. The alpha coefficient of the scale for the sample in the present study was .89.

Body satisfaction

A six-item version of the Body Satisfaction Scale (Slade, Dewey, Newton, Brodie, & Kiemle, 1990, as used in Neumark-Sztainer, Sherwood, Collier, & Hannan, 2000) was used to assess body satisfaction, using a 5-point scale ranging from 1 (*completely unhappy*) to 5 (*completely happy*) of how happy they were with the following body parts/characteristics: height, weight, body shape, thighs, stomach, and face. Scores ranged from 5 to 30 with higher scores reflective of greater body satisfaction. The scale has demonstrated good reliability and convergent validity with other measures of body satisfaction (Slade et al., 1990). The alpha coefficient was equal to .88 in the present sample.

Program satisfaction

For the purpose of the present study, open-ended questions were developed to solicit feedback from the participants about the content and process of the intervention. Examples of items included: What did you like most about today's session, Is there anything you would change? What is your opinion about the materials presented in terms of suitability for students attending the university? Are there parts of the session that you would prefer hearing about or seeing online? How satisfied were you with the

length of the session? Information was gathered at the end of each session.

Prevention program

Project team

The project team included academic researchers and student trainees from Psychology, Family Medicine, Health Sciences and Physical Education, along with three university-based health promotion staff. During the planning phase, in-person and telephone meetings were held throughout the period of the study with the members of the research team. Members of the team from the university health promotion departments were asked to share their feedback about the content and format of the intervention to gauge its feasibility with the students' schedules and its sustainability beyond the scope of the research project. Their input and expertise were sought on participant recruitment, development, implementation, and evaluation of the program, as well as knowledge translation of the findings to key stakeholders. The program content was drawn from the research literature on risk factors associated with disordered eating and universal-selective prevention work successfully carried out with early adolescent females (McVey et al., 2003, 2004), but tailored to the unique needs of late adolescents (e.g., age-appropriate videos and interactive activities). Information was drawn from existing resources in terms of activities, instructor's manuals, and videos (Davis & Phillips, 1994; Durkin, Paxton, & Wertheim, 2005; Seaver, McVey, Fullerton, & Stratton, 1997). Session 1 included the following topics: (a) critical analysis of unrealistic "ideal" body shapes portrayed in the media and how these images are related to self-perceptions, as well as the various methods that the media employ to create a "perfect" image of beauty; (b) enhancement of self-esteem and body image: ways to promote self-esteem and body image; (c) review of evidence on the genetic influences on body shape, the negative effects of shifting weight beyond the natural weight range, and acceptance and awareness of individual differences in body shape and size; (d) tips and strategies on developing (or maintaining) healthy eating and active living practices (and recognizing signs and symptoms of unhealthy eating and exercise, as well as eating disorders). Session 2 included stress management techniques that focused on assertive styles of communication and social problem-solving strategies to help attenuate the negative influences of stress on body image concerns; and a review of healthy versus unhealthy relationships and the application of problem-solving strategies to issues related to conflict in relationships.

Procedure

Ethical approval was received from the Research Ethics Boards at the sponsoring agency and at the three local study sites. During the partnership development phase of the project, the research team approached health promotion staff working in Student Health Services at three inner city universities in Ontario to invite them to be collaborators on the project. They were staff members with a background in health who were working as health promotion staff at the university, who had experience facilitating workshops with undergraduate students on various health-related topics. Participants provided written informed consent. The program was implemented at each of the three university study sites to accommodate the students' schedules and to avoid additional traveling for students. A room in the general university campus was booked at each study site. Each session was 3 hr long. Throughout each session, activities and video presentation were organized to spur on interactive discussions. The program was facilitated by a member of the research team who had experience

in the treatment and prevention of eating disorders. The university-based health promotion staff members were invited to co-facilitate the program, or at a minimum, be present during each session.

Statistical analyses

This study used a pre–post design without a control group to obtain preliminary information about the program in a natural setting. Analyses of variance (ANOVA) were conducted, using Time (baseline vs. post-intervention) as the within-subject variable, on the outcome variables of body satisfaction and internalization of media stereotypes.

Results

Influence of intervention on continuous outcome measures

The analyses of variance (ANOVAs) revealed significant Time effects for both the *body satisfaction* $F(1, 30) = 10.83, p < .005$, partial $\eta^2 = .27$, and the *internalization of media stereotypes*, $F(1, 30) = 14.16, p \leq .001$, partial $\eta^2 = .32$, variables. As predicted, the mean score at post-intervention ($M = 20.1, SD = 4.3$) was significantly higher than at baseline ($M = 18.8, SD = 4.0$) for the body satisfaction measure; and the mean score at post-intervention ($M = 19.5, SD = 5.8$) was significantly lower than at baseline ($M = 22.2, SD = 5.9$) for the internalization of media stereotypes measure.

Satisfaction with the intervention

Open-ended feedback from the intervention participants about the program *content* revealed the following themes: Participants enjoyed the videos (presented on set point theory and the media), information on stress management as it related to eating (i.e., developing healthy living patterns), and assertiveness in relationships. They felt that these life skills were relevant to their day-to-day experiences. Some participants requested more information on eating disorders (e.g., case studies and early warning signs), appropriate food intake/exercise guidelines, how stress influences the development of disordered eating, and practical strategies to help adopt health-promoting behaviours. With regard to the program *process*, an overwhelming majority said that they enjoyed the face-to-face format, the video presentations that accompanied the presentation, the interactive activities, and the length of the program.

Discussion

In the present study, a prevention program designed to promote body satisfaction and reduce the internalization of the thin ideal was carried out with university students using a life skills and media literacy approach, e.g., stress management skills to improve communication, assertion and decision-making, interactive activities to promote self-esteem and body satisfaction. To optimize sustainability, the program was facilitated at each site by members of the research team in collaboration with university-based health promotion staff. As such, the overarching goal was to help improve health outcomes for the student participants through direct intervention offered in a naturalistic setting all the while collaborating with health promotion staff in its delivery to enhance the feasibility of its sustainability beyond the scope of the study. Participation in the program was associated with increases in body satisfaction and decreases in the internalization of the thin ideal, which has implications for helping to reduce disordered eating (Stice, 2002).

The research team who had expertise in intervention research related to the prevention of disordered eating (i.e., academic setting) partnered with the university-based health promotion staff who had expertise training students on various *health promotion*-related topics, and the peer health educators whom they mentored. To set the stage for this collaboration, there was a period of consultation, liaising and planning that took place between the researchers, the university-based staff and the peer health educators to solicit feedback about the relevance, content, timing and format of the intervention. There was general consensus to shorten the number of sessions from the original plan of six 50-min sessions (determined by the research team) to two 3-hr sessions (recommended by the peer health educators). It was also recommended that the intervention be offered after class hours, and that it not conflict with mid-term exam schedules. To avoid duplication of content with other health-related workshops the health promotion staff provided valuable input on the curriculum. Next, the university-based health promotion staff assisted with the implementation process including participant recruitment, room booking, catering, and reminder notices to students about each session. They opted to attend all sessions and they were available on site in between the sessions to liaise with the participating students.

Although *Stice and Shaw (2004)* report in their meta-analysis that the success of prevention programs is associated with those that offer multiple sessions, this needs to be balanced with the needs of students and the feasibility for them to fit such programs into their existing schedules. The researchers in the present study maintained several of the recommended “best practices” for prevention with this age group (*Stice & Shaw, 2004*) namely, the use of multiple components together with interactive activities. Multiple topics covered in a short duration, as with the intervention in the present study, have shown success in previous studies (*Franko et al., 2005; Winzelberg et al., 2000*). Of note, the program in the present study was offered on a voluntary basis, and not embedded in an undergraduate course seminar as with other studies (*Springer, Winzelberg, Perkins, & Taylor, 1999; Stice & Ragan, 2002*). Despite attempts to enhance the feasibility of the program implementation by consulting ahead of time with the university staff and the participants themselves, future research could explore ways to prevent attrition all together as six participants did not return for the second session.

To date, most intervention-based studies in the area of disordered eating have been led by researchers without mention of stakeholder involvement (*Stice & Shaw, 2004*). A stakeholder is a person, group or organization that has direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies. In the present study, these were the health promotion staff and the peer health educators from the three participating universities. Collaborative research projects, like the one in the present study, have been described by others as time and resource consuming (*Gaskill et al., 2003*). For example, community partners often volunteer staff time to the research project to attend planning meetings and to help with project related activities such as recruitment or development of the intervention. This type of research often takes a much longer time to complete than other types of research. The scientific rigor can be compromised if community partners opt against the use of randomized control trials or the inclusion of a control (comparison) group.

Despite these challenges, there are clear advantages associated with such collaborative endeavors. An intervention can be more specifically tailored to the unique needs of the participants it serves. There is greater potential for increasing the adoption and sustainability of the intervention beyond the scope of the study, and increase the capacity and resources of the community that the

intervention is serving (*Wells, Miranda, Bruce, Alegria, & Wallerstein, 2004*). The peer health educators in the present study provided helpful feedback about which part of the content they thought would be suitable for students their age. They expressed a preference for face-to-face interventions when offered the option of online programming in the future. Internet-based and DVD format interventions offer less resource intense options to prevention and have shown promising results compared to face-to-face options, however, as with the present study, this is not always a preferred format (*Celio et al., 2000; Franko et al., 2005; Jacobi et al., 2004; Paxton, Mclean, Gollings, Faulkner, & Wertheim, 2007*). The peer educators reported that they would share their newly gained knowledge with other students through their routine delivery of workshops carried out in student residences (under the supervision of the university-based health promotion staff). Future research could examine the association between knowledge uptake and efficacy as agents of change among graduates of the present intervention. The university-based health promotion staff expressed interest in collaborating with the research team to find ways to disseminate program content in curricula across various disciplines at the university level (e.g., undergraduate courses in nutrition, biology, health sciences). They have subsequently partnered with the research team and new collaborators from four additional universities to design a study on the assessment of *level of readiness* (both individually and at the organizational level) of university-based health personnel to carry out prevention, early identification, and early intervention services in the area of eating disorders.

There are limitations associated with the present study including the absence of a control group, the small sample size, and the disproportionate number of female versus male participants. Similar limitations have been noted in other university prevention programs (*Yager & O'Dea, 2008*). Although disordered eating occurs more commonly among females (*Jones, Bennett, Olmsted, Lawson, & Rodin, 2001*), the involvement of males in prevention work is warranted given the high prevalence of disordered eating and muscle gaining techniques seen among males (*McCabe & Ricciardelli, 2003*). Future research could determine whether or not group-based prevention works best in either single-sex versus co-ed sessions with this age group of students. Finally, another limitation is that the findings are generalizable only to students who are peer health educators, which represents a pool of students with heightened leadership skills, likely influencing their motivation to participate in the study.

Although very preliminary, the findings have applied significance in terms of shedding light on ways to reach out to students before clinical symptoms of eating disorders develop, by boosting their resilience through life skills and media literacy strategies. This primary prevention approach to eating disorders could complement nicely with the delivery of more targeted interventions for those students who have already been identified with eating disorder symptoms (*Stice & Shaw, 2004*). The study also informs the field of prevention on ways to make such programs sustainable beyond the scope of the research project by reaching out to students via university-based health promotion staff and the peer health educators whom they mentor. Embedding disordered eating prevention strategies into an existing peer health educator training curriculum engages university-based staff in this type of prevention work and offers a cost effective way to help improve body satisfaction among the participating peer health educators. As newly trained agents of change, the peer health educators could have a positive influence on the rest of the student population both in how they role model body satisfaction as well as in the knowledge that they exchange. Finding creative ways to effectively mobilize knowledge and to create meaningful, mutually beneficial,

and sustainable community relationships with existing target populations are timely topics for future eating disorder prevention research (Jacobson, Butterill, & Goering, 2005; Rowling, 2003).

Acknowledgements

Gail L. McVey currently holds a mid-career award from the Canadian Institutes of Health Research – Institute of Gender and Health and the Ontario Women's Health Council (Grant GHM – 76772). The authors thank the students who participated in the study. Special thanks to Stacey Tweed for her assistance in facilitating the intervention and Sarah Yao Lin, Aisling Fitzpatrick, and Sarah Collier for their assistance with the preparation of this manuscript.

References

- Berel, S., & Irving, L. M. (1998). Media and disturbed eating: An analysis of media influence and implications for prevention. *Eating Disorders: The Journal of Treatment and Prevention*, 18, 415–430.
- Canadian Institutes of Health Information. (2005). *Improving the health of young Canadians*. Canadian Population Health Initiative. Retrieved January 28, 2010, from <http://www.cihi.ca/youth>.
- Celio, A. A., Winzelberg, A. J., Wilfley, D. E., Eppstein-Herald, D., Springer, E. A., Dev, P., et al. (2000). Reducing risk-factors for eating disorders: Comparison of an Internet- and classroom-delivered psychoeducational program. *Journal of Consulting and Clinical Psychology*, 68, 650–657.
- Cook-Cottone, C., & Phelps, L. (2003). Body dissatisfaction in college women: Identification of risk and protective factors to guide college counseling practices. *Journal of College Counseling*, 6, 80–89.
- Coughlin, J., & Kalodner, C. (2006). Media literacy as a prevention intervention for college women at low- or high-risk for eating disorders. *Body Image*, 3, 35–43.
- Cowen, E. L., & Durlak, J. A. (2000). Social policy and prevention in mental health. *Development and Psychopathology*, 12, 815–834.
- Davis, R., & Phillips, W. (1994). *Turning points: A psychoeducational program for overcoming an eating disorder: A Practitioner's guide*. Available from Ontario Community Outreach Program for Eating Disorders, University Health Network: Toronto General Division, 200 Elizabeth Street, Toronto, Ontario, M5G 2C4, www.ocoped.ca.
- Durkin, S., Paxton, S. J., & Wertheim, E. H. (2005). How do adolescent girls evaluate body dissatisfaction prevention messages? *Journal of Adolescent Health*, 37, 381–390.
- Franko, D. L., Mintz, L. B., Villapiano, M., Green, T. C., Mainelli, D., Folemsbee, L., et al. (2005). Food, mood and attitude: Reducing risk for eating disorders in college women. *Health Psychology*, 24, 567–578.
- Gaskill, D., Morrison, P., Sanders, F., Forster, E., Edwards, H., Fleming, R., et al. (2003). University and industry partnerships: Lessons from collaborative research. *International Journal of Nursing Practice*, 9, 347–355.
- Ghaderi, A. (2001). Review of risk factors for eating disorders: Implications for primary prevention and cognitive behavioural therapy. *Scandinavian Journal of Behaviour Therapy*, 30, 57–74.
- Glogowska, M., Young, P., & Lockyer, L. (2007). Should I go or should I stay?: A study of factors influencing students' decisions on early leaving. *Active Learning in Higher Education*, 8, 63–77.
- Heinberg, L. J., Thompson, J. K., & Stormer, S. M. (1995). Development and validation of the Sociocultural Attitudes Towards Appearance Questionnaire. *International Journal of Eating Disorders*, 17, 81–89.
- Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to terms with risk factors for Eating Disorders: Application of risk terminology and suggestions for a general taxonomy. *Psychological Bulletin*, 130, 19–65.
- Jacobson, N., Butterill, D., & Goering, P. (2005). Consulting as a strategy for knowledge transfer. *The Milbank Quarterly*, 83, 299–321.
- Johnson, C., Power, P. S., & Dick, R. (1999). Athletes and eating disorders: The national collegiate athletic association study. *International Journal of Eating Disorders*, 26, 179–188.
- Jones, J. M., Bennett, S., Olmsted, M. P., Lawson, M. L., & Rodin, G. (2001). Disordered eating attitudes and behaviours in teenaged girls: A school-based study. *Canadian Medical Association Journal*, 165, 547–552.
- Killen, J. D., Taylor, C. B., Hammer, L. D., Litt, I., Wilson, D. M., Rich, T., et al. (1993). An attempt to modify unhealthy eating attitudes and weight regulation practices of young adolescent girls. *The International Journal of Eating Disorders*, 13, 369–384.
- Klemchuk, H. P., Hutchinson, C. B., & Frank, R. I. (1990). Body dissatisfaction and eating-related problems on the college campus: Usefulness of the eating disorder inventory with a nonclinical population. *Journal of Counseling Psychology*, 37, 297–305.
- Risk factors as guides to prevention program design. (2006). Levine, M. P., & Smolak, L. (Eds.). *The Prevention of eating problems and eating disorders: Theory, research, and practice* (pp. 95–107). Mahwah, NJ: Lawrence Erlbaum Associates.
- McCabe, M. P., & Ricciardelli, L. A. (2003). A longitudinal study of body change strategies among adolescent males. *Journal of Youth and Adolescence*, 32, 105–113.
- McVey, G. L., Davis, R., Tweed, S., & Shaw, B. (2004). An evaluation of a school-based program designed to improve body image satisfaction, global self-esteem, and eating attitudes and behaviours: A replication study. *International Journal of Eating Disorders*, 36, 1–11.
- McVey, G. L., Lieberman, M., Voorberg, N., Wardrope, D., & Blackmore, E. (2003). School-based peer support groups: A new approach to the prevention of Eating Disorders. *Eating Disorders: The Journal of Treatment and Prevention*, 11, 169–185.
- Morry, M. M., & Staska, S. L. (2001). Magazine exposure: Internalization, self-objectification, eating attitudes, and body satisfaction in male and female university students. *Canadian Journal of Behavioural Science*, 33, 269–279.
- Neumark-Sztainer, D., Sherwood, N. E., Collier, T., & Hannan, P. J. (2000). Primary prevention of disordered eating among pre-adolescent girls: Feasibility and short-term effect of a community-based intervention. *Journal of American Dietetic Association*, 100, 1466–1473.
- Paxton, S. J., Mclean, S. A., Gollings, E. K., Faulkner, C., & Wertheim, E. H. (2007). Comparison of face-to-face and internet interventions for body image and eating problems in adult women: An RCT. *The International Journal of Eating Disorders*, 40, 692–704.
- Perry, C. L. (1999). *Creating health behavior change: How to develop community-wide programs for youth*. Thousand Oaks, CA: Sage.
- Phelps, L., Johnston, L. S., & Augustyniak, K. (1999). Prevention of eating disorders: Identification of predictor variables. *Eating Disorders*, 7, 99–108.
- Rowling, L. (2003). School mental health promotion research: Pushing the boundaries of research paradigms. *Australian e-Journal for the Advancement of Mental Health*, 2, 1–3.
- Seaver, A., McVey, G. L., Fullerton, Y., & Stratton, L. (1997). *Every BODY is a Somebody: An active learning program to promote healthy body image, positive self-esteem, healthy eating and an active lifestyle for female adolescents*. Brampton, ON: The Body Image Coalition of Peel.
- Shisslak, C. M., Crago, M., Neal, M. E., & Swain, B. (1987). Primary prevention of eating disorders. *Journal of Consulting and Clinical Psychology*, 55, 660–667.
- Slade, P., Dewey, M., Newton, T., Brodie, D., & Kiemle, G. (1990). Development and preliminary validation of the Body Satisfaction Scale (BSS). *Psychological Health*, 4, 213–220.
- Springer, E. A., Winzelberg, A. J., Perkins, R., & Taylor, C. B. (1999). Effects of a body image curriculum for college students on improved body image. *International Journal of Eating Disorders*, 26, 13–20.
- Stice, E. (2002). Risk and maintenance factors for eating pathology: A meta-analytic review. *Psychological Bulletin*, 128, 825–848.
- Stice, E., & Ragan, J. (2002). A preliminary controlled evaluation of an eating disturbance psychoeducational intervention for college students. *The International Journal of Eating Disorders*, 31, 159–171.
- Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of media exposure to eating disorder symptomatology: An examination of mediating mechanisms. *Journal of Abnormal Psychology*, 103, 836–840.
- Stice, E., & Shaw, H. (2004). Eating disorder prevention programs: A meta-analytic review. *Psychological Bulletin*, 130, 206–227.
- Stice, E., Spangler, D., & Agras, W. S. (2001). Exposure to media-portrayed thin-ideal on women and linkages to bulimic symptomatology. *Journal of Social and Clinical Psychology*, 20, 270–288.
- Turner, A., & Berry, T. (2000). Counseling center contributions to student retention and graduation: A longitudinal assessment. *Journal of College Student Development*, 41, 627–636.
- Wells, K., Miranda, J., Bruce, M., Alegria, M., & Wallerstein, N. (2004). Bridging community intervention and mental health services research. *American Journal of Psychiatry*, 161, 955–963.
- Winzelberg, A. J., Eppstein, D., Eldridge, K. L., Wilfley, D., Dasmahapatra, R., & Dev, P. (2000). Effectiveness of an Internet-based program for reducing risk factors for eating disorders. *Journal of Consulting and Clinical Psychology*, 68, 346–350.
- Yager, Z., & O'Dea, J. A. (2008). Prevention programs for body image and eating disorders on university campuses: A review of large, controlled interventions. *Health Promotion International*, 23, 173–189.