Universal Prevention

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Synonyms
Primary prevention

Definition
Universal prevention involves fostering resilience and reducing risk among nonsymptomatic populations. In the short term, prevention programs are expected to increase resiliency and decrease risk factors. In the long term, it is expected that those changes will lead to fewer eating problems and eating disorders (EDs). This is to be distinguished from selective prevention which involves programs that focus on nonsymptomatic people who are considered at high risk due to biological, psychological, and/or sociocultural factors and indicated/targeted prevention where the target audience does not yet have the disease or the disorder, but is at risk because of the presence of clear precursors to the disease (see Levine and Smolak 2006 for a full description).

Why Prevention?
Mental health difficulties can prevent youth from attending school. More often they simply struggle on a daily basis with low self-esteem, anxiety, body image issues, low mood, substance abuse, self-harm, and social isolation. Helping the youth cope with stressors in a healthy manner by building their capacity to problem solve, build healthy peer norms, and improve school connectedness can help prevent unhealthy coping and negative health outcomes such as ED symptoms.

Theoretical Frameworks
According to Levine and Smolak (2006), prevention studies conducted to date can be categorized into three main theoretical models including: the social cognitive theory (SCT), the nonspecific vulnerability stressor (NSVS) model, and the feminist empowerment relational (FER) model. SCT sees behavior to be the interactions between three types of factors: cognitive and emotional processes within the person, behavioral patterns, and the environment or context. According to this model, one must identify risk and protective factors for specific disorders and intervene to disrupt the destructive pathways. In contrast, the NSVS model adopts a broader approach to prevention, founded on the idea that there are generic sources of vulnerability and stress that may play a role in the development of different
psychopathologies, as well as generic sources of resilience that may play a role in positive development. This model supports the idea that one can intervene at multiple ecological levels to reduce stressors in children’s lives and that interventions focusing on teaching life skills for coping effectively with stress and increasing positive sources of socialization may help prevent the development of a wide range of psychopathology. The third model, the FER model coined by Canadian scholar, Dr. Niva Piran, stresses the importance of gender roles, objectification, and loss of voice in the development of disordered eating and negative body image in females. This model proposes that creating opportunity for embodiment (positive experiences in one’s own body), establishing a voice, and creating substance in the world that is not defined by appearance are all key features that will help girls combat negative influences. Prevention experts have long advocated for researchers to anchor their prevention research within these and other theoretical models to enhance the scientific rigor of the eating disorder prevention field (Levine and Smolak 2006).

**Translating Theory to Research, Practice, and Policy: The Ontario Project**

In Ontario, Canada, Dr. Gail McVey developed, revised, and tested a prevention model aimed at promoting protective factors and reducing risk for eating problems initially among late elementary school females and eventually among younger and older female and male youth (see Levine and McVey 2015 for review). At the onset of this 17-year program of community-based intervention research, attention was paid to shifting the focus away from the delivery of illness-based presentations on eating disorders to a more upstream approach including the promotion of body image and media literacy training, and life skills (SCT and NSVS). Classroom intervention sessions were evaluated through original and replication randomized controlled trials (RCTs) and revealed that the intervention was successful in improving body image satisfaction and global self-esteem and in reducing dieting attitude scores post intervention; however, these effects were not maintained at the 6-month and 12-month follow-up periods. On an encouraging note, a more recent study of a classroom-delivered media literacy program, *Media Smart*, revealed longer-lasting effects on risk factors associated with eating disorders (Wilksch 2015).

McVey’s prevention model was subsequently revised to suit a smaller all-girls peer format due in part to research linking the creation of healthy peer norms to decreases in the incidence of EDs (see Levine and Smolak 2006). This program, entitled *Girl Talk*, was lead by trained Public Health nurses, and the curriculum was broadened to include a focus on changing peer norms (FER). Effectiveness trials of local public health nurse-led groups carried out over a 3-month follow-up period (original and replication) revealed that this smaller all-girls group was successful in not only shifting eating attitudes but also in creating a positive behavioral effect, e.g., significant reduction in disordered eating. An added benefit to the collaborative and participatory nature of this research was the fostering of sustainability beyond the scope of the research trials. A replication study led by McVey conducted with a group of similar age females who happened to report higher disordered eating scores at baseline than those in the original RCT did not fare as well, raising the issue of whether a suite of prevention programs, each building on the other, might better serve the diverse needs of the student population. The findings from McVey’s replication study shaped the subsequent delivery of the all-girls peer group. A decision was made to lower the age group of recipients of the *Girl Talk* universal prevention programming to grades 5, 6, and 7 and to offer the grade 8 female students additional targeted prevention strategies to address their emerging disordered eating symptoms.

In an attempt to generate stronger effect sizes and to increase the prevention impact beyond the individual level, the all-girls group prevention model was expanded to an ecological framework by reaching out to boys and girls as well as parents, teachers, school personnel, and local public health nurses, in a program called *Healthy*
Schools-Healthy Kids. The length of the programming (8 months) and the follow-up assessment period (14 months) were also extended aligning with current universal prevention research recommendations (Wilksch 2014). An RCT of Healthy Schools-Healthy Kids was found to reduce internalization of media ideals among both male and female students and to reduce disordered eating among female students. Other studies of ecological prevention models conducted to date in the field of eating disorders have shown promising findings (see Levine and McVey 2015). Over time, McVey partnered with others to develop a sequential model of health promotion, universal, selective, and indicated prevention carried out in Ontario, Canada, all of which were evaluated using RCTs (see Figs. 1 and 2).

Buy-In/Sustainability. To foster buy-in from schools and local public health units, the Healthy Schools-Healthy Kids comprehensive school-based program was aligned with a comprehensive school health (CSH) model (http://www.jcsh-cces.ca/index.php/about/comprehensive-school-health) that was itself already being supported and disseminated to schools by public health agencies and many other organizations throughout the province. Moreover, student activities drawn from McVey’s earlier research were organized into a practical resource matched to Ministry of Education learning outcomes, and efforts were made to integrate the subject matter in with existing course work in other subject areas. This approach served the purpose of sharing the teaching load and sensitizing all teachers in the school not just those teaching Health and Physical Education.

Dissemination/Knowledge Translation. As part of her program of research, McVey researched ways to optimally disseminate these evidence-based programs in three ways (1) by creating an online curriculum and training program for teachers and public health and researching its impact on facilitator readiness and competency to carry out prevention across two Canadian provinces (www.aboutkidshealth.ca/thestudentbody), (2) collaborating in the development and evaluation of an online body positive program for female athletes and their parents and coaches (www.bodysense.ca), and (3) delivering and evaluating province-wide face-to-face workshops to local school boards, health units, sport settings, and other local agencies working with children, youth, and young adults and measuring their impact on knowledge and attitudes of health educators and practitioners (www.ocoped.ca).

Measurement

Measurement of universal prevention has numerous challenges given the magnitude of levels of ecology to measure. First and foremost is defining the outcomes and then having the resources to show long-term impact, using rigorous methods of analysis that can detect changes in predicted growth. A recommendation to examine the influence of prevention on actual symptoms or onset of EDs (Wilksch 2014) has its challenges given the absence of, or poorly measured, eating disorder indicators within existing national surveillance systems (see http://www.parl.gc.ca/content/hoc/Committee/412/FEWO/Reports/RP6772133/fewor04/fewor04-e.pdf). This poses a huge limitation for the field of eating disorder prevention as what gets measured is often what gets attention.

The Society for Prevention Research lists eight criteria for a successful prevention program: (1) The program is carefully derived from an explicit theoretical model; (2) trained personnel have implemented it with high fidelity; (3) outcome research uses samples permitting adequate statistical power and reasonable generalization; (4) reliable and valid measures are used and, if possible, administered by people blind to study conditions; (5) a pattern of predicted outcomes is seen in the target behaviors; (6) a pattern of predicted mediating effects is observed in the risk and protective factors derived from the model guiding program development; (7) predicted outcomes are observed in the short term and over a meaningfully long follow-up period; (8) the first seven criteria have been met in at least two RCTs or reasonable substitutes, such as time-series designs with long baselines. Replication is most persuasive when accomplished by two or more independent sets of investigators.
Universal Prevention, Fig. 1  CIHR-Ontario women’s health council mid-career award (McVey): sequential model of health promotion, prevention, and early intervention
To date, three ED prevention programs (all from the targeted prevention field) meet or come very close to meeting these stringent criteria: the dissonance-based programs of E. Stice and C. B. Becker, Stice’s Healthy Weight program, and C. B. Taylor’s Student Bodies program (see Stice et al. 2013).

Not surprisingly, it is recommended that the universal prevention field can learn from these rigorous prevention studies with regard to their methodological and thorough evaluation (Wilksch 2014). For example, paying greater attention to anchoring programming in theoretical models (as recommended by Levine and Smolak 2006) and testing mediating effects of the variables that are tied to the selected intervention theory is recommended (Stice et al. 2013). As well, being consistent with measures used across universal prevention studies and replicating existing programs instead of re-creating new ones is also recommended for the universal prevention field (Yager et al. 2013). Universal prevention studies require complex multivariate designs to evaluate the relative contribution of different intervention components. An added challenge is supplementing sophisticated outcome evaluations with equally useful analyses of the processes involved in promoting the uptake and feasibility of the intervention. This requires the application of qualitative methods of analysis to capture all sources of evidence.

**Controversies**

As pointed out by Green and Tones (1999), the multifactorial nature of health promotion interventions brings with it the need to consider...
measurement and evaluation of direct (e.g., outcome indicators, both proximal and distal ones), indirect (e.g., pretesting of educational materials, the training of personnel involved), and process (how was the intervention delivered or received) indicators. This requires measurement beyond the traditional experimental methods of randomized control trials (RCTs). As in the case of the Healthy Schools-Healthy Kids intervention, the use of a diverse and relatively large sample, regular classroom teachers, and other features designed to integrate the intervention into routine educational practices at the school limited investigator control over its delivery (i.e., internal validity). As such, there are numerous features not necessarily measured by McVey’s RCT that could have been the driving force(s) behind the success of the intervention.

Moreover, in McVey’s series of studies, care was taken to foster school readiness, administrative support, teacher buy-in, and collaboration with local champions including public health practitioners who provide services to the schools. Whereas these features were conceptualized up front as part of the intervention model, a future goal for McVey is to pay careful attention, not only to the process of preparation but also to the documenting of these processes in ways that are useful to readers of publications and to local and ongoing knowledge consumers and translators. This added information can serve to inform future program development teams to better understand how to design and to apply a school-based prevention program, increasing the external validity (e.g., translational aspect) of the programming.

Future Directions

In terms of future directions for the field of prevention of eating disorders, research is underway examining mindfulness as a strategy for universal prevention on its own or as add-ons to other mental health promotion/social competence strategies (Atkinson and Wade 2014), the tailoring of programming for male youth (Almenara et al. 2014) and for youth of diverse sexual orientation (Katz-Wise et al. 2015), as well as cost-benefit analysis for eating disorders to help underscore the need for prevention (Butterfly Foundation 2014).

It has been recommended that the ED field should forge greater collaboration with obesity (OB) prevention experts (Wilksch 2014). In direct response to federal and provincial “calls to action” to curb childhood OB (see http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/framework-cadre/pdf/ccofw-eng.pdf), McVey has hosted national and international symposia with researchers, practitioners, and policy decision makers from the fields of OB and ED to mobilize knowledge about shared risk and protective factors and to seek common ground on ways to promote health. These knowledge exchange forums sparked ideas for collaborative interdisciplinary intervention research. McVey subsequently forged linkages with public health experts to co-create and evaluate a professional development intervention intended to help service providers deliver prevention more effectively leveraging knowledge from the weight bias and weight science literature and increasing their sense of self-efficacy to address weight bias and to integrate mental health and healthy weights in their daily practice (McVey et al. 2013). Guiding principles for prevention of weight-related disorders co-created by a group of researchers, policy decision makers, and practitioners from across different sectors working in healthy weights and body image was additional outcome of this knowledge exchange forum. Sensitizing service providers about the negative effects of weight bias and ways to enhance their own weight bias awareness has since been integrated into healthy weights and OB prevention and treatment planning in other areas of Canada (https://balancedviewbc.ca/).

An additional recommendation from the research literature is to partner with prevention experts targeting other mental health problems (Wilksch 2014). This makes sense given the shared risk and protective psychosocial factors that are common to disordered eating and other issues facing youth such as substance abuse. This integrated approach has the added benefit of bringing EDs into the mainstream of public health planning. The approach of building partnerships with prevention
experts targeting other mental health problems is a timely one for the field of eating disorders. Transformations in youth mental health are under-way in Canada (http://www.mentalhealthcommission.ca/English/node/1132) and across different countries, including Australia, Ireland, and the UK (McGorry et al. 2013). Aligning our eating disorder prevention efforts with these recent and rapidly evolving transformations in youth mental health may provide a much needed vehicle for disseminating more widely the next generation of ED universal prevention programs.

Cross-References

▶ Current Status of Eating Disorder Prevention Research
▶ Dissonance-based Eating Disorder Prevention Programs
▶ Evidence-based Prevention Program delivery
▶ Future Directions in Eating Disorder Prevention
▶ Mindfulness and Acceptance-based Prevention of Eating Disorders
▶ Parent Influences on Body Image Attitudes and Eating Patterns in Early Childhood
▶ Peer Interactions and Relationships
▶ Sociocultural Environment and Internalisation of the Thin Ideal as Eating Disorder Risk Factors
▶ Weight and Shape Concern and Body Image

References and Further Reading


