

Internet-based innovations for the prevention of eating disorders: Evidence and implications for public health

Review on which this evidence summary is based:

Newton, M.S., Ciliska, D. (2006). *Internet-based innovations for the prevention of eating disorders: A systematic review*. *Eating Disorders*, 14, 365-384.

Review Focus

- P** General public
- I** Internet-based programs of varying formats: guided or non-guided; synchronous (e.g. real-time Internet chat rooms) or asynchronous (e.g. Internet message boards); and/or individual or group
- C** Wait list control
- O** *Primary outcomes:* disordered eating behaviour/outcomes, body mass index, body satisfaction
Secondary outcomes: knowledge of program content, and social support

Review Quality Rating: 10 (strong) Details on the methodological quality are available [here](#).

Considerations for Public Health Practice

Conclusions from Health Evidence	General Implications
<p>This high quality review is based on a small number of primary studies of weak methodological quality.</p> <p>Interventions consisting of psychoeducational readings and reflections, Internet-based body image journaling, and asynchronous Internet discussion groups resulted in:</p> <ul style="list-style-type: none"> perceptions of increased support improved knowledge <p>but had no impact on:</p> <ul style="list-style-type: none"> body satisfaction (e.g. shape and weight concerns) eating disordered attitudes and behaviours <p>Declining completion rates were associated with:</p> <ul style="list-style-type: none"> discomfort with the intervention lack of face-to-face contact concerns with privacy/confidentiality of personal information 	<p>Public health eating disorder prevention programs should use/encourage</p> <ul style="list-style-type: none"> internet-based programs and online discussion boards to improve healthy lifestyles, attitudes/behaviours and knowledge. <p>However, these programs are not as effective for improving disordered eating and associated symptomology.</p> <p>Public health should expect internet-based eating disorder programs to generate high satisfaction but should also be cautious given these types of programs can create discomfort as confidential and personal information is disclosed and face-to-face contact is eliminated. Strategies to minimize anxiety and frustration should be considered as part of program planning.</p> <p>Given the low methodological quality of the studies, these findings should be used cautiously.</p>

Evidence and Implications

What's the evidence?	Implications for practice and policy
<p>1. Body Satisfaction, Attitudes, and Behaviours (5 trials, 356 participants)</p> <ul style="list-style-type: none"> <u>No impact</u> on restraint, eating concern, shape concern, weight concern, or eating disordered attitudes and behaviours, body satisfaction, or eating attitudes. 	<p>1. Body Satisfaction, Attitudes, and Behaviours</p> <ul style="list-style-type: none"> Based on currently available evidence, internet-based public health programs are not supported.

<p>2. Social Support (Internet-based discussion groups) (2 RCTs)</p> <ul style="list-style-type: none"> Participants in the program reported a “moderate” amount of support, as well as self- and other-acceptance, from the on-line discussion boards. 	<p>2. Social Support (Internet-based discussion groups)</p> <ul style="list-style-type: none"> As a strategy to improve perceived social support among this population, public health may consider implementing intervention-based discussion groups.
<p>3. Knowledge (1 RCT; 1 quasi-experiment)</p> <ul style="list-style-type: none"> Statistically significant improvements in knowledge were observed when participants were exposed to a multi-session intervention focused on healthy lifestyle attitudes/behaviours that also allowed time for participants to reflect on new learning and experiment with newly-acquired skills. 	<p>3. Knowledge</p> <ul style="list-style-type: none"> Public health should consider Internet-based eating disorder prevention programs for improving knowledge related to healthy lifestyles and attitudes/behaviours.
<p>4. Software Experience (qualitative findings based on 1 RCT and 1 quasi-experiment)</p> <ul style="list-style-type: none"> Most (77.5%) reported high satisfaction with the program. Students reported feeling that: (1) they could talk about their concerns in the on-line discussion group and felt supported, (2) other group members understood their concerns, and (3) input they received from group members was trusted (1 RCT). Participants expressed high levels of anxiety/frustration related to participant posted Internet messages (1 RCT). 	<p>4. Software Experience</p> <ul style="list-style-type: none"> Public health should provide internet-based prevention programs for eating disorders considering it was viewed as being “useful, helpful, and fun” However, this type of program could negatively impact participants. Public health should consider the potential impact posted Internet messages could have on anxiety levels and frustration from posted messages.
<p>Legend: P – Population; I – Intervention; C – Comparison group; O – Outcomes; CI – Confidence Interval; OR – Odds Ratio; RR – Relative Risk ** For definitions please see the healthevidence.org Glossary http://www.healthevidence.org/glossary.aspx</p>	

Why this issue is of interest to public health in Canada

Recent literature from the Public Health Agency of Canada indicates that eating disorders are an increasing public health issue among young women.¹ It is now estimated that approximately 3% of women are affected by an eating disorder in their lifetime, while many more may live with sub-clinical disordered eating behaviours.^{1,2} Since 1987, hospitalizations for eating disorders in general hospitals have increased by 34% among young women under the age of 15 and by 29% among 15-24 year olds.² Although notably lower, the rates for men also increased slightly (4.8%) during the same period, from 0.6 to 0.7 per 100,000 men.¹ The importance of eating disorder prevention is undeniable, given their resilience to treatment and the fact that these disorders may lead to complications such as hypothermia, hypotension, endocrine disorders and kidney failure.¹ Moreover, those with eating disorders are at risk of long-term psychological and social problems, including depression, anxiety, substance abuse and suicide, with an inevitable impact on quality of life and productivity.^{1,2} Notably, eating disorders have the highest mortality rate of all mental illnesses, with 10% to 20% eventually dying from complications.³

- Gucciardi, E., Celasun, N., Ahmad, F., & Stewart, D.E. (2003). Eating disorders. In Canadian Institute for Health Information (Ed.), *Women's health surveillance report: A multi-dimensional look at the health of Canadian women* (chapter 20). Retrieved from http://www.phac-aspc.gc.ca/publicat/whsr-rssf/pdf/WHSR_Chap_20_e.pdf
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- Canadian Mental Health Association, Ontario. (1993). *Fact sheets: Eating disorders*. Retrieved from http://www.ontario.cmha.ca/fact_sheets.asp?cID=4759

Other quality reviews on this topic are available on www.healthevidence.org

Suggested citation

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This evidence summary was written to condense the work of the authors of the review referenced on page one. The intent of this summary is to provide an overview of the findings and implications of the full review. For more information on individual studies included in the review, please see the review itself.

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