National Eating Disorders Collaboration

Evaluating the Risk of Harm of Weight-Related Public Messages

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Evaluating the Risk of Harm of Weight-Related Public Messages

Introduction

It is important to consider the unintended consequences of campaigns and resources that provide weight-related messages. This resource considers obesity, overweight, and weight gain prevention public health messages in relation to eating disorders and disordered eating.

Overweight and Obesity and Related Health Promotion

Overweight and obesity carry significant burdens of ill health, premature death, and social and economic costs to the Australian community.[1,2,3] Over 60% of adults and one in four children in Australia is overweight or obese.[4] Overweight and obesity are descriptive terms for excess body fat, and are not classifiable as diseases as such. They are a significant public health focus because they are associated with substantial physical and mental health morbidity. Related chronic conditions and diseases include heart disease, high blood pressure, stroke, some cancers, gall bladder disease, and Type 2 diabetes. Overweight, obesity, and weight gain over time heighten risk for poor psychosocial outcomes such as depression and anxiety, particularly among females.[5,6,7,8]

Addressing unhealthy weight and weight gain is a national health priority and there are many campaigns, materials, and resources that provide information on this topic for the general public and health professionals. Obesity and related campaigns often focus on changing thoughts and behaviours related to eating and weight, within the context of adopting a healthier overall lifestyle. While addressing these issues, care must be taken not to cause unintended harm, such as increasing vulnerability to onset of eating disorders or disordered eating, or exacerbation of the risk factors that may predispose to these conditions.

Dieting and Disordered Eating

The term 'dieting', as defined in this guide, refers to a broad range of eating behaviours and cognitions that are unhealthy and potentially harmful from a physical and psychological standpoint. Examples include overly restrictive eating (i.e., excessively low calorie intake, cutting out entire food groups), strict and rigid food rules, and dietary changes that are not practical or sustainable long-term. Dieting can be distinguished from healthful dietary practices and cognitions, such as having a balanced diet, aiming to eat the recommended serving of fruits and vegetables, being flexible about food choices, and engaging in practical and sustainable dietary practices. In Western countries, approximately 55% of women and 29% of men report having dieted to lose weight at some point in their life.[9] The relationship between body mass index (BMI) and dieting is not clear-cut, with 10% of underweight individuals currently dieting, and 70% of overweight or obese currently not dieting, although they often have a history of dieting.[9] Adolescents, particularly females, are at high risk of dieting, with 38% of girls and 12% of boys dieting to a moderate level, and 7% of girls and 1% of boys dieting to an extreme level.[10] Dieting is commonly undertaken to control weight and shape, and may be a symptom of disordered eating.

Disordered eating affects a significant proportion of youth and adults in Australia,[10,11,12,13,14,15] and is a strong risk factor for eating disorders.[19] Disordered eating describes unhealthy, extreme and dangerous dietary and weight control practices, and includes fasting, skipping meals, self-induced vomiting, misuse of laxatives and diet pills, and binge eating. Over one in ten Australian women regularly engage in at least one form of disordered eating, with 7.5% binge eating, 2% purging, and 5% strictly dieting or fasting at least once per week or more frequent.[13] Among Australian men, 8% binge eat, 1% purge, and 4% strictly diet or fast on a weekly basis or more frequent.[11] Among both Australian men and women, disordered eating increased two-fold from the 1990s to 2000s.[11]

Although many individuals engage in dieting and disordered eating, only some individuals go on to develop an eating disorder. Developing an eating disorder is more likely with multiple risk factors.

Eating Disorders

Eating disorders are highly complex and serious illnesses with mental and physical aspects. They involve intense worry and concern about body image, eating and weight control. The two most commonly understood eating disorders are anorexia nervosa and bulimia nervosa.[16] A third category is "eating disorders not otherwise specified", a residual diagnostic category designed to capture those with other clinically significant eating disorders.[16] This category includes binge eating disorder, and syndromes that do not meet full criteria for anorexia nervosa or bulimia nervosa.[16] In reference to weight status, people with anorexia nervosa are extremely underweight, people with bulimia nervosa are typically of average weight, and people with binge eating disorder are often overweight. By Australian estimates, approximately 16% of adult women experience an eating disorder in their lifetime.[17] Males are also affected, comprising 10% of those with anorexia nervosa and bulimia nervosa. For binge eating disorder, the gender distribution is approximately equal. Eating disorders occur most frequently in adolescents, although they can develop at any age. The prevalence of disordered eating and eating disorders is on the rise in Australia.[11] Eating disorders carry significant burden, with anorexia nervosa and bulimia nervosa being leading causes of disease and injury in female youth in Australia, as measured by disability-adjusted life years.[18] Eating disorders can impact upon every major organ in the body. Physical problems associated with eating disorders include gastrointestinal illnesses, osteoporosis, kidney failure, heart failure, dental and gum diseases, Type 2 diabetes, and anaemia. The most common pathway into eating disorders appears to be through strict dieting – Australian female adolescents who diet are 18 times more likely to develop an eating disorder within six months.[19] Other risk factors for eating disorders include being female, aged less than 25 years, a family history of eating disorders or other mental health illnesses, childhood trauma, being overweight or teased about weight in childhood, dieting and disordered eating, low self-esteem, an anxious and perfectionistic personality; concern about eating, weight and shape, poor body image, and a belief in the importance of a thin body shape.[20]

Overweight, Obesity, and Eating Disorders: Common Ground in Health Promotion

Overweight, obesity, and eating disorders have more in common with each other than is commonly believed. Comorbidity studies suggest overlap, for instance, overweight and obese individuals are at higher risk of disordered eating and eating disorders than the general population.[21] Second, longitudinal research suggests that youth and adults who diet and use unhealthy weight-control practices (e.g., fasting, diet pills, self-induced vomiting, laxatives for weight control) gain more weight over time and are at higher risk of overweight and obesity.[22,23] Individuals with binge eating disorder are generally overweight or obese. Among Australian adults, the prevalence of comorbid obesity and eating disorder behaviours trebled from the 1990s to 2000s.[24] There is marked overlap; individuals with disordered eating problems and individuals who are overweight or at risk of becoming overweight, are therefore not two separate populations per se.

Coordinated and consistent messaging that promote health outcomes for overweight and eating disorder problems is possible,[25,26,27,28,29] particularly around prevention. One way of achieving this is to focus on the shared risk and protective factors, and to change these in a positive direction. The existing knowledge on shared risk and protective factors is based on a limited body of research and reflects best knowledge at present. Proposed shared risk factors include being overweight in childhood, weight bias and stigmatisation, childhood weight-related teasing, hours of watching television, media and marketing exposure, dieting and disordered eating, poor body image, depressive symptoms, and family talk about weight.[22,26,30,31,32,33,34] Proposed shared protective factors include enjoying physical activity, positive body image, high self-esteem, eating breakfast every day, family modelling of healthful behaviours (e.g., avoiding unhealthy dieting, engaging in physical activity, having regular meals), and regular and enjoyable family meals.[26,30,31,32,35,36] Eating a healthy diet made up of three meals and two to three snacks per day, made up of a variety of foods representing all food groups in proportions outlined in the Australian dietary guidelines,[37,38] is

a nutritional strategy that offers health promotion benefits for both eating disorders and the overweight spectrum.

Potential for Unintended Harm

It is important that weight-related public health messages consider the potential that messages may have for adverse or unintended consequences. Potential unintended consequences of obesity and weight-related campaigns have been highlighted in international discussions. Several key issues were identified and summarised at an international joint eating disorder and obesity symposium held to workshop common ground for health promotion.[29] These issues, which are elaborated on with further relevant literature, included:

- An overemphasis on weight and BMI as physical parameters of health. This is problematic for several reasons. First, it detracts from an understanding of health in its broader sense as a state of physical, social, and mental well-being[39] and absence of disease, and fails to optimise personal and sociocultural health solutions. Second, it assumes that normal BMI equals "good health", regardless of eating, physical activity, or other health-related behaviours. Third and relatedly, this focus may promote weight bias and weight stigmatisation, body dissatisfaction, and weight concern and preoccupation, and through these various mechanisms may increase risk of future weight-related conditions, including overweight, obesity, disordered eating, and eating disorders. Fourth, the limitations of weight and BMI as sometimes unreliable indicators of health and adiposity have been well-noted.[40] These indicators are particularly unreliable among weight-training athletes, Asian populations, older adults, children, and people with muscle-wasting conditions (e.g., muscular dystrophies, paraplegia). Fifth, as the international Academy of Eating Disorders states, weight is not a behaviour and is therefore not an appropriate target for behaviour modification;[41] there are many alternative appropriate behaviour targets, for instance, hours of television watching and eating breakfast each day. Focusing on behavioural and other change (i.e. social, cultural) is arguably a more strategic means of facilitating personal and sociocultural health solutions.

- Moralisation of eating, that is labelling foods as 'good', 'bad', 'junk', and food choices as 'right' or 'wrong', may foster a rigid approach to eating that is inconsistent with guidelines for nutritional health; preclude an understanding of dietary balance; foster guilt and other negative emotions about dietary choices; and at the extreme, perpetuate cycles of restriction, food avoidance, and binge eating.

- Awareness-raising initiatives that focus on the consequences of childhood obesity, without appropriate information and support for effective lifestyle changes, may be misinterpreted by obese children and their parents as cues to engage in dieting, such as fad or restrictive dieting. This is unsuitable for growing children and may have detrimental consequences for health and physical growth.

- BMI screening, for instance, school- or classroom based initiatives, can have negative consequences, resulting in an atmosphere of weight bias and stigmatisation. Among at-risk individuals, screening and regular monitoring can lead to body dissatisfaction, overconcern with weight and shape, and disordered eating, and may trigger responses in parents' to manage their childrens' weights that are potential unhelpful.

- Poorly planned weight-related initiatives may make at-risk individual feel more weight-concerned and may undermine self-esteem by encouraging negative self-evaluations.[42] One study[43] found that 11% of individuals with eating disorders reported that their illness was triggered by mandatory participation in a school-based 'health and fitness program' targeting overweight students. Another study found that parental encouragement of physical activity for children's weight loss was associated with higher child BMI and more weight concern over time, and was not associated with objectively-measured physical activity.[44] This is a new area of research, so findings must be regarded with due caution. In relation to public health messages, encouraging participation in physical activity for overall health, enjoyment, and social reasons, rather than solely for weight loss, is likely to be more effective at preventing unintended harm.

Finally, it is important to note that it is unclear how valid the above issues are in relation to triggering or exacerbating eating pathology, as rigorous evaluations have not yet been undertaken. Despite this, the information and guidelines inherent in this resource are based on expert opinions and the current status of knowledge. This document provides information on evaluating the potential risk of harm for weight-related public health messages. This resource draws on knowledge from the eating disorders field and evidence from the interface between eating disorders and obesity. Given the projected future Australian health, social, and economic burdens associated with these illnesses, improved collaboration and coordination is desirable to encourage cross-fertilisation of knowledge and to optimise health promotion benefits.

Key Principles and Assumptions for Weight-Related Public Health Messages

1. ***Campaigns and programs targeting eating-, physical activity-, and weight-related issues should aim to do no harm.*** Obesity prevention and related interventions should not increase risk of disordered eating or eating disorders, and eating disorder prevention interventions should not increase risk of overweight and obesity.

2. ***Obesity and eating disorders are not opposite ends of the same spectrum.*** A common myth is that anorexia nervosa is "the opposite of" obesity. Although the weight status of these individuals may differ, eating disorders in general and overweight and obesity have more in common than commonly believed. First, there is evidence that obesity and disordered eating – a salient pathway into eating disorders - share some risk and protective factors. Second, comorbidity studies suggest overlap. Overweight and obese individuals are at higher risk of disordered eating and eating disorders than the general population. Longitudinal research suggests that individuals with disordered eating symptoms are at higher risk of becoming overweight. A majority of individuals with binge eating disorder are overweight. Many individuals who develop bulimic syndromes have a history of being overweight and teased about weight in childhood. Eating disorders and obesity do not affect two separate populations per se.

3. ***Obesity and eating disorders may be viewed as occurring at the same end of a spectrum.*** At one end, health promoting beliefs, behaviour practices, and physical indicators, buffer against these conditions; at the opposite end, weight-related syndromes and eating disorders are potential outcomes (see **Table 1**).

4. ***Integrated, coordinated messages around obesity and eating disorders are possible.*** Although further research is required, conceptually, the optimum path forward involves targeting shared risk and protective factors, and avoiding increasing risk of specific problems.

Key Dimensions to Assess Eating- and Weight-Related Concerns

The spectrum of weight- and eating-related problems concerns four dimensions, ranging from healthy to problematic and these are shown in Table 1. These dimensions are adapted from Neumark-Sztainer (2005)[45].

Table 1. Dimensions for assessing weight- and eating-related concerns

Dimension		Healthy	⇨	⇨	Problematic
1.	Eating and weight control practices	Healthy eating and regular eating patterns	Dieting and erratic eating behaviours	Unhealthy weight control behaviours Binge eating†	Disordered eating Eating disorders: anorexia nervosa, bulimia nervosa, binge eating disorder, atypical eating disorders
2.	Physical activity behaviours	Moderate physical activity	Minimal or excessive physical activity (i.e., "excessive exercise"††)	Lack of or excessive physical activity (i.e., "excessive exercise")	Markedly excessive physical activity (i.e., "excessive exercise")
3.	Body image	Body acceptance and satisfaction	Mild body dissatisfaction	Moderate body dissatisfaction	Severe body dissatisfaction
4.	Physical status	Normal body weight	Mildly overweight or underweight	Overweight or underweight	Severe overweight or underweight

†Binge eating refers to eating an unusually large amount of food in a short period of time (i.e., within a 2-hour period) with an accompanying sense of loss of control.[16]

††Excessive exercise refers to physical activity that is excessive according to health-promoting guidelines,[46] that is undertaken solely to influence shape or weight, and when postponement of exercise occurs, is associated with intense guilt. Excessive exercise is unlikely to be associated with impairment when not accompanied by other eating disorder features, be it cognitive or behavioural.[47,48]

Neumark-Sztainer's conceptual framework provides a useful tool to consider the overall "helpfulness" of campaigns targeting eating, physical activity and weight-related concerns. Campaign messages across the four dimensions can range in degree of helpfulness. Those campaigns with "healthy" messages across the four dimensions are assumed to be the most helpful in jointly addressing obesity and eating disorders through health promotion and prevention interventions, and in reducing likelihood of causing harm, because they contain complementary, integrated messaging.

How to Apply this Framework

This framework is a tool to help guide risk assessment of weight-related public health messages. It is recommended that campaigns providing eating, weight, and/or body image-related messaging engage stakeholders from the obesity, eating disorders, and other relevant sectors (i.e. youth) to ensure materials are developed responsibly and that messaging is integrated. It is important to consider to whom the message is pitched, and the vulnerability of certain groups, particularly those at higher risk for disordered eating and eating disorders. Piloting and evaluation of campaign materials is recommended.

This framework can be used to help guide risk assessments of a wide variety of materials including television, radio, press, online, and outdoor advertising and resources. To assess campaign materials, look at the messages promoted in materials and compare them against the helpful and less helpful messages outlined in **Table 2**. It is important to consider the entire aspect of the material including text, imagery, and tone of voice. If a message sits in the less helpful column consider how it could be modified to move it into the helpful messaging column. If the decision is made to include a message that is considered less helpful, try to include a number of helpful messages from the same dimension i.e. physical activity behaviours. Careful consideration must be taken to ensure that the message still has relevance and impacts strongly on the target group.

Table 2. Framework to help assess weight-related health promotion messages

Dimension	Healthy	⇨	⇨	Problematic
Eating and weight control practices	**Healthy eating and regular eating patterns**	**Dieting and erratic eating behaviours**	**Unhealthy weight control behaviours** **Binge eating**	**Disordered eating** **Eating disorders: anorexia nervosa, bulimia nervosa, binge eating disorder, atypical eating disorders**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *healthy and balanced eating in line with appropriate guidelines*[37,38] ■ *an appropriate balance between energy intake and activity levels (while taking into account one's stage of growth and development)*	■ *dieting (e.g., cutting out entire food groups, drastically reducing calorie intake)* ■ *calorie restriction and creating a calorie deficit (when target audience includes non-overweight)* ■ *excessive calorie restriction (for overweight target audience)*		
	■ *the value of adopting healthy behaviours for overall physical health and emotional well-being*	■ *the value of adopting healthy behaviours solely or with excessive focus on weight-related reasons*		
	■ *regular eating patterns, including eating breakfast each day*	■ *fasting* ■ *skipping meals* ■ *eating when hungry only** **hunger/satiety signals are often non-normal (impaired and unreliable) in people with eating disorders and people who have been habitually dieting/restricting food intake*		
	■ *practical and sustainable dietary practices*	■ *impractical and unsustainable dietary practices*		
	■ *a flexible approach to eating and food choices*	■ *strict and rigid dietary rules that may induce guilt if broken*		
	■ *moderation (i.e. occasional 'treats' can fit into a healthy, balanced diet)*	■ *food rules that do not emphasise moderation and balance (i.e. occasional 'treats' not allowed; must eliminate 'X' food on all occasions)*		
	■ *healthy weight control behaviours (e.g., eating recommended daily serving of fruit and vegetables, regular and moderate physical activity)*	■ *unhealthy weight control behaviours. This includes messages provide education on (including those that encourage or discourage use of**)disordered eating/extreme weight control methods e.g., skipping meals, fasting, laxative misuse, self-induced vomiting, diuretic misuse, diet pills, etc.* ***messages designed to be helpful may inadvertently be harmful to those at risk by providing education on dangerous weight loss methods*		
	■ *matter-of-fact, non-judgmental, and pragmatic*	■ *moral and rigid judgements about dietary practices (i.e. labelling foods as 'good' or*		

	information	*'bad', choices as 'right' or 'wrong', certain foods as 'junk' foods)*		
Physical activity behaviours	**Moderate physical activity**	**Minimal or excessive physical activity (i.e., "excessive exercise")**	**Lack of or excessive physical activity (i.e., "excessive exercise")**	**Markedly excessive physical activity (i.e., "excessive exercise")**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *regular and moderate physical activity in line with appropriate guidelines*[46] ■ *an appropriate balance between energy intake and physical activity levels (while taking into account one's stage of growth and development)*	■ *no, minimal, or excessive physical activity*		
	■ *engaging in physical activity for physical health, psychological well-being, enjoyment, social, and lifestyle reasons* ■ *engaging in physical activity that is sustainable*	■ *engaging in physical activity for the sole purpose of weight loss, weight gain prevention, or appearance improvement* ■ *engaging in physical activity as a temporary method to affect weight change*		
Body image	**Body acceptance and satisfaction**	**Mild body dissatisfaction**	**Moderate body dissatisfaction**	**Severe body dissatisfaction**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *choosing healthy, balanced, behaviours for optimal physical health and psychological well-being*	■ *choosing healthy, balanced behaviours for weight and appearance reasons, with insufficient overall focus on physical health and psychological well-being* ■ *responsibility for body weight and shape as solely within the control of the individual*		
	■ *a positive relationship with one's body so that there is the desire to nurture one's body through healthy eating, physical activity, and positive self-talk*	■ *body dissatisfaction as a motivator to behaviour change* ■ *excess focus on weight and BMI* ■ *messages about controlling weight and body shape* ■ *fear, dissatisfaction, preoccupation, or concern about weight and weight gain*		
	■ *respect for individuals at any weight and shape*	■ *overweight/underweight stigmatisation* ■ *making comments about others' weight or shape*		
Weight status	**Normal body weight**	**Mildly overweight or underweight**	**Overweight or underweight**	**Severe overweight or underweight**
	Helpful messages promote:	***Less helpful messages promote:***		
	■ *choosing healthy, balanced, behaviours for optimal health and well-being*	■ *excess focus on weight, BMI, and weight management; with insufficient focus on overall health and on behaviour targets (i.e., eating the recommended servings of fruit*		

	■ *a healthy body weight as one possible outcome of behaviour change, in the context of other possible outcomes, such as greater physical health and psychological well-being*	*and vegetables).* ■ *messages about controlling weight and body shape*
	■ *realistic views about the relationship between body weight and physical and psychological health*	■ *the assumption that a normal body weight (BMI = 20-25kg/m^2) is equivalent to "good health", regardless of eating, physical activity, or other health-related behaviours.*
	■ *overweight and obesity (and eating disorders) as conditions with multiple causes*	■ *overweight and obesity (and eating disorders) as simple problems with simple solutions* ■ *overweight and obesity as entirely within the personal control of the individual* ■ *overweight/underweight stigmatisation*
	■ *respect for individuals at any weight*	■ *overweight and obesity as being associated with a lack of willpower* ■ *making comments about others' weight or shape* ■ *overweight/underweight stigmatisation*

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