

# **Tabulated Summary of Evaluated Prevention Intervention Research Literature**

Assoc Professor Susan J Paxton,  
Body Image and Health Inc and  
Psychology Department, University of Melbourne

Prepared for the Victorian Government Department of Human Services  
Melbourne Victoria



June 2002

## **Tabulated Summary of Evaluated Prevention Intervention Research Literature**

The following document provides a tabulated summary of the research literature examining the effectiveness of a wide range of body image dissatisfaction prevention interventions. With a few exceptions this is a review of published or in press research. While unpublished interventions are frequently valuable, they are difficult to access and often un-evaluated. I believe the literature summarised below does provide a very good indication of the “state of the art” in the prevention intervention area.

A review of this kind is never complete as new work is being conducted all the time and there are now very many evaluated programs of one kind or another. However, it is hoped that this table will be a helpful resource for those who wish to understand the research literature, and particularly the nature of the outcomes, in some depth. Commentaries have not been included in this review, but a number of helpful references of this kind are provided.

This document forms the evidence base on which the *Overview of Body Image Dissatisfaction Prevention Intervention Research*, the *Body Image Planning Guide* and *Best Bets* are based. The document is divided into three sections: a tabulated summary of each reviewed paper, a very similar though sometimes extended review in a non-tabulated form, and a reference section. A standard format has been used throughout to help in cross-comparisons. The research has been arranged in alphabetical order of first author. While this does mean that different types of research may be adjacent to each other, the reference list at the end with full titles and details provides a quick way to identify material that may of particular interest to you.

Full explanations of all variables assessed, abbreviations and descriptions of research details are not provided. Full detail is typically provided in the original document. With one or two exceptions, I have copies of the articles, and anyone wishing to obtain a copy is welcome to get in touch with me and I will endeavour to assist.

The *Overview of Body Image Dissatisfaction Prevention Intervention Research* provides an integrated overview of the findings of the research summarised below.

Associate Professor Susan Paxton

Body Image and Health Inc

and

Psychology Department, University of Melbourne

### Tabulated Summary of Evaluated Prevention Intervention Research Literature

Authors Date	Setting/Style of Intervention	Participant Selection	Participants Age/N	Design and Follow-up	Outcome Measures	Outcomes	Comments
Dalle Grave et al., 2001	Middle-school. 6x2 hrs weekly interactive sessions + two booster sessions after 6 months. Addressed socio- cultural pressures, cognitive distortions and negative effects of dieting. Aimed to create a counter- culture against unhealthy dieting.	Selective prevention  Random selection of two classes at one year level into exp group. Remaining classes = control	11-12 years, mean age =11.6 years.  N= 61 females, 45 males.  Exp group=55 (32 females, 23 males). Control=51 (29 females, 22 males).	Repeated measures ANOVA. 2 groups (exp and control) x 4 assessment occasions (pre- test, post-test, 6 months follow- up, 12 months follow-up). Baseline BMI as covariate.	Knowledge ChEAT EDE-Q Global; Restraint; Weight concern; Shape concern; Eating concern  Self-esteem	Effect of program observed on knowledge at post- test and this was maintained.  An effect of program on ChEAT and EDE- Q eating concern occurred at post-test and was maintained across 12 months.  No at risk analyses.	Italian.  Observed long term effect on knowledge and some eating attitudes but no effect observed on weight or shape concerns. (Started with low levels). Delivery by specialists.
Baranowski, & Hetherington, (2001)	Primary school.  Girls only  5 x1.5 hr weekly sessions during	Selective prevention.  Non-random selection. Volunteers from	Age 11-12 years  Exp gp: n=16 Control n=13	2 groups x 3 assessments (pre-test, post- test, 6 months follow-up) repeated	Index of self- esteem. Rosenberg self- esteem. Current-ideal discrepancy.	A group x time interaction found at follow-up on dietary restraint such that the healthy eating group reduced dieting to a	Result should be treated with great caution given it was the only intervention effect and the control group started with

	<p>school time.</p> <p>Two groups: Experimental —aimed to build self-esteem and reduce dieting behaviours and related attitudes. Control —healthy eating designed to promote higher consumption of fruit and vegetables.</p>	<p>one school in Exp group and volunteers from another in Control</p>		<p>measures ANOVA.</p>	<p>ChEAT. DEBQ-restraint.</p>	<p>greater extent than the experimental group.</p> <p>No other interaction effects.</p> <p>No at risk analyses.</p>	<p>much high restraint than the exp group.</p> <p>However, if future studies supported this finding it may be that eating more fruit &amp; veg reduces dieting. (Consistent with Stice et al., in press)</p>
<p>Buddeberg-Fischer et al. (1998)</p>	<p>Three 90 minute classes at monthly intervals.</p> <p>Mixed didactic and discussion group and included a class picnic.</p> <p>1<sup>st</sup> class —socio-culturally established body ideals, physical</p>	<p>Both selective and targeted intervention.</p>	<p>Mean age = 16.1 years.</p> <p>N=314 —205 female, 109 male.</p> <p>Exp group = 159, Control group = 155.</p>	<p>2 groups x 2 assessments (pre-test and post-test) ANOVA and MANOVA.</p> <p>Follow-up = 3 months after last class.</p>	<p>EAT —26; Giessen Physical Symptom Checklist; General Symptom Index.</p>	<p>No effect of intervention in total group.</p> <p>In at risk females (n=32 and n=31) (EAT scores &gt;10 12 months previously), there were no group by time interactions in univariate analyses. But in a multivariate</p>	<p>While not strong when looking at separate outcomes, high risk girls seemed to benefit from this fairly short intervention.</p> <p>No specific examination of body image variables although the program</p>

	changes in adolescents etc. 2 <sup>nd</sup> class —picnic, health and nutrition. 3 <sup>rd</sup> class — psychosomatic symptoms and psychological disorders in adolescence.					analysis there was a significant group by time interaction, suggesting that taking the symptoms together, the high risk girls in the intervention had fewer symptoms following the intervention.	did address these.
Carter et al., (1997).  Note: Stewart et al. (2001) is a sequel to this.	School based.  Girls only.  8 x 45 minute weekly sessions.  Educational material on: socio-cultural pressures on women to diet, body image and self-esteem, development of and help-seeking for eating disorders, healthy eating and	Selective prevention  Non-random selection of one class at a private and one at a state school.	13-14 years  Experimental group =46  No control group	1 group x 3 assessment times (pre-test, post-test and 6 months follow-up).  Non-parametric tests used to examine differences at different time points.	EDE-Q global, EDE-Q Restraint, EDE-Q Weight concern, EDE-Q Shape concern, EDE-Q Eating concern.  ChEAT.  Self-concept.  Knowledge	Knowledge increased and remained elevated over baseline levels.  Decreases in ChEAT, EDE-Q global and sub-scales at post-test, but changes were not maintained, returning to baseline levels 6 months.  Except for EDE-restraint, which at 6 months was significantly higher,	Short-term gains are evident but not maintained at follow-up. Small increase in EDE-R grossly exaggerated in subsequent commentary. It is the only significant effect making it suspect especially in such a small group, and without a control group it is not possible to say

	<p>resisting pressures to diet. Cognitive and behavioural aspects.</p> <p>Didactic teaching and small group exercises.</p> <p>Homework.</p> <p>Administered by members of research team.</p>					<p>but by a clinically unimportant amount at 6 months.</p> <p>No change in self-concept.</p> <p>No at risk analyses.</p>	<p>whether this was a normal developmental trend.</p>
<p>Coller et al., (1999) — based on extended abstract</p>	<p>An uncontrolled pilot study conducted with a small group of Girl scouts and used to develop materials for a larger program.</p> <p>6 x 90 minute weekly sessions of fun activities, called <i>Taste of Food, Fun and Fitness</i>. Included a Parent Tip Sheet.</p>	<p>Selective prevention.</p> <p>Non-random selection.</p>	<p>10-12 years.</p> <p>22 girls</p>	<p>Pre and post test design.</p>	<p>Assessed eating attitudes and behaviours.</p>	<p>“Minimal changes in eating attitudes and behaviours.”</p>	<p>Helpful in indicating which activities may be useful in extending.</p> <p>A preliminary study of Neumark-Sztainer et al. (2000).</p>
<p>Heinze et al., (2000)</p>	<p>High school Presentation of a 24 minute video</p>	<p>Selective prevention.</p>	<p>Mean age Grade 7=12.5, mean age Grade</p>	<p>2 Times (pre and post) x 2 grade (7 &amp; 10) x 4</p>	<p><u>Knowledge</u> (diet aspirations, Strict diets,</p>	<p>Effect of Time for all variables except body dissatisfaction. i.e.,</p>	<p>Immediate response to video was positive, but assessment made</p>

	presented by a young woman on body image and disordered eating issues. Presenter described as either: a recovered anorexic, an expert on eating disorders, a peer, or given no particular identity.	Random allocation of students to presenter condition.	10=15.75 years. N Grade 7=103, N Grade 10=88. Condition: 1. n=45 2. n=50 3. n=47 4. n=49	conditions (presenter identity) repeated measures ANOVA on each outcome variable.  No follow-up	models, diet results, eating disorders). <u>Attitudes</u> (body dissatisfaction, drive for thinness, size discrepancy). <u>Intentions</u> (intentions to diet, adaptive reaction, unconcerned, negative reaction).	after viewing video, knowledge increased, intentions to diet decreased, and reduced anticipated negative response to weight gain.  Effects strongest in Grade 7 girls.  No effect of presenter.  No at risk analyses.	straight after viewing and there is no indication that the responses would have been maintained. However, promising with no indications of negative effects. Grade 7 had greatest gains.
Higgins & Gray, 1998	Adult women chronic dieters.  <i>Freedom from Dieting</i> . To teach participants to adopt the natural eating - regulated by physiological rather than cognitive or emotional signals,	Targeted prevention.  Pool of volunteers drawn from radio ads and press, included if chronic dieters, no evidence of anorexia or	Mean age = 44 years (SD=10.1)  82 females drawn from a pool of 320 volunteers. Exp group = 40, Control group = 42	2 groups (experimental vs control) x 2 times (pre- and post-test). Following delay, control group offered program. All participants receiving treatment x 4	Restrained eating (DEBQ), Emotional Eating (DEBQ), External Eating (DEBQ), Body Shape Questionnaire, Self-esteem	At post-test the experimental group had made significant and substantial improvements on all measures. Especially marked effect on BSQ (134.8 down to 91.8). Effects maintained at 12 months follow-up.	A strong endorsement for this style of intervention to improve body image concerns. The BSQ scores finished below normal values.

	<p>eating regimes or have weight loss goals. Spontaneity and enjoyment of food without anxiety, guilt or concerns about compulsive or out-of-control eating.</p> <p>Six weekly 2 hour sessions, followed by a review meeting two weeks later and bi-monthly follow-up sessions</p>	<p>bulimia and were not participating in other interventions. Random allocation to an experimental or no intervention control group.</p>		<p>assessment occasions (pre-, post-test, 6 months and 12 months follow-up).</p>		<p>The greater the adoption of natural eating, the greater the weight loss.</p>	
Huon (1994)	<p>University students</p> <p>Small group discussion with group facilitator, 6 students in each x 2 one hour sessions. In one session each group looked at developing positive body image and in the other they</p>	<p>Targeted prevention.</p> <p>From introductory Psychology course at an Australian University, high weight pre-occupied and</p>	<p>Mean age = 19.8 years, range = 18-25 years.</p> <p>24 in total, 12 in each condition (Strategies vs barriers)</p>	<p>Comparison of Strategies vs Barriers x pre-test and post-test following each session (body image and dieting) and 1 month follow-up</p>	<p>Positive and Negative Affect Scale (PANAS), assessment of how they felt about their body and how they felt about eating.</p>	<p>Discussion of strategies to facilitate change produced an increase in positive affect scores and there was a decrease in negative body affect scores.</p> <p>Following discussion of strategies to give up dieting positive</p>	<p>Suggests importance of an intervention encouraging positive actions to take, rather than negative impediments such as social pressures.</p>

	looked at giving up dieting but in one condition discussion was focused on identifying strategies to facilitate change while in the other discussion was focused on barriers that impede change.	dieting students were invited to participate in the study. Assignment to group on order of arrival.				affect towards body also increased. Discussion of barriers had no impact. No change between post-test and follow-up.  All at risk.	
Kater et al. (2000)	Primary school  10 lessons by classroom teacher. Experiential approach/teaching critical thinking.  Unchangeable biological factors (e.g., puberty) re body size. Changeable factors re body size —activity and nutrition. Dangers of dietary	Selective prevention.  Convenience sample. Interested teachers.	4 <sup>th</sup> and 6 <sup>th</sup> grade girls and boys	Uncontrolled pre-post design  No follow-up	Questions on attitudes towards growth, body and others in relation to size.	How do you feel about how you look? Positive response, 54% pre and 73% post program.  I feel good about how my body is growing. Positive response, 36% pre and 64% post.  If I became fatter I would go on a diet... Negative response 15% pre and 46%	An uncontrolled pilot but the initial reports do show considerable promise.

	restraint. Cultural factors —ideals and media.					post.  No at risk analyses.	
Killen et al., (1993)	Didactic class-room curriculum. 18 lessons. Three components. (1). Instruction on harmful effects of unhealthy weight regulation, (2). Promotion of healthful weight regulation, (3) Developing coping skills for resisting pressure to be thin.	Selective prevention.  Four willing schools.  Randomisation within each grade and school by class.	931 girls 6 & 7 <sup>th</sup> grade (11-13 years)	Randomised design. Experimental vs control group  7, 14 and 24 months	Appearance concerns and weight concerns.  Knowledge.  Also eating behaviour — purging, restraint; physical activity and some psych variables.  BMI	Group effect on knowledge only.  In at risk girls there was a knowledge effect, slightly lower change in BMI, no change in weight concerns etc., clearly no negative effects.	No support for didactic approach of this kind.
Kusel (1999)  (Secondary source used review by Pratt, B. & Woolfenden, SR.)	US Junior school setting  Media literacy program  Video and discussion groups conducted	Selective prevention  Random allocation to groups	Mean age=10 years, 10 months.  172, 4 <sup>th</sup> , 5 <sup>th</sup> and 6 <sup>th</sup> grade girls.	Two groups (Intervention and control) x 3 testing occasions (pre-test, post-test and 3 month follow-up).	Self-worth, EDI –Body Dissatisfaction, ChEAT SATAQ, Body image assessment, Ideal body	From pre-test to post-test intervention group sig decreased dieting, body dissatisfaction, and internalization of ideal. Maintained at follow-up.	Provides support for value of media literacy and indeed for stress management program.

	<p>over two days to raise awareness and encourage critical analysis of media and sociocultural attitudes regarding weight and shape.</p> <p>Control group →video and group discussion about issues other than body image and media (stress management).</p>				<p>internalization, Message Interpretation Process Scale (MIP: measure of media literacy)</p>	<p>No difference between groups on MIP, or self worth measures.</p> <p>But at follow-up control group decreased their levels of dieting and purging more than intervention group.</p>	
<p>Mann et al. (1997)</p>	<p>First year university. 90 minutes small group discussion led by a recovered anorexic and largely recovered bulimic young women. In the first part of session one of the panellists described eating disorders, development and</p>	<p>Selective prevention.</p> <p>All first year students invited to participate in study. After first assessment, half were randomly selected and invited to participate in the prevention</p>	<p>Age=17-20 with 18 years being the mode.</p> <p>788 potential participants. 113 participated in all three surveys — 32 exp and 91 controls.</p> <p>At Time 2 (4 weeks after</p>	<p>Analysis 1 2 groups (exp vs control) x 3 times (1, 2 (4 weeks after program), &amp; 3 (12 weeks after)) repeated measures ANOVA.</p> <p>Analysis 2 (exploratory)</p>	<p>Eating symptoms, weight concerns, and self esteem.</p> <p>(These were measures derived from PCA of a range of measures)</p>	<p>Analysis 1. No group x time interactions.</p> <p>Analysis 2 (a weak analysis). Eating symptoms elevated in the exp group at Time 2 but not Time 3.</p> <p>No difference at</p>	<p>In more reliable analysis - no effect of the intervention.</p> <p>In less reliable analysis suggestion that the presentation had normalised eating disorder symptoms and may thus have contributed to a slight increase. Good suggestion that</p>

	treatment and in the second part they each gave an account of their personal story.	intervention. Remaining = controls.	program) exp=100, control=229; at Time 3 (12 weeks after program) exp=150, control=229	Independent t tests used to compare outcome measures of exp and control groups.		either time point between groups on weight concerns or self-esteem.  No effect in high-risk participants.	those without symptoms may benefit from a different style of intervention than those with symptoms.
Martz & Bazzini (1999)	First year university, Psychology students  One hour presentation. Peer educator presented information on size over-estimation in women, nature and cause of eating disorders, what to do if you think a friend has an eating disorder, and healthy eating.	Selective prevention.  Recruited from general psychology classes in exchange for course credit. Randomly assigned to 4 groups.	Mean = 19 years  Study 1: Exp group n=73, control=41.  Study 2: Exp group n=30, Control group n=37	Pre-test and post-test 1 month later.  Study 1 —post-test comparison.  Study 2: At pre-test no difference between groups so MANOVA conducted on post-test scores.	Cognitive Behavioural Dieting Scale, SATAQ, Body Esteem Scale.	Study 1: At post-test, Exp group had sig lower CBDS scores and sig high BES scores. But very small effects.  Study 2: At post-test exp group had lower CBDS scores but slightly lower BES scores. But effects very small.  No at risk group analyses.	While effects are significant they are so small as not to be meaningful.
McVey & Davis (2002)	School-based intervention for Grade	Selective prevention.	Grade 6 children,	Repeated measures	Body satisfaction (SIQYA) and	No effect of intervention, but both	Manual may be available from Body

	<p>6 girls called <i>Every BODY is a Somebody</i>.</p> <p>Six sessions that focused on media literacy regarding dieting and body image, and the promotion of life skills including self-esteem, stress management and building positive relationships.</p>	Means of selection unclear from information available at this point, but mots likely covered in paper.	N= 236, half in control group.	ANOVA with 2 groups x 4 assessments (pre-test, post-test, 6 months and 12 months follow-up).	disordered eating (ChEAT).	groups improved over time period.  No at risk analyses.	Image Coalition of peel in Canada.
McVey, Davis & Shaw (unpublished manuscript A)	<p><i>Every Body is Somebody</i>, as described above, but enhanced with a parent education component—a 3 hour evening session. However parent involvement extremely low. So largely a replication of McVey &amp; Davis</p>	<p>Selective prevention.</p> <p>Means of selection unclear from my current information.</p>	<p>Grade 6 children.</p> <p>Experimental = 288, control = 90.</p>	Repeated measures ANOVA with 2 groups x 4 assessments (pre-test, post-test, 6 months and 12 months follow-up).	Body satisfaction (SIQYA), disordered eating (ChEAT), self-esteem (Rosenberg), and Perfectionism (Flett).	Body satisfaction higher, and disordered eating lower at post-test in experimental group but difference not sustained at follow-up.	<p>It is important to note that parents were not active participants. Ways to get them involved seem very difficult to devise.</p> <p>Promising but not strong effect when two studies taken together.</p>

	(2002)						
McVey et al., Unpublished manuscript B	School-based program. <i>Girl Talk</i> Peer Support Group - 10-session program. Group of 10-14 led by trained public health nurses, Each session consisted of a group activity followed by open discussion and strategy building on ways to enhance health promoting behaviour.	Selective intervention, but potentially volunteers who were most interested.  Selection of schools does not appear to have been random.	Grade 7 and 8 students.  Mean age = 12.5 years.  Exp = 91 Control = 115	2 groups (exp vs. control) x 3 times (pre-test, post-test, 3 month follow-up) repeated measures  MANOVA	Body Esteem Scale for Adolescents and Adults — Appearance, weight and Attributions subscales.  Self-esteem, ChEAT —Dieting and Bulimia subscales.	Significant intervention effects for Body Esteem-Weight and Appearance subscales, ChEAT-Dieting and ChEAT Bulimia, such that these variables improved in the experimental group from pre-test to post-test and post-test to follow-up.	Very positive outcome.  Intervention effects observed in a number of measures adding strength to the results. May well have been effective through having an impact on the peer sub-culture that may have reinforced individual gains.
Moreno & Thelen, (1993)	School based Home economics classes.  6.5 min video on bulimia, socio-cultural attitudes towards thinness, dieting, healthy weight management and	Selective prevention.  Non-random selection of schools to participate	<u>Study 1</u> Mean=13.7 yrs N Exp=30, N Control=74  <u>Study 2</u> Mean=13.8 yrs N Exp=50 N Control=65	Non-random allocation to groups.  No intervention control  2 group x 2 assessment times (post-test	Purge attitude, diet attitudes and knowledge, weight concerns and intentions to use extreme weight loss behaviors, purge information, exercise and	Significant effect of intervention, maintained at follow-up on all measures.  Strongest effects on purge attitude, weight concerns and intentions to use extreme weight loss behaviours and purge	Encouraging but short follow-up.  If available would need updating for current audience.  Both leaders of discussions effective.

	resisting peer pressure to diet. Followed by discussion led in Study 1 by young woman, in Study 2 by home ec teacher			and 1 month follow-up) with time 1 used as a covariate.	weight, moderate dieting intentions.	information. No at risk analyses.	
Neumark-Sztainer et al., (1995)	School based program  10 session program, "The Weight to Eat", addresses issues of healthy eating, body image and self-esteem.  In class-room and delivered by nutritionist/health educator	Selective prevention  Intervention and Control groups	Grade 10 students	Intervention and control groups compared at pre-test, 6 and 24 month follow-up.	Nutrition knowledge, frequency of regular meals, weight loss attempts, binge eating, body dissatisfaction, self-esteem	Significant differences in nutritional knowledge and a higher frequency of regular meal patterns in experimental group at 6 and 24 months. No change in the incidence of self-reported attempts at weight loss, but the program was effective at preventing the onset of unhealthy dieting and bingeing. No differences were found between the groups on body dissatisfaction or self-	Very promising program. Helpful effects in at risk overweight group. Sustained over time.

						esteem.  <u>At risk group:</u> At 6 months, overweight girls in control group skipped meals more frequently than those in the experimental group. At 2 years, the overweight group in the intervention group were dieting and binge-eating less than the control group.	
Neumark-Sztainer (2000)	Girl Scout troops 6 x 90 min activities called <i>Free to be Me</i> . Focus on media literacy and encouraging activism. Also a regular parent information sheet. Covered physical development, issues of ideal body image,	Selective prevention.  Interested scout troop leaders randomised to exp or control	Mean=10.6 Grade 5 and 6  Exp=115 Control=111	Differences between exp and control troops examined at post-test and 3 month follow-up adjusting for baseline.	Dieting behav;s; Body related knowledge and attitudes; Media related knowledge and attitudes; Media habits.	No effect on dieting. Modest post-test effect on body related knowledge and attitudes (not body satisfaction). Follow-up effects on media knowledge and attitudes. Decrease in mag consumption.	Valuable in younger girls, especially to encourage a more active analysis of media consumption. Program likely to be available from author.

	examination of media role and media activism activity.					No at risk analyses.	
O'Dea & Abraham (2000)	<p>School based classes.</p> <p>9 x 50-80 min lessons aimed to increase self-esteem, identify stereotypes in our society, positive self-evaluation, relationship and communication skills.</p> <p>No intervention control group.</p>	<p>Selective prevention.</p> <p>One co-ed state and one girls' private school.</p> <p>Random allocation of classes to group.</p>	<p>11.1-14.5 years, Grades 7 and 8</p> <p>Exp: girls=169, boys=106;</p> <p>Control: girls=128, boys=67</p>	<p>Random allocation of class.</p> <p>2 groups x 2 change (baseline-3 moths, and baseline to 12 month follow-up)</p> <p>ANCOVA in which baseline score was co-variate.</p>	<p>EDI-DT, BD, and Interoceptive Awareness (IA), Physical Appearance Ratings, SBW (standard body weight), Self-concept (Social Acceptability and Physical Appearance), trying to lose weight</p>	<p>Exp group had decreased EDI-BD at post-test but not follow-up. No effect on DT or IA. In girls, Physical Appearance Rating by Father only rating to increase sig. at follow-up. SBW - control decreased and exp increased over 12 mths.</p> <p>Social acceptability and physical appearance became less important to exp at follow-up.</p> <p>Trying to lose weight increased in exp group but not in control at follow-up.</p>	<p>Mixed results at follow-up. Reduced value placed on physical appearance positive. Little effect on body image, but weight increased, as did dieting in the experimental group.</p> <p>High risk (ie low self-esteem) had lower Drive for Thinness at follow-up —positive.</p> <p>Suggests a role for programs that aim to enhance self-esteem in the prevention of body image and eating problems.</p> <p>The program is</p>

						<p>High risk=low self-esteem and high anxiety (no evidence at present that this constitutes high risk but possible). At post-test, high-risk girls in exp group had lower BD, but not sustained at follow-up.</p> <p>At follow-up high-risk girls in exp group had lower DT than controls.</p> <p>Importance of Social Acceptance and Physical Appearance became sig less important to high-</p>	currently unavailable.
--	--	--	--	--	--	--	------------------------

						risk girls in exp group.	
Paxton (1993)	Class-room curriculum. 5 lessons. Structured classes containing including information, individual work and small group discussion. Addressed media images of women, determinants of body size, healthy and unhealthy weight control methods and emotional eating.	Selective prevention  Non-random school or participant selection.  Agreeable schools.	Year 9 Mean age = 14.1 years  107 girls in exp group from 2 schools, 29 in control	School by testing occasion ANOVA with repeated measures on testing occasion. Assessments at pre-test, post-test and 12 month follow-up.	Body Figures, Body dissatis., Body cathexis, Weight and lower body, self-esteem; DEBQ, EDI-bulimia, EDI-DT; Healthy, moderate and extreme weight control behaviours.	No change in eating behaviours.  Decline in body satisfaction in exp and control groups — ie effect of time but no effect of intervention.  No at risk analyses.	Could be that more didactic style contributed to low impact?  Also age may have been a factor?
Piran (1996)	Ballet school  Feminist based discussion groups over an extended period	Selective prevention.  All willing to be involved	High school age —see notes	See notes	Qualitative analysis	Appears to have been effective in changing the school culture and in empowering girls to speak out and act in relation to body image issues and discrimination.	Very important approach to changing culture not just individuals.
Posovac et	Intervention designed	Targeted	18-25 years	Pre-test —	Weight Concern	All three interventions	Experimental

al., (2001)	to prevent women experiencing body image disturbance when exposed to media images by interrupting the social comparison process. Three interventions. "Artificial beauty" presented arguments that the media images are inappropriate models for comparison because they have been altered. "Genetic realities" argued that media images were inappropriate targets for comparison as the majority of women are genetically predisposed to be heavier than models. "Combination"	intervention.  Female Psychology students at University of Utah participating for course credit with moderate to high body dissatisfaction (i.e., at risk), randomly assigned to condition.	25 in each group —three exp groups and 2 control groups	intervention (experimental vs control) - media images (experimental female images vs car images) — post test.  No follow-up	Scale (Franzoi & Shields, 1984), evaluation of a thought-listing task also used to assess body image and social comparison.	(a) decreased the likelihood of female participants comparing their bodies with media images and (b) prevented media induced body image disturbance.  All subjects at risk.	situation, and looking at short term effects only, but suggests that giving reasons not to compare oneself to media reduces likelihood of doing so along with reducing body dissatisfaction that could result from this.
-------------	--	---	---	---	---	---	--

	presented both. Control intervention on "Parenting Skills".						
Santonastaso et al. (1999).	4 group sessions x 2 hours weekly. Following the presentation of didactic material (30- 50 mins), the rest of the time was devoted to discussion. Sessions were conducted by a psychiatrist or psychologist. Group consisted of 12-17 students. The program included information and discussion about maturational changes and puberty, body image concerns, coping with adolescence and interpersonal	Selective prevention  154 females in in program from 10 randomly selected from 2 classes from vocational high school (Italy). 154 females from remaining classes	Mean age = 16.1 years.  Exp group = 154, Control group = 154	Sample divided into low and high risk (high risk = ≥30 on EAT). 2 group x 2 testing occasions (pre- test, 12 month follow-up) repeated measures ANOVA separately for high and low risk.	EAT, EDI (all subscales), BMI	Low risk: At follow-up intervention group had significantly lower EDI Body Dissatisfaction and EDI bulimia scores than control.  High risk group did not differ from control group following intervention. Authors suggest "...high risk subjects are reluctant to modify their habits and behaviours".	Modest but positive effects of intervention on body dissatisfaction.  Program may be genuinely preventive in that it has effect of preventing increase in body dissatisfaction in those who start low, but not be so effective as secondary prevention.

	relationships, nature of eating disorders, sociocultural pressures, dieting and early detection.						
Smolak et al. (1998)	School based, 5 <sup>th</sup> graders, 10 lessons taught by own teacher. Designed to encourage healthy eating, exercise and body image, while discouraging calorie restrictive dieting, exercise for weight loss and body dissatisfaction.	selective prevention  Classrooms drawn from local schools. Assignment of classroom depended on willing teachers —ie non-random. Control group from the same schools as experimental group (potential for contamination). Almost all white.	9-11 years  253 children, 115 boys and 138 girls. 222 available at post-test —102 boys and 120 girls.	Two groups (experimental and control) x two testing occasions (pre-test and post-test) ANOVA  Post-test 1-4 months after intervention	Nutrition knowledge, vegetable consumption, knowledge of effects of puberty, exercise participation, beliefs about fat, negative characteristics associated with fat people, Body Esteem Scale, dieting frequency and understanding effects of dieting.	Knowledge improved in intervention group. Intervention had a significant effect on attitudes about fat people. No change in body esteem. No behavioural changes.  No at risk analyses.	Eating smart, eating for me curriculum, likely to be available from authors.
Smolak & Levine, 2001	Follow-up of 1997 study.	Selective prevention.	As above but a new control	3 groups (experimental,	Internalization of socio-cultural	No intervention compared to old	Promising, but it is not clear whether new

		As above but also a new control group of children who were not at a study school at program delivery. (So earlier characteristics unknown).	group of 104 girls and boys. Children now 13-15 years	old control and new control group) x 2 (gender).  Follow-up of 2 years.	ideal of thinness, Awareness of sociocultural ideal, Muscular look (for boys only), Body Esteem Scale; weight loss technique score; muscle building technique, concern about being too small; depressive symptoms; weight concerns; knowledge about nutrition; BMI	control group effect on internalization, awareness of ideal or muscular look, weight concerns, depressive symptoms or BMI.  But intervention group differed from new control group on knowledge concerning weight, weight control and nutrition, weight loss techniques, and Body Esteem Scale. Effects greater in girls  No at risk analyses.	control group would have started with higher levels than the intervention group.
Steiner-Adair et al (in press)	Middle school, 8 x 90 min small group sessions  Interactive program included usual information but in	Selective prevention.  Volunteers from participating schools. Some, but not	12-14 years, mean age=12.5 years.  213 (82%) of original 260 intervention	2 groups (exp, control) x 3 assessment occasions (pre-test, post-test and 6 months follow-up).	Knowledge Body Esteem Scale (BES) — weight, appearance and attributions subscales;	Intervention effect on Knowledge that was maintained at follow-up.  Intervention effect on BES —weight —exp group stayed the	This program is likely to be published and is very workable in schools.

	addition had a strong feminist/sociopolitical perspective, an emphasis on translating awareness into action (and a mentoring component not assessed).	complete, random assignment within schools to the program. (Two groups similar at outset).	participants completed, and 198 (83%) of 239 controls		MBSRQ —Body areas satisfaction; SATAQ — internalization and awareness subscales; Rosenberg self-esteem.	same across 6 months while the control group went down. Trend for intervention effect on self esteem. No effect of intervention on dieting behaviours.  No at risk analyses.	
Stewart et al. (2001)	School based. 6 x 45 min interactive classes based on cognitive principles. Addressed cultural influences, weight regulation, resisting pressure to diet, identification of eating disorders.	Selective prevention. Non-random school selection	Mean=13.4 Grade 9  Exp.=459 (409 completed) Control=386 (349 completed)	2 groups x 3 assessments (pre-test, post-test, 6 month follow-up) ANCOVA controlling for pre-int. ChEAT, self-esteem, Knowledge	EDE-Q4 Restraint, Weight concern, Shape concern, Eating concern and Knowledge	Intervention effect on Restraint at post-test and follow-up. Post-test intervention effect on Shape concern but not sustained at follow-up. No effect on weight concern. Knowledge effect.  Intervention effect strongest in high restraint girls	Promising program. Significant but small effect. Effects most marked in high risk girls. Was manualized and therefore maybe available from authors? Program did present information on disordered eating and no suggestion of harm. Follow-up to

							Carter et al (1997) pilot and clearly earlier concerns not sustained.
Stice et al., (2000)	Pilot program for Stice study, 2001.  College students. Dissonance based intervention for high risk. 3 weekly sessions (with 5 participants in each group) in which participants involved in tasks such as discussing ways to assist teenagers avoid internalizing the thin ideal.	Targeted prevention.  Non-random assignment. First 10 women in intervention, next 20 in delayed treatment control.  Recruited via fliers on campus asking for participants in research to evaluate an intervention aimed at improving body image. I.e.,	30 under- graduate women  18-22 years (mode=18)	Repeated measures ANOVA  2 groups(exp and control) x each outcome variable at post- test and 1 month follow-up.	Internalization Body dissatis Dieting behav Negative affect Bulimic symptoms	Sig group x time interaction for internalization Decrease at post-test in exp group maintained at follow- up. No change in control. Similar for body dissatis. Reduction in negative affect at post-test in exp group but not maintained at 1 month. No significant interaction effect for dieting behaviours. Sig group x time interaction in bulimic symp at post-test, not well maintained over	Promising secondary prevention intervention.  Program may have prevented a natural increase in bulimic symptoms.

		selected those with body image concerns.				1 month but an increase in control group.  All participants considered at risk	
Stice et al. (2001)	College students.  Dissonance-based intervention for high-risk young women. Design a program for younger girls  3 x 1 hr weekly sessions. Homework  Control —healthy weight management control	Targeted prevention  Respondents to fliers at two colleges to participate in a study evaluating interventions aimed at helping women improve body image.  Randomised to group	Mode=19 Range=17-29  Exp=48 Control=39  In analyses Exp=40 Control=36	Randomised control.  Repeated measures. 2 groups x 3 (baseline, termination, 1 month follow-up) assessment times	Internalization Body dissatisfaction Dieting behaviour Negative affect Bulimic symptoms	Exp effect on Internalization  Post-test exp effect on Body Dissatisfaction. But at 1 month both groups showed a decline.  For each of others, there were sig improvements maintained over 1 month in both groups.  All participants assumed at risk as a result of selection procedure and group means on risk	Authors assume placebo just happened not to be inert but there is the possibility of measurement effects accounting for the decline in both groups. Approach(s) promising though follow-up short.  This program is available from the author!

						indicators were elevated.	
Stice & Ragan (In press)	University course entitled "Eating Disorders".  The intervention was an advanced undergraduate seminar series on eating disorders. Twice weekly x 1.5 hours x 15 weeks.	Selective intervention.  Participants who enrolled in the course were in the experimental group and those who did not formed the control.	Modal age 21 years (range 17-55).  Exp group n=17 females; Control group n=71 females	Two groups x 2 assessments (pre and post-test) repeated measures ANOVA.  No follow-up	Internalization of thin ideal, body dissatisfaction, dieting, depressive symptoms, eating pathology, fat consumption and BMI.	Intervention group showed significant decreases in internalization, body dissatisfaction, dieting, eating disorder symptoms and weight over the 4 month study period, while matched control showed no changes with the exception of weight gain.	An intensive course does seem to produce beneficial changes in body image and eating behaviour. Presumably those who are interested are self-selecting into classes.
Winzelberg et al (2000)	University students  Internet-based psycho-education program Student Bodies —see Zabinski et al. for description.	Targeted prevention.  Participants recruited using fliers around Stanford University. Randomly assigned to two groups —Student	Mean age = 20.0 years, range 18-33 years.  61 subjects completed baseline assessments, 8 dropped out during study and 5 did not	Baseline assessment vs. post-intervention (8 weeks); baseline vs follow-up (3 months); post-test vs follow-up MANOVA	Body Shape Questionnaire, EDI —DT, EDI-Bulimia, EDE-Q Weight Concerns, and EDE-Q Shape Concerns	Completers -sig differences between baseline and follow-up between intervention and control on BSQ and EDI-DT. Intention to treat - comparison between intervention and control for baseline to follow-up,	Internet psycho-educational program was effective in reducing body shape concerns especially in high-risk women. Maintained at follow-up.

		Bodies or delayed treatment control.	complete follow-up.			found significant differences between BSQ, EDI-DT, EDI-B and EDE Shape Concerns.  At risk vs control - sig differences from baseline to follow-up on BSQ	
Withers et al. (in press)	Grade 7 school based intervention.  1 x 22 min video on determinants of body size, socio-cultural influences, negative effects of extreme dieting, healthy eating habits and suggestions for creating a healthy body image and boosting self-esteem	Selective prevention.  All Grade 7 students at 1 school invited to participate in intervention and all from two others were invited to participate in the control.	Grade 7 Exp mean age=12.7, control mean age=13.3  104 in intervention and 114 in control. Data from 24 excluded.	Change scores T1-T2 in two groups (exp and control) compared using one way ANOVA.  Change score T1-T3 in two groups compared using ANOVA.  1 month follow-up	Knowledge, EDI- Body dissatisfaction, EDI-Drive for Thinness, Figure rating scale C-I, Current dieting behaviour, Intention to diet.	T1-T2 Change scores greater in Exp group on Knowledge, EDI-DT and Intention to diet.  T1-T3 change scores sig different for Knowledge only.  Exp Ss higher on subjective personal relevance reported greater positive changes (T1-T2) on EDI-DT, and trend EDI-BD and Intention	Video available.

						<p>to diet. Objective PR +vely correlated with EDI-BD, C-I, and trend for EDI-DT.</p> <p>T1-T3 objective PR correlated with EDI-BD, EDI-DT and C-I.</p> <p>But there was no relevance by group interaction, on these outcome variables.</p>	
Zabinski et al., (in press)	<p>University students</p> <p>“Student Bodies” is an on-line interactive psycho-educational program. Modelled on CBT interventions. It is an 8 week program, and consists of five sections, (1) body image, (2) nutrition (3) exercise (4) eating</p>	<p>Targeted prevention.</p> <p>High body dissatisfaction students (BSQ score &gt;110) were identified in a mass screening of first year psychology —high risk group.</p>	<p>Mean age = 19.3 years, range = 17-24 years.</p> <p>N=62, intervention=31, control=31. At follow-up intervention =27 and no intervention control=29</p>	<p>2 groups x 3 testing occasions (pre-test, post-test and 10 week follow-up) repeated measures ANOVA</p>	<p>Body Shape Questionnaire, EDI Drive for Thinness, EDI Bulimia subscales, EDE-Q Restraint, eating, Shape and Weight Subscales.</p>	<p>Both groups improved on a number of measures but no group x time interaction i.e., no significant effect of the program over the control. The authors argue the effects were greater in the intervention group but this is debatable.</p>	<p>Computerised psycho-education program is workable and potentially has benefits but these are at best modest.</p>

	disorders (5) electronic discussion group. Assigned readings and exercises.	Participants fulfilled course requirements by participating. Random assignment to either intervention or control group.					
--	---	---	--	--	--	--	--

## Summary of Evaluated Prevention Intervention Research Literature

Authors: Dalle Grave, R., de Luca, L. & Campello, G.

Date: 2001

Full ref: Middle school primary prevention program for eating disorders: A controlled study with a twelve-month follow-up. *Eating Disorders*.

Style of Intervention: Selective prevention. School based intervention. 6x2 hrs weekly sessions. In each session the first 30 minutes were dedicated to educational materials and the remaining time devoted to practical activities, group discussions and revision of homework (ie and interactive rather than didactic approach). After 6 months exp group received 2x2hr booster sessions. Program administered by two psychologists, with experience in eating disorders and working with adolescents. The main objective was to prevent the development of eating disorders by reducing the prevalence of dietary restraint and the level of concern of body weight and shape. The specific aims were:

A. To increase the knowledge of the students on:

- Sociocultural pressure to be thin and beautiful
- Cognitive distortions, which can predispose to eating disorders (e.g. extreme concern for shape and body weight, low self-concept, perfectionism, and dichotomous thinking)
- Physical and psychological effects of dieting
- Eating disorders
- 

B. To help the students to avoid developing an eating disorder by:

- reducing the importance they attribute to shape and body weight in self-evaluation by accepting the natural biological changes of puberty
- developing a philosophy of life based on self-acceptance (Ellis, 1962)
- maintaining a healthy eating and lifestyle.
- To create a counter-culture in which the pupils help each other to avoid going on a diet and challenge media messages about thinness and beauty.

Participant selection: One school. Two randomly selected classes given the intervention, the remaining classes formed the control

Participant –N: females = 61, males=45 (55 in experimental group: 32 females and 23 males. 51 in control: 29 females and 22 males). Excellent retention rate.

Participant – Age: 11-12 years. Mean age =11.6 years

Setting: Middle school. Lower-middle SES

Design: assessment of experimental and control one week before the start of the program, one week after, six months after (one week before booster sessions), and 12 months after.

Length of Follow-up. 12 months.

Outcome Measures: Eating Disorder Examination, Children's Eating Attitude's Test, Rosenberg Self-Esteem, Knowledge Questionnaire (designed for this study).

Group Effects: Experimental group had significant gains in knowledge compared to the control group at all follow-up points. (Girls had higher knowledge than boys). At first post-test, the experimental group showed a significant decline in ChEAT scores but they came up a little after. Generally maintained. Eating Concerns EDE-Q went down in the experimental group after the program and maintained at 12 months. (There could have been a basement effect in the control group though as the scores of the control group started low, and did become lower at 6 and 12 months). No effect of program on weight and shape concerns or dietary restraint. No program effect on self-esteem. No evidence of harm.

Both experimental and control groups went down over year on Global EDE-Q and ChEAT. Could be that having half the students involved in the program changed the general climate of the year level in a positive direction.

A strong trend for a correlation between post program increase in knowledge and EAT scores at 6 months. May indicate that knowledge has delayed positive effect on eating behaviours.

At risk analyses: No analysis

Comments: Italian, so availability probably somewhat academic. Potentially effective but may require delivery by specialist. No measured impact on any body image variables.

Authors: Baranowski, M.J. & Hetherington, M.M.

Date: 2001

Full ref: Testing the efficacy of an eating disorder prevention program. *International Journal of Eating Disorders*. 29, 119-124.

Style of Intervention: Selective prevention. Primary school. Experimental group – psycho-educational program designed to combat low self-esteem, dieting behaviour and the attitudes and beliefs associated with eating disorders. Control group – healthy eating (fruit and vegetables awareness). Both involved 5 weekly activity-based sessions

Participant selection: Self-selection from two matched primary schools.

Participant –N: 16 girls from one school and 13 from another

Participant – Age: 11-12 years

Setting: Primary school

Design: 3 times (pre-test, post-test, 6 month follow-up) x 2 groups repeated measures ANOVA

Length of Follow-up: 6 months

Outcome Measures: Index of self-esteem (ISI: Hudson, 1982) and Rosenberg self-esteem inventory.

Body esteem questionnaire (Mendelson & White, 1982)

Current-ideal body figure discrepancy

ChEAT (Mahony , McGuire & Daniels, 1988)

Dietary Restraint sub-scale (DEBQ-R: Dutch Eating Behaviour Questionnaire (Van Strien et al., 1986)

Group effects: Significant Time and Group effects for DEBQ-R. Decrease in dietary restraint in both groups at follow-up and control group started higher than experimental. Also a Time by Group interaction – the control group went down more than the experimental group!

Main effects of Time and Group on ISI, ie., both groups had lower scores, but no interaction effect, ie., no difference between groups.

No effect of program observed on body esteem measure.

At risk group: No analysis

Comments: Sample size too small and selection unclear to draw any firm conclusions. However, it is possible that a program that encourages high consumption of fruit and vegetables, results in lower dietary restraint. But it is unclear whether there was high fruit and veg consumption. Further research required.

Authors: Buddeberg-Fischer, B., Klaghofer, R., Gnam, G. & Buddeberg, C.

Date: (1998).

Full ref: Prevention of disturbed eating behaviour: A prospective intervention in 14- and 19-year old Swiss students, *Acta Psychiatrica Scandinavica*, 98, 146-155.

Style of Intervention: Aims of intervention were to develop awareness of issues concerning eating behaviour, body image and physical and mental well-being and to discuss age related issues such as social and psychological problems encountered by adolescents. Three 90 minute sessions, one each month. Different methodological approaches, some presentations, small and large group discussions and group picnic. “The interventions were designed to reach students on cognitive, emotional and behavioural levels.” First class - socio-culturally established body ideals, physical changes in adolescents. Second class – picnic, health, nutrition. Third class – psychosomatic symptoms and psychological disorders in adolescence.

Participant selection: From a large epidemiological study (T1), 20 classes with a high percentage of at risk students were selected for the study. The 20 classes were matched into 10 pairs equivalent on demographic information. One class from each matched pair randomly assigned to Experimental and one to Control group.

Participant –N: 314 students (205 (65.3%) female and 109 (34.7%) male) on whom data available at all three time points. Exp group = 159, control=155.

Participant – Age: Mean age = 16.1 years

Setting: School classes.

Design: The second assessment (T2) was conducted 12 months after initial screening (T1). After T2 Experimental classes received 3 classes over 3 months. The third assessment was conducted three months after the last class.

Length of Follow-up: Three months after last class.

Outcome measures: EAT-26; Giessen Physical Symptom Checklist for Children and Adolescents; Self-Report Symptom Checklist of which the General Symptom Index was used.

Group effect: No significant difference between group means following the intervention on any measure.

At risk group: Comparison of high risk females – EAT total score of >10 at T1 (n=32 in Exp group, n=31 in control). There was no effect in univariate analyses of three variables. However, in a multivariate analysis (in which all three variables are examined at once), there was a significant group x time interaction, suggesting that when taken together, at risk girls in the experimental group benefited from the intervention. There was an improvement especially in the physical well-being of high-risk students in the intervention group.

Comments: No investigation of body image as such, but high risk girls seemed to benefit in a general way from the program.

Authors: Carter, J.C., Stewart, D.A., Dunn, V.J., Fairburn, C.

Date: 1997

Full ref: Primary prevention of eating disorders: Might it do more harm than good? *International Journal of Eating Disorders*, 22, 167-172.

NOTE: Stewart et al. (2001) is a follow-up study to this one.

Style of Intervention: Uncontrolled school based intervention. 8 x 45 minute weekly sessions integrated into school curriculum. Educational material on: socio-cultural pressures on women to diet and be a particular shape, body image and self-esteem, development and help-seeking for eating disorders, healthy eating and resisting pressures to diet. Included cognitive and behavioural aspects (e.g. self-monitoring eating for 2 weeks). Didactic teaching and small group exercises. Homework. Administered by members of research team.

Participant selection: Selective prevention. 2 secondary school classes received the program (one from private and one from state school)

Participant –N: 46 girls

Participant – Age: 13-14 years

Setting: High school classroom

Design: Uncontrolled. Pre-test, post-test and 6 months follow-up.

Length of Follow-up: 6 months follow-up.

Outcome measures; EDE-Q (global, restraint, eating concerns, weight concerns, shape concerns)  
ChEAT  
Piers-Harris Self Concept  
Knowledge

Group effect. No group comparison.  
Decrease in EDE-Q global at post-test but returned to baseline levels.  
Similar patterns for sub-scales, except for dietary restraint that was higher at follow-up than baseline – but started low and finished low. Similar pattern for ChEAT  
Increase in knowledge that remained elevated at follow-up.  
No change in self-concept.

At risk group: No analysis.

Comments: Poor study and poor interpretation. It is suggested the program had a negative effect when most measures returned to baseline levels. There was a small though significant increase in dietary restraint at 6 months, most likely in line with usual trends at that age. Without a control group no conclusion can be drawn.

Authors: Collier, T.C., Neumark-Sztainer, D., Bulfer, J., & Engebretson, J.

Date: 1999

Full ref: Taste of food, fun, and fitness: A community-based program to teach young girls to feel better about their bodies. *Journal of Nutrition Education*, 31, 283-284. (Abstract).

Style of Intervention: Selective prevention. An after-school program for pre-adolescents that aimed to prevent unhealthy dieting and excessive weight preoccupation called *Taste of Food, Fun and Fitness*. Delivered in Girl Scouts settings, and consisted of 6 weekly, 90 minute sessions that focused on three messages, “Enjoy a variety of foods”, Physical activity is fun” and Be proud of yourself – everyone is different.” These messages incorporated into fun activities. Included a Parent Tip Sheet.

Participant selection: Non-random

Participant –N: 22 girls

Participant – Age: 10-12 years

Setting: Girl Scouts

Design: Exploratory study to identify activities to which girls responded well.

Length of Follow-up: No follow-up

Outcome measures: Preferred sessions included: a board game, quiz show on body development, and the creation of pro-girl commercials that promoted healthy eating and body image. Changes in eating attitudes and behaviours were minimal. Parents reported having little time to read the Tip sheets.

Group effect: No control group.

At risk group: No analyses conducted.

Comments: A pilot program useful in directing development of more focused program.

Authors: Heinze, V., Wertheim, E.H., Kashima, Y.

Date: 2000

Full ref: An evaluation of the importance of message source and age of recipient in a primary prevention program for eating disorders. *Eating Disorder*, 8, 131-145.

Style of Intervention: Selective prevention. 24 minute video in which a young woman described issues related to body image, determinants of body size and shape, socio-cultural aspects of the thin idea, negative effects of dieting and disordered eating, emotional eating and healthy eating habits. Four conditions: Participants told presenter was (1) a recovered anorexic, (2) an expert on eating disorders (3) a peer and (4) no presenter identity given.

Participant selection: All students in Grade 7 and 10 from three co-ed high schools invited to participate. Random assignment of participants to condition.

Participant –N. 191 female students. Grade 7=103, Grade 10=88. Condition 1- Grade 7=23, Grade 10=21; Condition 2 – Grade 7=29, Grade 10=21. Condition 3- Grade 7=25, Grade 10=22. Condition 4 – Grade 7=26, Grade 10=23.

Participant – Age. Grade 7 girls mean age=12.5, Grade 10 mean age=15.75 years.

Setting: High school class-room.

Design: Randomised control design. 4 groups (video presenter condition) x 2 assessment occasions (pre-video 3-4 weeks prior to video; post-video, immediately after viewing video) x 2 (grade) repeated measures ANOVAs on each outcome variable.

Length of Follow-up: No follow-up

Outcome measures: Knowledge (diet aspirations, Strict diets, models, diet results, eating disorders).  
Attitudes (body dissatisfaction, drive for thinness, size discrepancy).  
Intentions (intentions to diet, adaptive reaction, unconcerned, negative reaction).

Group effect: Significant Time main effects were found for all variables except body dissatisfaction. Ie At Time 2 students showed greater knowledge, lower drive for thinness, less discrepancy between current and ideal figure, less intention to diet and a more unconcerned attitude toward weight gain. There was a main effect of Grade for knowledge and body dissatisfaction, Grade 10s scoring higher on both.

Significant Time by Grade interactions were observed, indicating increases in knowledge and decrease about concern about weight gain were greater in Grade 7. No consistent effect of condition, i.e., Identity of message source (presenter) not responsible for meaningful changes in outcome measures.

At risk group: No risk group analysis

Comments: No control group, and no follow-up make long-term effectiveness of program difficult to evaluate, but promising and certainly not negative. Younger students appeared to benefit more from the video.

Authors: Higgins, L.C. & Gray, W.

Date: 1998

Full Ref: Changing the body image concern and eating behavior of chronic dieters: The effects of a psychoeducational intervention. (Most likely published in *International Journal of Eating Disorders*).

Style of intervention: *Freedom from Dieting*. To teach participants to adopt the mid-set and behaviors of natural eaters. Natural eating is regulated by physiological rather than cognitive or emotional signals, and does not use specific eating regimes or have weight loss goals. Characterised by spontaneity and enjoyment of food without anxiety, guilt or concerns about compulsive or out-of-control eating. Natural eating responds to physical needs and therefore should be conducive to maintenance of a healthy weight especially when it is part of a non-sedentary life-style.

Six weekly 2 hour sessions, followed by a review meeting two weeks later and bi-monthly follow-up sessions

Participant selection: Targeted intervention. Pool of volunteers drawn from radio ads and press, included if chronic dieters, no evidence of anorexia or bulimia and were not participating in other interventions. Random allocation to an experimental or no intervention control group.

Participant N: 82 females drawn from a pool of 320 volunteers. Exp group = 40, Control group = 42

Participant Age: Mean age = 44.4 years (SD=10.1)

Setting: Community based intervention for adults.

Design: 2 groups (Experimental vs control) x 2 times (pre-test vs post-test). Following delay control group offered program. All participants receiving treatment x 4 assessment occasions (pre-test, post-test, 6 months and 12 months follow-up).

Length of follow-up: 12 months

Outcome variables: Restrained eating (DEBQ), Emotional Eating (DEBQ), External Eating (DEBQ), Body Shape Questionnaire, Self-esteem.

Group effect: At post-test the experimental group had made significant and substantial improvements on all measures. Especially marked effect on BSQ (134.8 down to 91.8). Effects maintained at 12 months follow-up. The greater the adoption of natural eating, the greater the weight loss.

At risk group: All at risk.

Comments: A strong endorsement of this approach!

Authors: Huon, G.F.

Date: 1994

Full ref.: Towards the prevention of dieting-induced disorders: Modifying negative food- and body-related attitudes. *International Journal of Eating Disorders*, 16, 395-399.

Style of Intervention: Small group discussion, 6 students in each x 2 one hour sessions. In one session each group looked at developing positive body image and in the other they looked at giving up dieting but in one condition discussion was focused on identifying strategies to facilitate change and in the other discussion was focused on barriers that impede change.

Participant selection: From introductory Psychology course at an Australian University, high weight pre-occupied and dieting students were invited to participate in the study. Assignment to group on order of arrival.

Participant –N: 24 young women

Participant – Age: Mean age = 19.8 years, range = 18-25 years.

Setting: University study

Design: Comparison of Strategies vs Barriers x pre-test and post-test following each session (body image and dieting) and 1 month follow-up

Length of Follow-up: 1 month follow-up

Outcome measures: Positive and Negative Affect Scale (PANAS), assessment of how they felt about their body and how they felt about eating.

Group effect: When participants discussed strategies that might help other young women to develop more positive body image, their positive affect scores increased and there was a decrease in negative body affect scores. Following discussion of strategies to give up dieting positive affect towards body also increased. Discussion of barriers had no impact. No change between post-test and follow-up.

At risk group: All at-risk – high weight preoccupation and dieting

Comments: Suggests importance of an intervention encouraging positive actions to take, rather than negative impediments such as social pressures.

Authors: Kater, K.J., Rohwer, J., Levine, M.P.

Date: 2000

Full ref: An elementary school project for developing healthy body image and reducing risk factors for unhealthy and disordered eating. *Eating Disorders*, 8, 3-16.

Style of Intervention: Fourth and sixth grade – school-based. Teachers who volunteered delivered a class-room program called *Healthy Body Image: Teaching Kids to Eat and Love Their Bodies Too*. Info about pubertal development, genetic diversity in shape, counter-productive effects of restrained eating, encouraging students to develop interests outside of appearance, teaching skills to resist pressures to meet cultural ideals.

Ten lessons. 4 emphasised biology of what cannot be controlled regarding size, puberty etc; 4 emphasise factors that influence that influence weight etc that can be controlled, activity etc; 2 socio-cultural in nature, body ideals, media. Designed to be experiential in nature and to teach critical thinking.

Participant selection: Convenience sample

Participant –N: N=222. 166 4<sup>th</sup> graders and 56 sixth graders

Participant – Age: Not given

Setting: Elementary school class-room

Design: Uncontrolled, pre-post assessment

Length of Follow-up: No follow-up

Outcome measures: 30 item survey assessing attitudes and behavioural intentions regarding body image and dieting. Positive changes in expected direction. E.g. I feel good about how my body is growing “True/mostly true”, 36% prior, 64% post. How do you feel about the way you look/ positive response 54% prior, 73% post. Thin people have more to offer or are more admirable than fat people. Negative response, 23% prior, 58% post

Group effect: No comparison group

At risk group: No analysis

Comments: Despite being uncontrolled, this program has shown very positive results in the pilot. Met with enthusiastic students and teacher response.

Authors: Killen, J. D., Barr-Taylor, C., Hammer, L.D., Litt, I., Wilson, D.M. et al.

Date: 1993

Full ref: An attempt to modify unhealthful eating attitudes and weight regulation practices of young adolescent girls. *International Journal of Eating Disorders*, 13, 369-384.

Style of Intervention: Didactic class-room curriculum. 18 lessons. Built on three components. (1). Instruction on harmful effects of unhealthy weight regulation, (2). Promotion of healthful weight regulation, (3) developing coping skills for resisting pressure to be thin.

Participant selection: Four agreeable schools. Randomisation within each grade and school by class.

Participant –N: 931 girls

Participant – Age: 6 & 7<sup>th</sup> grade (11-13 years)

Setting: Middle school

Design: Randomisation within each grade and school by class.

Length of Follow-up: Varied. Initial was either 18 weeks or 7 months, 14 months and 24 months. Some did 7, 14 and 24 months.

Outcome measures: Appearance concerns and weight concerns of principle interest to us. But also measures of eating behaviours (purging, restraint), physical activity and knowledge.

Group effect: Group effect on knowledge only.

At risk group: No sig effect but clear that high-risk group in terms of weight concerns were not negatively effected.

Comments: No evidence to support this didactic approach in reducing appearance or weight concerns.

Authors: Kusel, A.B.

Date: 1999

Full ref: Primary prevention of eating disorders through media literacy training of girls. *Dissertation Abstracts International B: The Sciences and Engineering*, 60 (4), 1859

(Secondary source used review by Pratt, B. & Woolfenden, SR.)

Style of Intervention: US Junior school setting, media literacy program. Video and discussion groups conducted over two days to raise awareness and encourage critical analysis of media and sociocultural attitudes regarding weight and shape. Control group – video and group discussion about issues other than body image and media (stress management, famous people).

Participant selection: Two junior schools, random selection into condition

Participant –N: 172, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> grade girls.

Participant – Age: Mean age=10 years, 10 months.

Setting: US Junior school

Design: 2 groups (intervention vs control) x 3 testing occasions (pre-test, post-test and 3 month follow-up\_

Length of Follow-up: 3 month follow-up

Outcome measures: Self-worth, EDI –Body Dissatisfaction, ChEAT; SATAQ, Body image assessment, Ideal body internalization, Message Interpretation Process Scale (MIP: measure of media literacy)

Group effect: From pre-test to post-test intervention group sig decreased dieting, body dissatisfaction, and internalization of ideal. Maintained at follow-up. No difference between groups on MIP, or self worth measures. But at follow-up control group decreased their levels of dieting and purging more than intervention group.

At risk group: Most likely none?

Comments: Supports use of media literacy to reduce body dissatisfaction, but also potentially supports stress management to reduce risk factors.

Authors: Mann, T., Nolen-Hoeksema, S., Burgard, D. Huang, K., Wright, A. & Hanson, K.

Date: 1997

Full ref: Are two interventions worse than none? Joint primary and secondary prevention of eating disorders in college females. *Health Psychology*, 16, 215-225

Style of Intervention: Selective intervention. Freshman females (1<sup>st</sup> year at University) at Stanford University. 90 minute discussion attended by groups of 10-20 at a time. Intervention had two parts (1) one of the panellists presented information about eating disorders (e.g. physiological and psychological symptoms and consequences, epidemiology and treatment) (2) the panellists told their personal stories about eating disorders (e.g., the development of their problem, how and why it started, their symptoms, help seeking, treatment, and on-going concerns). The discussions were led by two students with different histories of disordered eating – one a recovered anorexic and the other a largely recovered bulimic. “Both panellists were poised, self-assured, attractive and personable. Both panellists were effective speakers and held other high-profile positions on campus.”

Participant selection: All female freshman students invited to participate (N=788). Recruited through college dorm meetings and classrooms. Half participants invited to participate in the prevention intervention and other half not.

Participant –N. Of 788 potential participants, 597 completed the survey at Time 1, 342 at Time 2, 444 at time 3. 113 participants completed all three surveys.

Participant – Age: 17-20 years, mode=18

Setting: University campus in college residences

Design: Repeated measures analysis of variance on three outcome measures. 2 groups (experimental vs control) x 3 times (Time 1, 2, and 3).

Also a weaker analysis in which, after determining there were no differences between the exp and control groups at Time 1, at each subsequent time point they compared all those who had had the program with those who hadn't. This allowed them to increase power as the sample size was larger, but you are using different subjects in each analysis and you don't know how comparable they are.

Length of Follow-up: 4 weeks and 12 weeks after program

Outcome measures: Eating symptoms, weight satisfaction, self-esteem.

Group effect: On repeated measures ANOVA there were no significant group x time effects ie. No effect of intervention.

On weaker analysis, at Time 2, participants in the intervention group had more eating disorder symptoms than control subjects, but size of the effect is small. There was no effect at Time 3. No difference between groups on weight satisfaction or self-esteem at either time point.

At risk group: Half of p. 222 missing. It doesn't appear there was an analysis of differential effectiveness of intervention for those at high and low risk, but there may have been.

Comments: Given the weakness of the analysis indicating a Time 2 increase in disordered eating symptoms, and the failure to get this in the repeated measures ANOVA, it is unclear how reliable this finding is. However, there is the possibility that presentation of information about eating disorders by

two attractive and successful young women, normalised eating disorder symptoms. The authors suggest different programs likely to be needed for those who have no symptoms (primary prevention) and those who have symptoms (secondary prevention). In the former case the dangers etc could be described, in the latter, help seeking could be emphasised.

Authors: Martz, D.M. & Bazzini, D.G.

Date: 1999

Full ref: Eating disorders prevention programming may be failing: Evaluation of 2 one-shot program. Journal of College Student Development, 40, 32-42.

Style of Intervention: One-off one hour peer education presentation, presenting information about size over-estimation in women, the nature and causes of eating disorders, what to do if a friend has an eating disorder and healthy eating.

Participant selection: Psychology students volunteered in exchange for course credit. Volunteers randomised into experimental and control groups.

Participant –N: Study 1: Exp group n= 73 , control group n= 41 . Study 2: Experimental group n= 30; control group n=47.

Participant – Age: mean age 19 years

Setting: University

Design: Study 1; post-test only comparison. Study 2: pre-test and post-test. Pre-test showed no difference, so MANOVA conducted on post-test variables.

Length of Follow-up: 1 month

Outcome measures: Cognitive Behavioural Dieting Scale (CBDS: Martz et al., 1996), Socio-cultural Attitudes Towards Appearance Questionnaire (SATAQ), Body Esteem Scale (BES).

Group effect: In both Studies, lower dieting in experimental groups at pots test. In Study 1, higher body esteem at post-test, but in Study 2 lower body esteem at post-test. In all cases the effect sizes were very small.

At risk group: No analyses

Comments: While the lower dieting score is encouraging the difference between groups too low to be meaningful.

One hour presentation. Peer educator presented information on size over-estimation in women, nature and cause of eating disorders, what to do if you think a friend has an eating disorder, and healthy eating.

Authors: McVey, G. & Davis, R.

Date: 2002

Full ref: A program to promote positive body image with girls in grade six: A 1-year follow-up evaluation. *Journal of Early Adolescence*, 22, 96-108

Style of Intervention: School-based program for girls. Six sessions that focused on (1) media literacy about the dangers associated with the idealisation of thinness and (2) the promotion of life skills, including self-esteem enhancement strategies, stress management techniques, and positive relationship skills. Prevention manual titled *Every BODY is a Somebody*.

Participant selection: Not clear from information available.

Participant –N. 236 – half in control group

Participant – Age. Grade 6

Setting: School classes.

Design: Repeated measures ANOVA

Length of Follow-up: post-test, 6 months and 12 months

Outcome measures: Body satisfaction (SIQYA: Peterson et al., 1984), disordered eating (ChEAT; Maloney et al., 1988)

Group effect: No effect of intervention but both intervention and control groups improved in body satisfaction over the time period.

At risk group: No analysis reported.

Comments: Manual likely to be available from Body Image Coalition of Peel in Canada

Authors: McVey, G., Lieberman, M., Voorberg, N., Wardrope, D. & Blackmore, E.

Date: Unpublished manuscript A

Full ref: School-based peer support groups: A new approach to the prevention of disordered eating.

Style of Intervention: School-based program for girls. The *Girl Talk* Peer Support Group consisted of a 10-session program offered to female students. Public health nurses, who received a training workshop and were experienced in the *Every BODY is a Somebody* program (described above), led the sessions that consisted of one group activity followed by open discussion and strategy building on ways to enhance health promoting behaviour. Ten to 14 in each group.

Participant selection: Participants recruited from 12 schools – 7 assigned to intervention (n=91), 5 assigned to control group (n=115). Schools matched approximately on SES, size and location.

Participant –N. 214

Participant – Age. Grade 7 and 8. mean age=12.5

Setting: School classes

Design: 2 groups (exp vs. control) x 3 assessment time (pre-test, post-test and 3 months follow-up) repeated measures MANOVA

Length of Follow-up: 3 months

Outcome measures: Body Esteem Scale for Adolescents (Mendelson, Mendolson & White, 2001) – Appearance, Attributions and Weight subscales  
sub-scales  
Rosenberg Self-esteem  
ChEAT – Dieting and Bulimia subscales  
Evaluation of support group

Group effect: Significant group x time effect for Body Esteem-Weight, Body Esteem –Appearance subscales, ChEAT-Dieting and ChEAT Bulimia, such that these variables improved in the experimental group from pre-test to post-test and post-test to follow-up.

At risk group: No analysis

Comments: Very positive outcome. Intervention effects observed in a number of measures adding strength to the results. May well have been effective through having an impact on the peer sub-culture that may have reinforced individual gains.

Authors: McVey, G., Davis, R., & Shaw, B.F.

Date: Manuscript under preparation

Full ref: A program to promote positive body image with girls in grade six and their parents: A one-year follow-up evaluation.

Style of Intervention: School-based intervention including the six session component described above, but also a parent education component. The parent education component consisted of a 3-hour evening session on (1) the potential impact of parents' own personal values, beliefs, attitudes about weight and shape on their daughters' body image, (2) parental support variables and girls' body image, and (3) the topics covered in the student curriculum.

However, parental involvement was extremely low. Consequently, the study is largely a replication of the one above.

Participant selection: Unclear from current information.

Participant –N: N = 288 in intervention group, 90 in control

Participant – Age: Grade 6

Setting: School

Design: Repeated measures ANCOVA

Length of Follow-up: post-intervention, 6 and 12 months

Outcome measures: Body image satisfaction (SIQYA), disordered eating (ChEAT), self-esteem (Rosenberg, 1965); perfectionism (Flett et al., 1992)

Group effect: At post-intervention, body satisfaction was higher and disordered eating scores lower in the intervention group, but difference between groups were not sustained.

At risk group: no Assessment

Comments: It is important to note that parents were not active participants. Ways to get them involved seem very difficult to devise. The different findings between the two studies and the lack of sustained effects suggest only a modest impact of the program.

Authors: Moreno, A.B., & Thelen, M.H.

Date: 1993

Full ref: A preliminary prevention program for eating disorders in a junior high school population. *Journal of Youth and Adolescence*, 22, 109-124.

### Study 1

Style of Intervention – 6.5 min video between two “sisters” about bulimia nervosa, socio-cultural attitudes towards thinness, dieting, suggestions for weight management and resisting peer pressure to diet. Followed by class discussion led by 23 year old female

Participant selection: Non-random selection of schools

Participant –N: Exp group 30 subjects out of 82 completed three assessment sessions; Control 74 of 135 completed all three assessments.

Participant – Age: Mean Exp – 13.67, Control-13.73

Setting: School classes - Home economics classes

Design: Pre-test, post-test two days after video, follow-up at 1 month. 2 group x 2 time MANCOVA with Time 1 as covariate

Length of Follow-up: 1 month

Outcome measures: Purge attitude, diet attitudes and knowledge, weight concerns and intentions to use extreme weight loss behaviors, purge information, exercise and weight, moderate dieting intentions.

Group effect: Positive effects on all six measures. Strongest effects on diet attitudes, weight concerns and purge information.

At risk group: No analyses

## Study 2

Style of Intervention – 6.5 min video between two “sisters” about bulimia nervosa, socio-cultural attitudes towards thinness, dieting, suggestions for weight management and resisting peer pressure to diet. Followed by class discussion led by Home Economics teacher.

Participant selection: Non-random selection of schools. Exp subjects from one school, controls from two others

Participant –N: Exp group 50 subjects out of 63 completed three assessment sessions; Control 65 of 104 completed all three assessments.

Participant – Age: Mean Exp – 13.84, Control-13.80

Setting: School - Home economics classes

Design: Pre-test, post-test two days after video, follow-up at 1 month

Length of Follow-up: 1 month

Outcome measures: Purge attitude, diet attitudes and knowledge, weight concerns and intentions to use extreme weight loss behaviors, purge information, exercise and weight, moderate dieting intentions.

Group effect: As in Study 1, positive effects on all variables but strongest on diet attitudes, weight concerns and intentions to use EWLBs and purge information.

At risk group: No analyses

Comments: Encouraging short follow-up. (Also large attrition but no difference in drop outs and controls on assessment 1). If available would need updating for current audience.

Authors: Neumark-Sztainer, D., Butler, R., & Palti, H.

Date: 1995

Full ref: Eating disturbances among adolescent girls: Evaluation of a school-based primary prevention program. *Journal of Nutrition Education*, 27, 24-31.

(Secondary source used (Franko, 1998)– so some details not available)

Style of Intervention: School-based class-room intervention. 10 session program called “The Weight to Eat” was delivered by a nutritionist/health educator in Jerusalem. The program addressed issues of healthy eating, body image, and self-esteem.

Participant selection:

Participant –N:

Participant – Age: 10<sup>th</sup> grade

Setting: School class

Design: Comparison of intervention and control group followed up at 6 and 2 years.

Length of Follow-up: 2 years

Outcome measures: Nutrition knowledge, frequency of regular meals, weight loss attempts, binge eating, body dissatisfaction, self-esteem

Group effect: Significant differences in nutritional knowledge and a higher frequency of regular meal patterns in experimental group at 6 and 24 months. No change in the incidence of self-reported attempts at weight loss, but the program was effective at preventing the onset of unhealthy dieting and bingeing. No differences were found between the groups on body dissatisfaction or self-esteem.

At risk group: At 6 months overweight girls in control group skipped meals more frequently than those in experimental group. At 2 years, the overweight group in the intervention group were dieting and binge eating less than the control group.

Comments: Promising program. Helpful effects in at risk overweight group. Sustained over time.

Authors: Neumark-Sztainer, D., Sherwood, N.E., Collier, T., Hannan, P.J.

Date: 2000

Full ref: Primary prevention of disordered eating among preadolescent girls: feasibility and short-term effect of a community-based intervention. *Journal of American Dietetic Association*, 100, 1466-1473

Style of Intervention: Six 90 minute sessions for Girl Scouts. Consecutive bi-weekly meetings. Guided by social cognitive theory. – socio-cultural, personal and behavioural factors continually interact. Attention directed towards these and their interaction. Media literacy and action. Also parental component with weekly info sent home to parents. Troop leaders took primary responsibility for teaching the program. (Outline p.1468). Program called *Free to be Me*. Focused on media literacy and encouraging activism. Also a regular parent information sheet. Covered physical development, issues of ideal body image, examination of media role and media activism activity.

Participant selection: Interested leaders replied to a flier. Leaders were randomised to exp or control. 12 troops in each condition

Participant: N. 226 girls from 24 troops. Intervention=115, Control=111. At follow-up response rates – Exp=92%, Control=91%

Participant: Age – mean=10.6 years, mostly in Grade 5 or 6

Setting: Girls Scouts activity

Design: Group randomised trial. Primary outcome analyses examined differences between control and intervention groups in variables at post-intervention and three months adjusted for baseline values.

Length of Follow-up: Post-test and 3 months

Outcome measures: Dieting behaviors, Unhealthy dieting behaviors, Binge eating  
 Body satisfaction, Puberty knowledge, acceptance of range of body sizes  
 Internalisation of thin ideal (SATAQ), Knowledge of media influence, self-efficacy to impact weight related social norms  
 Media habits – magazine reading  
 Program satisfaction

Group effects: Not a statistically sig effect on dieting though data in right direction.  
 Body-related knowledge and attitudes – modest effect at post-test but not follow-up. Not on satisfaction specifically.  
 Intervention effect on media related attitudes. SATAQ lower in exp girls at follow-up. An effect on other media variables and magazine reading.

At risk group: No analysis

Comments: Called *Free to be Me*. The author is likely to make it available under some circumstances.  
 Aimed to teach girls they didn't have to be passive recipients – helpful in this respect. Encouraged advocacy for change.

Authors: O’Dea, J. & Abraham, S.

Date: 2000

Full ref: Improving the body image, eating attitudes, and behaviors of young male and female adolescents: A new educational approach that focuses on self-esteem. *International Journal of Eating Disorders*, 28, 43-57.

Style of Intervention: 9 lessons x 50-80 mins aimed to build self-esteem, identify stereotypes in our society, positive self-evaluation, relationship and communication skills.

Participant selection: One state co-ed school and one private girls’ school. School class groups randomly allocated to control or exp conditions.

Participant –N: Exp girls=169, boys=106; Control girls=128, boys=67

Participant – Age: 11.1-14.5, Grades 7 and 8

Setting: School class

Design: 2 groups x 3 assessment occasions. Baseline, after intervention=3 months after baseline and 12 month follow-up. ANCOVA was used to compare difference between groups over time and to control for differences at baseline, using baseline measure as a covariate. Change from baseline to post-test and baseline to follow-up.

Length of Follow-up: 12 months

Outcome measures: EDI-DT, EDI-BD, EDI-IA, Physical Appearance Ratings, SBW (standard body weight), Self-concept (Social Acceptability and Physical Appearance) , trying to lose weight.

Group effect. Experimental group had decreased EDI-BD at post-test but not follow-up. No effect on EDI-DT or EDI-IA.

For whole group, Physical Appearance Rating by Father increased sig at post-test but not at follow-up.

In girls only, Physical Appearance Ratings for Self, Mother and Father, increased sig at post-test. Father sig at follow-up.

Anthropomorphic changes – change in SBW (standard body weight) – control decreased and exp increased over 12 months

Importance of Social Acceptability became less important to intervention and more important to control at post-test and follow-up

Physical Appearance became more important to control and less important to intervention at 12 month follow-up

Total group – no changes in those reporting trying to lose weight at post-test or follow-up.

Females only – At post-test more control girls trying to lose weight than at baseline, but at 12 month follow-up there was a significant increase those in the experimental group trying to lose weight, but this was not the case for the control group.

At risk group: High risk identified as low self-esteem and high anxiety (but little evidence that these people are at higher risk of disordered eating)

At post-test, high-risk girls in exp group had lower BD, but not sustained at follow-up.

At follow-up high-risk girls in exp group had lower DT than controls.

Importance of Social Acceptance and Physical Appearance became sig less important to high-risk girls in exp group

Comments: “Everybody’s Different” program is currently unavailable.

Authors: Paxton, S.J.

Date: 1993

Full ref: A prevention program for disturbed eating and body dissatisfaction in adolescent girls: a 1 year follow-up. *Health Education Research: Theory and Practice*. 8, 43-51

Style of Intervention: Selective intervention. Class-room curriculum, 5 structured lessons, teacher presentation, individual work and small group discussions. Topics – media images of women, determinants of body size, healthy and unhealthy weight control methods, and emotional eating.

Participant selection: Agreeable schools. No randomisation.

Participant –N: Two experimental schools

Participant – Age: Year 9, mean age =14.1 years

Setting: School class

Design: 3 groups (2 experimental and 1 control) x 3 testing occasions (baseline, 1 month post completion, 12 months follow-up) repeated measures ANOVA.

Length of Follow-up: 12 months

Outcome measures: Ideal-Current discrepancy; EDI-body dis; Body Cathexis scale and sub-scales including weight/lower body; EDI-bulimia; DEBQ sub-scales, EDI-DT; healthy, moderate and extreme weight control behaviours, self-esteem.

Group effect: No effect on eating variables. Increase in body dissatisfaction in all groups ie no effect of intervention.

At risk group: None conducted

Comments: More didactic approach may have contributed to lack of impact. Also age group may have been too old?

Authors: Piran, N.

Date: 1996

Full ref: The reduction of body weight preoccupation with body weight and shape in schools: A feminist approach. *Eating Disorders: The Journal of Treatment and Prevention*, 4, 323-330.

(Also in: Piran, N. (1999). On the move from tertiary to secondary and primary prevention: Working with an elite dance school. In N. Piran, M.P. Levine & C. Steiner-Adair, (Eds.), *Preventing eating disorders A handbook of interventions and special challenges*. NY: Brunner/Mazel, Ch 16, pp. 256-269. And Piran, N. (1999). The reduction of preoccupation with body weight and shape in schools: a feminist approach. In N. Piran, M.P. Levine & C. Steiner-Adair, (Eds.), *Preventing eating disorders: A handbook of interventions and special challenges*. NY: Brunner/Mazel, Ch 9, pp. 148-159).

Style of Intervention: Students in a ballet school worked in regular groups to consider body weight and shape issues. The style of intervention was based on the premise that they were experts on their own environments and they could devise solutions for problems. They could describe the shame felt with having a woman's body, and the pressures on them to be thin from teachers and also male dancers, and then take action to confront the sources of the pressure.

“Through group discussion, knowledge emerges and is voiced about the meaning of the social experience of owning a young woman's body. From a discussion of body shape, body functions, and expectations of one's appearance, the dialogue is transformed into a discussion of power and voice. Through the articulations of the problems within the safety of the group, wise solutions emerge.”(p.150)

Actions taken may relate to going to those in authority to request change, but also may relate to endeavouring to change the immediate social environment. “Revisions in peer relationship among students are an equally important objective. Peers can be encouraged to form support groups to combat the expression of prejudices and inequities. The program established consensual norms about many aspects of the school milieu, including ways the teachers and peers... could and could not talk to each other. Specific norms were established around comments about the body. Therefore if norms were violated students felt empowered to voice their experience directly and with authority to staff and peers.” (p.152)

“From a feminist perspective, body weight and shape preoccupation may be seen as the expression by women of the prejudicial, unequal, and harsh treatment on themselves and their bodies in their social context and an attempt to cope with these challenges. A feminist prevention program critically examines the many varied contextual factors that affect women’s experience of themselves, their bodies, and their eating. It then targets aspects of the social and political environment for direct intervention. The changed context reinforces the process of transforming bodily expressions of oppression into authoritative voices, which, in turn, guide further systemic changes.” (p.152)

Participant selection: Volunteers from ballet school.

Participant –N and Age: N/A

Setting: Ballet school

Design: N/A

Length of Follow-up: N/A

Outcome measures: Evaluated qualitatively

Group effect: N/A

At risk group: All participants could be considered at risk in the Ballet school environment.

Comments: Very import in terms of philosophical approach.

Authors: Posovac, H., Posovac, S & Weigel, R.

Date: 2001

Full ref: Reducing the impact of media images on women at risk for body image disturbance: Three targeted interventions. *Journal of Social and Clinical Psychology*, 20, 324-340.

Style of Intervention: Intervention designed to prevent women experiencing body image disturbance when exposed to media images by interrupting the social comparison process. Three interventions. “Artificial beauty” presented arguments that the media images are inappropriate models for comparison because they have been altered. “Genetic realities” argued that media images were inappropriate targets for comparison as the majority of women are genetically predisposed to be heavier than models. “Combination” presented both. Control intervention on “Parenting Skills”.

Participant selection: Targeted intervention. Female Psychology students at University of Utah participating for course credit with moderate to high body dissatisfaction, randomly assigned to condition.

Participant –N: 125 participants

Participant – Age: 18-25 years

Setting: University experiment

Design: Pre-test – intervention (experimental vs control) - media images (experimental female images vs car images) – post test.

Length of Follow-up: Post-test only

Outcome measures: Weight Concern Scale (Franzoi & Shields, 1984), evaluation of a thought listing task also used to assess body image and social comparison.

Group effect: All three interventions (a) decreased the likelihood of female participants comparing their bodies with media images and (b) prevented media induced body image disturbance.

At risk group: All at risk – moderate to high body dissatisfaction

Comments: Experimental situation, and looking at short term effects only, but suggests that giving reasons not to compare oneself to media reduces likelihood of doing so along with reducing body dissatisfaction that could result from this.

Authors: Santonastaso, P., Zanetti, T., Ferrara, S., Olivotto, M.C., Magnavita, N., & Favaro, A.

Date: 1999

Full ref: A preventive intervention program in adolescent schoolgirls: A longitudinal study. *Psychotherapy and Psychosomatics*, 68, 46-50.

Style of Intervention: 4 group sessions x 2 hours weekly. Following the presentation of didactic material (30-50 mins), the rest of the time was devoted to discussion. Sessions were conducted by a psychiatrist or psychologist. Group consisted of 12-17 students. The program included information and discussion about maturational changes and puberty, body image concerns, coping with adolescence and interpersonal relationships, nature of eating disorders, sociocultural pressures, dieting and early detection.

Participant selection: Second form of three vocational training schools. A total of 308 of 426 female students, 154 in program from 10 randomly selected classes, 154 control group.

Participant –N: 308, 154 in intervention, 154 in control

Participant – Age: Mean age = 16.1 years

Setting: Vocational high school (Italy).

Design: Sample divided into low and high risk (high risk  $\geq 30$  on EAT). 2 group x 2 testing occasions repeated measures ANOVA separately for high and low risk.

Length of Follow-up: 12 months

Outcome measures: EAT, EDI, BMI

Group effect: Low risk: At follow-up intervention group had significantly lower EDI Body Dissatisfaction and EDI bulimia scores than control. High risk: No difference between the two groups.

At risk group: High risk group did not differ from control group following intervention. Authors suggest "...high risk subjects are reluctant to modify their habits and behaviours".

Comments: Modest but positive effects of intervention on body dissatisfaction. Program may be genuinely preventive in that it has effect of preventing increase in body dissatisfaction in those who start low, but not be so effective as secondary prevention.

Authors: Smolak, L., Levine, M.P., Schermer, F.

Date: 1998

Full ref: A controlled evaluation of an elementary school primary prevention program for eating problems. *Journal of Psychosomatic Research*, 44, 339-353.

Style of Intervention: Fifth grade, school based program called *Eating Smart, Eating for Me*. Ten lessons designed to encourage healthy eating, exercise and body image and discourage calorie-restrictive dieting, exercising for weight loss and the development of body dissatisfaction. Intended “to provide a multi-pronged attack on the various components of the thinness schema, while providing alternative behaviours and attitudes.” Includes myths about fat, tolerance of differences in body shape, media literacy and eating and exercising for your health.

Participant selection: Classrooms drawn from local schools. Assignment of classroom depended on willing teachers – ie non-random. Control group from the same schools as experimental group (potential for contamination). Almost all white.

Participant –N: 253 children, 115 boys and 138 girls. 222 available at post-test – 102 boys and 120 girls.

Participant-Age: Fifth grade, approximately 9-11 years.

Setting: Elementary school

Design: Two groups (experimental and control) x two testing occasions (pre-test and post-test) ANOVA

Length of Follow-up: Post-test=1-4 months after program completion.

Outcome measures: Nutrition knowledge, vegetable consumption, knowledge of effects of puberty, exercise participation, beliefs about fat, negative characteristics associated with fat people, Body Esteem Scale, dieting frequency and understanding effects of dieting.

Group effect: Knowledge improved in intervention group.. Intervention had a significant effect on attitudes about fat people. No change in body esteem. No behavioural changes.

At risk group: No analysis

Comments: Probably available. No short term effect on body dissatisfaction but more positive attitude towards diversity.

Authors: Smolak, L. & Levine, M.P.,

Date: 2001.

Full ref: A two-year follow-up of a primary prevention program for negative body image and unhealthy weight regulation. *International Journal of Eating Disorders*, in press.

Style of Intervention: Class-room intervention described above.

Participant selection: As above but new control those at the middle school but not participated earlier.

Participant –N: Experimental group- 289 of original group who received the intervention (74% of original experimental group); old control group – 100 (60% of original control); a new control group = 104 children who didn't participate in original study and had not attended a study school.

Participant – Age: Now tested when 11-13 years

Setting: Now in middle-school.

Design: 3 groups (experimental, old control and new control) x 2 (gender). Separate analyses when scales only for boys or girls.

Length of Follow-up: 2 years

Outcome measures: Internalization of socio-cultural ideal of thinness, Awareness of sociocultural ideal, Muscular look (for boys only), Body Esteem scale; weight loss technique score; muscle building technique, concern about being too small; depressive symptoms; weight concerns; knowledge about nutrition; Body Mass Index

Group effect: No curriculum effect on Internalization of socio-cultural ideal of thinness, Awareness of sociocultural ideal or Muscular look (for boys only), weight concerns, muscle building technique, concern about being too small; depressive symptoms or BMI.

Experimental group differed from new control on knowledge concerning weight, weight control and nutrition.

Experimental group differed from new control on weight loss techniques.

Experimental group differed from new control on Body Esteem Scale.

Possible prevention effect: Why were there not differences between the experimental group and the original control. Argued that there may have been contamination of the original control group – i.e., spill-over effect to non-curriculum classes. Alternatively, the new control group may always have been more weight and shape concerned. Assuming effect of the program, girls appear to have been more effected than boys.

At risk group: No analysis

Comments: Certainly promising of a longer-term prevention effect – ie girls who would normally have developed problems may not have done.

Authors: Steiner-Adair, C., Sjostrom, L., Franko, D., Pai, S., Tucker, R., Becker, A.E., & Herzog, D.

Date: In press

Full ref: Primary prevention of risk factors for eating disorders in adolescent girls: Learning from practice. *International Journal of Eating Disorders*.

Style of Intervention: “Full of Ourselves: Advancing Girl Power, Health and Leadership” – 8 units delivered in weekly sessions of 45-90 mins for 12-14 year old girls. It incorporates many of the features presumed to be effective from existing programs (e.g., a focus on esteem-building and hands-on, experiential approach to learning) with three distinctive additions: 1) a strong feminist, sociopolitical perspective; 2) an emphasis on translating knowledge and awareness into personal and public action; and 3) a mentoring component. The program was designed to reduce risk for disordered eating by increasing self-esteem, promoting body acceptance, providing leadership opportunities, and teaching a range of coping strategies to resist the cultural emphasis on maladaptive body preoccupation and unhealthy eating and dieting behaviours. Program delivered by two site leaders who attended a training session.

Participant selection: Participants from 24 schools. Some random assignment to control and experimental but not complete. Mainly Caucasian.

Participant –N. 499 enrolled in study, 411 completed study. 213 of original 260 assigned to intervention and 198 of the 239 assigned to the control.

Participant – Age: 12-14 years

Setting: School, small groups.

Design: Control and Experimental groups assessed at pre-test, post-test and 6 months follow-up. Repeated measures ANOVA.

Length of Follow-up: Pre-program, end of program and six months later.

Outcome measures: 13 Knowledge Questions on health/nutrition, body/appearance, weightism/sociocultural issues and media literacy  
 Body Esteem Scale (Mendelson et al., 1993) – three subscales: weight, appearance and attributions.  
 Multidimensional Body-Self Relations Questionnaire (MBSRQ- Cash, 1994) Body Areas Satisfaction subscale  
 Sociocultural; Attitudes Towards Appearance Questionnaire (SATAQ – Heinberg et al., 1995) – Awareness and Internalization  
 subscales.  
 Rosenberg self-esteem scale

Group effect: Intervention effect on Knowledge, maintained at follow-up  
 BES- weight. Sig group x time interaction. Intervention group stayed the same but control group went down from T1 to T3  
 Trend (p=.06) for group x time effect on self-esteem in predicted direction.  
 No effect of intervention on eating behaviours

At risk group: No assessment

Comments: Probably program will become available. Discussions are under-way with a publisher.

Authors: Stewart, D.A., Carter, J.C., Drinkwater, J., Hainsworth, J., Fairburn, C.G

Date: 2001

Full Ref: Modification of eating attitudes and behavior in adolescent girls: A controlled study. *International Journal of Eating Disorders*, 29, 107-118.

Style of Intervention: School-based, included cog-behavioural strategies, addressed potentially modifiable risk factors for disordered eating. Aim – to reduce dietary restraint and concerns about weight and shape. Manual.

Interactive – guided self-discovery, role-play, group discussions, self-monitoring, identify automatic thoughts.

Six, weekly, 45 minute sessions

Topics – determining cultural influences on body image and eating behaviour, understanding body weight regulation and the effects of dieting; developing a positive body image; understanding the relationship among thought thoughts, feelings, and behaviours; understanding the nature and consequences of eating disorders; determining the early warning signs of an eating disorder; obtaining help for an eating problem; building self-esteem; managing stress; eating healthy and resisting pressures to diet.

Participant selection: Non-random selection of three experimental and three control schools.

Participant –N: Exp=459 (representing 97% of invited) – 403 all time points

Control=386 (representing 91% of invited) – 349 all time points

Participant – Age: Mean=13.4 years

Setting: Girls' schools

Design: 2 groups (exp vs control) – each assessed before, one-week after the 6 week intervention, and 6 months later.

2 group x 3 (assessments ANCOVA – pre-intervention ChEAT, Knowledge and self-esteem used as covariates.

Length of Follow-up: One week and 6 months

Outcome measures : Self-report assessment. EDE-Q4 – restraint, eating concern, shape concern, and weight concern subscales;

ChEAT – anorexic symptoms. Self-esteem. Knowledge test

Group effects: Intervention effect on Restraint - Small but sig difference at post-test and follow-up in experimental group (positive treatment effect)

Weight concern – no effect of intervention.

Shape Concern – went down in experimental group at post-test but up again at follow-up so there was no difference between exp and control at follow-up.

Eating concern – same as shape concern.

Knowledge – an intervention effect at post-test and follow-up.

At risk group: Intervention effect more marked on restraint in high restraint girls.

Comments: Promising program. Significant but small effect. Was manualized and therefore maybe available from authors? Program did present information on disordered eating and no suggestion of harm. Follow-up to Carter et al (1997) pilot and clearly earlier concerns not sustained.

Authors: Stice, E, Mazotti, L., Weibel, D., Agras, W.S.

Date: 2000

Full ref: Dissonance prevention program decreases thin-ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms: A preliminary experiment. *International Journal of Eating Disorders*, 27, 206-217.

Style of Intervention: Targeted intervention in young adult women. 3 x 1 hour sessions. 5 participants in each group. Dissonance based intervention – discussion of ways of helping youth avoid internalising the thin ideal in guise of developing program for younger girls; explored costs associated with pursuing the thin ideal; difficulties that may be encountered in resisting thin ideal – role play making counter thin-ideal statements to resist pressure from peers and consider ways participants may unwittingly promote the thin ideal.

Participant selection: Targeted intervention. Respondents to fliers on one college campus (Stanford). High risk status supported by baseline data.

Participant N: 10 in experimental group and 20 in delayed treatment control.

Participant Age: 18-22 years. Mode=18

Setting: College campus

Design: 2 group (exp and delayed treatment control) x Time (3 times, pre-test, post-test and 1 month follow-up). Repeated measures ANOVA.

Length of follow-up: 1 month

Outcome measures: Internalisation of thin ideal –Ideal-Body Stereotype Scale revised (IBSS-R: Stice et al., 1996)  
 Body dissatisfaction - Satisfaction and Dissatisfaction with Body Parts Scale (Berscheid et al., 1973);  
 Dieting - Dutch Eating Behaviour Questionnaire (DEBQ-R);  
 Negative affect - Sadness, guilt and fear/anxiety sub-scales of the Positive and Negative Affect Scale-revised (PANAS-X);  
 Bulimic symptoms - Eating Disorder Examination-Questionnaire binge eating and purging items.

Group effect: Significant group x time interaction for Internalization of thin ideal. There was a decrease at post-test in the exp group, which was maintained at follow-up. No change in control.

Similar for body dissatisfaction. Significant interaction effect with decrease at post-test in the exp group, which maintained at follow-up. No change in control.

Reduction in negative affect at post-test in exp group but not maintained at 1 month.

No significant interaction effect for dieting behaviours.

Significant group x time interaction in bulimic symptoms at post-test. While not well maintained over 1 month there was an increase in bulimic symptoms in the control group. Thus the intervention may have prevented a natural increase in symptoms.

At risk group: All participants assumed to be at risk. i.e. targeted or secondary prevention.

Comments: Promising. Sufficient information to emulate and details most likely available.

Authors: Stice, E., Chase, A., Stormer, S., Appel, A.

Date: 2001

Full ref: A randomized trial of a dissonance-based eating disorder prevention program. *International Journal of Eating Disorders*.

Style of Intervention : Targeted intervention in young adult women. Two intervention groups, both of three, one hour sessions and homework between. (1) Dissonance based intervention – discussion of ways of helping youth avoid internalising the thin ideal in guise of developing program for younger girls; explored costs associated with pursuing the thin ideal; difficulties that may be encountered in resisting thin ideal – role play making counter thin-ideal statements to resist pressure from peers and consider ways participants may unwittingly promote the thin ideal. (2) Healthy weight management placebo control. Develop a lasting healthy lifestyle that incorporates a balanced diet and exercise, which should ultimately result in weight control and consequent body satisfaction. Generate own strategies for diet and exercise change, identification of problems and solutions.

Participant selection: Targeted intervention. Respondents to fliers on two college campuses. High risk status supported by baseline data. Randomised into two groups.

Participant –N: Exp=48, Control=39 Finished with 40 and 36 in ANOVAS

Participant – Age: Mode =19, range =17-29

Setting: University

Design: Randomised control trial. Repeated measures ANOVA for each outcome variable. Condition was a two level between-subjects factor and time was a three-level within-subjects factor. (Bonferroni corrected alpha =.016)

Length of Follow-up: 1 month

Outcome measures: Internalisation of thin ideal –Ideal-Body Stereotype Scale revised (IBSS-R: Stice et al., 1996)  
 Body dissatisfaction - Satisfaction and Dissatisfaction with Body Parts Scale (Berscheid et al., 1973);  
 Dieting - Dutch Eating Behaviour Questionnaire (DEBQ-R);  
 Negative affect - Sadness, guilt and fear/anxiety sub-scales of the Positive and Negative Affect Scale-revised (PANAS-X);  
 Bulimic symptoms - Eating Disorder Examination-Questionnaire binge eating and purging items.  
 Fat consumption – for manipulation check  
 BMI - for manipulation check  
 Exercise behav - for manipulation check.

Group effect: Exp intervention effect on Internalization  
 Post-test effect of exp condition on Body Dis. But at 4 weeks both conditions showed a sig improvement.  
 Dieting – both groups went down sig at post-test and follow-up  
 Negative affect – improvement in both groups  
 Reduction in bulimic symptoms in both groups

At risk group: Study was targeted at high risk women

Comments: Both exp and placebo condition appear to have potential. 1 month follow-up very short. Supports targeted intervention. Only study to have reduced bulimic symptoms. This program is available.

Authors: Stice, E. & Ragan, J.

Date: 2002

Full ref: A preliminary controlled evaluation of an eating disturbance psycho-educational intervention for college students. *International Journal of Eating Disorders*.

Style of Intervention: University course entitled “Eating Disorders”. The intervention was an advanced undergraduate seminar series on eating disorders. Twice weekly x 1.5 hours x 15 weeks.

Participant selection: Selective intervention. Experimental group were those who enrolled in the course. Control group were volunteers from similar level undergraduate subjects.

Participant –N: Exp group = 17, control group = 71

Participant – Age: Modal age = 21, range 17-55 years.

Setting: University undergraduate program

Design: Two groups x 2 assessments (pre and post-test) repeated measures ANOVA.

Length of Follow-up: No follow-up

Outcome measures: Internalization of thin ideal, body dissatisfaction, dieting, depressive symptoms, eating pathology, fat consumption and BMI.

Group effect: Intervention group showed significant decreases in internalization, body dissatisfaction, dieting, eating disorder symptoms and weight over the 4 month study period, while matched control showed no changes with the exception of weight gain.

At risk group: No specific analyses.

Comments: An intensive course does seem to produce beneficial changes in body image and eating behaviour. Presumably those who are interested are self-selecting into classes.

Authors: Winzelberg, A.J., Epstein, D., Eldredge, K.L., Wilfley, D et al.

Date: 2000

Full ref: Effectiveness of an internet-based program for reducing risk factors for eating disorders. *Journal of Consulting and Clinical Psychology*, 68, 346-350.

Style of Intervention: Targeted prevention. Internet-based psycho-education program Student Bodies – see Zabinski et al. for description.

Participant selection: Participants recruited using fliers around Stanford University. Randomly assigned to two groups – Student Bodies or delayed treatment control

Participant –N: 61 subjects completed baseline assessments, 8 dropped out during study and 5 did not complete follow-up.

Participant – Age: Mean age = 20.0 years, range 18-33 years

Setting: Undergraduate US university

Design: Baseline assessment vs. post-intervention (8 weeks); baseline vs follow-up (3 months); post-test vs follow-up MANOVA

Length of Follow-up: 3 months

Outcome measures: Body Shape Questionnaire, EDI – DT, EDI-Bulimia, EDE-Q Weight Concerns, and EDE-Q Shape Concerns

Group effect: For completers, significant differences between baseline and follow-up between intervention and control on BSQ and EDI-DT.

Intention to treat comparison between intervention and control for baseline to follow-up, found significant differences between BSQ, EDI-DT, EDI-B and EDE Shape Concerns.

At risk group: Looked at those with high BSQ (BSQ > 110) compared to control. There were sig differences from baseline to follow-up on BSQ

Comments: Internet psycho-educational program was effective in reducing body shape concerns especially in high-risk women.

Authors: Withers, G.F., Twigg, K., Wertheim, E.H. & Paxton, S.J.

Date: In press

Full ref: A controlled evaluation of an eating disorders primary prevention videotape using the Elaboration Likelihood Model of Persuasion. *Journal of Psychosomatic Research*.

Style of Intervention: School-based classroom intervention. 22 minute Prevention Video. Contents included: determinants of body size and shape, historical and socio-cultural influences on female appearance, negative effects of extreme dieting and disordered eating, healthy eating habits and suggestions for creating a healthy body image and boosting self-esteem.

Participant selection: Non-random allocation of participating schools

Participant –N: 218 Grade 7 girls. 104 in intervention group from one school and 114 in control group from two other schools. 24 excluded due to incomplete data.

Participant – Age. Exp= 12.7, control=13.3

Setting: School class – Grade 7

Design: Compared change scores T1 (pre-test) -T2 (post-test) and T1(pre-test) -T3(follow-up) between groups using one way ANOVAs.

Length of Follow-up: 1 month

Outcome measures: Knowledge (5 items)  
EDI- Body dissatisfaction  
EDI- Drive for Thinness  
Figure Rating Scale Current-Ideal  
Current dieting behaviour  
Intention to Diet

Group effects: Difference between change scores T1-T2 between exp and control on Knowledge; EDI-drive for thinness and intention to diet in predicted direction.

Difference between change scores T1-T3 between exp and control on knowledge only

At risk group: Examined relationship between perceived relevance (as indicated by subjective Personal Relevance, Objective PR=Time 1 EDI-BD, Need for Cognition (NFC), and Elaboration Likelihood (subjective PR x NFC).  
Participants higher in personal relevance, both subjective and objective, reported greater positive changes. But this happened in the control group too.

Comments: Video available

Authors: Zabinski, M.F., Pung, M.A., Wilfley, D.E., Eppstein, D., Winzelberg, A.J., Celio, A., Barr Taylor, C.

Date: 2001

Full ref: Reducing risk factors for eating disorders: targeting at-risk women with a computerized psychoeducational program. *International Journal of Eating Disorders*, 29, 401-408.

Style of Intervention: Targeted intervention. “Student Bodies” is an on-line interactive psycho-educational program. Modelled on CBT interventions. It is an 8 week program, and consists of five sections, (1) body image, (2) nutrition (3) exercise (4) eating disorders (5) electronic discussion group. Assigned readings and exercises.

Participant selection: High body dissatisfaction students (BSQ score >110) were identified in a mass screening of first year psychology – high risk group. Participants fulfilled course requirements by participating. Random assignment to either intervention or control group.

Participant –N: N=62, intervention=31, control=31. At follow-up intervention =27 and no intervention control=29

Participant – Age: Mean age = 19.3 years, range = 17-24 years

Setting: University program for course credit

Design: 2 groups x 3 testing occasions (pre-test, post-test and 10 week follow-up) repeated measures ANOVA

Length of Follow-up: 10 week follow-up

Outcome measures: Body Shape Questionnaire, EDI Drive for Thinness, EDI Bulimia subscales, EDE-Q Restraint, eating, Shape and Weight Subscales.

Group effect: Both groups improved on a number of measures but no group x time interaction i.e., no significant effect of the program over the control. The authors argue the effects were greater in the intervention group but this is debatable.

At risk group: All participants considered at risk.

Comments: Computerised psycho-education program is workable and potentially has benefits but these are at best modest.

## References

- Baranowski, M.J. & Hetherington, M.M. (2001). Testing the efficacy of an eating disorder prevention program. *International Journal of Eating Disorders*, 29, 119-124.
- Buddeberg-Fischer, B., Klaghofer, R., Gnam, G. & Buddeberg, C. (1998). Prevention of disturbed eating behaviour: A prospective intervention in 14- and 19-year old Swiss students, *Acta Psychiatrica Scandinavica*, 98, 146-155.
- Carter, J.C., Stewart, D.A., Dunn, V.J., Fairburn, C. (1997). Primary prevention of eating disorders: Might it do more harm than good? *International Journal of Eating Disorders*, 22, 167-172.
- Coller, T.C., Neumark-Sztainer, D., Bulfer, J., & Engebretson, J. (1999). Taste of food, fun, and fitness: A community-based program to teach young girls to feel better about their bodies. *Journal of Nutrition Education*, 31, 283-284. (Abstract).
- Dalle Grave, R., de Luca, L. & Campello, G. (2001). Middle school primary prevention program for eating disorders: A controlled study with a twelve-month follow-up. *Eating Disorders*.
- Franko, D. (1998). Secondary prevention of eating disorders in college women at risk. *Eating Disorders*, 6, 29-40.
- Heinze, V., Wertheim, E.H., Kashima, Y. (2000). An evaluation of the importance of message source and age of recipient in a primary prevention program for eating disorders. *Eating Disorder*, 8, 131-145.
- Higgins, L.C. & Gray, W. (1998). Changing the body image concern and eating behaviour of chronic dieters: The effects of a psycho-educational intervention. Most likely *International Journal of Eating Disorders*.
- Huon, G.F. (1994). Towards the prevention of dieting-induced disorders: Modifying negative food- and body-related attitudes. *International Journal of Eating Disorders*, 16, 395-399.

- Kater, K.J., Rohwer, J., Levine, M.P. (2000). An elementary school project for developing healthy body image and reducing risk factors for unhealthy and disordered eating. *Eating Disorders*, 8, 3-16.
- Killen, J. D., Barr-Taylor, C., Hammer, L.D., Litt, I., Wilson, D.M. et al. (1993). An attempt to modify unhealthful eating attitudes and weight regulation practices of young adolescent girls. *International Journal of Eating Disorders*, 13, 369-384.
- Kusel, A.B. (1999) Primary prevention of eating disorders through media literacy training of girls. *Dissertation Abstracts International B: The Sciences and Engineering*, 60 (4), 1859
- Mann, T., Nolen-Hoeksema, S., Burgard, D. Huang, K., Wright, A. & Hanson, K. (1997). Are two interventions worse than none? Joint primary and secondary prevention of eating disorders in college females. *Health Psychology*, 16, 215-225.
- Martz, D.M. & Bazzini, D.G. (1999). Eating disorders prevention programming may be failing: Evaluation of 2 one-shot program. *Journal of College Student Development*, 40, 32-42.
- McVey, G. & Davis, R. (2002). A program to promote positive body image with girls in grade six: A 1-year follow-up evaluation. *Journal of Early Adolescence*, 22, 96-108.
- McVey, G., Davis, R., & Shaw, B.F. (Unpublished manuscript A). A program to promote positive body image with girls in grade six and their parents: A one-year follow-up evaluation.
- McVey, G., Lieberman, M., Voorberg, N., Wardhope, D., & Blackmore, E. (Unpublished manuscript B). School-based peer support groups: A new approach to the prevention of disordered eating.
- Moreno, A.B., & Thelen, M.H. (1993). A preliminary prevention program for eating disorders in a junior high school population. *Journal of Youth and Adolescence*, 22, 109-124.
- Neumark-Sztainer, D., Butler, R., & Palti, H. (1995). Eating disturbances among adolescent girls: Evaluation of a school-based primary prevention program. *Journal of Nutrition Education*, 27, 24-31.

- Neumark-Sztainer, D., Sherwood, N.E., Collier, T., Hannan, P.J. (2000). Primary prevention of disordered eating among preadolescent girls: feasibility and short-term effect of a community-based intervention. *Journal of American Dietetic Association*, 100, 1466-1473.
- O'Dea, J. & Abraham, S. (2000). Improving the body image, eating attitudes, and behaviors of young male and female adolescents: A new educational approach that focuses on self-esteem. *International Journal of Eating Disorders*, 28, 43-57.
- Paxton, S.J. (1993). A prevention program for disturbed eating and body dissatisfaction in adolescent girls: a 1 year follow-up. *Health Education Research: Theory and Practice*. 8, 43-51.
- Piran, N. (1996). The reduction of body weight preoccupation with body weight and shape in schools: A feminist approach. *Eating Disorders: The Journal of Treatment and Prevention*, 4, 323-330.
- Posovac, H., Posovac, S & Weigal, R. (2001). Reducing the impact of media images on women at risk for body image disturbance: three targeted interventions. *Journal of Social and Clinical Psychology*, 20, 324-340.
- Santonastaso, P., Zanetti, T., Ferrara, S., Olivotto, M.C., Magnavita, N., & Favaro, A. (1999). A preventive intervention program in adolescent schoolgirls: A longitudinal study. *Psychotherapy and Psychosomatics*, 68, 46-50.
- Smolak, L., Levine, M.P., Schermer, F. (1998). A controlled evaluation of an elementary school primary prevention program for eating problems. *Journal of Psychosomatic Research*, 44, 339-353.
- Smolak, L. & Levine, M.P., (2001). A two-year follow-up of a primary prevention program for negative body image and unhealthy weight regulation. *International Journal of Eating Disorders*, in press.
- Steiner-Adair, C., Sjostrom, L., Franko, D., Pai, S., Tucker, R., Becker, A.E., & Herzog, D. (In press). Primary prevention of risk factors for eating disorders in adolescent girls: Learning from practice. *International Journal of Eating Disorders*.
- Stewart, D.A., Carter, J.C., Drinkwater, J., Hainsworth, J., Fairburn, C.G. (2001). Modification of eating attitudes and behavior in adolescent girls: A controlled study. *International Journal of Eating Disorders*, 29, 107-118.

Stice, E, Mazotti, L., Weibel, D., Agras, W.S. (2000). Dissonance prevention program decreases thin-ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms: A preliminary experiment. *International Journal of Eating Disorders*, 27, 206-217.

Stice, E., Chase, A., Stormer, S., Appel, A. (2001). A randomized trial of a dissonance-based eating disorder prevention program. *International Journal of Eating Disorders*.

Stice, E. & Ragan, J. (2002). A preliminary controlled evaluation of an eating disturbance psycho-educational intervention for college students. *International Journal of Eating Disorders*.

Winzelberg, A.J., Epstein, D., Eldredge, K.L., Wilfley, D et al. (2000). Effectiveness of an internet-based program for reducing risk factors for eating disorders. *Journal of Consulting and Clinical Psychology*, 68, 346-350.

Withers, G.F., Twigg, K., Wertheim, E.H. & Paxton, S.J. (In press). A controlled evaluation of an eating disorders primary prevention videotape using the Elaboration Likelihood Model of Persuasion. *Journal of Psychosomatic Research*.

Zabinski, M.F., Pung, M.A., Wilfley, D.E., Epstein, D., Winzelberg, A.J., Celio, A., Barr Taylor, C. (2001). Reducing risk factors for eating disorders: Targeting at-risk women with a computerized psycho-educational program. . *International Journal of Eating Disorders*, 29, 401-408.

### Some Valuable Commentary

Franko, D.L. & Orosan-Weine, P. (1998). The prevention of eating disorders: Empirical, methodological, and conceptual considerations. *Clinical Psychology: Science and Practice*, 5, 459-477.

Levine, M.P. & Smolak, L. (2000). Primary prevention of body image disturbances and disordered eating in childhood and early adolescence. In J.K. Thompson & L. Smolak (Eds.), *Body image, eating disorders and obesity in children and adolescents: Theory, assessment, treatment and prevention*. Washington, DC: American Psychological Association.

Piran, N., Levine, M.P. & Steiner-Adair, C. (Eds.), *Preventing eating disorders: A handbook of interventions and special challenges*. NY: Brunner/Mazel.

This summary, along with the *Research Review of Body Image Programs*, *Shapes: Body Image Program Planning Guide* and *Best Bets: Body Image Programs Overview*, is part of the Department of Human Services series on evidence-based health promotion.

Published by Rural and Regional Health and Aged Care Services Division, Victorian Department of Human Services  
Melbourne Victoria

This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the Copyright Act 1968.

July 2002-08-23

© Copyright State of Victoria, Department of Human Services, 2002

