

This electronic thesis or dissertation has been downloaded from the King's Research Portal at <https://kclpure.kcl.ac.uk/portal/>



## The development and feasibility testing of an eating disorders training programme for UK school staff

Hesmondhalgh, Pooky Knightsmith

*Awarding institution:*  
King's College London

The copyright of this thesis rests with the author and no quotation from it or information derived from it may be published without proper acknowledgement.

### END USER LICENCE AGREEMENT



Unless another licence is stated on the immediately following page this work is licensed

under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International

licence. <https://creativecommons.org/licenses/by-nc-nd/4.0/>

You are free to copy, distribute and transmit the work

Under the following conditions:

- Attribution: You must attribute the work in the manner specified by the author (but not in any way that suggests that they endorse you or your use of the work).
- Non Commercial: You may not use this work for commercial purposes.
- No Derivative Works - You may not alter, transform, or build upon this work.

Any of these conditions can be waived if you receive permission from the author. Your fair dealings and other rights are in no way affected by the above.

### Take down policy

If you believe that this document breaches copyright please contact [librarypure@kcl.ac.uk](mailto:librarypure@kcl.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.

**THE DEVELOPMENT AND FEASIBILITY TESTING OF AN  
EATING DISORDERS TRAINING PROGRAMME FOR  
UK SCHOOL STAFF**

**Pooky Knightsmith Hesmondhalgh**

**Institute of Psychiatry, King's College London**

**Thesis submitted to King's College London, University of London,**

**for the degree of Doctor of Philosophy (PhD)**

**2014**

## **Declaration**

**I confirm that the work presented in this thesis is my original work.**

---

**Pooky Knightsmith Hesmondhalgh**

**20<sup>th</sup> January 2014**

## **Abstract**

### **Aims:**

The overall aims of this thesis were (1) to develop an eating disorders training programme for school staff, informed by stakeholder (student, staff) views and designed to improve staff's confidence, attitudes and knowledge in recognising and managing student eating disorders and (2) to carry out a feasibility study of this programme.

### **Method:**

In Studies 1 and 2, 11-19 year old school students (n= 511) and school staff (n=826) completed online questionnaires exploring their respective experiences and complementing perspectives of eating disorders in an integrated way. In Study 3, focus groups were conducted with 63 members of staff from 29 UK schools with the aims of (a) capturing their views on their ability to identify and manage student eating disorders and any obstacles to this, and (b) to identify any specific training needs in this area that school staff may have and to generate recommendations based on these.

In study 4, an eating disorders training programme was developed with input from school staff and clinicians and informed by the findings from studies 1-3. 45 school staff took part in the one day face to face eating disorders training programme and completed a questionnaire about their eating disorder knowledge, attitude and confidence prior to the intervention, immediately post intervention and again three

months later. The significance of intragroup changes over time was determined using generalised estimating equations (GEE) models.

### **Results:**

Studies 1-3 indicated that both students and staff felt that eating disorder training for school staff would be beneficial but that such training was not currently widely available. Students and staff then went on to make recommendations for the development of a training intervention for school staff. The intervention was tested in study 4 and was found to have a significant positive impact on school staff's self-reported confidence, attitudes and knowledge about eating disorders with medium to large effect sizes of 0.7, 0.8 and 0.8 respectively. These gains were universally maintained at follow-up three months later.

### **Conclusions:**

The promising results of the feasibility study provide strong motivation and sound indicators for further research in this emerging field. A large scale evaluation of the teacher training using a fully powered stepped wedge design is recommended as the next step.

## **Original Contribution**

The four inter-linked studies outlined in this thesis make a substantial and novel contribution to the field of eating disorders prevention and early intervention. The work is the author's own with the exception that all information was double coded with a second researcher, not related to the current project nor wider research team, performing coding for studies one, two and three, blind to the lead researcher's coding in order to increase the validity of the results.

### **Study One (chapter 2):**

This study was the first empirical study to investigate students' experiences of eating disorders within the UK school setting.

### **Study Two (chapter 3):**

This study was the first empirical study to investigate school staff experiences of eating disorders within the UK school setting.

### **Study Three (chapter 4):**

This study was the first empirical study to specifically draw on school staff experiences of eating disorders to generate recommendations for an early intervention programme.

#### **Study Four (chapters 5 and 6):**

This study was the first feasibility study of a one day, face to face eating disorders training programme aimed at improving school staff knowledge about, attitudes towards and confidence in identifying and managing student eating disorders. Additionally, the experimental measures, training programme content and supporting materials were all authored by the researcher.

## Table of Contents

|   |    |
|---|----|
| Declaration .....   | 2  |
| Original Contribution.....  | 5  |
| Table of Contents .....   | 7  |
| Table of Tables and Figures.....  | 12 |
| Publications and Presentations Associated with this Thesis .....              | 13 |
| Acknowledgements .....  | 16 |
| Acknowledgement of Funding .....  | 17 |
| Incorporation of Published Papers .....                                       | 18 |
| Chapter 1 Introduction.....   | 19 |
| 1.1 Introduction to Eating Disorders .....                                    | 21 |
| 1.1.1 Classification .....  | 22 |
| 1.1.2 Epidemiology .....  | 27 |
| 1.1.3 Risk Factors.....   | 29 |
| 1.1.4 Comorbidities and Consequences of Eating Disorders .....                | 37 |
| 1.1.5 Treatment .....   | 41 |
| 1.1.6 Costs .....   | 42 |
| 1.2 Eating Disorders: Prevention, Detection and Early Intervention.....       | 44 |
| 1.2.1 Defining Prevention, Detection and Early Intervention .....             | 44 |
| 1.2.2 Eating Disorder Prevention Studies .....                                | 47 |
| 1.2.3 'Being' Rather than 'Doing' Prevention .....                            | 78 |
| 1.2.4 Eating Disorder Detection and Early Intervention in Schools.....        | 79 |
| 1.2.5 Barriers to Eating Disorder Detection & Early Intervention in Schools.. | 81 |
| 1.3 The Role of Schools in Student Mental Health Care .....                   | 85 |
| 1.3.1 The Role of School Staff in Early Intervention .....                    | 86 |

|  |   |     |
|--|---|-----|
| 1.3.2  | The Impact on Student Outcomes of Training School Staff in Early Intervention Strategies Targeted at a Range of Conditions..... | 90  |
| 1.4  | Summary.....  | 103 |
| 1.5  | Thesis Aims and Outline .....   | 105 |
| Chapter 2 - Student Experiences of Eating Disorders within the School Setting: An Online Survey .....                          |   |     |
|  |   | 108 |
| Chapter 3 - School Staff Experiences of Eating Disorders within the School Setting: An Online Survey .....                     |   |     |
|  |   | 118 |
| Chapter 4 - Recommendations from School Staff about Spotting and Supporting Eating Disorders.....                              |   |     |
|  |   | 128 |
| Chapter 5 - Development of Content and Outcome Measures of a One Day Eating Disorders Training Programme for School Staff..... |   |     |
|  |   | 141 |
| 5.1  | The NICE Principles of Effective Behaviour Change Interventions .....   | 142 |
| 5.1.1  | Principle 1: Planning Interventions and Programmes .....  | 143 |
| 5.1.2  | Principle 2: Assessing Social Context .....   | 144 |
| 5.1.3  | Principle 3: Education and Training .....   | 145 |
| 5.1.4  | Principle 4: Delivery .....   | 146 |
| 5.1.5  | Principle 5: Evaluating Effectiveness.....  | 147 |
| 5.2  | Intervention Content and Delivery .....   | 148 |
| 5.2.1  | The Authoring Process.....  | 148 |
| 5.2.2  | Content Outline and Rationale.....  | 150 |
| 5.2.3  | Content Delivery .....  | 162 |
| 5.3  | Development of Outcome Measures.....  | 163 |
| 5.3.1  | Knowledge Items .....   | 171 |
| 5.3.2  | Attitude Items.....   | 172 |

|   |  |     |
|---|--|-----|
| 5.3.3   | Confidence Items.....                  | 173 |
| 5.3.4   | Validity.....                          | 174 |
| 5.4   | Summary.....                           | 175 |
| Chapter 6 - Feasibility Study of a One Day Eating Disorders Training Programme for UK Secondary School Staff..... |  |     |
|   |  | 177 |
| 6.1   | Introduction .....                     | 178 |
| 6.2   | Method.....                            | 181 |
| 6.2.1   | Participants.....                      | 181 |
| 6.2.2   | Procedure.....                         | 181 |
| 6.2.3   | Statistical Analysis.....              | 182 |
| 6.3   | Results .....                          | 184 |
| 6.3.1   | Demographic Information .....          | 184 |
| 6.3.2   | Acceptability of the Intervention..... | 187 |
| 6.4   | Discussion.....                        | 190 |
| 6.4.1   | Knowledge.....                         | 190 |
| 6.4.2   | Attitudes.....                         | 191 |
| 6.4.3   | Confidence .....                       | 191 |
| 6.4.4   | Strengths of the Current Study .....   | 193 |
| 6.4.5   | Limitations of the Current Study ..... | 194 |
| 6.4.6   | Future Directions .....                | 196 |
| 6.5   | Summary.....                           | 201 |
| Chapter 7 Discussion .....  |  |     |
|   |  | 202 |
| 7.1   | Summary of Findings .....              | 203 |
| 7.2   | Strengths of the Studies.....          | 207 |
| 7.2.1   | Unique Nature of the Studies.....      | 207 |

|       |  |     |
|-------|--|-----|
| 7.2.2 | Participant Demographics.....  | 208 |
| 7.2.3 | Depth of Answers .....   | 210 |
| 7.2.4 | Use of an Independent Coder.....                                     | 210 |
| 7.2.5 | Training Intervention Follow up.....                                 | 211 |
| 7.2.6 | Practical Model of Delivery .....                                    | 212 |
| 7.2.7 | Acceptability of the Intervention .....                              | 212 |
| 7.2.8 | Consideration of Attitudes as well as Knowledge and Confidence ..... | 213 |
| 7.3   | Limitations of the Studies .....                                     | 213 |
| 7.3.1 | Sample size .....  | 214 |
| 7.3.2 | Lack of Control Group.....   | 214 |
| 7.3.3 | Sample Selection.....  | 215 |
| 7.3.4 | Reporting Measures .....   | 216 |
| 7.3.5 | UK Focus.....  | 216 |
| 7.3.6 | Limited Scope.....   | 217 |
| 7.4   | Future Directions.....   | 219 |
| 7.4.1 | Further Development of the Training Materials.....                   | 219 |
| 7.4.2 | Pilot Online Training Materials.....                                 | 220 |
| 7.4.3 | Carry out a Fully Powered Study .....                                | 220 |
| 7.5   | Positive By-Products of the Work on this Thesis.....                 | 221 |
| 7.6   | Overall Conclusions .....  | 221 |
|       | References.....  | 223 |
|       | Appendices .....   | 254 |
|       | Appendix A: Questionnaire and results from Hardie (2007) .....       | 254 |
|       | Appendix B: Student Questionnaire used in Study One .....            | 255 |
|       | Appendix C: Staff Questionnaire used in Study Two.....               | 260 |

|  |     |
|--|-----|
| Appendix D: Model Eating Disorders Policy for Schools .....                                  | 266 |
| Appendix E: Eating Disorders Attitude and Knowledge Questionnaire – Schools<br>Version ..... | 274 |
| Appendix F: Training Hand-Outs Authored for Study 4 .....                                    | 279 |

## **Table of Tables and Figures**

|   |     |
|---|-----|
| Table 1 - Significant changes to the diagnosis of eating disorders under the new DSM-5 criteria .....   | 26  |
| Table 2 - Descriptions of the sample, intervention content, and findings from universal eating disorder prevention trials aimed at school-aged participants not outlined in the narrative ..... | 61  |
| Table 3 - Descriptions of the sample, intervention content, and findings from selected eating disorder prevention trials aimed at college-aged participants .....                               | 77  |
| Table 4 - Eating Disorders - One day training curriculum.....   | 151 |
| Table 5 - Eating disorder knowledge, attitude and confidence summary .....  | 167 |
| Table 6 - case vignettes designed to test participant confidence in managing eating disorders .....   | 170 |
| Table 7 - Participant roles .....   | 184 |
| Table 8 - Estimated means and standard errors .....   | 185 |
| Table 9 - Post hoc analyses .....   | 186 |
| Table 10 - Participant feedback about potential improvements to the intervention  | 189 |
| Figure 1 - Definitions of and interactions between prevention, detection and intervention.....  | 46  |
| Figure 2 - Authoring process for each intervention session.....   | 149 |

## **Peer-Reviewed Papers, Other Publications and Presentations Associated with this Thesis**

### **Peer-Reviewed Papers**

Knightsmith, P., Sharpe, H., Breen, O., Treasure, J., Schmidt, U., (2013) "My teacher saved my life" versus "Teachers don't have a clue": An online survey of pupils' experiences of eating disorders" *Journal of child and adolescent mental health*

Knightsmith, P., Treasure, J., Schmidt, U (2013) "We don't know how to help" An online survey of school staff experiences of eating disorders" *Journal of child and adolescent mental health*

Knightsmith, P., Treasure, J., Schmidt, U (2013) "Spotting and supporting eating disorders in school. Recommendations from school staff" *Health Education Research Journal*, 28(6), 1004-1013

### **Other Publications**

Knightsmith, P. (September, 2012) *Eating Disorders Pocketbook*. Hampshire: Teachers' Pocketbooks

Knightsmith, P (reported by Bloom, A) (September 2012) "Teachers have the power to save lives" *TES Pro Magazine* (pp 14-15). *Times Educational Supplement*

Knightsmith, P (January, 2013) "Overcoming eating disorders: identifying pupils at risk and spotting the signs" *Special Children Magazine* (pp 8-9). *Optimus Education*

Knightsmith, P (March, 2013) "Guidelines for school staff" In Alexander, J & Treasure, J (Eds) Anorexia Nervosa: A Survival Guide for Families, Friends and Sufferers (pp 259-266) Routledge

Knightsmith, P (March, 2013) "Overcoming eating disorders: supporting pupils on the road to recovery" Special Children Magazine (pp 12-14). Optimus Education

Knightsmith, P., (June, 2013) "Out of the darkness" guidance for discussing mental health issues in the classroom. (page 45) Times Educational Supplement

Knightsmith, P., (July, 2013) "Mealtimes: ten ideas for supporting recovering anorexics" (page 37) Education Issues (249). Independence Educational Publishers. Cambridge

Knightsmith, P., (August, 2013) "What is my child saying" – guidance to understanding and responding to unusual behaviour related to food. (page 11) Adoption Today Magazine

Knightsmith, P., (October, 2013) "Talking to pupils when they make mental health disclosures" Teacher resource developed for PSHE Association members in the UK

Knightsmith, P., (January, 2014) "What are pro-ana and pro-mia sites and what can we do about them?" (pp 14-15) Issues Today: Eating Disorders. Independence Educational Publishers. Cambridge

Knightsmith, P., (In production) "Common eating issues in adoptive children – providing care and support" in Radwan, K (Ed) Prepare for Adoption Now. Adoption UK Publications

## **Presentations**

Eating Disorders International Conference 2010: “We just don’t know how best to help”

Staff Experiences of Eating Disorders in UK Schools. Oral Presentation

Royal College of Psychiatrists Eating Disorders Conference 2011: “Preventing eating disorders in school – what can we learn from students and teachers?” Keynote

PSHE Educators Conference 2012: “Recognising and responding to eating disorder warning signs.” Keynote

Eating Disorders International Conference 2012: “Working with teachers and students to develop an eating disorders prevention and support programme.” Oral presentation

Times Educational Supplement Special Needs Show 2013: “Promoting mental health in adolescents” seminar

Optimus one day annual conference 2013: “Promoting mental health in schools” workshop

## **Acknowledgements**

Thanks must go first to the wonderful Ulrike Schmidt. Ulrike kept me both smiling and stretched to the very end – always more sure of my abilities than I was. I hope I have lived up to her expectations. Thanks also to Janet Treasure, my second supervisor, who could always be relied upon for prompt, succinct feedback that was never sugar coated and invariably set me off in the right direction (at 5am).

The entire eating disorders team at the Institute of Psychiatry have been a real inspiration to me these past seven years (yes, it really has been that long). Special thanks to Helen, my first port of call for questions big and small as she always knows the answers. Thanks too to Jocelyn both for her personal support and her amazing ways with all things admin. Also to Miriam who was able to offer sage advice from a fellow working Mum who'd needed to find the 25th hour in the day to write her thesis.

There are too many personal thanks to list here, please know I love you and I'm grateful, even if your name is not listed in this great tome. Special thanks to my grandfather who inspires me to constantly try harder and to Tom who saved me from my own eating disorder and taught me to enjoy life... and enabled me to do so even during the final stages of my thesis write up.

Finally, thank you Lyra and Ellie who are too little right now to understand why Mummy has been so obsessed with this big project, but who have been a major inspiration for me to carry on. I was once told that having children was a sure fire way to ensure you

do not finish your PhD. But for me, it was only when I became a mother that I understood that I owed it to the other parents out there to do all I could to protect their children from eating disorders. This thesis is just the first step.

## **Acknowledgement of Funding**

This thesis presents independent research commissioned by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research scheme (RP-PG-0606-1043). The views expressed in this publication are those of the author and not necessarily those of the NHS, the NIHR or the Department of Health.

## **Incorporation of Published Papers**

Chapters 2, 3 and 4 of this thesis have already been published as papers in the Journal of Child and Adolescent Mental Health (chapters 2 and 3) and the Journal of Health Education Research (chapter 4). The papers have been incorporated within this thesis exactly as they have appeared in the journals. As a result, the references, tables and figures that appear within the papers are not incorporated into the indices or reference lists of the main thesis.

# **Chapter 1**

## **Introduction**

The overall aim of this thesis was to gain an understanding of student and staff experiences of eating disorders within the UK school setting and to use this information to inform an eating disorders recognition and early intervention training programme for school staff. Further, this thesis aimed to carry out a feasibility study of this programme within UK Schools and to measure its impact on school staff's knowledge, confidence and attitudes about eating disorders.

This introductory chapter starts by identifying the eating disorders which are of interest throughout this thesis, and outlining these conditions. The incidence and prevalence of eating disorders within school aged children is then summarised in order to illustrate the vulnerability of school-aged children to eating disorders compared to those in other age categories and risk factors, comorbidity and treatment options are briefly outlined. The costs of eating disorders are then considered in terms of financial implications for health services as well as in terms of psychological, physical and quality of life costs to the individuals concerned.

The chapter then goes on to define eating disorder prevention, detection and intervention before outlining a range of eating disorder prevention studies that have been carried out in schools. Due to a lack of research specifically pertaining to the early intervention of eating disorders in the school setting, the chapter next outlines the impact school staff have been shown to have on conditions such as learning problems, conduct disorder and Attention Deficit Hyperactivity Disorder (ADHD).

The role of school staff within mental health care is discussed before the small amount of research available regarding school staff knowledge and understanding of eating disorders is summarised. Finally, two studies are outlined which demonstrate the impact that training programmes for school staff can have in terms of knowledge, attitudes and confidence in dealing with health or mental health difficulties within the school setting.

Due to the paucity of data regarding the central theme of this thesis and the broad range of topics outlined in the introductory chapter, a narrative rather than systematic review of the literature was considered most appropriate.

In the final section of the introductory chapter, the remaining chapters of the thesis are outlined.

## **1.1 Introduction to Eating Disorders**

### **Diagnostic and Statistical Manual of Mental Disorders**

A revised version of The Diagnostic and Statistical Manual of Mental Disorders (“DSM-5”. American Psychiatric Association, 2013) was published in 2013. Therefore, the majority of the research within this thesis was carried out whilst the previous diagnostic manual was in effect (DSMIV American Psychiatric Association, 2000). The new definitions of eating disorders are described below and a table of the major changes to the diagnostic criteria of eating disorders is included for reference (see table 1).

The DSM-5 lists seven diagnosable disorders of feeding and eating. These are:

- Anorexia nervosa
- Bulimia nervosa
- Binge eating disorder
- Feeding and eating disorders not elsewhere classified
- Pica
- Rumination disorder
- Avoidant/Restrictive food intake disorder

Of specific interest to the current thesis are anorexia nervosa, bulimia nervosa, binge eating disorder and Other Specified Feeding or Eating Disorder (OSFED).

Pica, rumination disorder and avoidant / restrictive food intake are 'feeding' disorders and were listed among 'Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence' in DSMIV. This chapter does not exist in DSM-5 and did not form part of the original research aims of the current thesis.

### **1.1.1 Classification**

The four eating disorders of specific interest in the current thesis are outlined below.

#### **1.1.1.1 Anorexia Nervosa**

A clinician may diagnose a person with anorexia nervosa according to the DSM-5 criteria if they present with the following symptoms:

- The patient has reached a 'significantly low weight' through restriction of energy intake

- Intense fear of weight gain or becoming fat, or
- Persistent behaviour that interferes with weight gain
- Undue influence of body shape and weight on self-evaluation
- Persistent lack of recognition of the seriousness of the current low body weight

### **1.1.1.2 Bulimia Nervosa**

A clinician may diagnose a person with bulimia nervosa according to the DSM-5 criteria if they present with the following symptoms:

- Recurrent episodes of binge eating where binge eating is defined as consuming an objectively large amount of food in a discrete period of time accompanied by a sense of lack of control.
- Recurrent, inappropriate, compensatory behaviour aimed at preventing weight gain e.g.
  - self-induced vomiting
  - misuse of laxatives, diuretics, or other medications
  - fasting
  - excessive exercise
- The binge eating and compensatory behaviours occur at least once a week for a period of three months
- Undue influence of body shape and weight on self-evaluation

### **1.1.1.3 Binge Eating Disorder**

A clinician may diagnose a person with binge eating disorder according to the DSM-5 criteria if they present with the following symptoms:

- Recurrent episodes of binge eating, where binge eating is defined as consuming an objectively large amount of food in a discrete period of time accompanied by a sense of lack of control.
- The binge eating episodes are associated with three or more of the following:
  - eating very rapidly
  - continuing to eat even when feeling full
  - eating large quantities of food when not feeling hungry
  - eating in isolation due to embarrassment or shame
  - feelings of guilt, shame or low mood following an episode of binge eating
- The patient is distressed about their binge eating
- The binge eating occurs at least once a week for a period of three months

### **1.1.1.4 Other Specified Feeding or Eating Disorder & Unspecified Feeding or Eating Disorder**

In addition to the three major eating disorders, individuals can be diagnosed with Other Specified Feeding or Eating Disorder (OSFED – formerly known as Eating Disorders Not Otherwise Specified or 'EDNOS'). OSFED is a diagnosis that is applied to patients who do not meet the diagnostic criteria for one of the three major eating disorders, though this diagnosis is not an indication of a less severe eating disorder, rather a different combination of symptoms. This is a relatively frequent occurrence as people

with eating disorders do not always neatly fit into diagnostic categories and may suffer from symptoms or behaviours typical of more than one of the disorders without reaching the diagnostic criteria for any single disorder. Historically, EDNOS was a frequently applied diagnosis, accounting for up to fifty percent of diagnosed eating disorders (Fairburn, & Bohn, 2005).

DSM-5 outlines five specific OSFED subtypes:

1. Atypical Anorexia Nervosa (i.e., anorexic features without low weight)
2. Bulimia Nervosa (of low frequency and/or limited duration)
3. Binge Eating Disorder (of low frequency and/or limited duration)
4. Purging Disorder
5. Night Eating Syndrome

DSM-5 also includes a category called Unspecified Feeding or Eating Disorder (UFED) that is reserved for cases who do not fit into any of these five categories, or for whom there is not enough information to make a specific OSFED diagnosis.

The incidence of OSFED and UFED is likely to be significantly lower than the historic incidence of EDNOS as the new Diagnostic and Statistical Manual of Mental Disorders ("DSM-5". American Psychiatric Association, 2013) introduces major changes to the classification of eating disorders in order to better represent the symptoms and behaviours of people with eating disorders. The major changes between DSM-5 and DSMIV are outlined in table 1.

| <b>Disorder</b>       | <b>DSMV</b>  | <b>Impact</b>  |
|-----------------------|--|--|
| Anorexia Nervosa      | Patient must have reached 'significantly low weight' to be diagnosed   | DSMIV required weight to be at or below 85% of ideal body weight. The new DSM-5 criteria enable an earlier diagnosis   |
| Anorexia Nervosa      | Amenorrhoea is no longer listed as a criterion   | This criterion was not useful as there were so many exceptions to it. It cannot be applied to males, pre-menarchal females, females taking oral contraceptives and post-menopausal females. In some cases, individuals exhibit all other symptoms and signs of anorexia nervosa but still report some menstrual activity |
| Anorexia Nervosa      | Removal of the idea of "refusal" to maintain an appropriate weight   | Disambiguates diagnosis as 'refusal' implies intention on the part of the patient and can be difficult to assess   |
| Anorexia Nervosa      | Persistent behaviour that interferes with weight gain added as an alternative to fear of weight gain                         | Patients can now be diagnosed without explicitly expressing fear of weight gain  |
| Bulimia Nervosa       | Reduction of frequency of binge-purge behaviour required for a diagnosis of bulimia nervosa from twice weekly to once weekly | More patients fulfil the criteria for bulimia nervosa rather than being diagnosed with EDNOS / OSFED / UFED  |
| Binge Eating Disorder | Binge eating disorder is recognised as a discrete diagnosis  | Patients can now be diagnosed with, and treated for Binge Eating disorder as opposed to EDNOS / OSFED / UFED   |

**Table 1 - Significant changes to the diagnosis of eating disorders under the new DSM-5 criteria**

### **1.1.2 Epidemiology**

Due to the very recent introduction of revised diagnostic criteria for eating disorders with the introduction of DSM-5, the eating disorder incidence rates and prevalence rates stated throughout the current thesis are determined according to the previous versions of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000; American Psychiatric Association, 1994). It is worth noting that the new diagnostic criteria are likely to result in an increase in diagnosable cases of anorexia nervosa, bulimia nervosa and binge eating disorder and a decrease of cases of OSFED / UFED (formerly 'EDNOS'). This was a key aim of the updated diagnostic criteria (Ornstein et al., 2013).

Eating disorders have a peak age of onset of 15 to 19 in females and 10-19 in males according to a recent extensive study which examined the time trends in primary care incidence of eating disorders by drawing on data from the General Practice Research Database spanning nine years to 2009 (Micali et al., 2013). Additionally, this study found an increased incidence of eating disorders at the end of the 2000s compared to the start of the 2000s. By 2009, the incidence of eating disorders in 14-19 year old girls had peaked at an incidence of 0.2% of the population. Micali et al's study extends the findings of Currin et al. (2005) who examined the General Practice Research Database for the time period 1994-2000 and found incidences of anorexia nervosa and bulimia nervosa remained stable (at 4.7 and 6.6 per 100,000 population for anorexia nervosa and bulimia nervosa, respectively) with a peak onset in those between the ages of 10 and 19. The reported numbers are likely to grossly underplay the true incidence of eating disorders as they take into account only the 'detected' incidence rates as opposed to community incidence rates.

Swanson, Crow, Le Grange, Swendsen, & Merikangas, 2011 studied a community sample of 10,123 adolescents aged 13 to 18 years in the USA. All participants completed a survey and researchers interviewed participants who reported eating disorder symptomology. The median ages at onset of anorexia nervosa, bulimia nervosa and binge-eating disorder, were 12.3, 12.4, and 12.6 years respectively with lifetime prevalence estimates of 0.3% (anorexia nervosa), 0.9% (bulimia nervosa) and 1.6% (binge eating disorder).

Machado, Machado, Gonçalves, & Hoek (2007) studied a community sample of 2028 female students aged 12-23 in Portugal. Participants completed the Eating Disorders Examination Questionnaire in stage one of the study, and in stage 2, 901 who met symptomology criteria were interviewed. 3.06% of participants were found to have a diagnosable eating disorder. Prevalence for anorexia nervosa was 0.39% and for bulimia nervosa 0.30%. A far higher prevalence of 2.37% was reported for eating disorders not otherwise specified.

The data do not take into account those individuals with eating disorder like thoughts and behaviours and who may have a subclinical or prodromal form of the disorder. In a study by Cotrufo, Barretta, Monteleone, & Maj (1998) in Italy of 919 female students aged 13-19 years, 2 cases of full-syndrome anorexia nervosa (0.2%), 21 cases of full-syndrome bulimia nervosa (2.3%) and 2 cases of full-syndrome binge-eating disorder (0.2%) were reported. A further 35 girls (3.8%) met the criteria for partial-syndrome and 98 girls (10.7%) fulfilled the criteria for subclinical eating disorders. Additionally, in a self-report study of 1739 12-18 year-old girls in Toronto, 27% were found to have

disordered eating attitudes and behaviours (Jones, Bennett, Olmsted, Lawson, & Rodin, 2001).

### **1.1.3 Risk Factors**

For the purpose of this thesis, the term risk factor is understood according to the definition use by Jacobi, Hayward, De Zwaan, Kraemer & Agras (2004) in their comprehensive review of the risk factors for eating disorders:

*“A measurable characteristic of each subject in a specified population which precedes the outcome of interest and which can be shown to divide the population into two groups: a high-risk group and a low-risk group. The probability in the high-risk group must be shown to be greater than in the low-risk group.” (page 20)*

A series of potential eating disorder risk factors are considered briefly in turn, focusing on those factors which are more likely to be observable in adolescents by school staff.

#### **1.1.3.1 Gender**

Eating disorders are consistently found to be more prevalent in females than males, both within clinical and non-clinical populations (Jacobi et al., 2004). Population based studies indicate a ratio of ten to one female to male ratio for anorexia nervosa and bulimia nervosa (Wittchen, Nelson & Lachner, 1998) based on a sample of 3021 14 to 24 year olds, and a ratio of 2.5 to 1 female to male ratio for binge eating disorder (Spitzer et al., 1992) based on a community sample of 1984 18-60 year olds.

### **1.1.3.2 Ethnicity**

In her review of the literature Jacobi et al., (2004) found no clear relationship between ethnic status and eating disorder prevalence. Likewise in a meta-analysis of six studies of ethnicity and body dissatisfaction among US women, Grabe & Hyde (2006) challenged the commonly held belief that body dissatisfaction is greatest amongst white women suggesting that minority ethnic groups were no more, or less likely to develop eating disorders than their Caucasian peers. More recent studies demonstrate that abnormal eating behaviours do occur in some ethnic minority groups and may be more prevalent than in non-ethnic minorities (Marques et al., 2011). These authors drew on pooled data from the NIMH Collaborative Psychiatric Epidemiological Studies, to compare the prevalence, correlates of functional impairment, and service utilisation for eating disorders across Hispanic, Asian and African Americans living in the United States to non-Latino Whites (Marques et al 2011). The prevalence of bulimia nervosa and anorexia nervosa was found to be similar in all groups examined, whilst bulimia nervosa was found to be more prevalent amongst Latinos and African Americans than non-Latino whites.

In a UK based study that established the prevalence and correlates of disordered eating in a general population in South East London, Solmi, Hatch, Hotopf, Treasure & Micali (2014) found that the majority of participants reporting to have disordered eating according to the SCOFF Questionnaire, were of an ethnic minority. Participants of Asian or mixed other ethnicity had the highest prevalence of disordered eating (14.8% and 16.1%), followed by those of Black Caribbean and African ethnicity (12.8%). White participants had a disordered eating prevalence of 7.8%.

### **1.1.3.3 Age**

As outlined above, eating disorders have a peak age of onset of 15 to 19 in females and 10-19 in males (Micali et al., 2013; Currin et al., 2005). Of note is the fact that age is also a factor related to the onset of other psychiatric disorders so it is possible that the relationship between age and eating disorders incidence is a complex one.

### **1.1.3.4 Psychiatric Disturbance**

It is common for eating disorder patients to have dual diagnoses, with eating disorders being highly comorbid with other conditions such as affective disorders, substance abuse disorders, anxiety disorders and personality disorders (Herzog, Keller, Sacks, Yeh & Lavori, 1992; Milos, Spindler & Schnyder 2004; Zaider, Johnson, & Cockell, 2000). Here it is important to consider chronology i.e. is the eating disorder a risk factor for the comorbid illness or vice versa or do both arise simultaneously? This can be somewhat disambiguated by employing prospective studies, which follow a group of people over a period of time in addition to cross-sectional studies which provide a 'snapshot' of the characteristics of a given population at one point in time.

In order to gain an understanding of the causal nature of the relationships between eating disorders and personality disorders, Råstam (1992) considered chronology of onset and reported that obsessive compulsive personality disorder was the only personality disorder that was pre-morbid in eating disorder patients.

In a population based cohort study reported over three years, Patton, Selzer, Coffey, Carlin, & Wolfe (1999) reported that psychiatric morbidity predicted the onset of eating disorders (both full and partial syndromes) in 1699 male and female Australian High School students. Participants in the highest psychiatric morbidity category were found to be seven times more likely to develop an eating disorder.

In a study of comorbidity of anxiety and eating disorders, Swinbourne et al (2012) reported that of 100 women presenting for treatment of an eating disorder, 65 also met the criteria for at least one comorbid anxiety disorder. Of these, 69% reported that the anxiety disorder had preceded the eating disorder. The most prevalent diagnosis was social phobia (42%) followed by post-traumatic stress disorder (26%) and generalised anxiety disorder (23%).

#### **1.1.3.5 Sexual Abuse**

Sexual abuse, and especially childhood sexual abuse, has been widely reported as a risk factor for eating disorders (Jacobi et al., 2004). In a prospective study, Brown, Russell, Thornton & Dunn (1997) found that 34% of patients with eating disorders reported childhood sexual abuse compared to 20% of controls. In a cross-sectional study, Dansky, Brewerton, Kilpatrick & O'Neal (1997) conducted telephone interviews with a nationally representative sample of 3006 US women by telephone and reported the odds of having bulimia as 1.86 times higher among victims of direct assault, than non-victims whilst Garfinkel et al., (1995) found that in an epidemiological study of 8116 male and female Ontarian adults, structured interviews indicated that participants with bulimia nervosa were three times as likely to have been the victims of childhood sexual abuse as healthy participants.

#### **1.1.3.6 Adverse Life Events**

Eighteen percent of Participants with bulimia nervosa (n=18/102) in a community study by Welch, Doll and Fairburn (1997) reported three or more life events in the year prior to onset compared to five percent of healthy, age-matched controls (n=10/204). This finding was not replicated in participants with anorexia nervosa. The role of life events may not be specific to eating disorders but true for psychiatric patients in general (Jacobi et al., 2004).

#### **1.1.3.7 Body Mass Index and Weight Related Variables**

Childhood obesity was indicated as a risk factor for bulimia nervosa and binge eating disorder in a community-based case-control study by Fairburn, et al (1998). 33% of 52 female participants with binge eating disorder and 40% of 102 female participants with bulimia nervosa reported childhood obesity, compared to 13-19% of 104 healthy controls. In their review of the literature, Jacobi et al (2004) found conflicting evidence as to whether higher body mass index could be considered a risk factor, with two longitudinal studies supporting this stance and three studies which did not support this relationship.

#### **1.1.3.8 Dieting and Weight Preoccupation**

In their population based cohort study of 1699 Australian High School students, Patton et al., (1999) reported that female subjects who dieted at a severe level were 18 times more likely to develop an eating disorder than those who did not diet, and female participants who dieted at a moderate level were five times more likely to develop an eating disorder than those who did not diet. In a three-year prospective analysis of

939 adolescent girls, Killen et al., (1994) reported that girls scoring in the highest quartile in a measure of weight concerns were six times more likely to develop an eating disorder within three years than those scoring on the lowest quartile for weight concerns. These studies provide evidence that amongst the adolescent population, dieting and weight concern may act as predictive risk factors or prodromes for eating disorders.

### **1.1.3.9 Early Childhood Eating and Digestive Problems**

In a longitudinal study of 659 children and their mothers by Marchi & Cohen, 1990, it was reported that pica and early digestive problems were linked to later bulimic symptoms. Sufferers of pica during early childhood were reportedly seven times more at risk of a diagnosis of bulimia nervosa in adulthood than controls. Digestive problems and selective eating were linked to later anorexic symptoms. Kotler, Cohen, Davies, Pine, & Walsh (2001) reported a longitudinal study of 800 US children and their mothers which found that unpleasant meals and mealtime struggles between 1 and 10 years were predictive for a later diagnosis of anorexia nervosa.

A 14-month surveillance study of childhood eating disorders conducted by Nicholls, Lynn & Viner (2011) reported a history of early feeding problems was reported in around 21% of cases (66% none, 13% unknown), across all eating disorder diagnoses. The feeding difficulties experienced were described as picky, fussy, faddy or restrictive and the researchers noted the relative severity of these feeding difficulties. For example, one case was described as being fussy until the age of nine,

another consumed solely milk until the age of three and one four year old was described as being unaware of their hunger and unable to tolerate lumps in their food.

#### **1.1.3.10 Family Interaction Styles**

Shoebridge & Gowers (2000) reported a wide range of high concern attitudes and behaviours to be more frequent in mothers of four anorexic patients compared with matched healthy controls and that these behaviours preceded rather than accompanied the diagnosis. Similarly, Webster & Palmer (2000) reported that women with bulimia nervosa (but not those with anorexia nervosa) reported significantly more indifference, discord, lack of care and overall adversity in their family life than healthy controls. This pattern did not differ significantly from that reported by women with major depression so these experiences may be non-specific.

#### **1.1.3.11 Low Self-Esteem**

German patients diagnosed with anorexia nervosa, (N = 33); bulimia nervosa, (N = 38) and binge eating disorder, (N = 28) were all found to display lower self-esteem and higher feelings of ineffectiveness according to the Frankfurt Self-Concept Scales when compared with healthy controls and, to a lesser extent when compared with patients with other psychiatric diagnoses. More recently, Ackard, Fulkerson, & Neumark-Sztainer (2011) reported results from a US school-based sample of 4746 students who completed anthropometric measures and Project EAT survey items. The study indicated that the binge eating disorder and bulimia nervosa group reported significantly lower self-esteem than their asymptomatic peers.

#### **1.1.3.12 Perfectionism**

Fairburn et al., (1998) reported that in recovered anorexia nervosa patients, premorbid perfectionism was reported more commonly than in psychiatric controls or healthy controls. Perfectionism is widely accepted as a risk factor for anorexia nervosa (Jacobi et al, 2004), however, Gustafsson, Edlund, Kjellin, & Norring, (2010) note that perfectionism and need for control were historically considered central symptoms of the disorder but have been re-cast as risk factors.

#### **1.1.3.13 Athletic Competition**

Members of professions with an emphasis on shape and weight were first highlighted as at potential risk of eating disorders by Garner & Garfinkel twenty five years ago (1978) and belief that these groups are high risk is regularly restated in the literature. In their review of risk factors, Jacobi et al (2004) found little evidence which met their review criteria to conclusively support this stance but indicated this was possibly due to the very small sample sizes involved. Incomplete data also means that where there is evidence for e.g. increased eating disorder pathology in ballet dancers, due to lack of baseline data, it is not possible to determine whether this pathology was present prior to the participants' dancing careers (Garner, Garfinkel, Rockert & Olmsted, 1987).

Davis, Kennedy, Ravelski & Dionne (1994) carried out a study that retrospectively assessed physical activity levels prior to the onset of an eating disorder and found that

those participants who went on to develop eating disorders were significantly more active than their peers.

#### **1.1.3.14 Subclinical Eating Pathology**

Herzog, Hopkins, and Burns (1993) found that 15 of 33 treatment-seeking women with a partial syndrome eating disorder went on to develop a full syndrome eating disorder within 24 to 52 months whilst 6 had recovered indicating that a high proportion of patients with subclinical eating pathology will either continue to exhibit subclinical pathology or go on to develop the full syndrome.

#### **1.1.4 Comorbidities and Consequences of Eating Disorders**

Despite the relatively low prevalence and incidence rates reported for eating disorders compared to other psychiatric disturbances, their significance is heightened by their severity and impact resulting in role impairment; medical complications; comorbidity; mortality and suicide.

##### **1.1.4.1 Role Impairment**

In a cross-sectional study of 10,123 adolescents aged 13 to 18 years, Swanson et al., (2011) judged impairment using the Sheehan Disability Scale (Leon, Olsson, Portera, Farber & Sheehan, 1997) which is designed to capture the severity of role impairment in the domains of home, school, family and social life. Of those adolescents who had been diagnosed with anorexia nervosa, bulimia nervosa and binge eating disorder 97.1%, 78.0% and 62.6%, respectively, reported impairment in the past 12 months

and 24.2%, 10.7% and 8.7% reported severe impairment. Social impairment was the most reported impairment with 88.9% of participants with anorexia nervosa reporting some degree of social impairment. 11.6% of participants with anorexia nervosa, 14.4% of participants with bulimia nervosa and 9.8% of participants with binge eating disorder reported between one and ninety days in the previous twelve months when their impairment had been significant enough to completely prevent them from participating in normal activities.

#### **1.1.4.2 Medical Complications**

In a review of medical complications of anorexia nervosa and bulimia nervosa, Mitchell & Crow (2006) reported that medical complications are frequent and often serious in patients with eating disorders, particularly those with anorexia nervosa. Medical complications can affect all organ systems and includes disorders of the skin (Strumia, 2005); gastrointestinal system (Lo, Yen & Jones, 2004; Barada et al., 2006); cardiovascular / pulmonary systems (Ohwada et al., 2005; Klein-Weigel et al., 2004; Klump, Bulik, Kaye, Treasure, & Tyson, 2009; Mitchell & Crow, 2006); skeletal system (Herzog et al., 1993; Misra et al., 2004a); and metabolism (Misra et al., 2004b; Yücel, Özbey, Polat, & Yager, 2005).

In addition, the vomiting and laxative abuse commonly seen in bulimia nervosa and anorexia nervosa can give rise to ongoing dental and oral problems, electrolyte imbalances and their associated medical difficulties and gastro-intestinal complications (Mehler, 2011) and binge eating disorder frequently results in obesity

which carries with it a series of long-term health risks such as diabetes, heart disease, elevated blood pressure and some cancers (Striegel-Moore et al., 2001).

#### **1.1.4.3 Comorbidity**

Hudson, Hiripi, Pope, & Kessler (2007) conducted a face-to-face household survey of 9282 US adults and reported that anorexia nervosa, bulimia nervosa and binge eating disorder were significantly co-morbid with other DSMIV disorders. 56.2% of respondents with anorexia nervosa, 94.5% with bulimia nervosa and 78.9% with binge eating disorder met criteria for at least 1 of the core DSM-IV disorders. Eating disorders were positively related to mood, anxiety, impulse-control, and substance use disorders.

Similarly, Preti et al's 2009 study, which drew on findings from interviews of 4139 adults in six European countries, reported that eating disorder comorbidity with a range of other mental health disorders were highly common, though treatment was rarely sought.

The picture may be somewhat different for adolescent patients with eating disorders. Swanson et al., (2011) report a discrepancy between the lack of substantial comorbidity among adolescents diagnosed with anorexia nervosa in their study of 10,123 adolescents and the high rates of comorbidity associated with anorexia nervosa in adults (Preti et al., 2009; Hudson et al., 2007) and suggest that comorbid disorders may be a consequence of anorexia nervosa. Swanson et al's study did

report high levels of comorbidity with other mental health conditions in those adolescents fulfilling the criteria for bulimia nervosa or binge eating disorder.

#### **1.1.4.4 Mortality and Suicide**

Using computerized record linkage to the US National Death Index, Crow et al., (2009) conducted a longitudinal assessment of mortality over 25 years in 1,885 individuals with anorexia nervosa (N=177), bulimia nervosa (N=906), and eating disorders not otherwise specified (N=802). Mortality rates were reported at 4.0% for anorexia nervosa, 3.9% for bulimia nervosa, and 5.2% for eating disorders not otherwise specified.

Previous studies have demonstrated particularly high mortality rates and suicidal behaviour in patients with anorexia nervosa with an attempted suicide rate of 16.9% of 432 patients with anorexia nervosa in a study by Bulik et al., (2008) and a meta-analysis by Harris, & Barraclough (1997) showed a twenty three times greater risk of completed suicide in adult female patients with anorexia nervosa than in the general population. Data for adolescents, males or patients with other eating disorders were not reported; though overall, mental ill health was reported to increase the risk of completed suicide five-fold in adolescents.

Swanson et al., (2011) surveyed adolescents (n=10,123) about suicide ideation, plans and attempts and reported that suicide ideation was associated with all subtypes of eating disorders including sub clinical disorders. Bulimia nervosa was associated with

suicide plans and bulimia nervosa and binge eating disorder were associated with suicide attempts. Interestingly, adolescents with sub-threshold anorexia nervosa reported more suicide plans and attempts than those with the full syndrome disorder. A particularly strong link was demonstrated between bulimia nervosa and suicidality with 53% of the 92 adolescents surveyed reporting suicide ideation and 35% reporting suicide attempts.

### **1.1.5 Treatment**

The National Institute of Clinical Excellence (NICE) guidelines in the treatment and management of eating disorders (National Collaborating Centre for Mental Health, 2004) makes the following recommendations for the treatment of eating disorders in adolescents:

#### **All Eating Disorders:**

- Family members, including siblings, should be included in the treatment of adolescents with eating disorders.
- Sharing of information, behavioural management advice and communications facilitation may be included in the intervention.

#### **Anorexia Nervosa**

- Most treatment should be provided on an outpatient basis.
- The physical risk of the eating disorder must be assessed.

- Where inpatient treatment is provided, psychosocial interventions should be provided alongside re-feeding.

### **Bulimia Nervosa**

- Evidence based self-help programmes may form a first step.
- Cognitive behaviour therapy for bulimia nervosa (CBT-BN) – a specifically adapted form of CBT should be offered to adolescents with bulimia nervosa and adapted as needed to suit their age, circumstances and level of development and should include the family as appropriate.

### **Binge Eating Disorder**

- Cognitive behaviour therapy for binge eating disorder (CBT-BED), a specifically adapted form of CBT, should be offered to adults with binge eating disorder. (No specific guidance is offered for adolescents).

#### **1.1.6 Costs**

Eating disorders in secondary school aged children can impact on physical well-being, academic and social development and also carry a significant financial burden for the health service, especially if not treated promptly (Treasure, Claudino & Zucker, 2010).

It is well documented that children with mental health problems do less well in terms of academic and social development with lasting implications for later life (Farrington, Healey & Knapp, 2004, Colman et al., 2009). Of all of the mental health disorders arising in adolescence, eating disorders have the highest rate of morbidity and mortality due to complications of the disorder and completed suicide (Rome et al., 2003).

In addition to the physical ramifications of eating disorder pathology, individuals who have suffered from an eating disorder are more likely than their peers to develop comorbid mental health problems such as depression, thoughts of suicide, drug abuse and anxiety disorders (Berkman, Lohr & Bulik, 2007) which are likely to incur treatment costs and have a significant impact on the individual's quality of life.

In addition to the morbidity, mortality and disability resulting from eating disorder pathology, the impact can also be great to the individual in the short term, especially in terms of quality of life when factors such as emotional well-being, satisfaction at school or work and impact of mental and physical health on day to day life are considered. In a comprehensive review of the literature pertaining to quality of life in people with eating disorders, Jenkins, Hoste, Meyer, & Blissett (2011) found that the presence of an eating disorder had a great impact on quality of life and that this appears to be true even in cases where the pathology is subclinical.

## **1.2 Eating Disorders: Prevention, Detection and Early Intervention**

The terms prevention, detection and early intervention are key terms to define and understand within the context of the current thesis, so the next section focuses firstly on applying definitions to these concepts before briefly exploring illustrative examples of existing studies. Finally the scope for prevention, detection and early intervention within the school setting is explored.

### **1.2.1 Defining Prevention, Detection and Early Intervention**

The definitions for prevention, and early intervention used within this thesis are those adopted by the UK Department for Education as this is the body which oversees the UK state education system and is therefore a key potential stakeholder in the studies contained within this thesis, and future studies informed by the current studies.

The definition of prevention used will be the definition adopted by the Department for Children, Schools and Families in their review of early interventions in the UK (2010), namely:

***“The process of boosting children’s resilience and protecting them from potential poor outcomes. The success of a preventive strategy is evidenced by a reduction in the incidence and prevalence of a specific problem within a specific group.”*** (Page 9, Department for Children, Schools and Families, 2010).

Prevention studies may be universal – targeting all members of a specific population, or selective, targeting specific members of the population who are considered to be at higher risk of developing e.g. an eating disorder.

In the absence of a Department for Education definition of the term ‘detection’, the definition used by the Oxford English Dictionary (Oxford English Dictionary, 2013) is adopted. Namely:

***“The action or process of discovering the presence or existence of something.”***

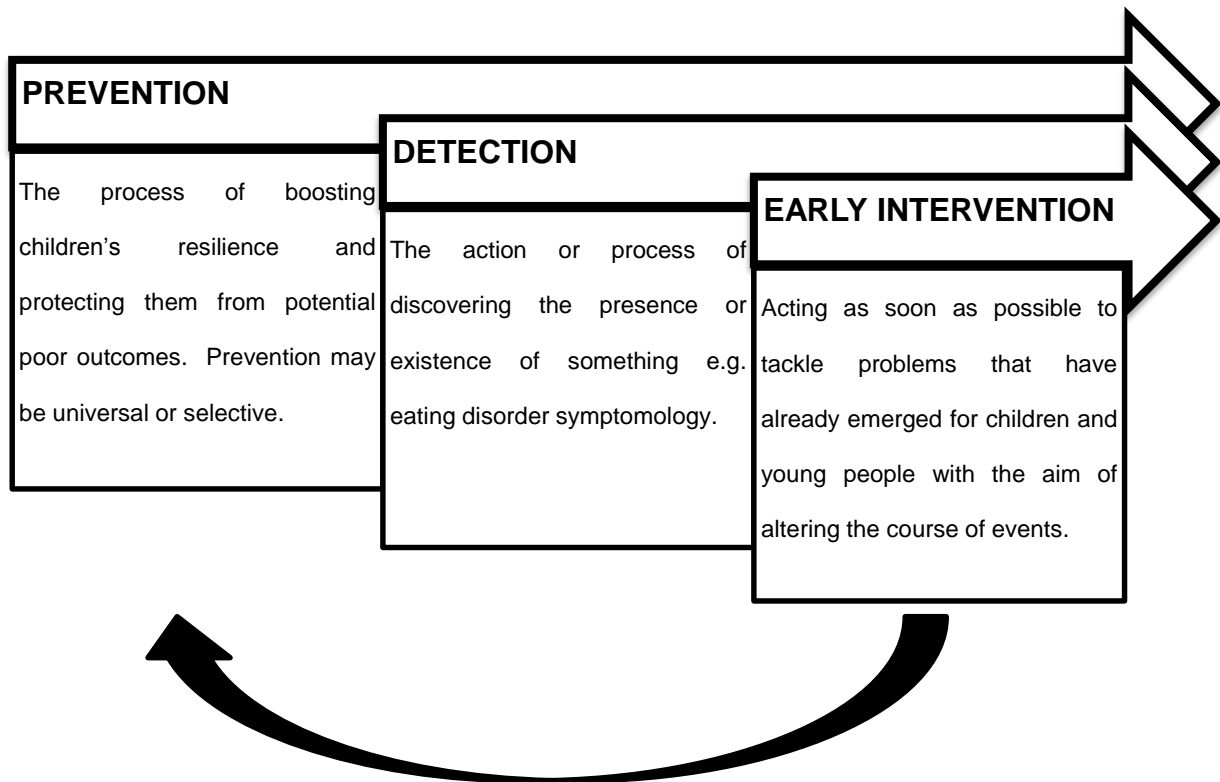
The definition of early intervention used is the definition adopted by the Policy Review of Children and Young People (HM Treasury and Department for Education and Skills, 2007) and the Department for Children, Schools and Families in their review of early interventions in the UK (2010):

***“Early intervention means intervening as soon as possible to tackle problems that have already emerged for children and young people.”*** (Page 8, Department for Children, Schools and Families, 2010)

Where ‘intervene’ is understood to mean ***“act so as to alter the result or course of events.”*** (Oxford English Dictionary, 2013).

***“When early intervention is understood in this way, it means that it targets specific children who have an identified need for additional support once their problems have already begun to develop but before they become serious. It***

***aims to stop those problems from becoming entrenched and thus to prevent children and young people from experiencing unnecessarily enduring or serious symptoms.*** (Early Intervention: Securing good outcomes for children and young people, Department for Children, Schools and Families, 2010. Page 8)



***Figure 1 - Definitions of and interactions between prevention, detection and intervention***

Prevention, detection and early intervention are often somewhat over-lapping processes (See figure 1). For example, in order to carry out an early intervention it is necessary to first detect the target disorder. Similarly, early intervention work may, in its own right, sometimes be considered a form of prevention. For example, if a school teacher detects a student with a subclinical eating disorder and initiates early intervention work, that work may be considered a form of prevention for the full-syndrome eating disorder.

Whilst the current thesis is primarily concerned with detection and early intervention of eating disorders, there is very little relevant literature to draw on. However, there is a large and growing, body of evidence regarding the implementation of eating disorder prevention programmes in schools which may provide some valuable lessons and directions to be applied to detection or early intervention programmes. For this reason, a narrative review of selected prevention studies is provided below.

### **1.2.2 Eating Disorder Prevention Studies**

The literature on eating disorder prevention is extensive. In their meta-analysis of the literature, Stice, Shaw & Marti (2004) identified 38 eating disorder prevention programmes evaluated in 53 separate controlled trials. Carrying out an exhaustive review of these studies is beyond the scope of the current thesis, however, examples which illustrate the key approaches to and elements of prevention are outlined in brief below, specifically those which are relevant to a high school aged audience, and therefore have most relevance to the current thesis.

Eating disorder prevention programmes fall into two broad categories; universal programmes and selective programmes. Universal prevention programmes target whole populations – e.g. an entire school cohort whereas selective prevention programmes are targeted specifically at those at higher risk of developing an eating disorder.

Prevention programmes may have primary, secondary or tertiary approaches. Primary prevention refers to programmes designed to prevent healthy people from developing a disease or disorder. Secondary prevention refers to interventions which are implemented following a diagnosis in order to halt or slow the progress of an the disease or disorder. Tertiary prevention focuses on helping people to manage complicated, long-term health issues in order to maximise quality of life and, where possible, to prevent further deterioration.

The ultimate aim of eating disorder prevention programmes is to reduce the incidence of eating disorders amongst the sample population. This may be achieved by:

- Improving general health, nutrition, and psychological well-being of participants including promotion of self-esteem and positive body image.
- Enhancing media literacy and promoting critical evaluation of media messages.
- Helping young people learn to manage the socio-cultural influences linked to the development of body image dissatisfaction.
- Reducing teasing, including weight, shape and appearance-based teasing.

#### **1.2.2.1 Universal Prevention Programmes**

Universal prevention programmes are offered to all available participants, regardless of their risk status. A wide range of formats have been developed for the delivery of universal prevention programmes including both brief interventions and longer programmes of study delivered over the course of several sessions or lessons. An example of one such approach is a recently reported prevention programme by

Sharpe, Schober, Treasure, & Schmidt (2013) who report on the feasibility, efficacy and acceptability of a teacher-delivered eating disorders prevention programme which consisted of six fifty-minute lessons. The lessons focused on improving media literacy, understanding and reducing 'fat talk' (negative ritualised communications about weight and shape) and implementing positive psychology techniques including self-esteem building. Sixteen classes from three UK schools were enrolled in the study.

The sample totalled 448 male and female students aged 12 to 14, of which 261 students were randomised to the intervention condition and the remaining 187 formed the control arm and received their school's regular curriculum. Participants completed self-report questionnaires pre-intervention, post-intervention and three months post-intervention. These reports were designed to measure body esteem and eating disordered behaviours. Sharpe et al., reported significantly improved body esteem, self-esteem and reduced thin-ideal internalisation post intervention. The impact of body esteem and thin-ideal internalisation were maintained at the three month follow-up. The study did not demonstrate a reduction in eating disorder symptoms.

Although Sharpe et al's study did not demonstrate a direct impact on eating disorder symptoms, there were clear benefits to participants in terms of developing protective factors against the development of eating disorders. Other eating disorder prevention programmes focus more heavily on the development of protective factors against eating disorders as a primary aim, with the assumption that this will lead to a decrease in eating disorder symptomology over time. One such study is Irving (2000)'s programme designed to promote the acceptance of different body sizes and reduce

weight-related teasing. The programme was delivered through age-appropriate puppet shows lasting approximately 20 minutes followed by an opportunity to ask questions for 20 minutes. Approximately 2,400 children in US schools grade 1-5 were exposed to the intervention. Of these, 152 first and second grade students completed an evaluation which aimed to determine what they considered the most important messages of the show. These evaluations demonstrated that the show promoted greater acceptance of diverse body shapes by discouraging teasing. Additionally, 45 fifth grade girls completed Brylinsky & Moore's (1994) Figure Rating Scale either prior to watching the performance or afterwards. The scale is designed to determine whether respondents evaluate large body types more or less favourably than medium or thin body types. Irving reported that compared to girls who completed the figure rating scale pre-test, girls who completed the scale post-test rated large body types more favourably on three out of six items. This prevention programme had the benefit of being very brief and enjoyed by students in addition to showing a modest impact on its aim of promoting universal body size acceptance. However, the study was not followed up, so it is unknown either whether the positive impact of the programme lasted in the medium or long term, nor whether this impact translated into a change in behaviour in participants. Furthermore, there is no evidence as to whether the programme ultimately impacted on the rate of development of eating disorders amongst the studied cohorts.

Wilksch & Wade (2010) took a slightly different approach with their universal eating disorder prevention programme, in that its key aim was to impact on a series of eating disorders risk factors, with a reduction in shape and weight concern being their primary aim. Two hundred and thirty four Australian eighth graders received the intervention

which was delivered as a series of eight media literacy lessons. A control group of 307 eighth graders received their normal lessons. Participants completed questionnaires at baseline, post intervention, and at 6-month and 30-month follow up periods. Wilksch & Wade reported that the intervention had a lasting, positive impact on shape and weight concern; dieting; body dissatisfaction; ineffectiveness and depression. This indicates that this form of prevention programme can have a significant impact on some of the major eating disorder risk factors in a universal, young adolescent, mixed gender population. It is unclear whether this reduction in risk factors translates into a reduction in eating disorder symptomology.

Some studies have demonstrated that a positive impact on thin ideal internalisation and body dissatisfaction can be observed alongside an impact on dieting behaviour. This was the case in O'Dea & Abraham (2000)'s study of 470 middle school students. The 470 US middle school students aged 11-14 were allocated to either the intervention or the control programme. The control programme consisted of the students' usual health curriculum whereas the intervention based on a programme entitled 'Everybody's Different' (O'Dea, 1995) and delivered by class teachers consisted of nine weekly lessons of up to eighty minutes on the following topics:

### **Lesson 1: Dealing with Stress**

- Relaxation tape.
- Ways of dealing with stress.
- Feeling good in your body.

## **Lesson 2: Building a Positive Sense of Self**

- Building your self-esteem.
- Identifying your unique features and self-image and how it might be destroyed.
- “I am OK” self-esteem-building activity.

## **Lesson 3, 4, 5: Stereotypes in our Society**

- Collage posters of stereotypes.
- Male and female stereotypes.
- Being an individual—being yourself.
- Learning to accept and value differences.

## **Lesson 6: Positive Self-Evaluation**

- Exploring individuality. What is unique about you?
- Self-advertisement activity. Learning to value uniqueness.

## **Lesson 7: Involving Significant Others**

- Ways of improving your self-image.
- Receiving positive feedback from others.
- Hand outline activity.
- Learning to seek positive feedback from significant others.

## **Lesson 8: Relationship Skills**

- How other people affect our self-image.
- Dealing with relationships.
- Video of self-esteem.
- Role plays.

## **Lesson 9: Communication Skills**

- Games and activities to build self-esteem.
- Pictionary game.
- Programme evaluation by students and teachers.

(O'Dea & Abraham, 2000)

Participants completed a range of measures before the programme, directly following the programme and three months after the completion of the programme. The measures included were:

- The Eating Disorders Inventory (Garner et al, 1983)
- The Self-Perception Profile for Adolescents (Harter, 1985)
- The Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961)
- The State-Trait Anxiety Inventory (STAI; Spielberger, 1983)
- Demographic, food habits, and body image questionnaires (O'Dea, Abraham, & Heard, 1996)
- And Six Physical Appearance Ratings (O'Dea et al, 1996)

O'Dea and Abraham reported a positive impact of the intervention on participants' thin ideal internalisation and dieting at 12 months but not directly post-test compared to controls. Conversely, effects were reported for body dissatisfaction at post-test but not at 12-months. The study also reported a shift in participant attitudes suggesting that peer group acceptability and popularity had become less important to them implying it may be possible to modify the susceptibility of adolescents to peer pressure and cultural ideals. Further studies would be needed to determine whether these qualitative observations were translated into an impact on participants' behaviour or eating pathology.

O'Dea and Abraham's study is unusual in that there is relatively detailed consideration of the role of pedagogy involved in the development and delivery of the intervention. The intervention was designed to be student-centred and interactive in order to promote learning and skill development (Hill & Hill, 1990) – it's possible that this consideration about what would make for effective, impactful learning may have had a significant impact on the efficacy of the programme. Many other studies either do not take pedagogy factors into consideration, or do not report them and in many cases, programmes are developed by researchers with clinical rather than educational expertise.

Findings from a range of universal eating disorder prevention trials aimed at school-aged participants not outlined in the narrative above are summarised in table 2, below, for reference.

| Study                                  | Sample  | Intervention   | Findings   |
|--|---|--|--|
| <b>Buddeberg-Fischer et al. (1998)</b> | 314 middle school boys and girls<br>mean age 16.1             | Didactic. Provided information on normative physical development, nutrition, healthy weight-control behaviours, eating disorders, and risk factors for eating disorders.   | No significant intervention effects on eating disorder symptoms, general psychiatric symptoms, or physical symptoms at termination relative to an assessment-only control group.   |
| <b>Dalle Grave et al. (2001)</b>       | 106 middle school girls and boys<br>mean age 11.6             | Interactive. Provided information about eating disorders and risk factors for eating disorders. Attempted to reduce over-evaluation of appearance and promote self-acceptance and healthy weight control behaviours. | Effects for knowledge at post-test and 6-month follow-up relative to an assessment-only control group, but no effects for body dissatisfaction, dieting, negative affect, or eating pathology.   |
| <b>Jerome (1987, 1991)</b>             | 135 and 109 high school girls and boys<br>mean age 15.1; 15.7 | Psycho-educational video. Described bulimia nervosa and detailed the processes that putatively cause development of this eating disorder.  | Effect for knowledge relative to assessment-only controls at post-test in first trial, but no effects for perceived pressure to be thin, body dissatisfaction, dieting, or eating pathology. Effects for knowledge at post-test in second trial, but no effects for body dissatisfaction, dieting, negative affect, or eating pathology. |

|                             |  |  |   |
|-----------------------------|--|--|---|
| <b>Kater et al. (2002)</b>  | 415 grade and middle school girls and boys mean age 10.0 | Psycho-educational. Provided information on determinants of body shape and healthy weight-control behaviours and promoted body acceptance, coping skills, and critical thinking about mass media.                                | No effects for knowledge, healthy weight-control behaviours, thin-ideal internalisation, body satisfaction, or negative affect at post-test for girls or boys relative to assessment-only controls.   |
| <b>Killen et al. (1993)</b> | 838 middle school girls mean age 12.4                    | Didactic psycho-educational. Provided information on harmful effects of unhealthy weight-control behaviours, promoted healthy weight-control practices, and taught coping skills to resist sociocultural pressures for thinness. | Effect for knowledge relative to assessment-only controls at post-test, but no effect at 24-month follow-up. No effects for healthy weight-control behaviours, perfectionism, body dissatisfaction, dieting, negative affect, eating pathology, or body mass at post-test or follow-up. |
| <b>Kusel (1999)</b>         | 172 middle school girls mean age 10.1                    | Media literacy program promoted resistance to sociocultural pressure for thinness by enhancing critical viewing of mass media.   | Effects for thin-ideal internalization, body dissatisfaction, dieting, and negative affect relative to assessment-only controls at post-test, but no effects for eating pathology; no effects at 3-month follow-up.   |

|  |   |  |   |
|--|---|--|---|
| <p><b>Moreno &amp; Thelen (1993)</b></p>                               | <p>219 middle school girls mean age 13.75</p> | <p>Didactic psycho-educational presentation. Provided information on eating disorders, consequences and putative causes of eating pathology, healthy weight-control behaviours, and peer pressure resistance skills. Delivered by a research assistant (Study 1) and a home economics teacher (Study 2).</p> | <p>Effects for knowledge and behavioural intentions to diet at post-test and 1-month follow-up relative to assessment-only controls in both trials.</p>   |
| <p><b>Neumark-Sztainer, Butler, &amp; Palti (1995)</b></p>             | <p>341 high school girls mean age 15.3</p>    | <p>Didactic psycho-educational. Presented information on healthy weight-control behaviours, body image, eating disorders, putative causes of eating disorders, and social pressure resistance skills.</p>  | <p>Effects for knowledge and eating pathology at 1-month follow-up; knowledge, healthy weight-control behaviours, dieting, and binge eating at 6-month follow-up; and binge eating at 24-month follow-up.</p>   |
| <p><b>Neumark-Sztainer, Sherwood, Collier, &amp; Hannan (2000)</b></p> | <p>208 girl scouts mean age 10.6</p>          | <p>Provided psycho-educational information on normative physical development. Included self-esteem enhancement exercises and interactive activities focused on helping adolescents become critical consumers of thin-ideal media.</p>  | <p>Effects for knowledge at post-test but not at 3-month follow-up, and effects for thin-ideal internalization at 3-month follow-up but not at post-test, relative to waitlist controls. No effects for body dissatisfaction, dieting, or eating pathology.</p> |

|                             |  |  |  |
|-----------------------------|--|--|--|
| <b>Outwater (1991)</b>      | 50 middle school girls and boys<br>mean age 11.5                 | Didactic psycho-educational. Focused on enhancing body satisfaction and self-esteem.   | No effects for body satisfaction or negative affect at post-test or 1-month follow-up relative to an assessment-only control group.  |
| <b>Paxton (1993)</b>        | 136 high school girls<br>mean age 14.1                           | Didactic psycho-educational. Provided information about sociocultural pressures; determinants of body size, nutrition, weight-control methods, and emotional eating. Interactive discussions about these topics in small groups. | No effects for thin-ideal internalization, body dissatisfaction, dieting, negative affect, eating pathology, body mass, or healthy behaviours at 11-month follow-up relative to assessment-only controls.  |
| <b>Richman (1993, 1998)</b> | 180 and 463 primary school girls and boys<br>mean age 10.4; 10.9 | Psycho-educational. Presented information on eating disorders and healthy weight-control behaviours, attempted to enhance self-esteem, and encouraged participants to resist the thin ideal.                                     | Effects for knowledge and body satisfaction compared with assessment-only controls at post-test in first trial, but no effects for dieting and eating pathology. Effects for knowledge, body satisfaction, and dieting relative to assessment-only control group at post-test, but no effects for bulimic pathology. |

|   |   |  |  |
|---|---|--|--|
| <p><b>Santonastaso et al. (1999)</b></p>                    | <p>265 vocational school girls mean age 16.1</p>                  | <p>Provided psycho-educational information about normative physical development and eating disorders. Girls engaged in unstructured discussions about topics such as body image concerns, sociocultural pressures, and coping with stress.</p> | <p>Effects for body dissatisfaction at 12-month follow-up relative to assessment-only controls, but no effects for body mass, negative affect, perfectionism, or eating pathology.</p>   |
| <p><b>Shepard (2001)</b></p>                                | <p>153 high school girls mean age 14.4</p>                        | <p>Psycho-educational interactive program provided information on sociocultural pressures, body image disturbances, dieting and healthy weight-control behaviours, and eating disorders.</p>   | <p>Effects for knowledge at post-test and follow-up relative to assessment-only controls, but no effects for thin-ideal internalisation, body dissatisfaction, or eating pathology.</p>  |
| <p><b>Smolak, Levine, &amp; Schermer (1998a, 1998b)</b></p> | <p>222 and 266 grade school girls and boys mean age 10.0; 9.0</p> | <p>Didactic psycho-educational. Provided information on nutrition, healthy weight-control techniques, and diversity of body shapes and promoted critical evaluation of thin-ideal media.</p>   | <p>Effects for thin-ideal internalisation at post-test relative to assessment-only controls in first trial, but no effects for knowledge, healthy weight-control behaviours, body dissatisfaction, and dieting. No effects for knowledge, healthy weight-control behaviours, thin-ideal internalisation, body dissatisfaction, or dieting in second trial.</p> |

|   |  |  |  |
|---|--|--|--|
| <b>Stewart,<br/>Carter,<br/>Drinkwater,<br/>Hainsworth, &amp;<br/>Fairburn (2001)</b> | 459 grade school girls mean age 13.4           | Interactive programme focused on resisting cultural pressures for thinness, determinants of body weight, body acceptance, effects of cognitions on emotions, nature and consequences of eating disorders, self-esteem enhancement, stress management, and healthy weight-control behaviours. | Effects for knowledge, dieting, and eating pathology at both post-test and 6-month follow-up, and effects for body dissatisfaction at post-test, but not at 6-month follow-up, relative to an assessment-only control group. No effects for negative affect.                           |
| <b>Varnado-Sullivan et al. (2001)</b>   | 287 grade school girls and boys mean age 12.0  | Interactive psycho-educational intervention focused on the causes and consequences of body dissatisfaction, particularly cultural influences, and healthy weight-control behaviours.   | Effects for girls at post-test for thin-ideal internalisation and eating pathology, but not for dieting and negative affect relative to waitlist controls. Effects for boys at post-test for thin-ideal internalisation and negative affect, but not for dieting and eating pathology. |
| <b>Wade et al. (2003)</b>   | 86 middle school girls and boys mean age 13.42 | Media literacy program promoted critical evaluation of thin-ideal images. Self-esteem program promoted positive self-esteem, coping skills, and social skills.   | No effects on body dissatisfaction, dieting, or negative affect at post-test or at 3-month follow-up for either intervention relative to assessment-only controls.   |

|  |                                       |   |  |
|--|---------------------------------------|---|--|
| <b>Weiss (2000)</b>                                  | 173 high school girls mean age 14.3   | Interactive program that provided information on eating pathology and risk factors for eating pathology and promoted healthy weight-control behaviours, social pressures resistance, and body satisfaction and self-esteem. | Effects for knowledge at post-test and follow-up, and for body dissatisfaction at follow-up relative to assessment-only controls, but no effects for dieting, negative affect, or bulimic pathology. |
| <b>Withers, Twigg, Wertheim, &amp; Paxton (2002)</b> | 242 middle school girls mean age 12.5 | Psycho-educational video provided information on causes and consequences of body image and eating problems, body shape determinants, social pressures for thinness, and healthy eating.                                     | Effects for knowledge at post-test and 1-month follow-up relative to an assessment-only control condition, but no effects for body dissatisfaction or dieting.                                       |
| <b>Wolf-Bloom (1999)</b>                             | 70 high school girls mean age 12.3    | Media literacy intervention. Promoted critical viewing of media images of the thin ideal and the effects on girls and women.  | No effects for thin-ideal internalisation, body dissatisfaction, negative affect, or eating pathology at post-test relative to assessment-only controls.   |

***Table 2 - Descriptions of the sample, intervention content, and findings from universal eating disorder prevention trials aimed at school-aged participants not outlined in the narrative. (adapted from Stice et al., 2004)***

### **1.2.2.2 Selective Prevention Programmes**

Instead of targeting the whole population, like the universal prevention programmes outlined above, selective prevention programmes are targeted specifically at those members of a population determined to be at high risk. Most commonly, selective eating disorder prevention programmes are targeted at college-aged females (see table 3). In Stice et al's (2004) meta-analysis of eating disorder prevention studies, 19 selective interventions are outlined, of which the majority are targeted at a college-aged audience and three are targeted at a school-aged population. The studies aimed at school-aged children are outlined in the narrative below. The information about the effectiveness of prevention trials aimed at college aged students is replicated from Stice et al's paper in table 3.

Withers, Twigg, Wertheim & Paxton (2002) reported a selective eating disorders prevention programme in which 242 12 to 13-year-old girls were either shown an intervention videotape on dieting and body image (N=115) or given no intervention. The intervention videotape was a twenty two minute video with the following content:

- Determinants of body size and shape, variation in the "normal" female appearance, natural weight gain during puberty.
- Historical and sociocultural influences on female appearance, the media's role in shaping this ideal.
- The negative effects of extreme dieting, eating disorders and their harmful consequences, emotional eating and its triggers.
- Healthy eating habits, the importance of healthy eating.
- Suggestions for creating a healthy body image and boosting self-image.

All participants completed pre, post and one-month follow up questionnaires. The intervention was reported to have a significant positive impact on attitude and knowledge at post-intervention but attitude only at one month follow-up. The intervention had no significant impact on body dissatisfaction or dieting behaviour. Bearing in mind the brevity of Withers et al's video intervention, it is perhaps unsurprising that minimal impact is reported.

A longer intervention, again targeted specifically at girls, was reported by Baranowski & Hetherington (2001) who reported results of a five week intervention with twenty nine 11 to 12-year-old girls in Dundee. The intervention consisted of five, weekly sessions of an hour and a half which covered a range of topics including:

- Causes and consequences of dieting.
- Appraisal of body weight and shape.
- Stereotypes associated with thinness and obesity.
- Self-esteem.
- Body-esteem.
- Eating disorders and
- Energy regulation.

A control group received a series of lessons on healthy eating. Participants completed questionnaires pre-intervention, post intervention and 6 months later. The questionnaires were designed to measure self-esteem, body esteem and eating pathology. Baranowski & Hetherington reported a positive impact of both the intervention programme and the control programme on dietary restraint and a marginal impact of the intervention programme on self-esteem. No impact was shown in either

group for body dissatisfaction, negative affect or eating pathology. The authors argue that the programme may have been more effective with older, more at risk girls.

A programme which appears to have proven more impactful with 11-12-year old girls than Baranowski & Hetherington's programme is McVey, Davis, Tweed, & Shaw (2004)'s selective eating disorders prevention programme. The programme aimed to improve body image satisfaction, self-esteem and eating attitudes and behaviours and was delivered in the form of a life-skills programme consisting of six, weekly, fifty-minute sessions. The content covered in the sessions included:

- **Media influences:** Unrealistic “ideal” body shapes portrayed in the media and how these images are related to girls’ perception of themselves, as well as the various methods that the media employ to create a “perfect” image of beauty.
- **Enhancing self-esteem and body image:** Ways to promote positive self-esteem and body image, including ways to lower the importance placed on physical appearance as a sole barometer for self-worth.
- **Body size acceptance:** Genetic influences on body shape, the negative effects of shifting an individual’s weight beyond the natural weight range, and acceptance and awareness of individual differences in body shape and size.
- **Healthy living:** A non-dieting approach to healthy eating and active living.
- **Stress management:** Stress management techniques that focus on assertive styles of communication and social problem-solving strategies to help attenuate the negative influences of stress on body image concerns.

- **Positive relationships:** Identifying healthy versus unhealthy relationships, applying problem-solving strategies to issues related to peer relations and negative comments about weight and shape.

182 girls participated in the intervention, whilst 76 girls completed the control condition.

All participants completed measures of

- Body images satisfaction,
- Global self-esteem,
- Eating disorders attitudes and behaviours and
- Perfectionism.

Measures were completed before, one week after, six months after and twelve months after the six week intervention.

The intervention was reported to be successful in improving body image satisfaction and global self-esteem, and in reducing dieting attitude scores one week post-intervention and three months post-intervention. However, this impact was not maintained at the 12 month follow-up. This is important to note as many studies do not include a longer term follow-up and may be assumed to be successful in the medium and long-term if e.g. 3-month follow up reports show that the intervention's impact is maintained. McVey et al's study demonstrates the impact that an eating disorders prevention programme can have in terms of influencing risk factors which pre-dispose girls to eating disorders in the short term, whilst raising questions about how best to ensure that this impact is maintained in the longer term.

Compared to the studies outlined above, Stice, Trost, & Chase took an even more targeted approach with their 2003 intervention aimed at adolescent girls. Not only was the intervention delivered only to girls, like the studies above, but additionally only girls who believed themselves to have body image concerns were invited to participate in the intervention.

One hundred and forty eight girls, with self-reported body image concerns, between the ages of 13 and 20-years-old were randomised to one of two interventions or to a waitlist control group. The first intervention was a healthy weight control intervention delivered over three sessions with the stated aims of helping participants develop a lasting healthy lifestyle incorporating a balanced diet and regular moderate exercise, ultimately resulting in weight control and consequent body satisfaction. The second intervention was a three session dissonance based intervention with the stated aims of helping to improve body satisfaction through the act of discussing how to help avoid body image problems.

Participants completed measures at baseline, directly post-intervention and at three follow-ups: one, three and six months post-intervention. The measures, in the form of self-report questionnaires, were designed to measure the following:

- Thin-Ideal Internalisation,
- Body Dissatisfaction,
- Dieting,
- Negative Affect and

- Bulimic Symptoms.

The results of the intervention were:

- Thin-Ideal Internalisation:
  - A significant decrease in thin-ideal internalisation was found in participants in the dissonance intervention directly post intervention and at the one month, three month and six month follow-up points.
  - A significant decrease in thin-ideal internalisation was found in participants in the healthy weight intervention directly post-intervention. This effect was maintained at the one month follow-up but not beyond this point.
  - Waitlist control participants showed significant decreases in thin-ideal internalisation from baseline to 3-month follow-up.
- Body Dissatisfaction:
  - Dissonance intervention participants showed significant reductions in body dissatisfaction from baseline to post-intervention. This effect was not maintained.
  - Healthy weight intervention participants and waitlist participants did not show a reduction in body dissatisfaction.

- **Dieting**
  - Dissonance intervention participants showed significant reductions in dieting from baseline to termination. This effect was maintained at one, three and six month follow-ups.
  - Healthy weight intervention participants showed significant reductions in dieting from baseline to termination. This effect was maintained at one, three and six month follow-ups.
  - Waitlist control participants showed significant reductions in dieting from baseline to one and three month follow-ups.
  
- **Negative Affect:**
  - Dissonance intervention participants showed significant reductions in negative affect from baseline to three month follow-up but not directly post-intervention or one or six month follow-ups.
  - Healthy weight intervention participants showed significant reductions in negative affect from baseline to post-intervention. This effect was maintained at one, three and six month follow-ups.
  - Waitlist control participants did not show significant reductions in negative affect.
  
- **Bulimic Symptoms:**
  - Dissonance intervention participants showed significant reductions in bulimic symptoms from baseline to post-intervention and at the three month follow-up but not directly at the one or six month follow-ups.

- Healthy weight intervention participants showed significant reductions in bulimic symptoms from baseline to termination. This effect was maintained at one, three and six month follow-ups.
- Waitlist control participants did not show significant reductions in bulimic symptoms.

This study was the first to demonstrate the positive impact of a cognitive dissonance intervention in adolescent girls. A positive impact of similar interventions had previously been reported within college-aged populations (Stice, Chase, Stormer, & Appel, 2001). This is positive as, arguably, introducing prevention measures beyond the peak age of eating disorder onset is likely to provide only a limited impact in terms of preventing eating disorder pathology (i.e. where the illness has already occurred it is too late to prevent it). However, the lack of impact demonstrated in reducing body dissatisfaction and dieting – impact on both had been observed previously in college populations – indicates either that there may be a need for further adaptation of the intervention to make it more suitable for an adolescent target group or, perhaps, that a cognitive dissonance intervention will be slightly limited in its impact when targeted at younger groups who may not yet have fully subscribed fully to the thin-ideal which the programme aimed to explore. The healthy weight intervention did demonstrate a positive impact across a wider range of measures implying that the cognitive dissonance programme's lack of impact upon some measures may be due to a limitation with the programme rather than the target audience. The more positive impact of the healthy weight intervention than the cognitive intervention was an unexpected impact of this study whose key aim was to explore the efficacy of the cognitive dissonance intervention – but this study design offered an interesting insight

into the differential impact that can be observed by using similar programme types with different age cohorts.

As interventions which prove successful in a college-aged cohort may not be assumed to be efficacious with a younger audience, such studies have not been outlined in full in the current thesis. However, information regarding the effectiveness of such studies is summarised below in table 3 which is adapted from Stice et al's meta-analysis (2004).

### **1.2.2.3 Conclusions Drawn from the Prevention Literature which can be used to Inform the Intervention Development**

#### **The Use of Universal and Selective Prevention Programmes**

The literature outlined demonstrates a potential preventative role for universal prevention programmes when working with a school aged population e.g. Wilksch & Wade (2010); Sharpe et al., (2013). The impact of selective prevention programmes on food, shape and weight attitudes, beliefs and behaviours was minimal (Withers et al, 2002 and Baronwski & Hetherington, 2001) and although a significant impact was demonstrated, this was not maintained at 12 months (McVey et al., 2004). However, in a recent review of body image programmes, Yager, Diedrichs, Ricciardelly & Halliwell (2013)it was found that the majority of programmes that conducted separate analyses of the effects of their programme among high and low risk groups, greater improvements in body image and other secondary factors were reported with high risk groups (McCabe et al., 2010; O'Dea & Abraham, 2000; Weiss & Wertheim, 2005).

This indicates that enabling school staff to identify those most at risk of eating disorders may enable effective prevention measures to be implemented. Body image is a malleable risk factor in children and adolescents, which is something that many teachers may be unaware of and untrained in. Further, with appropriate, preparation, support and training, teachers may be in a position to create an appropriate culture of support in their schools, tackling potential body image issues at an early stage.

### **The Importance of Pedagogy**

O'Dea and Abraham 's (2000) study of 470 middle school students reports a positive impact on thin internalisation, dieting, body dissatisfaction and attitudes towards popularity peer acceptance. One element of the study that stands out is the direct focus on pedagogy (the method and practice of teaching). Careful consideration was given to the development and dissemination of teaching materials in order to ensure that students were engaged and motivated by the content.

This suggests that when developing an intervention for school staff, pedagogy and andragogy (the method and practice of teaching of children and adults respectively) should be given careful consideration to ensure that the intervention content is developed and delivered in a style that is most likely to impact on the target audience.

## **The Importance of Follow-Up Measures**

The literature review demonstrates that whilst many prevention studies are shown to have an impact on eating disorder pathology or risk behaviours directly following the intervention, this impact is not universally maintained at follow up. For example, Kussel's (1999) media literacy programme had a significant impact on thin-ideal internalisation, body dissatisfaction and dieting post-intervention. However, this impact was not maintained at 3 months. Similarly, Stewart et al's intervention (2001) had a positive impact on body dissatisfaction post-intervention but not 6 months later. In a review of classroom based body image interventions, Yager et al., (2013) found that of 16 programmes included, nine did not demonstrate a sustained impact on body image.

This underlines the importance of including follow-up measures when trialling new interventions in order to demonstrate the longevity of any impact the programme is shown to have directly post intervention and that one off interventions may have the capacity to have a long term impact.

| <b>Study</b>                              | <b>Sample</b>                     | <b>Intervention</b>  | <b>Findings</b>  |
|---|-----------------------------------|--|--|
| <b>Bearman, Stice, &amp; Chase (2003)</b> | 74 college women<br>mean age 18.9 | Brief four-session version of the cognitive-behavioural intervention for body dissatisfaction developed by Cash and Rosen (see, e.g., Butters & Cash, 1987).   | Effects for body dissatisfaction and negative affect at post-test and 3-month follow-up relative to waitlist controls, but no effects for dieting or bulimic symptoms.   |
| <b>Butters &amp; Cash (1987)</b>          | 31 college women<br>mean age 21.3 | Cognitive-behavioural intervention promoted body satisfaction by challenging negative cognitions regarding appearance and using systematic desensitisation to reduce anxiety about body dissatisfaction.                               | Effects for body dissatisfaction and negative affect at post-test.   |
| <b>Chase (2001)</b>                       | 91 college women<br>mean age 18   | Didactic intervention that provided education about healthy weight-control behaviours, precursors and consequences of eating disorders, the influence of cognitions on feelings and behaviours, and social pressure resistance skills. | Effects for knowledge, body dissatisfaction, and dieting at post-test and 1-month follow-up relative to minimal-intervention controls, but no effects for thin-ideal internalisation, negative affect, eating pathology, or body mass. |

|                                       |  |   |   |
|---------------------------------------|--|---|---|
| <b>Dworkin &amp; Kerr (1987)</b>      | 79 college women<br>mean age not available | Cognitive intervention promoted body satisfaction through cognitive restructuring. A cognitive-behavioural intervention added self-reinforcement for cognitive restructuring and body acceptance role-plays.  | Effects for body dissatisfaction and negative affect at post-test for both interventions relative to minimal-intervention controls.   |
| <b>Franko (1998)</b>                  | 19 college women<br>mean age not available | Intervention promoted critical evaluation of cultural pressure for thinness, presented healthy weight-control skills, challenged dysfunctional cognitions about body image, and introduced affect-regulation skills.  | No effects for thin-ideal internalisation, body dissatisfaction, or bulimic symptoms relative to assessment-only controls at post-test.   |
| <b>Kaminski &amp; McNamara (1996)</b> | 29 college women<br>mean age 18.3          | Interactive programme provided information about eating disorders, putative risk factors for eating disorders, and healthy and unhealthy weight control; presented cognitive interventions for body image and eating disturbances; and taught communication and affect regulation skills. | Effects for perfectionism, thin-ideal internalisation, body dissatisfaction, dieting, and negative affect relative to assessment-only control group at post-test. All effects except perfectionism persisted through 1-month follow-up. |
| <b>Presnell &amp; Stice (2003)</b>    | 81 college women<br>mean age 20.0          | Intervention promoted a low-calorie diet, adapted from Brownell's (1997) obesity treatment program, for non-obese individuals.  | Effects for bulimic pathology and body mass, but not in negative affect or dieting, relative to the waitlist control group at post-test.  |

|  |   |  |   |
|--|---|--|---|
| <p><b>Rosen,<br/>Saltzberg, &amp;<br/>Srebnik (1989)</b></p>     | <p>23 college women<br/>mean age 19.0</p> | <p>Cognitive-behavioural intervention was similar in content to that evaluated by Butters and Cash (1987) but was delivered in a small group format, provided corrective feedback regarding body size misperception, and sought to reduce avoidance of behaviours that elicit body image concerns.</p> | <p>Effects for body size estimation, body dissatisfaction, and behavioural avoidance relative to minimal-intervention control group at post-test and 2-month follow-up.</p>   |
| <p><b>Stice, Mazotti,<br/>Weibel, &amp; Agras<br/>(2000)</b></p> | <p>30 college women<br/>mean age 18.0</p> | <p>A dissonance-based intervention wherein girls with elevated levels of thin-ideal internalization voluntarily critiqued the thin ideal in a series of verbal, written, and behavioural exercises.</p>  | <p>Effects for thin-ideal internalization, body dissatisfaction, negative affect, and bulimic symptoms but not dieting at post-test relative to waitlist controls. All effects except negative affect persisted at 1-month follow-up. Prevented increases in bulimic symptoms observed in the waitlist controls over 2-month study.</p> |

|   |  |   |   |
|---|--|---|---|
| <p><b>Stice &amp; Ragan (2002),</b></p> | <p>66 and 60 college women mean age 21.0; 21.3</p> | <p>Psycho-educational eating disorder class presented information on eating disorders and obesity, putative causes of these disorders, and prevention and treatment programs for these disorders.</p> | <p>Effects for thin-ideal internalisation, body dissatisfaction, dieting, eating pathology, and body mass at post-test, but not for negative affect or healthy weight-control behaviours relative to assessment-only controls in first trial. Prevented natural increases in weight observed in controls.</p> |
| <p><b>Orjada &amp; Stice (2003)</b></p> |  |   | <p>Effects for body mass, thin-ideal internalisation, and eating pathology at post-test, but not for body dissatisfaction, dieting, negative affect, or healthy weight-control behaviours relative to controls in second trial. Prevented weight gain observed in controls.</p>                               |

|   |   |   |   |
|---|---|---|---|
| <p><b>Winzelberg et al. (1998, 2000), Celio et al. (2000)</b></p> | <p>57, 60, and 76 college women mean age 19.7; 20.0; 19.6</p> | <p>Computer-administered program based on cognitive-behavioural interventions for body dissatisfaction (Butters &amp; Cash, 1987). Intervention provided information on eating disorders, healthy weight-control behaviours, and nutrition and included unstructured e-mail-support interchange that allowed participants to talk about emotionally important material and reactions to the programme. Third version included in-person meetings with facilitators, weekly reading assignments, and critical reflection papers on readings. Third trial compared intervention with a university-taught eating disorder class.</p> | <p>Effects for body dissatisfaction at post-test and 3-month follow-up relative to waitlist controls in first trial, but no effects for knowledge, eating pathology, or body mass. Effects for body dissatisfaction at follow-up, but not at post-test, relative to waitlist controls in second trial, but no effects for eating pathology. Effects for body dissatisfaction at post-test, but not 6-month follow-up, and dieting at post-test and 6-month follow-up relative to waitlist controls in third trial, but no effects for bulimic symptoms. No effects on any outcomes for the eating disorder class relative to computer-administered intervention or waitlist controls.</p> |
| <p><b>Zabinski et al. (2001)</b></p>                              | <p>338 college women and men mean age 24</p>                  | <p>Psych-educational program promoted lifestyle change that incorporates regular physical activity.</p>   | <p>No effects on body dissatisfaction or body mass at post-test relative to assessment-only controls.</p>   |

**Table 3 - Descriptions of the sample, intervention content, and findings from selected eating disorder prevention trials aimed at college-aged participants. (adapted from Stice et al., 2004)**

### 1.2.3 'Being' Rather than 'Doing' Prevention

In a review of the role of school teachers in the prevention of eating disorders, Piran (2004) suggests that less focus should be placed upon the role of teacher as facilitator for prevention programmes and initiatives. Instead, teachers could be taught to play a pivotal role in eating disorder prevention by “providing constructive daily experiences to students in their classrooms and through integrating relevant material into their existing curricula” (page 8). Piran also argues that with appropriate support and training, teachers have the potential to have a longer term impact on eating disorder prevention and early intervention than that achieved by delivering an intervention to a single cohort, as each teacher who is trained has the ability to impact on multiple cohorts of students as they utilise these skills throughout their career.

Piran's conclusions are drawn after reviewing three surveys of teachers reflecting on their role in eating disorder prevention. Piran drew several conclusions from her review:

- School staff are interested in eating disorder prevention
- Teachers would welcome training that would improve their interactions with students on a range of areas including body image, role modelling and peer teasing
- Teachers would also welcome training on school policies and the integration of eating disorder prevention messages or material into their existing curriculum
- Teachers would welcome support that would enhance their ability to identify students who are developing eating disorders

- Teachers are not keen on the administration of pre-packaged prevention programmes

Furthermore, Yager & O'Dea (2005) suggest that the role of the teacher in the heading up of prevention programmes needs to be further explored. They suggest that teachers with a lack of knowledge about eating disorders or who have nutrition, body image or weight control problems have the potential to model and transfer these attitudes to students. Yager & O'Dea note the important role of teachers as role models and consider the importance of teachers conveying positive, rather than negative, messages about body image and eating behaviours and attitudes.

#### **1.2.4 Eating Disorder Detection and Early Intervention in Schools**

In addition to implementing school-based programmes designed to prevent eating disorders, there is also a complementary role for the early detection and intervention of eating disorders. This is in order to ensure that those students who do go on to develop eating disorder pathology receive appropriate support as early on in the illness as possible, as recovery becomes much less likely the longer the illness has persisted (Treasure et al., 2010).

There is very little evidence to draw on about the use of eating disorder detection and early intervention programmes in schools, with the exception of the National Eating Disorders Screening Program (Austin et al., 2008) which was the first ever nationwide screening programme for eating disorders conducted in the US. 5567 High school students completed EAT-26, a self-report eating attitudes test. The programme was successful at identifying at-risk students who may benefit from

early intervention, though no such early intervention was specifically implemented.

In a follow-up study, D'Souza, Forman, & Austin (2005) found that students reported an increased knowledge about eating disorders following screening and that they were more likely to talk to peers or a trusted adult about any eating difficulties they may be experiencing. The authors argue that this may shorten the interval between onset of symptoms and treatment, but this would only be the case if the young person's concerns were responded to appropriately by the peer or adult they confided in, and relies upon appropriate help or support being available to refer on to.

Whilst there is initial evidence that schools may be in a good position to implement eating disorder detection programmes, without appropriate follow-up, possibly in the form of early intervention programmes, their impact is likely to be limited. Early intervention programmes could offer support to students identified as at risk of or suffering from an eating disorder in a variety of ways, including supporting the process of referring students to treatment, providing a safe and supportive environment and working with the student's friends or family to provide support.

### **1.2.5 Barriers to Eating Disorder Detection and Early Intervention in Schools**

Schools have greater contact with young people than any other organisations and, as such, their staff could provide an excellent opportunity for meaningful input into the detection, prevention and early intervention of mental health issues including eating disorders (Chatterji, Caffray, Crowe, Freeman & Jensen 2004; Ginsburg & Drake, 2002). However, there is often little expertise within the staff body – who are trained as educators rather than clinicians – and little clarity over with whom this responsibility should lie. An important role for school nurses has been implicated but existing barriers including heavy workload, lack of confidence and limited education and training opportunities are likely to limit their efficacy (Prymachuk, Graham, Haddad & Tylee, 2012). Increasingly, UK schools have embedded counselling services (Cooper, 2009) but these remain under-utilised due to students' fear of stigmatisation (Fox & Butler, 2007; Bowers, Manion, Papadopoulos, & Gauvreau, 2012) and desire to conform to the norms set by their peers (Raviv, Sills, Raviv, & Wilansky, 2000). Students report a lack of knowledge about available services for those with emotional and mental health difficulties and a lack of focus on emotional and mental health in the curriculum (Kidger, Donovan, Biddle, Campbell, & Gunnell, 2009).

Finney (2006), education consultant to the Calderdale mental health team states “schools have a pivotal role to play in the identification and response to school-age pupils with mental health problems, but there must be fundamental changes before effective change can take place.” Finney identified several key barriers to school staff providing effective support to students with mental health needs:

- The problem of capacity as school staff are already over-burdened
- A lack of definition of the role that school staff are expected to play
- A blurring of boundaries between the role of school staff and that of higher tier agencies
- Conflicting goals – schools are heavily targeted on measures pertaining to academic results rather than the more holistic outcomes required for individuals' mental health. School staff may therefore be reluctant to take on a more 'caring' role.
- Lack of supervision – unlike mental health professionals, school staff are not entitled to supervision of practice and have little chance to reflect on their working practice which is likely to result in ineffective intervention implementation.

Kidger, Gunnell, Biddle, Campbell, & Donovan (2010) echoed Finney's opinions when they interviewed 14 secondary school staff in the UK about their views on supporting student emotional health and well-being. The interviewees consisted solely of teaching and learning support staff, staff currently involved in emotional health and well-being work – unsurprisingly the study found that the staff interviewed felt that teaching and student emotional well-being were linked. Young people's emotional health and well-being was perceived to be intimately related to the process of growing up, but it was also presented as inseparable from learning, making it something that even those school staff who were only interested in education and results could not ignore.

However, the interviewees felt that their colleagues were unlikely to engage with emotional well-being and mental health initiatives for students. They also felt that teachers' own emotional needs are neglected and that they were not adequately trained or supported in managing mental-health related problems in the classroom – a view also presented in several previous studies (Moor et al., 2007; Walter, Gouze, & Lim, 2006; Cohall et al., 2007; Graham, Phelps, Maddison, & Fitzgerald, 2011). Participants in Graham et al's (2011) study of Australian school teachers' views about supporting children's mental health expressed a desire to support student mental-well-being as this is an area of great need and significance for their students. The role of the teacher in supporting mental health was viewed as one of working with students, staff and families to develop, implement and monitor interventions for particular children – this might be as simple as setting aside time to regularly listen and respond to a pupil's concerns, or as involved as supervising and recording mealtimes according to direction given by a health practitioner. The majority of teachers (64%; n=325) felt unable to offer such support due to a range of factors, including the stigma associated with mental health, a need for additional training, lack of time and insufficient resources (e.g. lack of school counsellors). The authors felt that the following participant statement expressed the sentiment shared by many of their participants:

*"I deal with this (mental health issues) every day. I am unsure how to deal with it. I become concerned that I am under-acting, over-acting, or not supporting the issues correctly. I have sought to improve my skills but training is expensive and nearly non-existent!"*

Lack of knowledge about how to recognise or manage eating disorders could form a major barrier to school staff providing appropriate support to those

students at risk of or suffering from eating disorders (Yager & O'Dea, 2005). In a questionnaire study of educators' knowledge regarding body weight, eating behaviour and eating disorders, Hardie (2007) found that none of her 50 participants was able to answer all 13 questionnaire items correctly.

The research questionnaire aimed to assess school staffs' knowledge of eating disorders and healthy diet, as well as their knowledge regarding safe and effective teaching practices regarding eating disorders and healthy diet. The items of the self-administered research questionnaire were generated from three sources: the Survey for Trainee Teachers, developed by O'Dea and Abraham (2001); the Questionnaire on Eating Disorders developed by Price and Desmond (1990) used to assess school counsellors' knowledge of adolescent eating disorders and the Revised National Curriculum Statement Grades R-9 Policy (Pretoria Department of Education, 2002). A full copy of the research questions and participant answers is included in Appendix A.

Six items were responded to incorrectly by 38% or more of the 50 participants.

These items (with correct response in parenthesis) were:

- Teenagers should be encouraged not to eat any junk food (false)
- Thin people are generally happier than their overweight counterparts (false)
- People with anorexia nervosa never lose their appetite (false)
- People with bulimia nervosa are usually within the normal weight range for their age and height (true)

- People with bulimia nervosa always induce vomiting (false)

These responses highlight a range of misunderstandings about eating disorders which may impact on school staff's ability or willingness to support young people with eating disorders.

In the same study, more than half of the participants (61%; n = 30) said they were not confident they could recognise the signs or symptoms of an eating disorder and 63% (n=31) did not know how they should respond if a student told them they had an eating disorder.

Similarly, in a US study of school counsellors, Price et al., (1990) reported that 40% of school counsellors stated that they did not feel competent in supporting students affected by eating disorders and that a further 49% felt only moderately competent. 50% of school counsellors reported using the mass media as a key source of information about eating disorders.

### **1.3 The Role of Schools in Student Mental Health Care**

The role of schools in student mental health care is considered primarily from a UK perspective below as UK school staff are the target audience for the intervention reported later in this thesis.

### **1.3.1 The Role of School Staff in Early Intervention**

The UK's child and adolescent mental health services (CAMHS) are made up of four tiers, with higher tiers reflecting increased complexity of cases and specialisation of practitioners. School staff fall within the lowest tier, tier 1, and have historically had very little role to play in student mental health other than referring young people experiencing difficulties on to tiers 2, 3 or 4.

More recently, education policy initiatives in the UK have sought to implement an enhanced role for schools in the mental health and well-being of their students, with a particular emphasis on the prevention and early intervention of mental health difficulties. This includes "Every Child Matters" (Department for Education and Skills, 2003), "National Healthy Schools" (Department for Education and Employment, 1999), "Social and Emotional Aspects of Learning" (Department for Children, Schools and Families, 2007), the "Targeted Mental Health in Schools Project" (Department for Children, Schools and Families, 2008) and the 2008 Child and Adolescent Mental Health Service (CAMHS) review.

#### **1.3.1.1 National Healthy Schools Programme**

The National Healthy Schools Programme (Department for Education and Employment, 1999) promotes the link between good health, behaviour and achievement through four key areas:

- healthy eating
- physical activity
- personal, social and health education (PSHE)

- emotional health and well-being

This government-led initiative encouraged school leaders to consider their schools' places not just of academic learning but of providing young people with a broader education including the ability to live and sustain a physically and emotionally healthy lifestyle.

#### **1.3.1.2 Every Child Matters**

Once the National Healthy Schools Programme had become relatively widely adopted, "Every Child Matters" (Department for Education and Skills, 2003) was published. Every Child Matters is a strategy document which outlined the government's vision for the future of every child in the UK. The document is based upon five basic principles which the authors believed were an entitlement for every child. One of these principles is 'being healthy' and this encompasses both good physical and mental health. The document indicates that supporting the mental health of young people should form an important part of the role of school staff and other people who work with or care for children.

#### **1.3.1.3 Social and Emotional Aspects of Learning**

Social and Emotional Aspects of Learning (SEAL) is "a comprehensive, whole-school approach to promoting the social and emotional skills that underpin effective learning, positive behaviour, regular attendance, staff effectiveness and the emotional health and well-being of all who learn and work in schools" (Department for Children, Schools and Families, 2007, P4). SEAL provided a practical and hands on approach to school staff to enable them to actively

promote the emotional well-being of the children in their care. The aim of this initiative was ultimately to improve student attainment and achievement.

#### **1.3.1.4 Targeted Mental Health in Schools**

The Targeted Mental Health in Schools (TaMHS) Project was initiated by the Department for Children, Schools and Families in 2008 with the aim of improving the working relationships between agencies involved in the delivery of child and adolescent mental health services, including schools, in order to improve young people's mental well-being and tackle difficulties more rapidly. The role of schools as agencies for detection and early intervention of mental health issues was highlighted and the use of evidence based practice formed a cornerstone of the three-year project which was intended for national roll-out but became the subject of a change of government and spending cuts, though some local authorities have secured independent funding to continue with the project locally as it is perceived as having a significant impact on the well-being of young people, although this is not universally backed up by qualitative data (Wolpert, Humphrey, Belsky, & Deighton, 2013).

#### **1.3.1.5 2008 CAMHS Review**

The 2008 CAMHS review called for enhanced provision of mental health support at tier 1, including schools. The review highlighted a series of common school-based themes:

- There is a wide variation in the approaches taken to promote and support mental health across schools.

- There is a shortfall of staff with the skills and confidence to deal with mental health issues.
- School staff are receptive to developing greater awareness and understanding of mental health issues and good working relationships with child and adolescent mental health services staff.
- Children and young people think that schools should be more aware of mental health issues, as this will help remove associated stigma.

(National CAMHS Review, 2008, P40)

Whilst schools are recognised as key stake-holders in young people's mental health and emotional well-being, it is well-recognised that there are barriers and shortcomings which prevent schools from realising their potential as providers of mental health prevention and early intervention programmes and initiatives.

In their recent national evaluation of TaMHS, Wolpert et al., reported that TaMHS led to reductions in behavioural problems but not emotional problems. The longitudinal study found that good information giving and good inter-agency working correlated with more positive outcomes for secondary school students but that there were challenges to the implementation of the programme including:

- Lack of training for school staff
- Lack of a common language across different agencies
- Inefficient joint working between schools and child and adolescent mental health services

Additionally, the 2008 CAMHS review identified three significant barriers frequently observed in schools:

- Some schools still see their role in fairly narrow terms.
- There is a tension between the crucial emphasis on driving up educational standards and the broader focus required of work to improve mental health and psychological well-being.
- The significant changes taking place for 14 to 19 year olds – for example, where young people may be studying at different institutions – are not always being approached strategically by the range of partners that may be involved.

(National CAMHS Review, 2008, PP40-41)

### **1.3.2 The Impact on Student Outcomes of Training School Staff in Early Intervention Strategies Targeted at a Range of Conditions**

It is possible that effective training may increase the capacity of schools to provide support to their students by way of prevention and early intervention initiatives for mental health and emotional well-being issues, and specifically for those students at risk of or suffering from an eating disorder.

Whilst there is a paucity of evidence currently available to support the idea that school staff can effectively detect and support the early stages of eating disorders, there is some research evidence that school staff can play a key role in early detection and support of other conditions including learning problems, conduct disorder and attention deficit hyperactivity disorder. The ability of

kindergarten teachers to effectively detect learning problems was demonstrated in a study by Taylor, Anselmo, Schatschneider, & Angelopoulos, (2000) which required kindergarten teachers in a suburban school district of Ohio to rate student progress towards a range of academic objectives. Teachers identified potential learning problems in 20% of the 303 children screened and the academic progress of 38 of these 'identified' students was matched to that of 34 'non-identified' peers and group differences in achievement testing continued to be present after one year. Taylor et al., suggested that teacher input could enable learning problems to be picked up on at an earlier stage than the exclusive use of screening tools, potentially enabling specific children to be targeted with educational interventions prior to the development of more severe learning problems. In a review of strategies for early identification of reading difficulties, Ritchey & Speece (2004) opined that in some instances, teachers may be more sensitive than screening tools at identifying students with reading disabilities. It was suggested that this may be because teachers identified children based on an extended history, rather than a singular day, and are able to compare a child's performance within the wider context of their peers and the curriculum.

As well as being able to identify learning difficulties, teachers have been shown to be apt at early identification of conduct disorder (Jones, Dodge, Foster, & Nix, 2002). In this study, a screening tool was used which relied on kindergarten teacher observation and feedback and was found to be an effective predictor of future involvement with the mental health, special education or juvenile justice systems. Similarly, Moldavsky, Groenewald, Owen, & Sayal, (2012) found 99% of teachers (n=496) were accurately able to identify the presence of a problem when reading case vignettes of students with attention deficit hyperactivity

disorder (ADHD). However, some subtypes of ADHD were more readily identified than others and teacher knowledge about appropriate interventions were limited. The authors advocate the need for teacher training in recognising ADHD subtypes and ADHD interventions but this follow-up research has not, as yet, been undertaken.

Teachers' knowledge about their students is informed by a broad range of information with regards to student well-being. This was demonstrated by a prospective population-based study in Copenhagen which commenced in 1974 and was reported in 1994. Lissau & Sørensen selected 1258 nine and ten year-old students in Copenhagen at random and asked their teachers to report on family structure and perceived support from parents. Ten years later, 756 participants were followed up. Parental support, as perceived by teachers, was found to have a highly significant effect on the child's risk of obesity in young adulthood. This factor was found to be the most consistent predictor of obesity in young adulthood of a range of social and demographic factors that the authors analysed. The author's asserted "we believe no other key professionals know as much about the parents and the family homes as the form teachers" (page 326). A key role for teachers in early screening for obesity risk was indicated.

In addition to detecting difficulties, school staff have also been shown to have a positive impact on student outcomes through early interventions. The most noteworthy and best researched teacher-led early intervention is the Reading Recovery Programme which has proven popular in both the US and the UK. Reading recovery programmes are aimed at low achieving students in order to

try and bring their reading abilities in line with their peers' during the early years of school. The intervention usually consists of sessions of about 30 minutes a day, each day for a period of 12 to 20 weeks. These sessions are led by specially trained school staff and have been demonstrated to have a significant and sustained impact on children's reading abilities (Clearinghouse, 2007; Schwartz, Hobsbaum, Briggs, & Scull, 2009; Reynolds & Wheldall, 2007).

### **1.3.2.1 The Impact of Training School Staff in Early Intervention for Health Issues**

Teachers are increasingly seen as important promoters of health within schools and this has been formally recognised in the UK by the National Healthy Schools Programme (Department for Education and Employment, 1999), a joint programme between the Department of Health and Department of Education with the key aims of raising student achievement, promoting social inclusion and reducing health inequalities through the promotion of healthy lifestyles.

As such, school staff have been trained to deliver a wide range of health intervention initiatives in recent years – these are summarised in a recent report by Shepherd et al., (2013) which consisted of a survey followed up by a systematic review.

Shepherd et al., initially carried out an online survey with 220 initial teacher training course leaders in the UK. 19 of the course leaders participated in in depth interviews about how effectively health and well-being is covered on

teacher training courses, and to identify the barriers to delivering effective training. In addition to this, the researchers conducted a two-stage systematic review comprising a descriptive map of the characteristics of international research studies of health teacher training and a detailed synthesis of a subset of studies specifically on pre-service training.

The survey demonstrated that student physical and mental health was considered an important part of the initial teacher training curriculum by course leaders, with over 90% rating it as important or very important. 42% of course leaders estimated that between 5 and 9% of teaching time was focused on health and well-being. A further 26% estimated the time spent to be as much as 10-14%. Respondees reported variability as to how health was addressed both across and within institutions in terms of content, format and methods. It was often assumed that health related issues would be covered by student teachers during their school-based placements, so these did not always form a formal part of the teacher training curriculum. This was exacerbated by limited curriculum time and the fact that, whilst considered important, health was seen as a lower priority than other aspects of the curriculum. Teacher training providers also indicated that it was difficult to cover both breadth and depth of subject matter due to the wide range of potentially relevant topics in the field of physical and mental health.

A total of twenty studies were included in the systematic review. All twenty were evaluations of health training for student teachers covering such diverse areas as child protection, sex and relationships education and healthy eating. Most

studies reported increases in student teachers' knowledge of the targeted health issues and an increase in their confidence to address the targeted health issue with students. No studies reported the impact of teacher training on student outcomes. Training was generally considered acceptable to trainees. Evidence from the systematic review highlighted the following key elements of effective teacher training aimed at promoting student health and well-being:

- There should be opportunities to gain practical experience and practise new skills
- Examples used in training should be relevant
- Training programmes should take individual needs into account

These points are expanded upon below.

### **There should be Opportunities to Gain Practical Experience and Practise New Skills**

Several of the studies reviewed highlighted that learning about health related issues within an entirely theoretical context can sometimes lead to an increase in knowledge but no corresponding improvement in confidence. For example, in a review of pilot materials designed to train student teachers about safe-guarding teachers, Baginsky & Macpherson (2005) reported that 80% of their 1347 participants welcomed the materials. Many noted the need for the materials to be written at a relatively basic level but followed up by support from qualified teachers in schools. Qualitative feedback suggested that the materials alone did not prepare student teachers for managing a child protection incident. The authors highlighted the importance of follow-up support in school and of the use

of realistic case studies within the training materials alongside practical guidance about how a student teacher should respond to a disclosure.

Similarly, interviews conducted by Rossato, & Brackenridge (2009) with 28 student sport teachers about child protection training they had received also raised a concern that there was a lack of preparation for dealing with potential child protection situations. Whilst, following the training, participants reported feeling prepared to deal with minor situations, they felt unprepared for dealing with more major child protection situations.

### **Examples used in Training should be Relevant**

Shepherd's review suggested that the use of generic case study materials may be limited in their use and that these should be adapted to suit the needs of the school staff being trained, this might include considerations of gender appropriateness if working with a single sex school or age appropriateness depending on which phase participants are working with. For example some resources may be suitable for teaching student teachers working with primary school aged students but not for those working with secondary school aged students or vice versa. A study by Athanases & Martin (2006) also highlighted the need to consider the appropriateness of materials and messages from a cultural perspective. In their review of the effectiveness of training designed to break down stigma and barriers associated with teaching about gay and lesbian issues, participants suggested that they needed to fully understand the issue in line with the cultural context in which they'd be teaching, particularly with regards

to religion and what would and wouldn't be considered appropriate by students and parents and to what degree these views should be challenged.

Additionally, it was considered important that student teachers felt that the training they undertook was relevant to them and to their teaching qualification as this meant that they were more likely to engage with the topic and to apply what they'd learnt. When teaching student teachers about well-being, Yager (2009) found that some students were disengaged with the topic, reporting it to be irrelevant to their teaching degree:

"I found [this subject] slightly irrelevant as I wanted to learn more about teaching"  
(P59)

Yager commented on the difficulty of developing training programmes for heterogeneous groups of student teachers, advocating the use of smaller, more homogenous groups. In practice, this may prove impractical due to time-tabling and cost implications.

### **Training Programmes should take Individual Needs into Account**

Shepherd et al., suggest that health education training is most well received by student teachers when it has been tailored to take into account their individual needs, specifically with regards to their current level of experience. This point is exemplified in a study by Cleave & Charlton (1997) about the efficacy of a cancer-based coping and caring course delivered to teachers. Eleven student teachers

and ten practising teachers shared in depth feedback about the training through survey and interview questions. The authors found clear differences between the requirements of the two groups, with student teachers suggesting that they would have preferred to work from case studies rather than being asked to draw on their own limited experience, whilst practising teachers welcomed the opportunity to discuss the wealth of real-life incidents they had encountered. Training should also take into account what prior training participants might have received on the topic so as to complement rather than duplicate existing knowledge (Baginsky & Macpherson, 2005).

In evaluating the effectiveness of initial teacher training for the support of student health and well-being, Shepherd et al., suggest that student teachers find initial training useful but that most of their learning on these topics comes from experiences gained once actually teaching in school and working with students with physical and mental health concerns. As such, it is important to look too at the effectiveness of training programmes designed to develop the skills and knowledge of currently serving school staff on the topics of physical and mental health.

#### **1.3.2.2 The Effectiveness of Health Education Training Programmes Aimed at Currently Serving Teachers**

There is limited research regarding the impact of training on currently serving school staff's ability to recognise and support health or well-being concerns in students. There are two studies of note. A study from the USA focuses on school staff's recognition and support of students with HIV or AIDS following a one day

training programme (Deutschlander, 2010) and Hussein & Vostanis (2013) have recently published research regarding the ability of school staff in Pakistan to identify common mental health problems following a short training intervention.

The aim of Deutschlander's study was to determine whether participation in a six hour training programme significantly improved school staff's knowledge, attitude, comfort and confidence levels when educating students about and supporting students with HIV or AIDS in Pennsylvania, USA. Surveys were completed by 341 participants, 62.8% of participants were teachers; 31.7% were school nurses, 1.5% were managers and 4.1% were classed as 'other' – this group included school counsellors and school psychologists. The training was shown to impact positively on participants' overall knowledge about AIDS and HIV with mean scores rising from 64.2 pre-training to 77.1 directly post training out of a possible maximum score of 100. For the third of staff who had received training on HIV or AIDS previously, the session appeared to act as a knowledge booster, highlighting a possible role for update or booster training sessions to combat the attrition of knowledge over time.

Prior to attending the training, participants identified their confidence in discussing sensitive topics related to sexual issues as the area they felt least comfortable with. This was therefore likely to act as the largest impediment to them providing appropriate information and education to their students. Interestingly, Deutschlander noted a significant difference in confidence levels pre-training between different participant groups, with teachers reporting higher confidence levels than head teachers. Post-training, there was no significant

difference in confidence levels between professional groups and the training was shown to have a positive impact on participants' confidence in dealing with a wide range of HIV and AIDS related issues, with scores increasing from 36.0 pre-training to 42.9 post training out of a possible 50.

Deutschlander's study varies from other school based HIV and AIDS intervention studies as it focuses on developing school staff skills, knowledge and attitudes whereas other HIV and AIDS interventions tend to be delivered directly to students by external facilitators (Fisher, Fisher, Bryan, & Misovich, 2002; Main et al., 1994; Siegel, DiClemente, Durbin, & Krasnovsky, 1995). Deutschlander's rationale for this was that in order to effectively support students with regards to HIV and AIDS related issues, there needed to be a culture of support and knowledge within the school. School staff need to have the knowledge and confidence to integrate key messages about HIV and AIDS into the curriculum and into their regular teaching practice in addition to delivering specific lessons on the topic. Deutschlander notes that "Schools provide a setting for equipping children and adolescents with the knowledge to protect themselves and others from acquiring HIV... This requires teachers to be knowledgeable in this area and possess the ability to help high risk adolescents assess their vulnerability to disease" (page 446). As such, school staff will not be in an appropriate position to implement or complement a specific HIV prevention programme or curriculum unless they have the confidence, knowledge and willingness to do so. Additionally, even without a specific programme in place, appropriately trained school staff have the potential to impact on students' risky behaviours by "providing valid information and demonstrating appropriate behaviours when dealing with HIV and infected students" (page 446) Deutschlander's study

highlighted the positive impact that a 6-hour training programme could have on Pennsylvanian school staff comfort, confidence and knowledge levels about HIV and AIDS. However, the impact of these improvements on students was not measured so it is unclear whether the study achieved the secondary aims of decreasing the levels of HIV infection amongst the adolescent population in Pennsylvania. The study also lacked a control group which limits its validity and as there was no follow-up of study participants beyond the post-training time point, it is unclear whether the benefits of the training were maintained longer-term.

Like AIDS and HIV, mental health conditions have traditionally been associated with considerable stigma within the school setting (Bowers, Manion, Papadopoulos & Gauvreau, 2012) These conditions are stigmatised at a societal level (Henderson, Evans-Lacko & Thornicroft, 2013) and schools are no exception to this. School staff also report a lack of confidence in their ability to identify and manage even the most common mental health conditions (Reinke, Stormont, Herman, Puri, & Goel, 2011; Graham et al., 2011). As with physical health, schools are increasingly seen as appropriate providers of prevention programmes for mental health issues (Loades & Mastroyannopoulou, 2010) but these initiatives are generally teacher led student education programmes or curricula and beyond the scope of the current thesis. Several excellent systematic reviews and meta-analyses exist (Neil & Christensen, 2009; Stice, Shaw & Marti, 2007; Yager, Diedrichs, Ricciardelli, & Halliwell 2013; Wells, Barlow, & Stewart-Brown, 2003; Calear & Christensen, 2010).

There is little evidence, to date, about the impact of training school staff to recognise and support the early stages of mental ill health, but a recent pilot study in Pakistan highlights the potential impact of such training for teachers (Hussein & Vostanis, 2013). The authors state that in Pakistan approximately 17% of mainstream primary school children have a diagnosable psychiatric disorder but that failures in identification mean that only a small percentage receive the appropriate treatment. As no school-based training programmes for the identification of child mental health issues currently exist in Pakistan, the aim of the current study was to pilot one such school-based teacher training programme and evaluate the impact on teachers' knowledge and awareness.

One hundred and fourteen teachers participated in the training which consisted of six two-hour sessions delivered face to face by a child and adolescent psychologist. Participants completed a 20 item questionnaire pre and post training. The questionnaire was designed to assess participants' ability to understand, recognise and support common child mental health problems such as anxiety disorders and mood disorders. The training sessions were positively received and were associated with a moderate improvement in teachers' knowledge and awareness of common child mental health problems. However, the training showed only a marginal impact upon some widely held stigmatising perceptions such as "People with mental illness are morally weak and a curse for the family." It is possible that teachers' pervading, negative attitudes towards students with mental health difficulties would prevent teachers from effectively implementing the knowledge gained during the intervention. Hussein & Vostanis note that "knowledge alone could not alter practical perceptions" and implicate a role for anti-stigma messages to form part of future training.

Deutschlander's (2009) HIV study and Hussein & Vostanis' (2013) mental health study outline a potential role for brief training programmes in increasing school staff knowledge and awareness of health or mental ill health conditions, increasing confidence in supporting students and improving attitudes towards these conditions.

#### **1.4 Summary**

Eating disorders are serious mental health conditions which can have lasting physical and psychological ramifications for sufferers. The peak age of onset has recently been estimated at 15 to 19 in females and 10-19 in males in the UK (Micali et al., 2013). This coincides with the ages at which children attend secondary school in the UK, (age 11-18-years).

Education policy initiatives in the UK in recent years have highlighted the potential role of schools in the prevention and early intervention of mental health difficulties (Department for Children, Schools and Families, 2008). Theoretically, this position is sensible, with school staff in greater contact with young people than other organisations (Chatterji, et al., 2004). However, in practice, school staff are trained as teachers rather than as clinicians and there is often little expertise within the staff body.

School staff knowledge and confidence regarding eating disorders, specifically, is reported as being very low (Hardie, 2007; Piran, 2004). Staff find the idea of

eating disorders training acceptable but have few opportunities to participate in such training (Neumark-Sztainer, Story, & Collier, 1999). There is little current evidence regarding the role of school staff in supporting students affected by eating disorders.

There is a clear role for school staff in the broader field of early intervention, with school staff playing a key role in the detection and support of a range of concerns including attention deficit hyperactivity disorder (Moldavsky et al., 2012); learning problems (Taylor et al., 2000) and conduct disorder (Jones, Dodge, Foster, & Nix, 2002).

Brief training interventions have been shown to be an effective means of improving school staff knowledge, attitudes and confidence towards specific physical and mental health conditions (Shepherd et al, 2013; Deutschlander, 2010; Hussein & Vostanis, 2013) though there is little evidence about the long-term impact of brief interventions on teacher knowledge, attitudes or confidence; nor about the impact of these interventions on student outcomes.

In conclusion, the peak age of onset of eating disorders falls within the period children in the UK attend secondary school. School staff welcome the idea of being trained to support students affected by eating disorders and there is evidence from other fields that school staff can play an important role in detection and early intervention and that brief training interventions are an effective means of improving school staff knowledge, confidence and attitudes.

## **1.5 Thesis Aims and Outline**

The overall aims of this thesis were (1) to develop an eating disorders training programme for school staff, informed by stakeholder (student, staff) views and designed to improve staff's confidence, attitudes and knowledge in recognising and managing student eating disorders and (2) to carry out a feasibility study of this programme.

The thesis is presented as a series of published papers (chapters 2-4), two regular chapters and a concluding discussion chapter.

**Chapter 2 is a paper entitled: "My teacher saved my life" versus "Teachers don't have a clue": An online survey of pupils' experiences of eating disorders" published by the Journal of Child and Adolescent Mental Health in 2013.**

The aim of this study was to gain an understanding of student experiences of eating disorders in UK schools. There were two reasons for this. Firstly, to gain an understanding of the current situation in order to determine whether there was a need to improve the support offered by schools to students affected by eating disorders. Secondly, to understand what students had found helpful, or unhelpful, approaches from their schools with regards to eating disorders in the hope that these examples of good and bad practice could inform the brief intervention to be developed later on.

**Chapter 3 is a paper entitled: “We don’t know how to help” An online survey of school staff experiences of eating disorders” published by the Journal of Child and Adolescent Mental Health in 2013.**

The aims of this study were to gain an understanding of school staff experiences of eating disorders in the UK with similar aims to those outlined in chapter 2. In addition, it was important to gain an understanding of what existing training was available and whether this had proven effective and whether school staff would be open to the opportunity to learn more about eating disorders and what they considered would form important components of such a training programme.

**Chapter 4 is a paper entitled: “Spotting and supporting eating disorders in school. Recommendations from school staff” published by the Health Education Research Journal in 2013.**

This study was an extension of the study outlined in chapter 3 and provided a more in depth opportunity to explore the experiences and ideas of school staff with regards to eating disorders and also focused heavily on the development of an eating disorders training programme for school staff.

**Chapter 5: Development of Content and Outcome Measures of a One Day Eating Disorders Training Programme for School Staff**

This chapter outlines the development of a brief, face to face intervention which aims to improve school staff knowledge about, attitudes towards and confidence in identifying and managing student eating disorders. The development of the intervention is considered in the context of the NICE Principles of Effective

Behaviour Change Interventions (National Institute for Health and Care Excellence, 2007) and the specific content of the intervention is outlined. The development of outcome measures are also outlined.

## **Chapter 6: Feasibility Study of a One Day Eating Disorders Training Programme for UK Secondary School Staff**

This chapter reports the findings from a feasibility study of the face to face intervention with 45 school staff. Strengths, limitations and implications for future research are considered. .

## **Chapter 7: Discussion**

The final chapter of this thesis provides a conclusion to the current body of work including a general discussion of the findings and implications of the current thesis and directions for future research and practice.

# **Chapter 2**

**– Study One –**

**Student Experiences of Eating**

**Disorders within the School**

**Setting: An Online Survey**

**(Published Paper)**

## **2.1 The published paper in the context of the current thesis**

The following chapter is a reproduction of a published paper on which the thesis author was the lead researcher and author. Prior to reproduction of the paper, the study is briefly considered in the context of the current body of work.

### **2.1.1 Aims**

When setting out to develop an eating disorders training programme for school staff; consulting with students who had first or second hand experience of recovering from an eating disorder whilst at school seemed an appropriate way of developing a programme that was practical and relevant to the needs of staff and student in the current context. It is an approach that has previously been successfully used with regards to adolescent deliberate self-harm (Hawton, Rodham, Evans, Weatherall, 2002).

In short, the aim of this study was to gain an understanding from young people about the ways in which schools can best support young people with eating disorders, so that these ideas could inform the development of the eating disorders training programme for school staff.

### **2.1.2 Conclusions**

This paper highlights that according to the views of young people, school staff can play a very important role in the recognition of eating disorders in students and in supporting young people through the recovery process. However, it also highlights that many young people currently feel that their school is not a supportive environment and that their teachers do not have the knowledge or skills needed to provide adequate support. The young people surveyed provided some very clear guidance as to how their school staff knowledge and attitudes

could be developed to provide better support to young people suffering from eating disorders.

Insert paper: Knightsmith, P., Sharpe, H., Breen, O., Treasure, J., Schmidt, U., (2013)  
"My teacher saved my life" versus "Teachers don't have a clue": An online survey of  
pupils' experiences of eating disorders" Journal of child and adolescent mental health

**[TEMPORARILY INSERTED AS OBJECT: DOUBLE CLICK TO OPEN PDF]**

doi:10.1111/camh.12027

My teacher saved my life 7

- interpersonal maintenance model of eating disorders: Intervention for carers. *British Journal of Psychiatry*, 199, 225-31.
- Grover, M., Naumann, U., Mohammad-Dar, L., Glennon, D., Ringwood, S., Eisler, J., & Schmidt, U. (2011). A randomized controlled trial of an Internet-based cognitive-behavioural skills package for carers of people with anorexia nervosa. *Psychological Medicine*, 41, 1-11.
- Haines, J., Neumarck-Sattiner, D., & Thiel, L. (2007). Addressing weight-related issues in an elementary school: What do students, parents, and school staff recommend? *Eating Disorders*, 15, 5-21.
- Hay, P., Mond, J., Batters, P., Paxton, S., Rodgers, B., Quirk, F., & Katojans, D. (2011). Targeted prevention in bulimic eating disorders: Randomised controlled trials of a mental health literacy and self-help intervention. In P. Hay (Ed.), *New insights into the prevention and treatment of bulimia nervosa* (pp. 69-84). Rijeka, Croatia: InTech.
- Hay, P., Mond, J., Paxton, S., Rodgers, B., Darby, A., & Owen, C. (2007). What are the effects of providing evidence-based information on eating disorders and their treatments? A randomized controlled trial in a symptomatic community sample. *Early Intervention in Psychiatry*, 1, 316-324.
- Killen, J.D., Taylor, C.H., Hammer, L.D., Litt, I., Wilson, D.M., Rib, T., & Vandey, A. (1993). An attempt to modify unhealthy eating attitudes and weight regulation practices of young adolescent girls. *International Journal of Eating Disorders*, 13, 369-384.
- Knightsmith, P. (2013). *Eating disorders pocketbook: Hampshire Teachers' Pocketbooks*.
- Kyriakou, O., Treasure, J., & Schmidt, U. (2008a). Understanding how parents cope with living with someone with anorexia nervosa: Modelling the factors that are associated with carer distress. *International Journal of Eating Disorders*, 41, 233-242.
- Kyriakou, O., Treasure, J., & Schmidt, U. (2008b). Expressed emotion in eating disorders assessed via self-report: An examination of factors associated with expressed emotion in carers of people with anorexia nervosa in comparison to control families. *International Journal of Eating Disorders*, 41, 27-46.
- Machado, P.P.P., Machado, B.C., Gonçalves, S., & Hoek, H.W. (2007). The prevalence of eating disorders not otherwise specified. *International Journal of Eating Disorders*, 40, 212-217.
- Maying, P. (2004). Qualitative content analysis. In U. Flick, E. von Kardoff & I. Steinke (Eds.), *A companion to qualitative research* (p. 2). London: Sage.
- McVey, G., Guastella, J., Tweed, S., & Ferrari, M. (2008). A controlled evaluation of web-based training for teachers and public health practitioners on the prevention of eating disorders. *Eating Disorders*, 17, 1-26.
- McVey, G.L., Lieberman, M., Voorberg, N., Wardmore, D., & Blackmore, E. (2003). School-based peer support groups: A new approach to the prevention of disordered eating. *Eating Disorders*, 11, 169-185.
- Mond, J.M., & Arighi, A. (2011). Gender differences in perceptions of the severity and prevalence of eating disorders. *Early Intervention in Psychiatry*, 5, 41-49.
- Mond, J.M., Hay, P.J., Paxton, S.J., Rodgers, B., Darby, A., Nilsson, J., & Owen, C. (2010). Eating disorders "mental health literacy" in low risk, high risk and symptomatic women: Implications for health promotion programs. *Eating Disorders*, 18, 287-295.
- Mond, J.M., Hay, P., Rodgers, B., & Owen, C. (2008). Mental health literacy and eating disorders: What do women with bulimic eating disorders think and know about bulimia nervosa and its treatment? *Journal of Mental Health*, 17, 565-575.
- Mond, J.M., Marks, P., Hay, P.J., Rodgers, B., Kelly, C., & Owen, C. (2007). Mental health literacy and eating-disordered behavior: Beliefs of adolescent girls concerning the treatment of and treatment-seeking for bulimia nervosa. *Journal of Youth and Adolescence*, 36, 753-762.
- Mond, J.M., Robertson-Smith, G., & Vitere, A. (2006). Stigma and eating disorders: Is there evidence of negative attitudes towards individuals suffering from anorexia nervosa? pp. 519-532.
- Murphy, R., Frost, S., Webster, P., & Schmidt, U. (2004). An evaluation of web-based information. *International Journal of Eating Disorders*, 35, 145-154.
- Neumarck-Sattiner, D. (1996). School-based programs for preventing eating disturbances. *Journal of School Health*, 66, 64-71.
- Neumarck-Sattiner, D., Stary, M., & Collier, T. (1999). Perceptions of secondary school staff toward the implementation of school-based activities to prevent weight-related disorders: A needs assessment. *American Journal of Health Promotion*, 13, 153-156.
- O'Dea, J.A., & Abraham, S. (2001). Knowledge, beliefs, attitudes, and behaviors related to weight control, eating disorders, and body image in Australian trainee home economics and physical education teachers. *Journal of Nutrition Education and Behavior*, 33, 332-340.
- Paxton, S.J., Schutz, H.K., Wertheim, E.H., & Muir, S.L. (1999). Friendship clique and peer influences on body image concerns, dietary restraint, extreme weight-loss behaviors, and binge eating in adolescent girls. *Journal of Abnormal Psychology*, 108, 255-266.
- Perkins, S., Winn, S., Murny, J., Murphy, R., & Schmidt, U. (2004). A qualitative study of the experience of caring for a person with bulimia nervosa. Part 1: The emotional impact of caring. *International Journal of Eating Disorders*, 36, 256-268.
- Piran, N. (2004). Prevention series. Teachers: On "being" (rather than "doing") prevention. *Eating Disorders: The Journal of Treatment and Prevention*, 12, 1-9.
- Price, J.A., Diamond, S.M., Price, J.H., & Moising, A. (1990). School counselors' knowledge of eating disorders. *Adolescence*, 25, 945-957.
- Sharpe, H., Damaier, K., Treasure, J., & Schmidt, U. (in press). What are adolescents' experiences of body dissatisfaction and dieting, and what do they recommend for prevention? A qualitative study. *Eating and Weight Disorders*.
- Shaw, H., Sice, E., & Becker, C.B. (2009). Preventing eating disorders. *Child and Adolescent Psychiatric Clinics of North America*, 18, 199-207.
- Slice, E., Shaw, H., & Marti, C.N. (2007). A meta-analytic review of eating disorder prevention programs: Encouraging findings. *Annual Review of Clinical Psychology*, 3, 207-231.
- Swanson, S.A., Crow, S.J., Le Grange, D., Swendsen, J., & Merikangas, K.R. (2011). Prevalence and correlates of eating disorders in adolescents: Results from the national comorbidity survey replication adolescent supplement. *Archives of General Psychiatry*, 68, 714-723.
- Treasure, J., Claudino, A.M., & Zucker, N. (2014). *Eating disorders: The Lancet*, 373, 583-593.
- Wade, T.D., Wilfong, S.M., & Lee, C. (2012). A longitudinal investigation of the impact of disordered eating on young women's quality of life. *Health Psychology*, 31, 352-359.
- Weber, R.P. (1985). *Content classification and interpretation. Basic content analysis* (2nd edn). Thousand Oaks, CA: Sage, 15-16.
- Winn, S., Perkins, S., Wahryn, R., Schmidt, U., Eisler, L., Treasure, J., ... & Yi, I. (2007). Predictors of mental health problems and negative caregiving experiences in carers of adolescents with bulimia nervosa. *International Journal of Eating Disorders*, 40, 171-178.
- Yager, Z., & O'Dea, J.A. (2003). The role of teachers and other educators in the prevention of eating disorders and child obesity: What are the issues? *Eating Disorders*, 13, 261-278.

Accepted for publication: 7 February 2013













# **Chapter 3**

**– Study Two –**

**School Staff Experiences of  
Eating Disorders within the  
School Setting: An Online Survey  
(Published Paper)**

### **3.1 The published paper in the context of the current thesis**

The following chapter is a reproduction of a published paper on which the thesis author was the lead researcher and author. Prior to reproduction of the paper, the study is briefly considered in the context of the current body of work.

#### **3.1.1 Aims**

In the context of the current body of work, the aims of the study presented in the following paper were two-fold:

1. To determine whether school staff perceived a need for an eating disorders training programme.
2. To gain an understanding of the key areas of need with regards to eating disorders training.

Aim one was important both in terms of determining level of need – if school staff perceived either that there were no cases of eating disorders in their student body, or that they were already receiving adequate support or training for the cases they did come across, then if developed, the intervention would be unlikely to be welcomed by school staff.

If school staff were found to perceive a need for an eating disorders training programme, then they would also be in a good position to highlight key areas of concern which could be addressed by such a programme. As there were no existing data on the training needs of UK school staff with regards to eating disorders, a survey which directly posed this question to staff was considered likely to provide useful data when considering the content of the programme.

### **3.1.2 Conclusions**

Majority of the school staff surveyed had encountered eating disorders amongst their students, but most staff felt ill-equipped either to recognise or manage eating disorders and indicated they would welcome further training on the topic. Clear policies and procedures were called for as well as more clarity over how to support students with eating disorders and how to reintegrate students following a period of absence resulting from an eating disorder.

Insert paper: Knightsmith, P., Treasure, J., Schmidt, U (2013) "We don't know how to help" An online survey of school staff experiences of eating disorders" Journal of child and adolescent mental health

[TEMPORARILY INSERTED AS OBJECT: DOUBLE CLICK TO OPEN PDF]

recommendations from school staff about how they could be best supported in helping young people with ED.

### Methods

#### Design

The study comprised an anonymous online questionnaire aimed at school staff in UK schools. A convenience sample of 1250 school staff were invited to participate.

#### Institutional review board approval and informed consent procedures

Ethical approval was obtained from King's College London Research Ethics Committee (Ref PNM/09/10-110). Once they had logged into the questionnaire, participants were provided with detailed information about the study and were given the opportunity to contact the research team about the project. It was made clear to participants that by completing the survey, they were giving their consent to participate in the study.

#### Survey content

The survey explored school staff experiences of ED, including access to training and support. It also asked for recommendations about how they could best be supported in helping young people with ED. The items included in the questionnaire are summarised in Tables 1 and 2.

#### Development and pretesting

The online survey was developed following consultation with teachers and pupils. Face validity was judged by a panel of school staff who met as a focus group to discuss the structure and content of items in the survey. The panel provided useful comments for wording and restructuring of items to improve the ease of understanding and completion, but reported no technical difficulties or problems with comprehension. The panel agreed that the survey had adequate content validity in that it contained a representative sample of items relevant to staff experiences of ED in school. 26 teachers completed the

survey 10 days apart with kappa coefficients ranging from 0.78 to 0.88 for the closed questions outlined in Table 2.

#### Recruitment process

A database of school staff email addresses was obtained from a teacher training provider. All staff on the list had previously expressed interest in mental health training and came from a variety of primary, secondary and special schools from throughout the United Kingdom.

Staff were eligible for inclusion if they were currently employed, or on a placement, with a UK mainstream or private school of any type.

#### Survey administration

The study consisted of an anonymous self-report online questionnaire, which took between 10 and 30 min to complete. Completion of the questionnaires was voluntary and no incentives were offered for participation. The data were collected between September 2010 and April 2011.

The questionnaire was hosted on a survey website, which was not password protected. The questionnaires consisted of a cover page containing the information sheet and 19 questionnaire items, each of which appeared on a screen alone. Only questions relating to the participant's school type and role were compulsory. There was no randomisation of items. There was adaptive questioning such that, based on their previous answers, only relevant questions were presented. Participants were given the opportunity to review and amend their answers prior to submitting their responses.

#### Response rates

1250 school staff were invited to participate and, of these, 826 (66%) chose to complete the questionnaire.

#### Preventing multiple entries from the same individuals

Multiple responses from the same IP address (same computer) were prohibited to prevent multiple entries from the same individuals.

Table 1. Summary of Staff Responses to Eating Disorders (ED) Experience Survey - Closed Questions

| Does your school have an Eating Disorder policy? (774 respondents)                                    | No<br>320 (41%)                          | Yes - part of another policy<br>208 (27%) | Unsure<br>205 (26%)                               | Yes - specific policy<br>41 (5%)                               |
|---|--|---|---|--|
| Are Eating Disorder policies effective? (519 respondents)   | Effective<br>317 (61%)                   | Ineffective<br>148 (29%)                  | Very effective<br>42 (8%)                         | Very ineffective<br>12 (2%)                                    |
| Has your school offered ED training? (791 respondents)  | No<br>383 (48%)                          | Yes<br>208 (26%)                          | Whole staff                                       | All pastoral staff<br>All middle and senior managers<br>3 (2%) |
| Who attended the training? (147 respondents)  | 3 of fewer staff members<br>82 (56%)     | 43 (29%)                                  | 19 (13%)  |  |
| Training delivery method (161 respondents)  | Seminar<br>107 (66%)                     | Lecture<br>27 (23%)                       | Written materials<br>17 (11%)                     |  |
| If you have not received any training, do you think you would find training useful? (346 respondents) | Very useful<br>160 (46%)                 | Quite useful<br>156 (45%)                 | Not very useful<br>30 (9%)                        | Not at all useful<br>0 (0%)                                    |
| Are you aware of any current or past cases of Eating Disorders in your school? (530 respondents)      | Yes, directly involved<br>266 (50%)      | Yes, not involved<br>181 (34%)            | No<br>83 (16%)                                    |  |
| If a student is concerned a friend may have an ED   | Talk to any member of staff<br>364 (47%) | Never been discussed<br>287 (37%)         | Concerns go to specific staff member<br>112 (14%) | Use anonymous service (e.g. SMS)<br>18 (2%)                    |
| Would you feel comfortable teaching students about Eating Disorders? (785 respondents)                | Very uncomfortable<br>419 (54%)          | Uncomfortable<br>273 (35%)                | Comfortable<br>84 (11%)                           | Very comfortable<br>9 (1%)                                     |
| Has your school reintegrated students following absence due to ED? (487 respondents)                  | Yes<br>329 (68%)                         | No<br>158 (32%)                           |   |  |
| Did staff/students receive any advice on how to support returning students? (317 respondents)         | Yes<br>240 (76%)                         | No<br>77 (24%)                            |   |  |

All questions were optional. When not all participants recorded a response to a question, percentages were calculated according to the number of respondents to the specific question.













# **Chapter 4**

**– Study Three –**

**Recommendations from School**

**Staff about Spotting and**

**Supporting Eating Disorders**

**(Published Paper)**

## **4.1 The published paper in the context of the current thesis**

The following chapter is a reproduction of a published paper on which the thesis author was the lead researcher and author. Prior to reproduction of the paper, the study is briefly considered in the context of the current body of work.

### **4.1.1 Aims**

A series of focus groups were carried out to build on the data gained from the survey of school staff outlined in chapter 3. The aim of the focus groups was to develop a series of recommendations from school staff which could be used as the basis for the development of an eating disorders training programme for school staff.

### **4.1.2 Conclusions**

The findings showed that school staff currently feel ill-equipped to support students with eating disorders and endorse a need for focused training for school staff to better enable them to support students with eating disorders. Five key themes emerged from the focus groups which could be used during the development of an eating disorders training programme for school staff:

1. Many staff don't have a basic understanding of eating disorders;
2. Eating disorders are taboo in the staffroom;
3. Staff don't feel comfortable talking to students about eating disorders;
4. The parent-school relationship can play an important role in recovery, but parents often react very negatively when first told of their child's eating disorder, therefore, support is needed to ensure the teacher-parent relationship is a positive one;

5. School staff would welcome practical ideas for how they can best support students during the recovery period.

[TEMPORARILY INSERTED AS OBJECT: DOUBLE CLICK TO OPEN PDF]

## Spotting and supporting eating disorders in school: recommendations from school staff

P. Knightsmith\*, J. Treasure and U. Schmidt

Division of Psychological Medicine, Institute of Psychiatry, King's College London (KCL), London SE5 8AF, UK.

\*Correspondence to: P. Knightsmith. E-mail: kingsdown@gmail.com, jodi.knightsmith@kcl.ac.uk

Received on January 21, 2013; accepted on July 10, 2013

### Abstract

Eating disorders have a high rate of onset in school-aged children. School staff are in an excellent position to spot the early warning signs and offer support during recovery. This article explores the findings from focus groups conducted with 63 members of staff from 29 UK schools with the aims of (i) understanding whether they are in a good position to support students with eating disorders and (ii) to generate recommendations regarding school staff's training needs for spotting and supporting eating disorders. Participants took part in semi-structured focus groups. These were transcribed and analysed using content analysis principles. Five key themes emerged: (i) many staff do not have a basic understanding of eating disorders, (ii) eating disorders are taboo in the staffroom, (iii) staff do not feel comfortable talking to students about eating disorders, (iv) support is needed to ensure the teacher–parent relationship is a positive one and (v) school staff would welcome practical ideas for how they can best support students during the recovery period. The findings show that school staff currently feel ill-equipped to support students with eating disorders and endorse a need for focused training for school staff to better enable them to support students with eating disorders.

### Background

Eating disorders in school-aged children have recently hit the headlines in the United Kingdom

as the number of hospitalizations caused by eating disorders in children aged between 10 and 19 rose by 49% between June 2011 and June 2012 compared with the previous year [1]. The 10–19 age group accounted for 55% of all eating disorder related hospital admissions and 1 in 10 admissions was a 15-year-old girl. This reflects existing evidence that the peak age of onset of eating disorders is between the ages of 10 and 19 [2] making them a very real issue for secondary schools which typically cover the 11–18 age range.

Recent estimates about the prevalence of eating disorders in adolescence puts the lifetime prevalence of anorexia nervosa at 0.3%, bulimia nervosa at 0.9% and binge eating disorder at 1.6% with a particularly high incidence between the ages of 12 and 13 years [3]. Many eating disorders sufferers do not meet the diagnostic criteria for one of the three major disorders and are instead classified as suffering from 'eating disorders not otherwise specified'—as many as 2.4% of girls between the ages of 12 and 23 fall into this category [4]. All told, the prevalence of eating disorders at secondary school age is such that most school staff are likely to encounter students suffering with eating disorders several times throughout their school career.

The ramifications for a student suffering from an eating disorder during their time at school can be wide-ranging with a lasting impact on both their academic and social development [5, 6]. There is clear evidence that early detection and appropriate intervention can significantly reduce the impact that eating disorders have on young people's outcomes as well as greatly increasing the chance of a full recovery [7].

Downloaded from <http://her.oxfordjournals.org/> by guest on August 21, 2013



















# **Chapter 5**

**Development of Content and  
Outcome Measures of a One Day  
Eating Disorders Training  
Programme for School Staff**

The following chapter describes the development of a brief, face to face intervention which aims to improve school staff knowledge about, attitudes towards and confidence in identifying and managing student eating disorders. The development of the intervention is considered in the context of the NICE Principles of Effective Behaviour Change Interventions (National Institute for Health and Care Excellence, 2007) and the specific content of the intervention is outlined. The development of outcome measures are also outlined in the following chapter.

## **5.1 The NICE Principles of Effective Behaviour Change Interventions**

The NICE principles of effective behaviour change interventions (National Institute for Health and Care Excellence, 2007) were adhered to during intervention development. The current intervention aims to change school staff behaviours in relation to their confidence and knowledge in recognising and managing eating disorders and attitudes towards eating disorders.

The NICE principles are primarily designed for the development of more straightforward health-behaviour change interventions e.g. encouraging men to check for and report testicular masses. However, despite the slightly different and more complex nature of the intended behaviour change resulting from the current intervention, it was felt that the NICE principles offered a sound basis on which to develop the intervention and that many of the principles would be directly translatable to the current study.

The NICE Principles address the following key areas:

- Planning interventions and programmes
- Assessing social context
- Education and training
- Delivery
- Evaluating effectiveness

Taking each of these areas in turn I will discuss how steps were taken to develop the current intervention in line with the NICE recommendations.

### **5.1.1 Principle 1: Planning Interventions and Programmes**

The NICE Guidance states that researchers should:

***“Work in partnership with individuals, communities, organisations and populations to plan interventions and programmes to change health-related behaviour.”***

The current intervention was developed following extensive consultation with school staff and students as outlined in chapters 2, 3 and 4 of this thesis. This consultation was designed to gain a thorough understanding of the context in which the intervention was to be developed; to give a clear direction as to the key areas which the intervention should look to address. This was to ensure the

intervention is as relevant as possible and to draw on existing best practice already occurring within school settings.

### **5.1.2 Principle 2: Assessing Social Context**

The NICE Guidance states that researchers should:

***“Consider in detail the social and environmental context and how it could impact on the effectiveness of the intervention programme.”***

In order to ensure that the current intervention was relevant to as broad a range of schools as possible, during the consultation phase (outlined in chapters 2,3 and 4) participants were recruited from a wide range of schools including:

- Schools which achieved highly and those which were struggling academically.
- Schools whose students paid a fee to attend and schools whose students did not.
- Co-educational schools and single gender schools.
- Mainstream schools and special education schools.
- Schools from a wide range of geographical locations.
- Schools with higher and lower proportion of students on free school meals (this is a quasi-measure of social economic status).
- Schools who were considered to be performing well according to Ofsted (the UK school inspectorate) and those who were considered to be failing.
- Boarding schools and day schools.

Gathering data from such a wide range of school types enabled us to understand the specific issues faced by students and staff at schools of different types, serving different populations and to carefully consider how best to tailor the intervention to meet these differing needs. For example, staff from schools with a high number of Muslim students were particularly interested to learn about issues related to Ramadan and how to address these effectively.

### **5.1.3 Principle 3: Education and Training**

The NICE Guidance states that researchers should:

***“Provide training for those involved in changing people’s health-related behaviour.”***

The current intervention is a training programme, so by its very nature it fulfils Principle 3 of the NICE guidance. The training programme was designed to be suitable for, and accessible to, entire school staff bodies including support staff and non-teaching staff. The rationale behind this was that enabling a wide range of school staff to recognise eating disorders, and offer appropriate support to those students affected, would increase the rate at which eating disorders were picked up. It would also mean that all school staff were prepared for impromptu disclosures and would be able to respond in an appropriate and supportive manner conducive to recovery.

#### **5.1.4 Principle 4: Delivery**

The NICE Guidance states that researchers should:

***“Identify and build on the strengths of individuals and communities and the relationships within communities”***

The current intervention very much fulfils this recommendation. The intervention encourages schools to nominate a key person to take responsibility for eating disorders within the school. That person is responsible for ensuring all staff are trained and that accurate records are kept with regards to all students at risk of, suffering from, or recovering from an eating disorder. In addition, the training recognises the fact that students will often show a preference for confiding in a specific member of staff, even if that staff member does not hold a position within the staff body that would naturally lend itself to facilitation of the recovery process. The training aims to build the capacity of all staff members so that they are in a good position to work alongside a student in recovery where this is considered appropriate by the student, school and parents. This was considered important as student consultation highlighted the fact that often, there were members of staff who did not specifically hold caring roles, but who students felt at ease with and trusted. I felt that the skills and abilities of such staff to relate to their students should be embraced and expanded upon in order to facilitate recovery in students with eating disorders.

The training programme also recognises the role of the community in eating disorder recovery and includes recommendations about how to develop an eating disorder recovery team so that all key stakeholders in a student's recovery can work together to support the student. This may include friends, parents, school

staff and external health providers for example. A person-centred approach is outlined and recommended so that the student is at the heart of the recovery process and is able to benefit directly from the support of their whole recovery team. Additionally, the role of peers during the recovery process is specifically discussed with ideas both for keeping peers safe, and for enabling them to safely and proactively support the recovery process.

### **5.1.5 Principle 5: Evaluating Effectiveness**

The NICE Guidance states that researchers should:

***“Ensure that, wherever possible, the following elements of behaviour change interventions and programmes are evaluated using appropriate process or outcome measures: effectiveness, acceptability, feasibility, equity, safety.”***

Specific outcome measures were developed for the current intervention in order to measure its effectiveness in terms of improving knowledge, attitudes and confidence with regards to eating disorders (see section 5.3 below). Acceptability and feasibility were assessed using a post-intervention evaluation form.

Potential issues concerning equity and safety had been considered at length during the King’s College London ethics approval process. The result was that the intervention was developed to be suitable for and made available to a wide range of potential participants including those of different genders, ages, experiences and ethnic minorities. It was important to specifically consider the

safety of participants who may have had personal experiences of eating disorders.

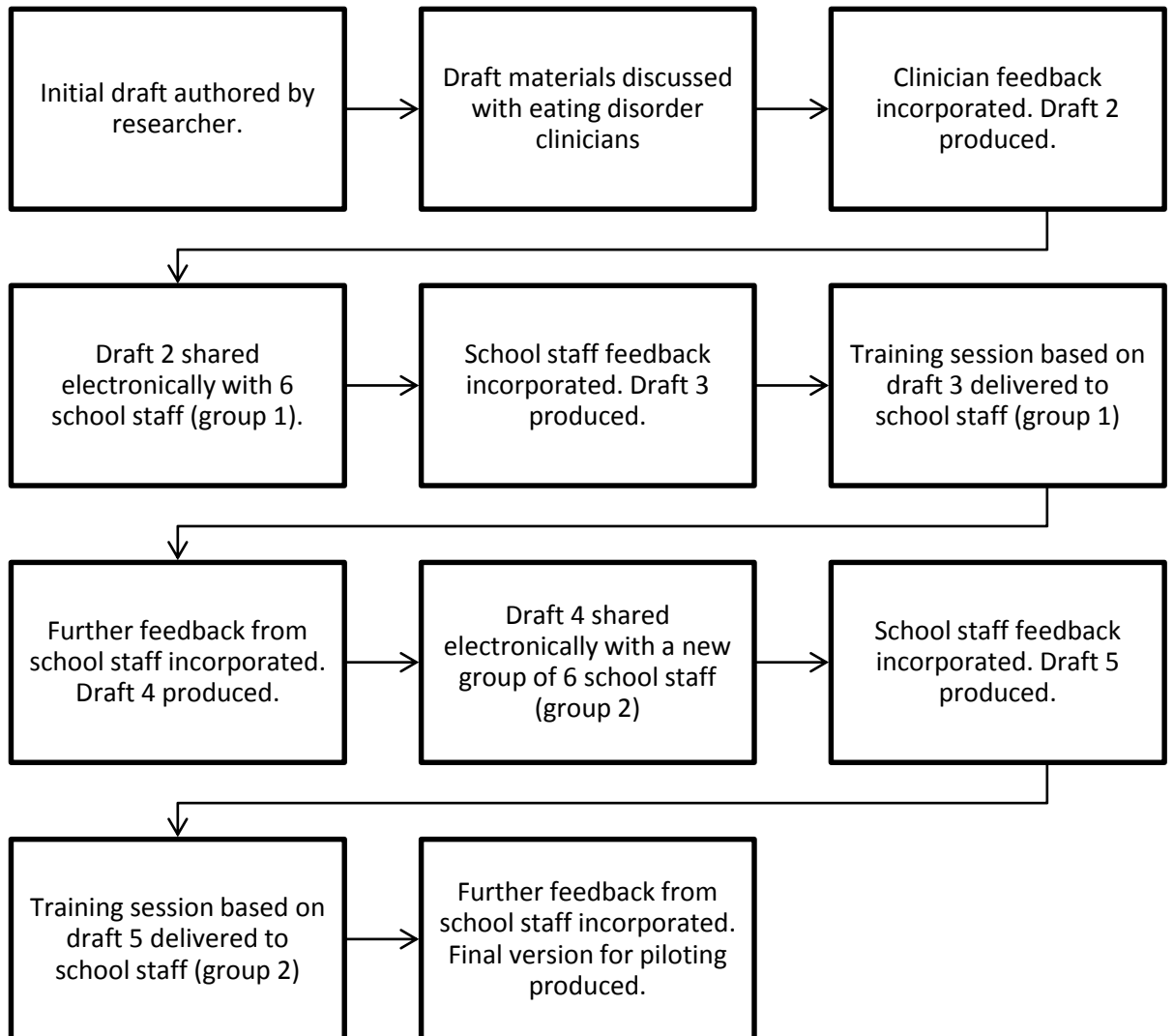
All participants were given the opportunity to opt out of the training at any point and were fully briefed about how and where to access follow-up support if this was considered necessary. Care was taken to create training materials which would not be overtly triggering to anyone with a pre-existing eating disorder. This was done by ensuring that there was no use of graphic images or detailed descriptions of weight-loss or purging mechanisms and no reference to specific weights of sufferers. This is in accordance with Beat - the eating disorder charity's guidelines on safe communication about eating disorders (Beat, 2014).

## **5.2 Intervention Content and Delivery**

The authoring process for content development is outlined below followed by an overview and explanation of the content which was contained within the final version of the intervention. Finally, the method of delivery is considered briefly.

### **5.2.1 The Authoring Process**

Care was taken to ensure that each of the four sessions was relevant and practical for the target audience by using an authoring process which involved multiple feedback loops and small pilot phases. The authoring process for each of the intervention sessions is outlined in figure 2.



**Figure 2 - Authoring process for each intervention session**

An initial draft for a session was authored by the researcher. This draft was discussed with eating disorders clinicians at the Institute of Psychiatry whose feedback was incorporated. Next, the session was shared electronically with six school staff who provided feedback which was incorporated into the training sessions. Then the training session was delivered to the six school staff who provided further feedback. Once this had been incorporated, the materials were shared electronically with a further six school staff who provided feedback which was incorporated. Finally, the session was delivered to the second set of six school staff for final feedback. Once this feedback was incorporated, the session was considered ready to pilot.

### **5.2.2 Content Outline and Rationale**

The content and delivery style of the intervention was developed in response to the consultation phase of the current project as outlined in chapters 2, 3 and 4.

The intervention was designed to be delivered in four 90 minutes sessions which could be completed within one school day as the consultation phase had informed us that this was the maximum amount of time that most schools would be able to set aside for training of this type.

The training curriculum is outlined briefly in table 4 and more fully in the text below. A full copy of the supporting materials provided to all participants is provided in Appendix F.

|  |
|--|
| <p><b>Session One: Introduction to eating disorders</b></p> <p>What is an eating disorder?   Why do people suffer from eating disorders?   Anorexia Nervosa   Bulimia Nervosa   Binge Eating Disorder   Sub-clinical eating disorders   What role can school staff have?   Risk factors   Early symptoms</p>   |
| <p><b>Session Two: When and how to talk to students causing concern</b></p> <p>How can you encourage disclosures – common pitfalls   When should you approach a student you're concerned about?   How should you react when a student confides in you?   Practical listening skills</p>  |
| <p><b>Session Three: Working with parents, staff and students</b></p> <p>Overcoming objections to informing parents   Meeting with parents   Talking to parents on the phone   Parents – dealing with difficult scenarios   Tackling the eating disorders taboo in school   Teaching students about eating disorders</p>   |
| <p><b>Session Four: Providing a supportive environment during recovery</b></p> <p>Maintaining contact when a student becomes an inpatient   Adjusting academic expectations   Ideas to help at mealtimes   Safe participation in school sports   students in recovery – what not to say &amp; helpful things to do   How to handle a rough patch   What does recovery look like?</p> |

***Table 4 - Eating Disorders - One day training curriculum***

Below I briefly outline the desired teaching outcomes for each session along with information about the decisions made with regards to the specific content included in each session of the intervention. Where appropriate I have also discussed any underlying theories or methodologies drawn on and explained why these were used.

### **5.2.2.1 Session One: Introduction to Eating Disorders**

The aim of session one was to give participants a basic overview of what eating disorders are and why people suffer from them. Participants learnt about the most common types of eating disorders and the risk factors and early symptoms they could look out for.

The learning objectives for session one were to:

- Understand the role school staff can play in supporting students with eating disorders
- Know what an eating disorder is and some of the reasons people suffer from them
- Understand the symptoms of anorexia nervosa, bulimia nervosa and binge eating disorder
- Have a better understanding of social, family and personality factors which may put students at increased risk of developing an eating disorder
- Have a good idea of the early symptoms to look out for which may indicate a student is developing an eating disorder

## **Eating Disorder Overview**

Session one started with a very basic introduction to eating disorders, as the consultation work carried out in studies one, two and three indicated that some school staff did not have even a most basic level of knowledge of eating disorders. As the training was designed to meet the needs of the entire staff body of the school, it was necessary to bear in mind the needs of the learners with the least knowledge. Providing basic information about eating disorders also provided a good opportunity to correct inaccurate beliefs or misunderstandings of those staff whose knowledge was more advanced.

## **Why People Develop Eating Disorders**

Specific school-based case studies were used to help participants understand why young people might develop an eating disorder. The aim of this was to enhance school staff's understanding about the underlying causes for eating disorders and increase their empathy with young people suffering from eating disorders. In study one, young people reported that they did not feel school staff understood them and did not consistently take eating disorders concerns seriously, hence the decision to include this topic.

## **Eating Disorder Symptoms**

When outlining the symptoms of eating disorders, particular attention was paid to the diagnostic criteria that doctors may be looking for in order to be able to make a referral to the child and adolescent mental health service (CAMHS) or other specialist services. The rationale behind this was that in study three, school staff

had reported difficulties in obtaining referrals to specialist services and it was felt that if school staff were better able to inform parents about the symptoms to highlight to their GP, this may aid diagnosis and therefore improve referral rates. Additionally, participants were made aware of the catch-all category of eating disorders not otherwise specified (the materials were written and delivered prior to the updates outlined in DSM-5). And the importance of recognising and managing those students with sub-clinical eating disorders was also highlighted as, whilst these cases often will not warrant a referral to specialist services, there is a great deal the school may be able to do to support in the early stages of an eating disorder and this early intervention may prevent the development of the full syndrome.

### **Eating Disorder Risk Factors**

Participants were taught about relevant risk factors for eating disorders. This consisted both of risk factors which they may be made aware of in their wider role as educators such as many of those pertaining to family life and also those risk factors which may be directly observable within the school setting such as personality and social factors. Care was taken only to teach participants about risk factors that they may be likely to observe or learn about from students to avoid overloading participants with superfluous knowledge.

### **Early Symptoms of Eating Disorders**

School staff were taught about a range of early symptoms which may indicate that a young person was suffering from an eating disorder. Care was taken to

adapt the early symptoms to the school setting and only to include symptoms that were relevant to the school environment in order to make the learning as relevant as possible to school staff.

#### **5.2.2.2 Session Two: When and How to Talk to Students Causing Concern**

The aim of session two was to help school staff understand when and how to talk to students about eating disorders. It included strategies for encouraging students to share their concerns about themselves and their peers and how to respond to student disclosures.

The learning objectives for session two were to:

- Understand when to approach a student causing concern
- Understand how to encourage students to share their concerns
- Have an action plan for overcoming common pitfalls to disclosure
- Understand how to react when a student confides in you
- Be able to employ basic motivational interviewing skills to encourage change

#### **Encouraging Disclosures**

In studies two and three, many school staff shared that there had been times when they had had concerns about a student but they had not known how to encourage that student to talk about their concerns without making the situation worse. The suggestions included for encouraging student disclosures were a combination of suggestions from students and strategies that teachers had found helpful in the past.

School staff were actively encouraged to either encourage a disclosure from a student or to pass on their concerns to the appropriate member of staff as quickly as possible. The danger of a 'watchful waiting' approach was outlined and it was made clear to participants that the more embedded eating disordered behaviours were allowed to become, the more difficult and protracted they became to treat.

### **Barriers to Disclosure**

In study one, students identified a series of barriers which would prevent them from confiding in a teacher about their own eating disorder concerns or their concerns about a friend. These potential barriers were diverse and included difficulties such as a lack of private places to have conversations with a trusted member of staff and a lack of trust in teachers to respond to eating disorder concerns appropriately. These barriers varied from school to school so participants were encouraged to brainstorm specific barriers to disclosure in their school and to think of practical ways to overcome them.

### **Responding to Disclosures**

Participants were taught basic active listening and positive body language skills as used in the client-centred approach to counselling pioneered by Carl Rogers (Rogers, 1951). This approach was decided upon because students in study one had made it clear that, above all else, when they made a disclosure about an eating disorder, they wanted to be listened to. Participants were also provided with strategies to overcome the issue of not being able to promise confidentiality,

whilst still maintaining the student's trust. This is a difficulty specific to the school environment where school staff have a duty of care to refer student disclosures on to the appropriate member of staff and / or a parent if the student is at risk of harming themselves. Teachers in studies two and three had discussed the tension this placed on relationships at times of disclosure, so strategies for proactively handling confidentiality effectively were developed with school staff during the authoring process and shared with participants as part of the intervention.

Participants were also taught about the importance of record keeping and of developing clear lines of responsibility within the school.

### **Motivational Interviewing Skills**

Many students are not ready to address their eating disorder at the point at which they share their concerns with a member of school staff. In order to enable school staff to support students in understanding the need to make a change in their behaviour and address their food related issues, participants were taught the basics of motivational interviewing (Miller & Rollnick, 2002). This is a technique which is often employed by clinicians working with patients with eating disorders. A very basic overview of motivational interviewing techniques was provided to participants using school based-examples. Participants all had a chance to practice motivational interviewing skills in role play situations.

### **5.2.2.3 Session Three: Working with Parents, Staff and Students**

The aim of session three was to enable school staff to effectively work with students, their parents and school staff once they have been made aware of a student's difficulties

The learning objectives for session three were to:

- Understand how to overcome a student's objections to informing their parents
- Develop some ideas for working with parents and tackling difficult scenarios
- Be confident discussing eating disorders with parents either face to face or on the phone
- Understand why and how to tackle the eating disorders taboo in the staffroom
- Know the dos and don'ts when teaching students about eating disorders

### **Overcoming Objections to Informing Parents**

Whilst schools have a duty of care to inform parents about a young person's eating disorder, the young person concerned is often very reluctant for their parents to be informed. School staff in sessions two and three outlined this as a difficult problem to navigate so specific strategies for managing these conversations were explored in the training session.

## **Working with Parents**

It was clear from studies two and three that whilst parents can provide excellent support during the eating disorder recovery process, that this relationship can sometimes start off quite negatively. Specific strategies for developing a positive relationship with parents and overcoming difficulties were explored drawing on experiences shared by teachers during the authoring phase and also drawing on the scenarios encountered by the more experienced teachers in each training session.

## **Overcoming Stigma**

In order to help overcome the stigma towards mental illness which school staff in studies two and three suggested was common in schools, an effort was made throughout the training sessions to increase participants' awareness about eating disorders and to dispel inaccurate beliefs about eating disorders. This is in line with Penn & Couture's (2002) strategies for reducing stigma toward persons with mental illness which advocate the role of education in reducing stigma. In addition to attempting to reduce any stigma amongst participants attending the training, participants were taught how they might also go on to reduce stigma throughout their school staff body by ensuring all staff were trained about eating disorders and knew how and when to offer appropriate support.

## **Teaching Students about Eating Disorders**

In order to increase staff confidence in teaching their students about eating disorders and to prevent staff from teaching about eating disorders in such a way

that might prove harmful to their students, participants were taught briefly about how they could discuss eating disorders with their students in a way that was least likely to trigger eating disorder symptoms in those students most at risk. This information was based on guidance received from Beat, the eating disorders charity who regularly deliver eating disorders sessions to school students and have developed a specific training programme for young people delivering eating disorders workshops and assemblies in schools.

#### **5.2.2.4 Session Four: Providing a Supportive Environment during Recovery**

The aim of session four was to enable school staff to effectively support students recovering from eating disorders.

The learning objectives for session four were to:

- Be comfortable maintaining appropriate contact if a student becomes an inpatient
- Understand why and how to alter academic expectations for students in recovery
- Know how to set up a recovery team with the student at its heart
- Be able to support a student in recovery at mealtimes
- Understand how to help a student in recovery participate in schools sports safely
- Know what to say and what not to say

- Be able to spot the early symptoms of a relapse and respond appropriately
- Have the tools to develop an eating disorders policy for your school

### **Working with Inpatients**

In study three, school staff had expressed difficulties in working alongside specialist mental health providers when a student was in recovery. Based on information from clinicians, and feedback from school staff who had been successful in building positive relationships with students' clinicians, information was provided to participants about what they could expect during the period that a student was an inpatient. The aim was both to ensure that participants had realistic expectations and also to ensure that they provided appropriate support, where possible, during a student's period of absence. The issue of academic expectations was also explored as there is often a tension in schools between academic achievement and student well-being and this is exacerbated when a student is unwell.

### **Supporting Recovery**

In terms of supporting students during the recovery period, a strategy was developed based on person centred planning (Thompson, Kilbane & Sanderson, 2007). This puts the student at the heart of the recovery process and involves all major stakeholders in their recovery. The student, relevant school staff, parents and any external health providers are all present at meetings and the student has a key role in explaining what difficulties they needed to overcome whilst the other

people present explore how they might be able to help the student meet these needs. This approach has proven successful when working with special needs students resistant to behaviour change at times of transition (Ward, Mallett, Heslop, & Simons, 2003) and whilst it has not been specifically used with students with eating disorders within a school context previously, feedback from school staff involved in the authoring process was positive that this could be a positive and effective approach to employ.

### **Practical Strategies**

School staff in study two specifically requested help with supporting students during mealtimes, whether to allow students with anorexia nervosa to participate in sporting activities and what not to say during recovery. The ideas shared were based on a combination of the good practice observed in other schools and clinician input.

#### **5.2.3 Content Delivery**

The intervention was developed as a one day face to face training session broken down into four sessions of approximately ninety minutes. The content was designed to be highly interactive and several real-life case studies were adapted and anonymised for use in the training sessions to make the training feel as relevant as possible. Due to the breadth and depth of skills and knowledge to be conveyed in a limited time-frame, some material was delivered in a didactic style. However, this was limited as far as possible making way for more interactive teaching methods such as problem solving activities, pair and share exercises, role play and group learning.

Whilst developing and delivering the teaching materials for the intervention, Knowles' assumptions of andragogy were borne in mind and adhered to. These are:

- Adults need to know why they need to learn something
- Adults need to learn experientially
- Adults approach learning as problem-solving,
- Adults learn best when the topic is of immediate value.

(Based on Knowles, 1984, appendix D).

The intervention was developed and delivered by the researcher who had experience of developing and delivering adult training and had conducted the consultation phases of the project so was well placed to answer any questions from participants. As well as following the prescribed programme, it was deemed important that there should be plenty of opportunity for participants to ask questions and all participants were provided with extensive materials to take away which covered all of the topics they had been taught during the course of the day (see Appendix F for a full copy). These materials were provided for reference only and there was no expectation for the participants to specifically follow up the training in any way.

### **5.3 Development of Outcome Measures**

No specific measures of school staff eating disorders knowledge, attitude and confidence had been previously developed, so it was decided to develop a

specific measure for the purpose of the current study. The measure developed was informed by previous work in the field of measuring GP knowledge and attitudes towards eating disorders (Currin, Waller & Schmidt, 2009), as well as feedback from school staff about their experiences of eating disorders within UK schools during the consultation phase of this thesis (see chapters 2, 3 and 4) and the current literature. A full copy of the measure can be seen in Appendix E; a summary is included below in table 5.

### **5.3.1 Development and pretesting**

An initial version of the measure was developed by the researcher based on Currin et al's attitude and knowledge questionnaire and the results of the school staff consultation outlined in chapters three and four of the current thesis. This initial version was discussed with a focus group of six school staff who were representative of the intended users of the measure and were recruited via face to face meetings of two teaching unions, (one aimed at teaching staff, one aimed at school leaders). The group was made up of four regular teaching staff and two senior staff. The school staff fed back changes intended to make the questions as relevant as possible to staff working in a school setting and to ensure that the measure adequately drew upon aspects of confidence, attitudes and knowledge which would be important within a school setting.

Face validity was assessed when a second version of the questionnaire was then disseminated to a panel of eight school staff who had not previously seen the measure who each viewed the measure independently before coming together as a focus group to discuss the structure and content of items contained. This

panel was also recruited via teaching union meetings and consisted of six regular teaching staff and two senior staff

No problems with comprehension were reported. Minor suggestions for restructuring and rewording of items were adopted in order to improve ease of completion of the measure. The panel agreed that the measure had adequate content validity in that it contained a representative sample of items relevant to staff experiences of eating disorders in school.

Test-retest reliability was tested by 24 school staff recruited via teaching union meetings. The group consisted of 18 regular teaching staff and six school leaders. They completed the measure nine days apart with kappa coefficients ranging from 0.81 to 0.87 indicating that the measure had good test-retest reliability. The measure was shown to have good internal consistency with Cronbach's Alpha coefficients of 0.72, 0.81 and 0.78 for the attitude, knowledge and confidence elements respectively.

|                  | <b>Item detail</b>   | <b>Response</b>                           |
|------------------|--|---|
| <b>Knowledge</b> | My overall knowledge about eating disorders  | 1 (no knowledge) -<br>10 (full knowledge) |
|                  | My knowledge about the risk factors and causes of eating disorders                                       | 1 (no knowledge) -<br>10 (full knowledge) |
|                  | My knowledge about the symptoms seen in eating disorders   | 1 (no knowledge) -<br>10 (full knowledge) |
|                  | My knowledge about how to support a student with an eating disorder                                      | 1 (no knowledge) -<br>10 (full knowledge) |
| <b>Attitude</b>  | Symptoms of eating disorders are fairly common and will resolve over time without treatment              | Strongly agree - strongly disagree (1-4)  |
|                  | Eating disorders are severe mental illnesses   | Strongly agree - strongly disagree (1-4)  |
|                  | Students with eating disorders are to blame for their own condition                                      | Strongly agree - strongly disagree (1-4)  |
|                  | Eating disorders have major consequences on the sufferer's quality of life                               | Strongly disagree - strongly agree (1-4)  |
|                  | Students with eating disorders cause difficulties for school staff                                       | Strongly agree - strongly disagree (1-4)  |
|                  | Students with eating disorders cause difficulties for their peers  | Strongly agree - strongly disagree (1-4)  |
|                  | Teaching students about eating disorders will make them more likely to develop them                      | Strongly agree - strongly disagree (1-4)  |
|                  | School staff should be involved in the treatment and recovery process for students with eating disorders | Strongly disagree - strongly agree (1-4)  |
|                  | Sufferers should not continue to attend school as other students may copy their behaviour                | Strongly agree - strongly disagree (1-4)  |
|                  | School staff should review their academic expectations of students with eating disorders                 | Strongly disagree - strongly agree (1-4)  |

|                   |  |  |
|-------------------|--|--|
|                   | The school has a responsibility to support students suffering from eating disorders                                    | Strongly disagree - strongly agree (1-4) |
|                   | There is a lot the school can do to help during the recovery process   | Strongly disagree - strongly agree (1-4) |
| <b>Confidence</b> | My confidence in my ability to recognise the warning signs of an eating disorder in one of my students                 | 1 (no confidence) - 10 (full confidence) |
|                   | My confidence in my ability to support a student with an eating disorder   | 1 (no confidence) - 10 (full confidence) |
|                   | My confidence in my ability to successfully work with the parent/carer of a student with an eating disorder            | 1 (no confidence) - 10 (full confidence) |
|                   | My confidence teaching a lesson exploring student knowledge and attitudes about eating disorders?                      | 1 (no confidence) - 10 (full confidence) |
|                   | How confident would you feel in dealing with this situation? (female at risk from anorexia case study – see table 6)   | 1 (no confidence) - 10 (full confidence) |
|                   | How confident would you feel in dealing with this situation? (male potential eating disorder case study – see table 6) | 1 (no confidence) - 10 (full confidence) |
|                   | How confident would you feel in dealing with this situation? (female bulimia case study– see table 6)                  | 1 (no confidence) - 10 (full confidence) |

***Table 5 - Eating disorder knowledge, attitude and confidence summary***

**Female at risk from anorexia case study:**

12-year-old Zeena is a model student. She works very hard at everything she does and excels academically. She is usually top of the class and is disappointed even to come second. She always submits her homework on time and it is clear that she dedicates a lot of time to her studies at home as well as at school.

Zeena has recently been fasting for Ramadan and decided to show her dedication to her faith by fasting beyond Ramadan. She has had her parents full support on this – they are very proud of Zeena’s dedication to her faith. In fact, her parents play a huge role in her life, they are very encouraging of her academic achievements too and always encourage her to achieve to her very best and believe that she can achieve anything she wants to if she works hard enough.

Zeena is well liked by her classmates though she seems a little more withdrawn in class than usual and has taken to spending many of her lunchtimes in the library alone. Although she is only in year 8, she has ambitions to study veterinary science and she understands from her parents and older brother that in order to realise her goal she must work very hard.

**Male potential eating disorder case study:**

15-year-old Simon is not a natural sportsman, but this year he has been putting his all into the football team. He has been attending every practice and keeping his fitness up by frequently visiting the gym between practices.

The slightly chubby looks that earned him the nickname 'Podge' in Year 9 are a thing of the past and instead Simon is building up quite a six-pack. He's even beginning to get some rather giggly attention from the girls – though he doesn't seem interested at all, preferring to shy away from the attention and work out in the gym during his lunch breaks and after school.

Simon lives with his younger brother and his mum who has been a single parent to both boys for as long as you have known them. She is very supportive of Simon and his brother but isn't always able to attend parents evenings as she works long hours to support the family.

**Female bulimia case study:**

16-year-old Karly is in your tutor group. She has recently been absent from school for half a term receiving treatment for Bulimia. She is due to start back at school soon. Whilst her condition is much improved and her physical health no longer in immediate danger, it has been made clear to you that Karly will require quite significant support to ensure she does not relapse. She is still in the process of recovery and will be for quite some time but her doctors and parents have agreed that with an appropriately supportive environment, it would be beneficial for her to continue her recovery in school. She's a few months away from sitting her GCSEs and has several good friends at school though they have not seen much of her during her absence.

***Table 6 - case vignettes designed to test participant confidence in managing eating disorder***

### **5.3.2 Knowledge Items**

Four items were included which aimed to measure participant's self-reported knowledge about eating disorders. Participants rated their knowledge from 1-10 (where 1=no knowledge and 10=full knowledge) with a maximum possible score of 40. Gaining an understanding of participants' knowledge of eating disorders was considered important because participants in the consultation phase of the current study (chapters 2,3 and 4) referred to the general lack of knowledge school staff had about eating disorders. This is in line with previous research which has indicated a willingness on the part of some school staff to learn about eating disorders, but a current lack of knowledge. For example, a survey of 114 US school staff, Neumark-Sztainer, Story, & Coller, (1999) reported that 72% of participants were highly motivated to learn about eating disorders but that none of the participants had been involved in training at the time of the survey.

Items were included in the current study's knowledge measure which were designed to measure school staff's perceived knowledge about risk factors and symptoms of eating disorders as knowledge in these areas are key to early intervention and prevention of eating disorders (Manitoba Health, 2006).

Subjective rather than objective measures of knowledge were used because my past experience of teaching adults has shown that commencing a training session with a test of knowledge that many participants are likely to fail, or perceive that they have failed, results in a negative mindset from participants whose belief in their own abilities and their ability to learn about the topic is decreased as a result of the test. This results in an atmosphere that is not conducive to learning. This

is in line with Carol Dweck's influential 'mindset' pedagogical theories (Dweck, 2006) which suggests that we tend towards a 'fixed mindset' and we believe that our basic qualities and abilities are fixed traits. Therefore a person who perceives that they have performed particularly badly on a test will often assume this is because they 'are not good' at the item being tested and that those who achieve more highly, do so due to a natural talent for the topic. Our belief that our lack of ability is innate acts as a barrier to future learning on the topic. Of course, this problem could exist without a test but is likely to be exacerbated by a test, and especially one which many participants are expected to find difficult.

### **5.3.3 Attitude Items**

Twelve attitude items were included and participants were asked to indicate their agreement by stating whether they strongly disagreed, disagreed, agreed or strongly agreed. Understanding the attitudes of school staff towards eating disorders was considered important because both school staff and students had highlighted the negative impact that stigmatising, catastrophising and otherwise unhelpful beliefs about eating disorders can have upon the school's ability to provide effective support. Previous work on stigma informed many of the items included (Crisp, Gelder, Rix, Meltzer, & Rowlands 2000; Fleming & Szmukler, 1992). Participants' responses were converted to numerical responses (1-4) for data analysis purposes. A score of 1 was used to indicate the least desired response whilst a score of 4 was used to indicate the most desired response. This meant that for some items 'strongly agree' was awarded a score of 1, with strongly disagree being awarded a score of 4 whilst for other items this scoring was reversed. The way in which each item is scored is included in table 5. The maximum possible attitude score was 48 with higher scores indicating that

participants' attitudes were more likely to be supportive towards students with eating disorders (e.g. less stigmatising and less catastrophising).

#### **5.3.4 Confidence Items**

In addition to items designed to measure knowledge and attitudes, the current measure also included seven items designed to measure confidence. Items were scored from 1 (no confidence) to 10 (full confidence) with a maximum possible score of 70. The importance of school staff confidence was highlighted during the consultation phase of the study with school staff often reporting a lack of confidence in providing appropriate support to young people affected by eating disorders, even where knowledge was not lacking:

*"I know what eating disorders are, I've read a lot about the warning signs and things. I'd say I'm relatively well informed compared to my colleagues; but it doesn't make any difference in practice. The reality is that I'm terrified of actually doing or saying anything, for fear that I'll get it all wrong and make things worse."*  
(PE Teacher, Secondary School).

This discrepancy between knowledge and confidence is also mirrored by Jones, Saeidi & Morgan's recent study (2013) where 60.5% of psychiatrists reported that they had the knowledge to diagnose an eating disorder but only 14.9% were confident in their ability to manage these conditions.

Three of the confidence items included consisted of case vignettes (see table 6). Case Vignettes were developed to try and gain a better understanding of

participants' confidence in identifying and managing student eating disorders. These vignettes were all based on case studies shared by school staff who participated in study two (see chapter 3). The rationale for using real rather than imagined case vignettes was that real vignettes would better portray the types of situations school staff were likely to encounter. The information presented within the vignettes could be considered incomplete or ambiguous. This accurately reflects eating disorder presentation within school, where staff are likely to have limited access to information about the case. One of the three vignettes outlined the case of a male student. It was considered important to include a male example as previous literature points to the importance of successful eating disorder prevention and interventions addressing both male and female eating disorders (Manitoba Health, 2006). In addition to this, evidence from Hudson, et al's (2007) face-to-face household survey of 9282 US adults indicates that male eating disorders make up to a third of cases at a community level, meaning school staff are more likely to encounter male eating disorders than eating disorder clinicians as the proportion of males diagnosed with eating disorders is far lower (Micali et al., 2013).

### **5.3.5 Validity**

Face validity was judged by a panel of 18 school staff who met as two focus groups to discuss the structure and content of items in the measure. The panel provided useful comments for wording and restructuring of items to improve the ease of understanding and completion, but reported no technical difficulties or problems with comprehension. The panel agreed that the measure had adequate content validity in that it contained a representative sample of items relevant to school staff knowledge, attitudes and confidence with regards to eating disorders.

12 school staff completed the measure 7 days apart with kappa coefficients ranging from 0.78 to 0.86.

## **5.4 Summary**

This chapter outlined the development and content of a one day face to face training programme for school staff targeted at improving knowledge, attitudes and confidence towards the identification and management of eating disorders in school students.

The intervention was developed in line with the NICE Principles for effective behaviour change interventions (National Institute for Health and Care Excellence, 2007). The specific content was developed in conjunction with school staff and clinicians and was informed by best practice from related fields and included skills and ideas drawn from motivational interviewing (Miller & Rollnick, 2002), Rogerian Counselling (Rogers, 1951) and person centred planning (Thompson, Kilbane & Sanderson, 2007). Care was taken to tailor the content to ensure it was highly relevant to the school setting.

The intervention was designed to be delivered face to face and adhered to Knowles' assumptions of andragogy (Knowles, 1984) with the aim of making it engaging for an adult audience, in order to improve retention of the key skills and knowledge being conveyed.

The development of outcome measures was also outlined in the current chapter. The outcome measures were informed by previous measures developed for clinicians but were designed to suit participants from a school setting. The

measures were developed to capture participants' self-reported levels of knowledge, attitude and confidence in recognising and managing eating disorders in the school student population.

# **Chapter 6**

**– Study Four –**

**Feasibility Study of a  
One Day Eating Disorders  
Training Programme for  
UK Secondary School Staff**

The following chapter describes the feasibility study of a brief face to face intervention which aims to improve school staff knowledge about, attitudes towards and confidence in identifying and managing student eating disorders. In chapter five, the development of the intervention was considered in the context of the NICE Principles of Effective Behaviour Change Interventions (National Institute for Health and Care Excellence, 2007) and the specific content of the intervention was discussed. The current chapter reports the findings from a feasibility study of the intervention with 45 school staff. Strengths, limitations and implications for future research are considered.

## **6.1 Introduction**

Eating disorders have a high rate of onset during adolescence (Currin et al., 2005; Health and Social Care Information Centre, 2012), the period during which young people attend secondary / high school. Research indicates that up to 1.5% of high school students suffer from a diagnosable eating disorder (Smink, van Hoeken & Hoek, 2012; Hoek, 2006; Swanson et al., 2011) and up to 15% experience sub-clinical eating disturbance (Neumark-Sztainer & Hannan, 2000). However, many of these cases go undetected and untreated (Jaite et al, in press).

As students spend an average of forty hours a week attending school (Smolak, Levine & Shisslak, 2001) school staff are in a good position to pick up on the physical and behavioural symptoms that are present during the early stages of eating disorders (Shaw, Stice & Becker, 2009). Furthermore, school staff are well placed to offer ongoing support as young people have indicated that they are up to nine times more likely to talk to a teacher than a parent about food related

difficulties (Beat, 2007), and the online surveys of student and school staff experiences of eating disorders outlined in chapters two and three of this thesis provide clear evidence that school staff can have a very positive impact during eating disorder recovery.

The online survey of school staff experiences of eating disorders outlined in chapter three of the current thesis indicates that school staff are keen to be involved in the detection and management of eating disorders but feel unable to do so due to lack of training; these findings reflect previous studies; for example, a survey of 114 US school staff, Neumark-Sztainer, Story, & Collier, (1999) reported that 72% of participants were highly motivated to learn about eating disorders but that none of the participants had been involved in training at the time of the survey.

Results outlined in chapter three of this thesis state that school staff have indicated a need for further information and skills in the following areas in order to improve their ability to identify and managing student eating difficulties:

- Information about the different types of eating disorders
- Understanding the risk factors and early symptoms for eating disorders
- Ideas about how to tackle the taboo / stigma associated with eating disorders at school
- Ideas for communicating effectively and sensitively with staff and students about eating disorders

- Strategies for developing positive relationships with parents of students with eating disorders
- Practical ideas for supporting students recovering from an eating disorder

This enthusiasm for training needs to be tempered with the need to fit within school time and budgetary constraints. School staff have a relatively limited amount of time available for professional development and many other pressures on this development time (Kennedy, & McKay, 2011).

If effective, such training could have long-lasting implications for affected young people as the early detection and management of eating disorders is key to ensuring long-term outcomes (Treasure, Claudino & Zucker, 2010) and minimising the damage eating disorders frequently cause to academic and social development (Colman et al 2009; Farrington, Healey, & Knapp, 2004).

The feasibility study outlined in the current chapter, aims to assess whether it is possible to improve school staff's scores on measures of knowledge about, attitudes towards and confidence in dealing with eating disorders following a single day's face to face training and if so, whether these improved scores can be maintained three months later.

## **6.2 Method**

### **6.2.1 Participants**

Participants were 45 members of school staff including school nurses, teachers, teaching assistants and senior staff from two co-educational, state secondary schools in the UK. Participants were aged between 24 and 59 (mean 39, SD 11.23). Six participants were male, 39 were female. At least one participant from each school had taken part in the online survey of school staff experiences of eating disorders outlined in chapter two, and had indicated that their staff body would be interested in participating in eating disorders training. Training was available for 24 staff members of staff from each school – 48 staff members in total. Only 45 staff members completed the full day's training, two participants were absent due to illness and one had to leave the training to attend to school business.

The intervention was made available to all members of staff within each participating school via a lead staff member who was in communication with the researcher and had details of the training programme to be delivered. Participants were selected by the lead staff member on a first come, first served basis.

### **6.2.2 Procedure**

The intervention was delivered on participants' school premises to groups of a maximum of twelve school staff members. Prior to commencing training, staff were fully briefed and required to give written consent for their participation in the

study. Ethical approval was obtained from King's College London Research Ethics Committee (Ref PNM/09/10-110).

Participants completed the eating disorders knowledge, attitudes and confidence measure in hard copy at three time points; at the beginning of the day, before training commenced (T1 - baseline), at the end of the day, once training was completed (T2 – post-intervention), and again 3 months later (T3 – follow-up).

Post-intervention, participants also completed a short evaluation form designed to indicate acceptability of the intervention and to highlight areas for improvement. (See appendix G).

### **6.2.3 Statistical Analysis**

The significance of intragroup changes was determined using generalised estimating equations (GEE) models. GEE models were used rather than multilevel models as GEE models provide population averaged estimates rather than estimates for individual subjects and due to the robust standard errors they output. All analyses were performed using SPSS version 20.0 statistical software. All tests were 2-tailed, and P values of less than 0.05 were considered statistically significant. All variables were checked for normality, an assumption of GEE models, through observation of plots. All variables were found to be normally distributed.

Participants responded to each item in the measure on three occasions – T1 (baseline) T2 (post intervention) and T3 (3 months post intervention). Three GEE models were run for the three outcomes of knowledge, attitude and confidence with time (T1, T2 and T3) as an independent variable. This takes into account the correlations between the different time points due to repeated measures. Estimates of the effect of the intervention came from two coefficients in the model. A comparison between T1 and T2 responses was carried out to ascertain whether the intervention had a significant impact on participants' knowledge, attitude and confidence scores. Further matched post hoc tests were carried out between T2 and T3 to ascertain whether any significant changes which had been noted at T2 were maintained at T3 and between T1 and T3 to ascertain whether changes that had been maintained at T3 were still significantly different to T1.

Effect sizes (Cohen's d) for continuous outcomes were calculated by computing standardised differences in the estimated marginal means in self-reported scores of knowledge about, attitude towards and confidence in identifying and managing student eating disorders at:

- Baseline (T1) compared to directly post-intervention (T2) and
- Baseline (T1) compared to three months post intervention (T3) using the following formula:

$$d = \frac{(x_1 - x_2)}{s}$$

where  $X_1$  was time point one participants' scores adjusted mean,  $X_2$  was time point two participants' scores adjusted mean and  $s$  was the standard deviation for the whole sample.

## 6.3 Results

### 6.3.1 Demographic Information

The 45 participants represented a wide variety of roles including school nurses, teachers, teaching assistants and senior staff (see table 7). All participants were currently working at one of two state secondary schools in the UK. Participants were aged between 24 and 59 (mean 39, SD 11.23).

| Role   | Number | Percentage of Sample |
|--|--------|----------------------|
| School Nurse or Counsellor                                       | 3      | 7%                   |
| Teacher  | 22     | 49%                  |
| Teaching Assistant   | 14     | 31%                  |
| Middle or Senior Leadership Team (Head, deputy, department lead) | 6      | 13%                  |

**Table 7 - Participant roles**

The full results of the statistical analyses are shown in tables 8 and 9.

| Measure | Baseline (T1) |           | Post Intervention (T2) |           | Follow-up (T3) |           |
|---------|---------------|-----------|------------------------|-----------|----------------|-----------|
|         | n             | Mean (SD) | n                      | Mean (SD) | n              | Mean (SD) |

|                   |    |             |    |             |    |             |
|-------------------|----|-------------|----|-------------|----|-------------|
| <b>Knowledge</b>  | 45 | 17.1 (5.52) | 45 | 29.9 (5.36) | 45 | 29.3 (5.24) |
| <b>Attitude</b>   | 45 | 29.9 (1.18) | 45 | 37.9 (3.81) | 45 | 37.2 (3.61) |
| <b>Confidence</b> | 45 | 24.9 (9.86) | 45 | 48.7(9.61)  | 45 | 47.0 (9.34) |

**Table 8 - Estimated means and standard deviations**

| Measure           | Baseline (T1) to Post Intervention (T2) |            |                |       |             |
|-------------------|---|------------|----------------|-------|-------------|
|                   | B                                       | Hypothesis | 95% Confidence |       | Effect Size |
|                   |   | Test       | Interval       |       |             |
|                   |   | Sig.       | Lower          | Upper |             |
| <b>Knowledge</b>  | 12.8                                    | <0.01      | 11.3           | 14.4  | 0.8         |
| <b>Attitude</b>   | 8.1                                     | <0.01      | 7.0            | 9.1   | 0.8         |
| <b>Confidence</b> | 23.8                                    | <0.01      | 21.2           | 26.4  | 0.8         |

| Measure           | Baseline (T1) to Follow-up (T3) |            |                |       |             |
|-------------------|---------------------------------|------------|----------------|-------|-------------|
|                   | B                               | Hypothesis | 95% Confidence |       | Effect Size |
|                   |                                 | Test       | Interval       |       |             |
|                   |                                 | Sig.       | Lower          | Upper |             |
| <b>Knowledge</b>  | 12.2                            | <0.01      | 9.9            | 14.5  | 0.7         |
| <b>Attitude</b>   | 7.4                             | <0.01      | 6.3            | 8.4   | 0.8         |
| <b>Confidence</b> | 22.1                            | <0.01      | 17.9           | 26.3  | 0.8         |

### ***Table 9 - Post hoc analyses***

There was a statistically significant improvement (all p-values < 0.001) in participants' self-reported knowledge, attitude and confidence scores post intervention (T2) compared to baseline (T1) with a large effect size on all three comparisons (Cohen, 1994). These differences were maintained at the 3 month follow-up (T3) and there was no significant difference between the knowledge, attitude or confidence scores measured post intervention (T2) and at the three month follow-up (T3).

Knowledge scores increased from a mean of 17.1 (SE 0.76) at baseline to 29.9 (SE 0.78) post intervention with a significance of <0.001 and a large effect size of 0.8. Knowledge scores at three months post intervention were 29.3 (SE 0.76) an increase from baseline with a significance of <0.001 and a medium effect size of 0.7.

Attitude scores increased from a mean of 29.8 (SE 0.17) at baseline to 37.9 (SE 0.56) post intervention with a significance of <0.001 and a large effect size of 0.8. Attitude scores at three months post intervention were 37.2 (SE 0.53) with a significance of <0.001 and a large effect size of 0.8.

Confidence scores increased from a mean of 24.9 (SE 1.44) at baseline to 48.7 (SE 1.40) post intervention with a significance of <0.001 and a large effect size

of 0.8. Confidence scores at three months post intervention were 47.022 (SE 1.38) with a significance of  $<0.001$  and a large effect size of 0.8.

### **6.3.2 Acceptability of the Intervention**

Participants all completed a post course evaluation form designed to assess the acceptability of the intervention. All delegates (n=45) considered the course either good (16%) or very good (84%) in terms of course content, course materials and for providing practical strategies they could use at school.

Ideas were shared for improving the intervention including the inclusion of information about eating difficulties in younger children, how to prevent eating disorders from occurring and how to refer to and work with external agencies such as child and adolescent mental health service (CAMHS) (see table 10).

| Theme  | Comments   |
|--|--|
| <b>Eating Difficulties in Younger Children</b> | <p>There wasn't time today, but in future I'd be interested to learn more about the conditions I might see in younger children and those with special needs.</p>   |
|  | <p>I'd like to learn more about the childhood eating problems children may come with from primary school. I'm worried I may be over-reacting in some cases.</p>  |
|  | <p>It would be interesting to talk more about other eating difficulties in younger children and looked after children (children in care).</p>  |
| <b>Eating Disorder Prevention</b>              | <p>I'd have liked some ideas about how we, as a school, can change our day to day practice to help prevent eating disorders .e.g self-esteem building activities?</p>  |
|  | <p>I feel confident spotting the early warning signs but it would be so good if we could do something to completely stop eating disorders happening in the first place...</p>                                      |
|  | <p>I would have liked to learn about prevention as well as early intervention but only if the strategies are effective and practical. (I wouldn't have wanted to miss out anything which we did cover though).</p> |

|                            |   |
|----------------------------|---|
| <b>Making Referrals</b>    | I'm worried that if I pick cases up, I won't be able to get CAMHS to take them on.  |
|                            | Do you have any tips or tricks for getting CAMHS to take us seriously?  |
|                            | Are there different places I can refer to? I'm the most senior manager in this area at school and I'm not quite sure what my options are about where to go next. It feels like quite a lot of pressure, especially if the rest of the staff get good at picking up cases. What next if CAMHS won't take them? |
|                            | Can I make a referral to CAMHS or does the head or parents have to do it? I'm really confused about this.   |
|                            | When a child is in a unit, how can I make them keep us in the loop and prepare for the child's return?  |
| <b>Talking to students</b> | I'd like practical ideas about how not to promise confidentiality to a student in such a way that they'll still trust you and talk to you.  |
|                            | I'd really like a list of suggested conversation openers for broaching the subject with the student. I feel confident about responding to a disclosure but I'm still kind of anxious about trying to get a student to open up without blurting out 'I think you've got an eating disorder!'                   |
|                            | We talked briefly about how to respond if a student clams up / denies there is a problem. I'd like to have done more about this as it's so useful (and common).   |

**Table 10 - Participant feedback about potential improvements to the intervention**

## **6.4 Discussion**

The purpose of the current study was to test the feasibility and acceptability of a one day eating disorders training programme for school staff and to obtain effect sizes for a future large scale study. The findings showed that the intervention had a significant and positive impact, with medium to large effect sizes, on school staff knowledge, attitudes and confidence, about eating disorders and that these gains were maintained three months later.

### **6.4.1 Knowledge**

Participants reported very low levels of knowledge about eating disorders prior to the intervention. This is unsurprising as previous studies have shown similar results. For example, in a study of 337 school counsellors, 40% reported they did not have the knowledge or confidence to support young people with eating disorders (Price et al., 1990). Similarly, in their study of 216 trainee teachers, O'Dea & Abraham (2001) reported low levels of knowledge and frequent misconceptions about the effects and aetiology of eating disorders with items on a self-report survey of eating disorders knowledge and understanding receiving between 14% and 72% incorrect responses. This included items such as 'eating disorders only occur in upper and middle class families' (false, 41% incorrect) and 'people with anorexia nervosa do not lose their appetite' (true, 55% incorrect) and 'people with bulimia nervosa always induce vomiting' (false, 67% incorrect). Low levels of knowledge were evident throughout the delivery of the current intervention though participants showed a willingness to learn and asked frequent questions.

Post-intervention, participants reported significantly improved levels of knowledge across all of the relevant items. The measures of knowledge used in the current study were, in fact, assessments of the participants' perceived knowledge rather than an objective measure of knowledge. Future studies could incorporate an objective measure of knowledge.

#### **6.4.2 Attitudes**

Participants reported a significant improvement in their attitudes towards eating disorders and this change was maintained at three months. At baseline, participants demonstrated some stigmatising attitudes, for example 37% of participants (N= 17) either agreed or strongly agreed that 'students with eating disorders cause difficulties for school staff'. There was also a noticeable shift in attitude about the role of the school; at baseline only 20% (N=9) of participants either agreed or strongly agreed that the school had a responsibility to students suffering from eating disorders. Post intervention, this number rose to 100% (N=45). If negative attitudes about the school's responsibility towards sufferers or school staff's ability to help had pervaded, then the increased knowledge and confidence resulting from the intervention could have had little chance of being implemented and providing real impact as school staff may have had the confidence and knowledge to address students' issues but may have continued to feel that it was not the school's place to provide this type of support.

#### **6.4.3 Confidence**

Participants reported very little confidence in their ability to recognise eating disorders or to offer to support to students with eating disorders prior to the

intervention. This is in line with Price et al's (1990) study which indicated that less than 11% of a sample of 337 US school counsellors reported feeling confident in helping students with an eating disorder.

Post-intervention, participants reported significantly improved levels of confidence across all of the relevant items. It could be argued that an increase in confidence is irrelevant as it may not be paired with a corresponding increase in knowledge. However, it was considered important to develop an intervention which specifically increased the confidence of school staff, as lack of confidence was a recurring theme during the consultation phase of this project. Additionally, a key tenet of the health belief model, which has provided the basis for many successful health-education and health-promotion initiatives (Holloway & Watson 2002), is self-efficacy – one's confidence in their own ability to take action. Self-efficacy has been repeatedly demonstrated to be a key determinant of behaviour change, for example for participants over-coming snake phobia (Bandura. 1977), learning to manage their diabetes (King et al., 2010) or over-coming the symptoms of a stroke (Jones & Riazi, 2011).

In addition to this, it was felt that without the confidence building aspect of the current intervention, a possible result would be participants who had the skills and knowledge to support their students but who were prevented from doing so by their lack of confidence. A previous study by Jones et al., (2013) which focused on clinician eating disorder knowledge and confidence found that whilst 60.5% were confident in their knowledge with regards to eating disorders, only 14.9% were confident in their ability to manage these conditions. Likewise,

Currin, Waller & Schmidt (2009) found that primary care physicians' attitudes directly impacted on their actions. Of 154 physicians who completed a case-vignette study, those who believed that patients with anorexia nervosa had personal control over their problem were more likely to ensure a follow-up appointment took place compared to their colleagues who did not hold this belief. This demonstrates that attitudes towards people with eating disorders can be directly translated into actions in the case of clinicians. The same may be true of school staff also.

#### **6.4.4 Strengths of the Current Study**

This study was the first of its type, either in the UK or internationally, to test the feasibility and acceptability of a one day eating disorders training programme for school staff.

A key strength of the current study is that a brief, face to face, training programme was found to be an effective means of improving school staff knowledge, attitudes and confidence towards eating disorders. This was especially positive as the short time frame is more suitable for school time and budgetary constraints than more in depth alternatives would be (Kennedy, & McKay, 2011).

Content development for the intervention was based heavily on feedback from school staff and students about their experiences and needs (as outlined in chapters 2,3 and 4 of this thesis). This is the approach advocated by the National Institute for Health and Care Excellence but is currently the exception rather than

the norm (National Institute for Health and Care Excellence, 2007). Best practice from clinical practice and the field of education was drawn on when developing some of the materials, including motivational interviewing techniques (Miller & Rollnick, 2002) and person centred planning (Thompson, Kilbane & Sanderson, 2007). This approach resulted in a programme that is highly relevant to school staff and many of the ideas shared were practical to implement within a school setting, as they were all either based on best practice used in other schools, or they were based on ideas from the clinical world which were developed with comprehensive feedback loops with school staff.

The intervention was made as engaging as possible by developing the delivery mechanisms based on Knowle's assumptions of andragogy (adult learning) (Knowles, 1984) in order to develop an effective learning experience for the adult learners at whom the intervention was aimed. Participants found the intervention acceptable which is very encouraging for future studies.

#### **6.4.5 Limitations of the Current Study**

The current study was a feasibility study of a one day training programme and as such the sample size was small and there was no control group. Therefore, whilst the study has some promising findings, care must be taken with regards to how these are interpreted.

It was very positive that the significant impact seen post-intervention was maintained three months later. However, a limitation of the current study was the

lack of a longer-term follow up at 6 or 12 months. In studies 2 and 3 (chapters 3 and 4), school staff specifically noted the need for repeat or refresher courses in order to maintain their knowledge on this topic – it would be interesting to explore whether this was actually the case, and if so with what frequency refresher courses were needed.

The use of self-report measures mean that the data obtained in the current study is entirely subjective. The use of additional objective measures for school staff eating disorder knowledge and skills in particular would be a significant improvement. Whilst participants showed a clear improvement in self-reported measures of knowledge with regards to eating disorders, it is possible that this would not be reflected in objective measures of their knowledge. In a study designed to improve motivational interviewing skills amongst clinicians, Miller, Yahne, Moyers, Martinez, & Pirritano (2004) reported that clinician self-reports of MI skilfulness were unrelated to proficiency levels in observed practice. An objective measure of participant knowledge and skills would add significant value to future iterations of the current study. However, there is some early evidence to suggest that in order to effect behaviour change, it is important to improve both perceived and objective knowledge (Rock, Ireland, Resnick, & McNeely, 2005) which implicates a possible role for objective measures of knowledge in addition, rather than in place of, the current measures of perceived knowledge in future studies.

One of the motivations of the current study was that working with school staff may have a longer term impact on eating disorder prevention and early intervention

than working with students as each teacher who is trained has the ability to impact on multiple cohorts of students (Piran, 2004). However, the current study did not attempt to measure the impact of the intervention on student outcomes so it is not possible to say whether this aim was achieved. If a larger scale study were rolled out it would be important to build in a measure of student outcomes such as a decrease in eating disorder symptomology or increased satisfaction with the school's ability in identifying and managing student eating difficulties.

Whilst the current sample included a wide range of job descriptions and ages, only 13% of participants were male and only one school type was represented so it is not possible to state whether the current intervention would have the same impact in other school types such as private schools, special schools or primary / elementary schools.

#### **6.4.6 Future Directions**

The current feasibility study indicates that a larger scale study of an eating disorders training programme for school staff would be worthwhile as it appears that it is possible to have a significant impact on staff eating disorder knowledge, attitudes and confidence in one day and that this style of intervention proves acceptable to school staff.

There are several considerations that could be taken into account in future studies. Namely:

### **Control Group**

In order to increase the validity of future studies, the use of a control group would be vital. The use of a stepped wedge design may be the most appropriate way of facilitating this, with all participants receiving both the control and intervention conditions. It would not be possible to deliver the intervention to some members of staff in a given school and have colleagues act as controls. This is because it would be impossible to prevent contamination, particularly if one were to consider student outcomes in future studies, as outcomes for all students in a given school could be impacted even if only half of the staff were trained. Instead, at the time of intervention delivery, every member of school staff in the specific school should be trained.

The control condition could consist of a one day face to face training session which would be universally suitable to all staff on a topic such as time management skills. The control condition should mirror the intervention condition in terms of length and style of delivery.

### **Participants**

In order to test whether the intervention is suitable for a wide range of school settings, it would be important to recruit a wide range of participating schools in future studies.

These would ideally include all of the following:

- Schools which achieved highly and those which were struggling academically.
- Schools whose students paid a fee to attend and schools whose students did not.
- Co-educational schools and single gender schools.
- Mainstream schools and special education schools.
- Schools from a wide range of geographical locations.
- Schools with higher and lower proportion of students on free school meals (this is a quasi-measure of social economic status).
- Schools who were considered to be performing well according to Ofsted (the UK school inspectorate) and those who were considered to be failing.
- Boarding schools and day schools.

## **Measures**

The current study included only subjective measures of school staff knowledge, attitudes and confidence. Future studies should also include objective measures where possible. Care would need to be taken to ensure participant readiness for learning following an objective measure of knowledge which may induce a negative mindset if participants perceived themselves to have failed. The development and implementation of such measures would necessitate careful piloting.

Additionally, the introduction of measures of student outcomes would greatly enhance future studies. These should include both subjective and objective measures. Qualitative feedback from students could include information regarding:

- How supportive they feel their school is
- How they would expect staff to respond to an eating disorders disclosure
- How well informed they are about eating disorders and what to do if they're concerned
- Whether they would feel comfortable and confident confiding in a member of school staff if they had eating concerns
- The experiences of any students currently recovering from an eating disorder

Objective measures of student outcomes could include:

- Number of students with eating disorder symptomology according to e.g. the eating disorders examination questionnaire (EDE-Q; Fairburn & Beglin, 1994) or using a bespoke eating disorders screening tool
- Number of students with eating disorder symptomology that the school are supporting / aware of
- Number of eating disorders disclosures and where these came from e.g. direct from the student, from a friend or from a parent
- Outcomes of students with eating disorder symptomology including any external referrals or internal processes

## **Length of Follow-up**

In order to ascertain whether any impact of the intervention was maintained long-term, it would be beneficial for future studies to include additional follow-up points with measures being completed at baseline, post-intervention, and at 12 week, 6 month and one year follow-up points.

## **Intervention Content**

The intervention could be enhanced by further developing the content. Participants in the current study gave excellent feedback as to how the content of the current intervention could be improved (see table 10). These suggestions included:

- Additional information about eating disorders in younger children
- Ideas for preventing eating disorders
- Information about making effective referrals to external agencies
- More depth and breadth on the topic of how to talk to students

Additionally, the intervention could be delivered alongside a universal screening tool in order to improve rates of detection. This could have the dual benefits of providing quantitative data for the study and highlighting those students in need of support following the intervention.

Participant recommendations that eating disorder prevention should also be covered in future studies raises an interesting question. As discussed in chapter one, prevention, detection and intervention of eating disorders are often not

discrete activities and may prove complementary or cyclical (see figure 1). With this in mind, it may make sense for future studies to incorporate a teacher facilitated student prevention programme alongside an eating disorders detection and intervention programme for all school staff. Great care would need to be taken over the measurement of the efficacy of the individual elements.

## **6.5 Summary**

This chapter outlined a feasibility study testing a brief, face to face intervention which aimed to improve school staff knowledge about, attitudes towards and confidence in identifying and managing student eating disorders. The findings from the feasibility study showed that the intervention had a significant and positive impact on school staff knowledge, attitudes and confidence, about eating disorders and that these gains were maintained three months later indicating that conducting a larger scale study would be worthwhile.

# **Chapter 7**

## **Discussion**

The overall aim of this thesis was to develop and carry out a feasibility study of an eating disorders recognition and early intervention training programme for school staff. This chapter first summarises and then discusses the main findings presented in chapters 2, 3, 4, 5 and 6. Strengths and limitations of the studies are considered taking the context of the existing literature into consideration where applicable. Finally, future directions for further research are discussed.

## **7.1 Summary of Findings**

The introductory chapter set this thesis within the context of existing research. Looking specifically at eating disorders research, the introductory chapter illustrated that adolescence is a peak time of onset for eating disorders and that eating disorders are costly, both to the individual in terms of quality of life, physical health and academic and social development and to society in terms of costs of treatment, loss of earning and impact on productivity. Existing research clearly demonstrated that early intervention can improve the likelihood of young people recovering rapidly and completely from eating disorders and it was suggested that school staff are in a good position to recognise and respond to the risk factors and early symptoms of eating disorders but that they currently lack the knowledge and confidence to do so.

The overall aims of this thesis were (1) to develop an eating disorders training programme for school staff, informed by stakeholder (student, staff) views and designed to improve staff's confidence, attitudes and knowledge in recognising and managing student eating disorders and (2) to carry out a feasibility study of this programme.

This thesis can be argued to have achieved these aims: chapters 2, 3 and 4 outline work which was carried out in order to gain a clear understanding of school student and staff experiences of eating disorders in the UK and to gain recommendations for best practice during the development of an eating disorders training programme for school staff. The development of the training programme, and measures for testing its effectiveness are outlined in chapter five and the feasibility testing of the training programme is outlined chapter six.

Chapters five and six outline study four in which 45 school staff took part in a one day face to face eating disorders training programme based on the findings from studies 1, 2 and 3. Participants completed a questionnaire about their eating disorder knowledge, attitude and confidence prior to the intervention, immediately post intervention and again three months later. The intervention had a significant positive impact on school staff confidence, attitudes and knowledge about eating disorders. These gains were universally maintained three months later. Post intervention evaluations showed that participants found the intervention acceptable.

These overarching aims were undertaken in a series of steps, which formed subsidiary aims:

**Subsidiary Aim 1:**

Consultation was carried out to gain an understanding of secondary school student experiences of eating disorders within the school setting in the UK. **The**

**aim of this study was to gain an understanding from young people about the ways in which schools can best support young people with eating disorders, so that these ideas could inform the development of the eating disorders training programme for school staff.**

This aim was achieved, as outlined in chapter two. Chapter two outlined study one in which 511 11-19 year old school students completed an online questionnaire exploring their experiences of eating disorders. Participants shared a great deal of information about both positive and negative first and second hand experiences of eating disorders within the school environment. These experiences were drawn on during the development of the eating disorders training programme (chapter 5).

### **Subsidiary Aim 2:**

Consultation was carried out to gain an understanding of school staff experiences of eating disorders within the school setting in the UK. **The aims of these studies were two-fold: i) To determine whether school staff perceived a need for an eating disorders training programme. ii) To gain an understanding of the key areas of need with regards to eating disorders training.**

This aim was achieved and is addressed in chapters three and four which outlines studies two and three. Chapter three outlined study two in which 826 school staff completed an online questionnaire exploring their eating disorder experiences. Seventy four percent of respondents' schools had received no training on eating

disorders, of these, 91% agreed that eating disorders training would be quite useful (46%, n=160) or very useful (45%, n=156). Forty percent did not know how to follow up students' eating disorder concerns and 89% of respondents felt uncomfortable teaching students about eating disorders.

Chapter four outlined study three in which 63 members of staff from 29 UK schools participated in semi-structured focus groups with the aims of (a) understanding whether they are in a good position to identify and manage student eating disorders and (b) to generate recommendations regarding school staff's training needs for identifying and managing eating disorders.

Five key themes emerged:

- i. Many staff don't have a basic understanding of eating disorders;
- ii. Eating disorders are taboo in the staffroom;
- iii. Staff don't feel comfortable talking to students about eating disorders;
- iv. Support is needed to ensure the teacher-parent relationship is a positive one;
- v. School staff would welcome practical ideas for how they can best support students during the recovery period.

### **Subsidiary Aim 3:**

**Development of an eating disorders training programme which addressed the needs highlighted by UK school staff and students during consultation.**

This aim was achieved and is addressed in chapter 5 which outlines the development of an eating disorders training programme for school staff which draws heavily on the experiences outlined and needs highlighted by school staff and students in studies one, two and three.

The studies contained within this thesis had limitations which are discussed in this chapter.

The remainder of this chapter is dedicated to discussion of the results of the studies contained within this thesis. Each study was discussed individually within the relevant chapter, so care has been taken in this final chapter to draw on points of discussion which extend upon the original points raised or pertain to the study as a whole, and to avoid repetition of discussion points previously raised unless highly salient to the thesis as a whole.

## **7.2 Strengths of the Studies**

Notable strengths of the studies are discussed below.

### **7.2.1 Unique Nature of the Studies**

All four of the studies conducted as part of this thesis were unique within the UK setting and possibly internationally as well. The surveys conducted in studies

one and two were developed specifically for the purpose of these studies following consultation with school staff and students and the training programme implemented in study four was developed by the researcher based largely on recommendations and ideas shared by participants in studies one, two and three with additional input from eating disorders clinicians based at the Institute of Psychiatry. Additionally, the measure used to assess school staff confidence, attitudes and knowledge in study four was informed by the “Eating Disorders Attitude and Knowledge Questionnaire”, an existing measure aimed at clinicians (Currin, Waller & Schmidt, 2009) but was heavily adapted and redesigned to meet the needs of school staff in the UK.

The novelty of the studies can be a considered strength insofar as this thesis makes a significant contribution to this emerging field. However, the uniqueness of the research did make it very hard to draw on existing research to inform the development of these studies and to compare the results of this research with similar studies due to the lack of such studies.

## **7.2.2 Participant Demographics**

### **Gender**

Female participants were over-represented in all studies with males making up between 13% and 28% of participants.

- In study one (online survey of student experiences of eating disorders) 72% (n=370) of participants were female and 28% (n=141) were male.

- In study two (online survey of school staff experiences of eating disorders) 63% of participants were female (n=524) and 36% (n=302) were male.
- In study three (school staff focus groups) 76% (n=48) of participants were female and 24% (n=15) were male.

Previous research in this area has been largely confined to females (Mond & Arrighi, 2011) so the inclusion of males in the studies constitutes a significant strength and the studies could be argued to represent a more balanced view than previous studies in similar areas.

## **Role**

The participants in studies two, three and four represented a wide range of secondary school staff including support staff, teaching staff, leadership team members and pastoral / welfare staff. This was important as it meant both that a wide range of opinions and experiences were shared in studies two and three and also indicated that the training programme trialled in study four may be universally suitable for staff regardless of role. This is positive bearing in mind comments from students in study one who made the point that they might choose to confide first in any member of the staff body and their decision as to who to approach with a disclosure about themselves or a friend was unlikely to be tempered by a school's policy as to who they should approach.

## **School Type**

In addition to a range of roles, a range of school types was represented in studies two, three and four. The participants included staff from fee-paying schools as well as state-maintained schools, both high and low achieving schools and a geographical range was represented too. However, secondary schools (age 11-19) were far better represented than special or primary schools. For this reason the training programme developed was targeted primarily at secondary school staff. This could be considered a weakness, but evidence suggests that this is the age range in which eating disorders most typically emerge (Currin et al., 2005; Health and Social Care Information Centre; 2012; Micali et al., 2013) so this is arguably the primary group that any such intervention should be targeted at.

### **7.2.3 Depth of Answers**

The anonymous, open response, online survey method employed in studies one and two seems to have proven highly acceptable to both students and school staff who were very open, honest and extensive in their responses. 511 student responses and 826 school staff responses provided a great depth of material for analysis and provided an extremely solid foundation for studies three and four.

### **7.2.4 Use of an Independent Coder**

Aside from regular feedback and input from supervisors and colleagues, the studies contained within this thesis have essentially been an independent project on the part of the researcher. A potential problem with this approach was the possibility of bias when interpreting the great number of qualitative results. In order to avoid this, all information was double coded with a second researcher, not related to the current project nor wider research team, performing coding for

studies one, two and three, blind to the lead researcher's coding. This greatly reduced the possibility of bias being introduced into to the interpretation of results.

### **7.2.5 Training Intervention Follow up**

A strength of study four was that data were collected at baseline, post intervention and again twelve weeks post intervention. This has not always been the case in similar studies (Hussein & Vostanis, 2013; Deutschlander, 2010). It was considered very important to take follow up measures of participant confidence, knowledge and attitudes with regards to eating disorders because a training programme whose effects were notable immediately following the intervention but whose impact had disappeared or reduced after three months would provide little long-term value to school staff or their students respectively.

Participants in study two who had previously taken part in eating disorders training outlined the importance of follow-up or booster sessions. It was not possible to determine whether this would be necessary following the training programme implemented in study four as the follow up measures were limited to twelve weeks. To get a true understanding of whether the impact of the training was retained, and whether there may be a need for follow up or booster sessions it would be interesting to complete further measures six months or a year post intervention.

### **7.2.6 Practical Model of Delivery**

The training intervention developed in study four represents a potential model for eating disorder early intervention which is practical to implement, requiring a single day's training and no ongoing commitment. The brevity of the programme is key if it is to be more widely implemented at school staff have many pressures on their time (Kennedy & McKay, 2011).

Additionally, studies two and three indicated that school staff often lack the confidence to deliver eating disorders education to their students – this is also highlighted in existing research as a key barrier to the successful implementation of eating disorder prevention programmes (Yager & O'Dea, 2005; Stang, Story, & Kalina 1997). The training programme outlined in session four is designed to be implemented as a stand-alone intervention, however, it could arguably also be used to complement existing teacher-delivered eating disorders prevention curricula by improving staff willingness and ability to deliver the content of these programmes.

### **7.2.7 Acceptability of the Intervention**

A key focus of the current series of studies was to use school staff and student input to develop a training programme that was highly relevant to school staff, addressed the areas of most need, as determined by staff and students, and presented realistic and practical ideas which could be implemented within the school setting. This is likely to be a key factor underlying the acceptability of the programme as demonstrated in study four. Participants valued the fact that the intervention could be delivered in just one day, they liked the practical nature of

the training programme and the fact that all ideas discussed were tailored specifically for use in the school environment and they also provided very positive feedback about the accompanying workbook provided for reference during and after the course (see appendix F).

### **7.2.8 Consideration of Attitudes as well as Knowledge and Confidence**

Previous studies have shown that school staff having the knowledge and confidence to support students with regards to a specific topic does not necessarily mean that they are motivated to do so. For example, in Deutschlander's 2010 study looking at teacher delivery of HIV curriculum, it was apparent that even when teachers had the knowledge and confidence to support students' HIV education, they were not inclined to do so because they felt that it was beyond their remit. Some participants in study three of the current thesis would argue that this is also likely to be the prevailing attitude towards eating disorders in UK schools. Therefore, in addition to improving school staff knowledge and confidence in identifying and managing student eating disorders it was also important for us to address their attitudes. Study four indicated that a one day training programme could improve teacher attitudes towards eating disorders. The fact that school staff's improved attitudes towards eating disorders were maintained at twelve weeks post intervention was particularly encouraging.

### **7.3 Limitations of the Studies**

The generalisability of the results presented in this thesis are limited by a number of factors outlined below.

### **7.3.1 Sample size**

The first three studies, and in particular studies one and two, achieved a far greater sample size than had been anticipated when the studies were initially embarked upon. Whilst this was very positive for the individual studies and meant that a great deal of information was collected in order to inform study four, it meant that more time was spent analysing studies one and two and developing study four and that less time overall was able to be spent on implementing study four. This resulted in a relatively small sample size (N=45). However, the study was designed as a feasibility study. According to the National Institute of Health Research's recommendations "Feasibility studies are pieces of research done before a main study in order to answer the question "Can this study be done?" (National Institute of Health Research, 2013). Given the universally positive results, despite its small size, this study can be seen as a good indicator that a larger scale study is warranted. The sample size approximated that of other feasibility studies within the field of eating disorders research (e.g. Ginsburg & Drake, 2002; Tanofsky-Kraff et al., 2010).

### **7.3.2 Lack of Control Group**

No control group was employed for study four – this was an intentional decision informed by informal discussions with schools which indicated that they would not welcome a wait-list scenario (and given the time constraints of the current study it may not have been possible to offer training at a later date to those schools assigned to the control condition). The feasibility of having both control and experimental groups within each school setting was limited by our inability to prevent the sharing of information between school staff. This may not have impacted on outcome measures at baseline and immediately post-intervention

but was highly likely to impact upon outcome measures at the third time point, twelve weeks post intervention. Recent research has noted the specific difficulties of cross group contamination in studies conducted within school settings (Sharpe, 2013). Future, larger scale studies could employ a stepped wedge design with all participants completing both the intervention and control conditions. In order to prevent contamination, it would be important to deliver the intervention to all members of a given school simultaneously.

### **7.3.3 Sample Selection**

Samples for all studies were self-selected as opposed to randomly selected. The impact of this was that students and staff with more experience of, or interest in, eating disorders were more likely to participate than their peers. Whilst this meant that the study results were not representative of the population as a whole, it also meant that participants in studies one, two and three shared a great degree of insight into their experiences of eating disorders and that study four was better informed as a consequence.

On reflection, it would have been preferable to have trained the entire staff body at each school in study four, or to have randomly selected participants rather than working on a first come first served basis which inevitably led to those with more interest in eating disorders being enrolled in the programme. The first come, first served basis used may have resulted in an artificial sense of the acceptability of this type of programme. It is worth noting though, that the participants' knowledge, attitudes and understanding of eating disorders were almost universally low in study four; so whilst those who volunteered to be trained may

have shown more interest than their colleagues, they were not especially well informed on the topic.

#### **7.3.4 Reporting Measures**

In addition to researcher recorded focus groups, three of the four studies contained within this thesis implemented self-reporting questionnaires. This is accepted practice for qualitative studies (i.e. studies one and two) but arguably, objective measures could have been used alongside the subjective measures employed in study four. Study four demonstrated that staff reported an increase in their knowledge, attitudes and confidence in identifying and managing student eating disorders but there is no objective evidence to back this up. Additionally, no attempt was made in study four to measure the outcomes of the study in terms of impact upon students. From the current data there is no way of telling, subjectively or objectively, whether the study had an impact on student outcomes such as eating disorder prevalence, willingness to speak to staff, receiving an appropriate response etc. Similar studies have also failed to provide evidence with regards to student outcomes (Hussein & Vostanis, 2013; Deutschlander, 2010). Nevertheless, much work could be done to improve the reporting measures used in future related studies.

#### **7.3.5 UK Focus**

The studies outlined in this thesis all involved UK school staff or students and may not be generalizable to non-UK settings, particularly those where the school system differs significantly from the UK. However, international research was drawn upon to inform the current studies so it is possible and indeed likely, that

with adaptations, the studies contained within this thesis could be replicated in other settings in order to expand our body of knowledge on this topic.

### **7.3.6 Limited Scope**

The design of this series of studies was one of the qualitative research in studies one, two and three informing the training programme development and quantitative research conducted in study four. However, there was a limit as to what could be completed within the scope of this thesis. The following areas fell beyond the scope of the current thesis but could have usefully contributed to this research:

#### **Follow-Up Focus Groups with Students**

The online surveys with school staff (study two) were followed up with focus groups (study three). The focus groups proved to be highly informative and an excellent opportunity to expand upon the ideas shared in the online questionnaires as well as an opportunity to discuss best and worst practice in terms of eating disorder recognition and management more generally within the school setting. The decision was taken not to carry out follow-up focus groups with students despite the fact that these would have been very informative. The key reason for this decision was concerns that the focus groups were likely to explore some highly traumatic, triggering and distressing situations with young people and the background research undertaken for this thesis indicates that the students' schools would be unlikely to be in a position to respond and support appropriately, and that students would be unlikely to seek support even if they needed it. Additionally, students would be highly likely to feel

uncomfortable discussing their eating disorder experiences with their peers present and the time investment required to conduct and analyse a number of one to one interviews was beyond what was possible during the course of this project.

### **Research into Parent Experiences of Working with Schools with regards to Eating Disorders**

No attempt was made to draw upon the experiences of parents as part of the current project. However, school staff clearly outlined the difficulties that they sometimes found when working with parents, and conversely what a pivotal part of the recovery process parents could be when the relationship was a positive one. Exploring parents' experiences of working with schools would have given a more balanced view of the school – parent – student relationship and could have provided more examples of best and worst practice for the training programme to draw on.

### **Research into Clinicians' Experiences of Working with Schools with regards to Eating Disorders**

No attempt was made to formally draw upon the experiences of clinicians in the context of the current thesis. The researcher was working with the eating disorders team at the Institute of Psychiatry in London and had a

great deal of access to clinicians working in the field and received a lot of informal feedback in this regard. However, with hindsight, it would have been preferable to formalise this feedback in the form of surveys or focus groups and to extend its reach beyond the Institute of Psychiatry and other highly specialised eating disorders practitioners that the researcher regularly interacted with. In reality, many young people in the UK who are receiving treatment for an eating disorder, receive this treatment via less specialised facilities and consultants than those with whom the researcher was regularly interacting with. Study four could have been usefully informed using information obtained by gaining a more extensive understanding of health practitioners' experiences of working with schools to support students with eating disorders.

## **7.4 Future Directions**

As the area researched within the context of the current thesis is something of an emerging field, the potential future directions for research are extensive. Below I have outlined the key ways in which I hope to take this research forwards in addition to addressing the limitations outlined earlier in this chapter.

### **7.4.1 Further Development of the Training Materials**

The material covered within the training programme developed for study 4 (see table 4 / appendix F) proved acceptable to a wide range of participants. However, on reflection, much of this information is beyond the level needed by day to day school staff. A future version of the programme could include two versions of the training, one for designated staff which would look broadly similar to the current

programme and one for the general staff body which would be an abridged version of the current programme and could be taught in approximately half the time (2-3 hours instead of 6 hours).

Additionally, the training programme could be enhanced by the further development of the practical ideas outlined for managing students whose symptoms are sub-threshold and do not warrant a referral to CAMHS. Even where a student meets the threshold for referral, waiting lists can be many weeks (NHS National Services Scotland, 2013; Kowalewski, McLennan, & McGrath, 2011; Brann, Walter & Coombs, 2011) so providing school staff with more proactive support they can provide prior to a referral would be a positive step.

#### **7.4.2 Pilot Online Training Materials**

Adapting the training materials to make them available online could be an important next step as this may provide a programme that is highly cost effective to roll out and provided the flexibility to school staff to complete the training at their own pace and refresh their knowledge as the need arises.

#### **7.4.3 Carry out a Fully Powered Study**

Study four was a small feasibility study, a key aim of future research is to extend the research carried out within the context of this thesis through implementation of a fully powered stepped wedge design (this is more fully outlined in the discussion section of chapter 6).

## **7.5 Positive By-Products of the Work on this Thesis**

In addition to the results outlined in this thesis, it is worth noting the positive impact that carrying out these studies has had in terms of raising UK school staff awareness of the need to identify and manage student eating disorders. During the course of conducting this research, the researcher has come into contact with a great number of UK school staff and students, which in itself has done a great deal to raise awareness. Additionally, the researcher has run numerous informal training, support and advice sessions for school staff, students and parents and has contributed to several widely read magazines and developed a well-read eating disorders advice blog and authored a book providing practical advice for school staff. A model eating disorders policy for schools was developed in consultation with school staff (see appendix D) in addition to the studies outlined in this thesis in order to provide basic information, referral pathways and support to school staff with regards to managing eating disorders whilst further research was undertaken. This has been adopted by in excess of 100 schools in the UK and beyond.

## **7.6 Overall Conclusions**

The overall aim of this thesis was to develop and carry out a feasibility study of an eating disorders recognition and early intervention training programme for school staff. In order to achieve this aim, extensive consultation was carried out with UK school staff and students in order to utilise their experiences in the development of the training programme. This research was unique within the field, providing interesting insights both within and beyond the context of the current thesis. The training programme developed in response to the consultation was well received and the results of the feasibility study were

promising, suggesting that it may be possible to impact on the knowledge, attitudes and understanding of school staff with regards to eating disorders with the implementation of a one day face to face training programme. This thesis outlines promising early results and provides strong motivation and sound indicators for further research in this emerging field.

## References

- Ackard, D. M., Fulkerson, J. A., & Neumark-Sztainer, D. (2011). Psychological and behavioral risk profiles as they relate to eating disorder diagnoses and symptomatology among a school-based sample of youth. *International Journal of Eating Disorders*, 44(5), 440-446.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Athanases, S. Z., & Martin, K. J. (2006). Learning to advocate for educational equity in a teacher credential program. *Teaching and Teacher Education*, 22(6), 627-646.
- Austin, S. B., Ziyadeh, N. J., Forman, S., Prokop, L. A., Keliher, A., & Jacobs, D. (2008). Peer Reviewed: Screening High School Students for Eating Disorders: Results of a National Initiative. *Preventing chronic disease*, 5(4).
- Baginsky, M., & Macpherson, P. (2005). Training teachers to safeguard children: Developing a consistent approach. *Child Abuse Review*, 14(5), 317-330.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological review*, 84(2), 191.

Barada, K. A., Azar, C. R., Al-Kutoubi, A. O., Harb, R. S., Hazimeh, Y. M., Abbas, J. S., & Al-amin, H. A. (2006). Massive gastric dilatation after a single binge in an anorectic woman. *International Journal of Eating Disorders*, 39(2), 166-169.

Baranowski, M. J., & Hetherington, M. M. (2001). Testing the efficacy of an eating disorder prevention program. *International Journal of Eating Disorders*, 29(2), 119-124.

Bearman, S. K., Stice, E., & Chase, A. (2003). Effects of body dissatisfaction on depressive and bulimic symptoms: A longitudinal experiment. *Behavior Therapy*, 34, 277–293.

Beat (2007). "Something's got to change" - eating disorders sufferer survey. Beat, Norwich.

Beat (2014). Media Guidelines – Communicating safely about eating disorders. Beat, Norwich. <http://www.b-eat.co.uk/about-beat/media-centre/media-guidelines/> (accessed 10/01/2014)

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of general psychiatry*, 4(6), 561.

Berkman, N. D., Lohr, K. N., & Bulik, C. M. (2007). Outcomes of eating disorders: a systematic review of the literature. *International Journal of Eating Disorders*, 40(4), 293-309.

Bowers, H., Manion, I., Papadopoulos, D., & Gauvreau, E. (2012). Stigma in school-based mental health: perceptions of young people and service providers. *Child and Adolescent Mental Health*, 18(3) 165-170.

Brann, P., Walter, G., & Coombs, T. (2011). Benchmarking child and adolescent mental health organizations. *Australasian Psychiatry*, 19(2), 125-132.

Brown, L., Russell, J., Thornton, C., & Dunn, S. (1997). Experiences of physical and sexual abuse in Australian general practice attenders and an eating disordered population. *Australasian Psychiatry*, 31(3), 398-404.

Brylinsky, J. A., & Moore, I. C. (1994). The identification of body build stereotypes in young children. *Journal of Research in Personality*, 28, 170-181

Buddeberg-Fischer, B., Klaghofer, R., Gnam, G., & Buddeberg, C. (1998). Prevention of disturbed eating behaviour: A prospective intervention study in 14- to 19-year-old Swiss students. *Acta Psychiatrica Scandinavica*, 98, 146–155.

Bulik, C. M., Thornton, L., Pinheiro, A. P., Plotnicov, K., Klump, K. L., Brandt, H. & Kaye, W. H. (2008). Suicide attempts in anorexia nervosa. *Psychosomatic Medicine*, 70(3), 378-383.

Butters, J. W., & Cash, T. F. (1987). Cognitive–behavioral treatment of women’s body-image dissatisfaction. *Journal of Consulting and Clinical Psychology*, 55, 889–897.

Calear, A. L., & Christensen, H. (2010). Systematic review of school-based prevention and early intervention programs for depression. *Journal of Adolescence*, 33(3), 429-438.

CAMHS Review (2008) *Children and Young People in Mind: The Final Report of the National CAMHS Review*. Department for Children, Schools and Families, London.

"Celio, A. A., Winzelberg, A. J., Wilfley, D. E., Eppstein-Herald, D.,

Springer, E. A., Dev, P., & Taylor, C. B. (2000). Reducing risk factors for eating disorders: Comparison of an Internet- and classroom-delivered psychoeducational program. *Journal of Consulting and Clinical Psychology*, 68, 650–657."

Chase, A. K. (2001). Eating disorder prevention: An intervention for at risk college women. *Dissertation Abstracts International*, 62(3), 1568B.

Chatterji, P., Caffray, C. M., Crowe, M., Freeman, L., & Jensen, P. (2004). Cost assessment of a school-based mental health screening and treatment program in New York City. *Mental Health Services Research*, 6(3), 155-166.

Clearinghouse, W. W. (2007). *Beginning reading*. Washington, DC: US Department of Education, Institute of Education Sciences.

Cleave, H., & Charlton, A. (1997). Evaluation of a cancer-based coping and caring course used in three different settings. *Child: care, health and development*, 23(5), 399-413.

Cohall, A. T., Cohall, R., Dye, B., Dini, S., Vaughan, R. D., & Coots, S. (2007). Overheard in the halls: what adolescents are saying, and what teachers are hearing, about health issues. *Journal of School Health*, 77(7), 344-350.

Cohen, J. (1994). The earth is round ( $p < .05$ ). *American psychologist*, 49(12), 997.

Colman, I., Murray, J., Abbott, R.A., Maughan, B., Kuh, D., Croudace, T.J., & Jones, P.B. (2009). Outcomes of conduct problems in adolescence: 40 year follow-up of national cohort. *British Medical Journal*, 338, a2981

Cooper, M. (2009). Counselling in UK secondary schools: A comprehensive review of audit and evaluation data. *Counselling and Psychotherapy Research*, 9(3), 137-150.

Cotrufo, P., Barretta, V., Monteleone, P., & Maj, M. (1998). Full-syndrome, partial-syndrome and subclinical eating disorders: an epidemiological study of female students in Southern Italy. *Acta Psychiatrica Scandinavica*, 98(2), 112-115.

Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *The British Journal of Psychiatry*, 177(1), 4-7.

Crow, S., Peterson, C., Swanson, S., Raymond, N., Specker, S., Eckert, E., & Mitchell, J. (2009). Increased mortality in bulimia nervosa and other eating disorders. *American Journal of Psychiatry*, 166(12), 1342-1346.

Currin, L., Schmidt, U., Treasure, J., & Jick, H. (2005). Time trends in eating disorder incidence. *British Journal of Psychiatry*, 186(FEB.), 132-135.

Currin, L., Waller, G., & Schmidt, U. (2009). Primary care physicians' knowledge of and attitudes toward the eating disorders: do they affect clinical actions? *International Journal of Eating Disorders*, 42(5), 453-458.

D'Souza, C. M., Forman, S. F., & Austin, S. B. (2005). Follow-up evaluation of a high school eating disorders screening program: knowledge, awareness and self-referral. *Journal of Adolescent Health*, 36(3), 208-213.

Dalle Grave, R. D., 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*, 9, 327-337.

Dansky, B. S., Brewerton, T. D., Kilpatrick, D. G., & O'Neil, P. M. (1997). The National Women's Study: relationship of victimization and posttraumatic stress disorder to bulimia nervosa. *International Journal of Eating Disorders*, 21(3), 213-228.

Davis, C., Kennedy, S. H., Ravelski, E., & Dionne, M. (1994). The role of physical activity in the development and maintenance of eating disorders. *Psychological medicine*, 24(4), 957-968.

Department for Children Schools and Families (2008). Targeted mental health in school project. Nottingham: DCSF.

Department for Children, Schools and Families, 2010, Early Intervention: Securing good outcomes for children and young people. Nottingham. DCSF.

Department for Children, Schools and Families.(2007). Social and emotional aspects of learning (SEAL) programme: Guidance for secondary schools. Nottingham: DCSF.

Department for Education and Employment. (1999). National healthy schools programme. Nottingham: DfEE.

Department for Education and Skills. (2003). Every child matters. Nottingham: DfES.

Deutschlander, S. (2010). An analysis of training effects on school personnel's knowledge, attitudes, comfort, and confidence levels toward educating students about HIV/AIDS in Pennsylvania. *International Journal of Mental Health and Addiction*, 8(3), 444-452.

Dweck, C. (2006). *Mindset: The new psychology of success*. Random House Digital, Inc..

Dworkin, S. H., & Kerr, B. A. (1987). Comparison of interventions for women experiencing body image problems. *Journal of Counseling Psychology*, 34, 136–140.

Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire?. *International Journal of Eating Disorders*, 16(4), 363-370.

Fairburn, C. G., & Bohn, K. (2005). Eating disorder NOS (EDNOS): an example of the troublesome “not otherwise specified” (NOS) category in DSM-IV. *Behaviour Research and Therapy*, 43(6), 691-701.

Fairburn, C. G., Doll, H. A., Welch, S. L., Hay, P. J., Davies, B. A., & O'Connor, M. E. (1998). Risk factors for binge eating disorder: a community-based, case-control study. *Archives of general psychiatry*, 55(5), 425.

Farrington, D., Healey, A., & Knapp, M. (2004). Adult labour market implications of antisocial behaviour in childhood and adolescence: Findings from a UK longitudinal study. *Applied Economics*, 36, 93–105.

Finney, D. (2006). Stretching the boundaries: schools as therapeutic agents in mental health. Is it a realistic proposition? *Pastoral Care in Education*, 24(3), 22-27.

Fisher, J. D., Fisher, W. A., Bryan, A. D., & Misovich, S. J. (2002). Information-motivation-behavioral skills model-based HIV risk behavior change intervention for inner-city high school youth. *Health Psychology*, 21(2), 177.

Fleming, J., & Szumukler, G. I. (1992). Attitudes of medical professionals towards patients with eating disorders. *Australian and New Zealand Journal of Psychiatry*, 26(3), 436-443.

Fox, C. L., & Butler, I. (2007). 'If you don't want to tell anyone else you can tell her': young people's views on school counselling. *British Journal of Guidance & Counselling*, 35(1), 97-114.

Franko, D. L. (1998). Secondary prevention of eating disorders in college women at risk. *Eating Disorders*, 6, 29-40.

Garfinkel, P. E., Lin, E., Goering, P., Spegg, C., Goldbloom, D. S., Kennedy, S., Kaplan, A.S., & Woodside, D. (1995). Bulimia nervosa in a Canadian community sample: prevalence and comparison of subgroups. *American Journal of Psychiatry*, 152, 1052-1058.

Garner, D. M., Garfinkel, P. E., Rockert, W., & Olmsted, M. P. (1987). A prospective study of eating disturbances in the ballet. *Psychotherapy and psychosomatics*, 48(1-4), 170-175.

Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International journal of eating disorders*, 2(2), 15-34.

Garner, D., & Garfinkel, P. (1978). Sociocultural factors in anorexia nervosa. *The Lancet*, 312(8091), 674.

Ginsburg, G. S., & Drake, K. L. (2002). School-based treatment for anxious African-American adolescents: A controlled pilot study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 41(7), 768-775.

Grabe, S., & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: a meta-analysis. *Psychological bulletin*, 132(4), 622.

Graham, A., Phelps, R., Maddison, C., & Fitzgerald, R. (2011). Supporting children's mental health in schools: Teacher views. *Teachers and Teaching*, 17(4), 479-496.

Gustafsson, S. A., Edlund, B., Kjellin, L., & Norring, C. (2010). Characteristics measured by the Eating Disorder Inventory for children at risk and protective factors for disordered eating in adolescent girls. *International journal of women's health*, 2, 375.

Hardie, A. (2007). Eating disorders, body image and weight control: life orientation teachers' knowledge, attitudes and behaviours. Unpublished doctoral thesis Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Harris, E. C., & Barraclough, B. (1997). Suicide as an outcome for mental disorders. A meta-analysis. *The British Journal of Psychiatry*, 170(3), 205-228.

Harter, S. (1985). *Self-perception Profile for Children:(revision of the Perceived Competence Scale for Children)*. Universidad de Denver.

Hawton, K., Rodham, K., Evans, E., & Weatherall, R. (2002). Deliberate self harm in adolescents: self report survey in schools in England. *Bmj*, 325(7374), 1207-1211.

Health and Social Care Information Centre (2012) *Provisional Monthly Hospital Episode Statistics for Admitted Patient Care, Outpatient and Accident & Emergency data: April - June 2012*

Henderson, C., Evans-Lacko, S., & Thornicroft, G. (2013). Mental Illness Stigma, Help Seeking, and Public Health Programs. *American journal of public health*, 103(5), 777-780.

Herzog D. B., Keller M. B., Sacks N. R., Yeh C. J., Lavori P. W. Psychiatric comorbidity in treatment-seeking anorexics and bulimics. *J Am Acad Child Adolesc Psychiatry* 1992;31:810–18.

Herzog, D. B., Hopkins, J. D., & Burns, C. D. (1993). A follow-up study of 33 subdiagnostic eating disordered women. *International Journal of Eating Disorders*, 14(3), 261-267.

Hill, S., & Hill, T. (1990). *The collaborative classroom: A guide to cooperative learning*. South Yarra, Victoria: Curtain

HM Treasury and Department for Education and Skills, 2007, Policy review of children and young people: A discussion paper. Nottingham. DfE.

Hoek HW (2006) Incidence, prevalence and mortality of anorexia nervosa and other eating disorders. *Current Opinion in Psychiatry* 19:389–394

Holloway, A., & Watson, H. E. (2002). Role of self-efficacy and behaviour change. *International journal of nursing practice*, 8(2), 106-115.

Hudson, J. I., Hiripi, E., Pope Jr, H. G., & Kessler, R. C. (2007). The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological psychiatry*, 61(3), 348-358.

Hussein, S. A., & Vostanis, P. (2013). Teacher training intervention for early identification of common child mental health problems in Pakistan. *Emotional and Behavioural Difficulties*, 18(3), 284-296.

Irving, L. M. (2000). Promoting size acceptance in elementary school children: the EDAP puppet program. *Eating Disorders*, 8(3), 221-232.

Jacobi, C., Hayward, C., de Zwaan, M., Kraemer, H. C., & Agras, W. S. (2004). Coming to terms with risk factors for eating disorders: application of risk terminology and suggestions for a general taxonomy. *Psychological bulletin*, 130(1), 19.

Jacobi, C., Paul, T., de Zwaan, M., Nutzinger, D. O., & Dahme, B. (2004). Specificity of self-concept disturbances in eating disorders. *International Journal of Eating Disorders*, 35(2), 204-210.

Jaite, C., Hoffmann, F., Glaeske, G., & Bachmann, C. J. Prevalence, comorbidities and outpatient treatment of anorexia and bulimia nervosa in German children and adolescents. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 1-9. (in press)

Jenkins, P. E., Hoste, R. R., Meyer, C., & Blissett, J. M. (2011). Eating disorders and quality of life: A review of the literature. *Clinical Psychology Review*, 31(1), 113- 121.

Jerome, L. W. (1987). Primary intervention for bulimia: The evaluation of a media presentation for an adolescent population. Unpublished master's thesis, Kent State University, Kent, OH.

Jerome, L. W. (1991). Primary intervention for bulimia: The evaluation of a media presentation for an adolescent population. *Dissertation Abstracts International*, 52(6), 3296B.

Jones, D., Dodge, K. A., Foster, E. M., & Nix, R. (2002). Early identification of children at risk for costly mental health service use. *Prevention Science*, 3(4), 247-256.

Jones, F., & Riazi, A. (2011). Self-efficacy and self-management after stroke: a systematic review. *Disability and rehabilitation*, 33(10), 797-810.

Jones, J. M., Bennett, S., Olmsted, M. P., Lawson, M. L., & Rodin, G. (2001). Disordered eating attitudes and behaviours in teenaged girls: a school-based study. *Canadian Medical Association Journal*, 165(5), 547-552.

Jones, W. R., Saeidi, S., & Morgan, J. F. (2013). Knowledge and attitudes of psychiatrists towards eating disorders. *European Eating Disorders Review*, 21(1), 84-88.

Kaminski, P. L., & McNamara, K. (1996). A treatment for college women at risk for bulimia: A controlled evaluation. *Journal of Counseling and Development*, 74, 288–294.

Kater, K. J., Rohwer, J., & Londre, K. (2002). Evaluation of an upper elementary school program to prevent body image, eating, and weight concerns. *Journal of School Psychology*, 72, 199–204.

Kennedy, A., & McKay, J. (2011). Beyond induction: the continuing professional development needs of early-career teachers in Scotland. *Professional Development in Education*, 37(4), 551-569.

Kennedy, A., & McKay, J. (2011). Beyond induction: the continuing professional development needs of early-career teachers in Scotland. *Professional development in education*, 37(4), 551-569.

Kidger, J., Donovan, J., Biddle, L., Campbell, R., & Gunnell, D. (2009). Supporting adolescent emotional health in schools: a mixed methods study of student and staff views in England. *BMC Public Health*, 9(1), 403.

Kidger, J., Gunnell, D., Biddle, L., Campbell, R., & Donovan, J. (2010). Part and parcel of teaching? Secondary school staff's views on supporting student emotional health and well-being. *British Educational Research Journal*, 36(6), 919-935.

Killen, J. D., Taylor, C. B., Hammer, L., Litt, I., Wilson, D. M., Rich, T., Hayward, C., Simmonds, B., Kraemer, H., Varady, A., (1993). An attempt to modify unhealthful eating attitudes and weight regulation practices of young adolescent girls. *International Journal of Eating Disorders*, 13, 369–384.

Killen, J. D., Taylor, C. B., Hayward, C., Wilson, D. M., Haydel, K. F., Hammer, L. D., Simmonds, B., Robinson, T. N., Litt, I., Varady, A., & Kraemer, H. (1994). Pursuit of thinness and onset of eating disorder symptoms in a community sample of adolescent girls: A three-year prospective analysis. *International Journal of Eating Disorders*, 16(3), 227-238.

King, D. K., Glasgow, R. E., Toobert, D. J., Strycker, L. A., Estabrooks, P. A., Osuna, D., & Faber, A. J. (2010). Self-efficacy, problem solving, and social-environmental support are associated with diabetes self-management behaviors. *Diabetes care*, 33(4), 751-753.

Klein-Weigel, P., Rein, P., Kronenberg, F., List, E., Kinzl, J., Biebl, W., & Fraedrich, G. (2004). Microcirculatory assessment of vascular acrosyndrome in anorexia nervosa and analysis of manifestation factors. *Journal of psychosomatic research*, 56(1), 145-148.

Klump, K. L., Bulik, C. M., Kaye, W. H., Treasure, J., & Tyson, E. (2009). Academy for Eating Disorders position paper: Eating disorders are serious mental illnesses. *International Journal of Eating Disorders*, 42(2), 97-103.

Knowles, M. (1984). *Andragogy in Action*. San Francisco: Jossey-Bass.

Kotler, L. A., Cohen, P., Davies, M., Pine, D. S., & Walsh, B. T. (2001). Longitudinal relationships between childhood, adolescent, and adult eating disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 40(12), 1434-1440.

Kowalewski, K., McLennan, J. D., & McGrath, P. J. (2011). A preliminary investigation of wait times for child and adolescent mental health services in Canada. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 20(2), 112.

Kusel, A. B. (1999). Primary prevention of eating disorders through media literacy training of girls. *Dissertation Abstracts International*, 60(4), 1859B.

Leon AC, Olfson M, Portera L, Farber L, & Sheehan DV. Assessing psychiatric impairment in primary care with the Sheehan Disability Scale. *Int J Psychiatry Med*. 1997;27(2):93-105

Lissau, I., & Sorensen, T. I. (1994). Parental neglect during childhood and increased risk of obesity in young adulthood. *The Lancet*, 343(8893), 324-327.

Lo, D. Y., Yen, J. L., & Jones, M. P. (2004). Massive gastric dilation and necrosis in anorexia nervosa: cause or effect?. *Nutrition in clinical practice*, 19(4), 409-412.

Loades, M. E., & Mastroyannopoulou, K. (2010). Teachers' recognition of children's mental health problems. *Child and Adolescent Mental Health*, 15(3), 150-156.

Machado, P. P. P., Machado, B. C., Gonçalves, S., & Hoek, H. W. (2007). The prevalence of eating disorders not otherwise specified. *International Journal of Eating Disorders*, 40(3), 212-217.

Main, D. S., Iverson, D. C., McGloin, J., Banspach, S. W., Collins, J. L., Rugg, D. L., & Kolbe, L. J. (1994). Preventing HIV infection among adolescents: evaluation of a school-based education program. *Preventive medicine*, 23(4), 409-417.

Manitoba Health (2006). *Eating Disorders: Best Practices in Prevention and Intervention. Mental Health and Spiritual Health Care. Manitoba.*

Marchi, M., & Cohen, P. (1990). Early childhood eating behaviors and adolescent eating disorders. *Journal of the American Academy of Child & Adolescent Psychiatry*, 29(1), 112-117.

Marques, L., Alegria, M., Becker, A. E., Chen, C. N., Fang, A., Chosak, A., & Diniz, J. B. (2011). Comparative prevalence, correlates of impairment, and service utilization for eating disorders across US ethnic groups: Implications for reducing ethnic disparities in health care access for eating disorders. *International Journal of Eating Disorders*, 44(5), 412-420.

McVey, G. L., Davis, R., Tweed, S., & Shaw, B. F. (2004). Evaluation of a school-based program designed to improve body image satisfaction, global self-esteem, and eating attitudes and behaviors: A replication study. *International Journal of Eating Disorders*, 36(1), 1-11.

Mehler, P. S. (2011). Medical complications of bulimia nervosa and their treatments. *International Journal of Eating Disorders*, 44(2), 95-104.

Micali, N., Hagberg, K. W., Petersen, I., & Treasure, J. L. (2013). The incidence of eating disorders in the UK in 2000–2009: findings from the General Practice Research Database. *BMJ Open*, 3(5).

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. Guilford press.

Miller, W. R., Yahne, C. E., Moyers, T. B., Martinez, J., & Pirritano, M. (2004). A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of consulting and Clinical Psychology*, 72(6), 1050.

Milos G, Spindler A, Schnyder U. Psychiatric comorbidity and Eating Disorder Inventory (EDI) profiles in eating disorder patients. *Can J Psychiatry* 2004;49:179–84.

Misra, Madhusmita, Avichal Aggarwal, Karen K. Miller, Cecilia Almazan, Megan Worley, Leslie A. Soyka, David B. Herzog, and Anne Klibanski. Effects of anorexia nervosa on clinical, hematologic, biochemical, and bone density parameters in community-dwelling adolescent girls. *Pediatrics* 114, no. 6 (2004a): 1574-1583.

Misra, Madhusmita, Karen K. Miller, Cecilia Almazan, Kavitha Ramaswamy, Avichal Aggarwal, David B. Herzog, Gregory Neubauer, Jeffrey Brey, and Anne Klibanski. Hormonal and body composition predictors of soluble leptin receptor, leptin, and free leptin index in adolescent girls with anorexia nervosa and controls and relation to insulin sensitivity. *Journal of Clinical Endocrinology & Metabolism* 89, no. 7 (2004b): 3486-3495.

Mitchell, J. E., & Crow, S. (2006). Medical complications of anorexia nervosa and bulimia nervosa. *Current Opinion in Psychiatry*, 19(4), 438.

Moldavsky, M., Groenewald, C., Owen, V., & Sayal, K. (2012). Teachers' recognition of children with ADHD: role of subtype and gender. *Child and Adolescent Mental Health*, 18(1), 18-23

Mond, J. M., & Arrighi, A. (2011). Gender differences in perceptions of the severity and prevalence of eating disorders. *Early Intervention in Psychiatry*, 5(1), 41-49.

Moor, S., Maguire, A., McQueen, H., Wells, J. E., Elton, R., & Wrate, R., & Blaire, C. (2007). Improving the recognition of depression in adolescence: Can we teach the teachers? *Journal of Adolescence*, 30(1), 81-95.

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.

National Collaborating Centre for Mental Health 2004, Eating disorders: Core interventions in the treatment and management of anorexia nervosa, bulimia nervosa and related eating disorders. Clinical Guideline 9., The British Psychological Society and Gaskell., London.

National Institute for Health and Care Excellence. (2007) Behaviour Change: the principles for effective interventions. NICE Public Health Guidance. UK.

National Institute of Health Research (2013). Feasibility and Pilot studies. <http://www.ccf.nihr.ac.uk/Search/results.aspx?k=feasibility%20and%20pilot%20studies> accessed December 2013.

Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review, 29*(3), 208-215.

Neumark-Sztainer D, & Hannan PJ (2000) Weight-related behaviours among adolescent girls and boys: results from a national survey. *Archives of Pediatrics and Adolescent Medicine, 154*:569–577

Neumark-Sztainer, D., Butler, R., & Palti, H. (1995). Eating disturbances among adolescent girls: Evaluation of a school-based primary prevention program. *Journal of Nutritional 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 the American Dietetic Association, 100*, 1466–1473.

Neumark-Sztainer, D., Story, M., & Collier, T. (1999). Perceptions of secondary school staff toward the implementation of school-based activities to prevent weight-related disorders: A needs assessment. *American Journal of Health Promotion, 13*(3), 153-156.

NHS National Services Scotland “Child and Adolescent Mental Health Services Waiting Times in Scotland” (2013) accessed June 2013: <http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2013-05-28/2013-05-28-WT-CAMHS-Report.pdf>

Nicholls, D. E., Lynn, R., & Viner, R. M. (2011). Childhood eating disorders: British national surveillance study. *The British Journal of Psychiatry, 198*(4), 295-301.

O'Dea, J. (1995). *Everybody's different: A self-esteem program for young adolescents*. Sydney: University of Sydney Press.

O'Dea, J. A., & 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(1), 43-57.

O'Dea, J. A., & Abraham, S. (2001). Knowledge, beliefs, attitudes, and behaviors related to weight control, eating disorders, and body image in Australian trainee home economics and physical education teachers. *Journal of Nutrition Education and Behavior*, 33(6), 332-340.

O'Dea, J. A., Abraham, S., & Heard, R. (1996). Food habits, body image and weight control practices of young male and female adolescents. *Australian Journal of Nutrition and Dietetics*.

Ohwada, R., Hotta, M., Kimura, H., Takagi, S., Matsuda, N., Nomura, K., & Takano, K. (2005). Ampulla cardiomyopathy after hypoglycemia in three young female patients with anorexia nervosa. *Internal medicine*, 44(3), 228-233.

Orjada, K., & Stice, E. (2003). A controlled evaluation of an eating disturbance psychoeducational intervention for college students: A replication. Manuscript in preparation.

Ornstein, R. M., Rosen, D. S., Mammel, K. A., Callahan, S. T., Forman, S., Jay, M. S., Fisher, M., Rome, E., & Walsh, B. T. (2013). Distribution of Eating Disorders in Children and Adolescents Using the Proposed DSM-5 Criteria for Feeding and Eating Disorders. *Journal of Adolescent Health*.

Outwater, A. D. (1991). An intervention project to improve body image and self-esteem in 6th grade boys and girls as a potential prevention against eating disorders. *Dissertation Abstracts International*, 51(12), 4029A.

"Outwater, A. D. (1991). An intervention project to improve body image and self-esteem in 6th grade boys and girls as a potential prevention against eating disorders. *Dissertation Abstracts International*, 51(12), 4029A."

Oxford English Dictionary. 2013. Oxford: Clarendon Press.

Patton, G. C., Selzer, R., Coffey, C. C. J. B., Carlin, J. B., & Wolfe, R. (1999). Onset of adolescent eating disorders: population based cohort study over 3 years. *BMJ: British Medical Journal*, 318(7186), 765.

"Paxton, S. J. (1993). A prevention program for disturbed eating and body dissatisfaction in adolescent girls: A 1 year follow-up. *Health Education Research*, 8, 43–51."

Penn, D. L., & Couture, S. M. (2002). Strategies for reducing stigma toward persons with mental illness. *World Psychiatry*, 1(1), 20.

Piran, N. (2004). Prevention series. Teachers: On "being" (rather than "doing") prevention. *Eating Disorders: The Journal of Treatment and Prevention*, 12(1), 1-9.

Presnell, K., & Stice, E. (2003). An experimental test of the effect of weight-loss dieting on bulimic pathology: Tipping the scales in a different direction. *Journal of Abnormal Psychology*, 112, 166–170.

Preti, Antonio, Giovanni de Girolamo, Gemma Vilagut, Jordi Alonso, Ron de Graaf, Ronny Bruffaerts, Koen Demyttenaere, Alejandra Pinto-Meza, Josep Maria Haro, and Piero Morosini. The epidemiology of eating disorders in six European countries: results of the ESEMeD-WMH project. *Journal of psychiatric research* 43, no. 14 (2009): 1125-1132.

Pretoria Department of Education. (2002). Revised National Curriculum Statement Grades R-9 (Schools) Policy: Life Orientation. Gazette No.: 23406, Vol. 443.

Pretoria Department of Education. (2002). Revised National Curriculum Statement Grades R-9 (Schools) Policy: Life Orientation. Gazette No.: 23406, Vol. 443. Pretoria: Department of Education.

Price, J. A., Desmond, S. M., Price, J. H., & Mossing, A. (1990). School counselors' knowledge of eating disorders. *Adolescence*, 25(100), 945-957.

Prymachuk, S., Graham, T., Haddad, M., & Tylee, A. (2012). School nurses' perspectives on managing mental health problems in children and young people. *Journal of Clinical Nursing*, 21(5-6), 850-859.

Råstam, M. (1992). Anorexia nervosa in 51 Swedish adolescents: premorbid problems and comorbidity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31(5), 819-829.

Raviv, A., Sills, R., Raviv, A., & Wilansky, P. (2000). Adolescents' help-seeking behaviour: the difference between self-and other-referral. *Journal of Adolescence*, 23(6), 721-740.

Reinke, W. M., Stormont, M., Herman, K. C., Puri, R., & Goel, N. (2011). Supporting children's mental health in schools: Teacher perceptions of needs, roles, and barriers. *School Psychology Quarterly*, 26(1), 1.

Reynolds, M., & Wheldall, K. (2007). Reading recovery 20 years down the track: Looking forward, looking back. *International Journal of Disability, Development and Education*, 54(2), 199-223.

Richman, R. D. (1993). Primary prevention of eating disorders: A pilot program. Unpublished master's thesis, Simon Fraser University, Burnaby, British Columbia, Canada.

"Richman, R. D. (1993). Primary prevention of eating disorders: A pilot program. Unpublished master's thesis, Simon Fraser University, Burnaby, British Columbia, Canada."

Richman, R. D. (1998). Preventing disordered eating: Promoting healthy attitudes and behaviors: A school-based program. *Dissertation Abstracts International*, 52(6), 0425B.

"Richman, R. D. (1998). Preventing disordered eating: Promoting healthy attitudes and behaviors: A school-based program. *Dissertation Abstracts International*, 52(6), 0425B."

Ritchey, K. D., & Speece, D. L. (2004). Early identification of reading disabilities: Current status and new directions. *Assessment for Effective Intervention*, 29(4), 13-24.

Rock, E. M., Ireland, M., Resnick, M. D., & McNeely, C. A. (2005). A rose by any other name? Objective knowledge, perceived knowledge, and adolescent male condom use. *Pediatrics*, 115(3), 667-672.

Rogers, C. R. (1951). *Client-centered therapy: Its current practice, implications and theory* (p. 491). Boston: Houghton Mifflin.

Rome, E.S., Ammerman, S., Rosen, D.S., Keller, R.J., Lock, J., Mammel, K.A., O'Toole, J., Rees, J.M., Sanders, M.J., Sawyer, S.M., Schneider, M., Sigel, E., & Silber, T.J. (2003). Children and adolescents with eating disorders: The state of the art. *Pediatrics*, 111,98–108.

Solmi, F., Hatch, S. L., Hotopf, M., Treasure, J., & Micali, N. (2014). Prevalence and correlates of disordered eating in a general population sample: the South East London Community Health (SELCoH) study. *Social psychiatry and psychiatric epidemiology*, 1-12.

Rosen, J. C., Saltzberg, E., & Srebnik, D. (1989). Cognitive behaviour therapy for negative body image. *Behavior Therapy*, 20, 393–404.

Rossato, C., & Brackenridge, C. (2009). Child protection training in sport-related degrees and initial teacher training for physical education: an audit. *Child Abuse Review*, 18(2), 81-93.

Santonastaso, P., Zanetti, T., Ferrara, S., Olivotto, M. C., Magnavita, N., & Savaro, A. (1999). A preventive intervention program in adolescent school girls: A longitudinal study. *Psychotherapy and Psychosomatics*, 68, 46–50.

"Santonastaso, P., Zanetti, T., Ferrara, S., Olivotto, M. C., Magnavita, N., &

Savaro, A. (1999). A preventive intervention program in adolescent

school girls: A longitudinal study. *Psychotherapy and Psychosomatics*, 68, 46–50."

Schwartz, R. M., Hobsbaum, A., Briggs, C., & Scull, J. (2009). Reading Recovery and evidence-based practice: A response to Reynolds and Wheldall (2007). *International Journal of Disability, Development and Education*, 56(1), 5-15.

Sharpe, H. (2013). The development and pilot testing of a school-based prevention programme for eating disorders. Unpublished doctoral thesis, King's College London, UK.

Sharpe, H., Schober, I., Treasure, J., & Schmidt, U. (2013). Feasibility, acceptability and efficacy of a school-based prevention programme for eating disorders: cluster randomised controlled trial. *The British Journal of Psychiatry*, 203(6), 428-435.

Shaw, H., Stice, E., & Becker, C. B. (2009). Preventing eating disorders. *Child and Adolescent Psychiatric Clinics of North America*, 18(1), 199-207.

"Shepard, R. E. (2001). The body and soul program: Evaluation of a peer educator-led eating disorder education and prevention program. (Doctoral dissertation, University of Oregon, 2000). *Dissertation Abstracts International*, 61(7), 3862B."

Shepherd, J., Dewhirst, S., Pickett, K., Byrne, J., Speller, V., Grace, M., & Roderick, P. (2013). Factors facilitating and constraining the delivery of effective teacher training to promote health and well-being in schools: a survey of current practice and systematic review. *NIHR Journals Library-Public Health Research*.

Shoebriidge, P. J., & Gowers, S. G. (2000). Parental high concern and adolescent-onset anorexia nervosa A case-control study to investigate direction of causality. *The British Journal of Psychiatry*, 176(2), 132-137.

Siegel, D., DiClemente, R., Durbin, M., & Krasnovsky, F. (1995). Change in junior high school students' AIDS-related knowledge, misconceptions, attitudes and HIV-preventive behaviors: Effects of a school-based intervention. *AIDS Education and Prevention*.

Smink F. R., van Hoeken D, Hoek H. W. (2012) Epidemiology of eating disorders: incidence, prevalence and mortality rates. *Current Psychiatry Reports*, 14:406–414

Smolak, B. H., Levine, M P., Shisslak, C. M. (2001). Teachers: The forgotten influence on the success of prevention programs. *Eating Disorders*, 9(3), 261-265.

Smolak, L., Levine, M., & Schermer, F. (1998a). A controlled evaluation of an elementary school primary prevention program for eating problems. *Journal of Psychosomatic Research*, 44, 339–353.

Smolak, L., Levine, M., & Schermer, F. (1998b). Lessons from lessons: An evaluation of an elementary school prevention program. In W. Vandereyken & G. Noordenbos (Eds.), *The prevention of eating disorders* (pp. 137–172). London: Athlone.

Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety Inventory STAI (Form Y)* (" Self-Evaluation Questionnaire").

Spitzer, R. L., Devlin, M., Walsh, B. T., Hasin, D., Wing, R., Marcus, M., ... & Nonas, C. (1992). Binge eating disorder: a multisite field trial of the diagnostic criteria. *International Journal of Eating Disorders*, 11(3), 191-203.

Stang, J. S., Story, M., & Kalina, B. (1997). School-based weight management services: perceptions and practices of school nurses and administrators. *American Journal of Health Promotion*, 11(3), 183-185.

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., & Ragan, J. (2002). A controlled evaluation of an eating disturbance psychoeducational intervention. *International Journal of Eating Disorders*, 31, 159–171.

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*, 29, 247-262.

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., Shaw, H., & Marti, C. N. (2007). A meta-analytic review of eating disorder prevention programs: encouraging findings. *Annual Review of Clinical Psychology*, 3, 207-231.

Stice, E., Trost, A., & Chase, A. (2003). Healthy weight control and dissonance-based eating disorder prevention programs: Results from a controlled trial. *International Journal of Eating Disorders*, 33(1), 10-21.

Striegel-Moore, R. H., Cachelin, F. M., Dohm, F., Pike, K. M., Wilfley, D. E., & Fairburn, C. G. (2001). Comparison of binge eating disorder and bulimia nervosa in a community sample. *International Journal of Eating Disorders*, 29(2), 157-165.

Strumia, R. (2005). Dermatologic signs in patients with eating disorders. *American journal of clinical dermatology*, 6(3), 165-173.

Swanson, S. A., Crow, S. J., Le Grange, D., Swendsen, J., & Merikangas, K. R. (2011). Prevalence and correlates of eating disorders in adolescents: Results from the national comorbidity survey replication adolescent supplement. *Archives of General Psychiatry*, 68(7), 714-723.

Swinbourne, J., Hunt, C., Abbott, M., Russell, J., St Clare, T., & Touyz, S. (2012). The comorbidity between eating disorders and anxiety disorders: Prevalence in an eating disorder sample and anxiety disorder sample. *Australian and New Zealand Journal of Psychiatry*, 46(2), 118-131.

Tanofsky-Kraff, M., Wilfley, D. E., Young, J. F., Mufson, L., Yanovski, S. Z., Glasofer, D. R., & Schvey, N. A. (2010). A pilot study of interpersonal psychotherapy for preventing excess weight gain in adolescent girls at-risk for obesity. *International Journal of Eating Disorders*, 43(8), 701-706.

Taylor, H. G., Anselmo, M., Foreman, A. L., Schatschneider, C., & Angelopoulos, J. (2000). Utility of kindergarten teacher judgments in identifying early learning problems. *Journal of Learning Disabilities*, 33(2), 200-210.

Thompson, J., Kilbane, J., & Sanderson, H. (Eds.). (2007). *Person centred practice for professionals*. McGraw-Hill International.

Treasure, J., Claudino, A. M., & Zucker, N. (2010). Eating disorders. *The Lancet*, 375(9714), 583-593.

Varnado-Sullivan, P. J., Zucker, N., Williamson, D. A., Reas, D., Thaw, J., & Netemeyer, S. B. (2001). Development and implementation of the Body Logic Program for adolescents: A two-stage prevention program

Wade, T. D., Davidson, S., & O'Dea, J. A. (2003). A preliminary controlled evaluation of a school-based media literacy program and self-esteem program for reducing eating disorder risk factors. *International Journal of Eating Disorders*, 33, 371–383.

Walter, H. J., Gouze, K., & Lim, K. G. (2006). Teachers' beliefs about mental health needs in inner city elementary schools. *Journal of the American Academy of Child & Adolescent Psychiatry*, 45(1), 61-68.

Ward, L., Mallett, R., Heslop, P., & Simons, K. (2003). Transition planning: how well does it work for young people with learning disabilities and their families?. *British Journal of Special Education*, 30(3), 132-137.

Webster, J. J., & Palmer, R. L. (2000). The childhood and family background of women with clinical eating disorders: A comparison with women with major depression and women without psychiatric disorder. *Psychological Medicine*, 30(1), 53-60.

Weiss, K. R. (2000). An evaluation of a primary prevention program for disordered eating in adolescent girls: Examining responses of high- and low-risk girls.

Unpublished doctoral dissertation, La Trobe University, Bundoora, Victoria, Australia.

Welch, S. L., Doll, H. A., & Fairburn, C. G. (1997). Life events and the onset of bulimia nervosa: a controlled study. *Psychological Medicine*, 27(03), 515-522.

Wells, J., Barlow, J., & Stewart-Brown, S. (2003). A systematic review of universal approaches to mental health promotion in schools. *Health Education*, 103(4), 197-220.

Wilksch, S. M., & Wade, T. D. (2009). Reduction of shape and weight concern in young adolescents: A 30-month controlled evaluation of a media literacy program. *Journal of the American Academy of Child & Adolescent Psychiatry*, 48(6), 652-661.

"Winzelberg, A. J., Eppstein, D., Eldredge, K. L., Wilfley, D., Dasmahapatra, R., Dev, P., & Taylor, C. B. (2000). Effectiveness of an Internetbased program for reducing risk factors for eating disorders. *Journal of Consulting and Clinical Psychology*, 68, 346–350."

"Winzelberg, A. J., Taylor, C. B., Sharpe, T., Eldredge, K. L., Dev, P., & Constantinou, P. S. (1998). Evaluation of a computer-mediated eating disorder intervention program. *International Journal of Eating Disorders*, 24, 339–349."

Withers, G. F., Twigg, K., Wertheim, E. H., & Paxton, S. J. (2002). A controlled evaluation of an eating disorders primary prevention videotape using the

elaboration likelihood model of persuasion. *Journal of Psychosomatic Research*, 53, 1021–1027.

Wittchen, H. U., Nelson, C. B., & Lachner, G. (1998). Prevalence of mental disorders and psychosocial impairments in adolescents and young adults. *Psychological medicine*, 28(01), 109-126.

Wolf-Bloom, M. S. (1999). Using media literacy training to prevent body dissatisfaction and subsequent eating problems in early adolescent girls. *Dissertation Abstracts International*, 59(8), 4515B.

Wolpert, M., Humphrey, N., Belsky, J., & Deighton, J. (2013). Embedding mental health support in schools: learning from the Targeted Mental Health in Schools (TaMHS) national evaluation. *Emotional and Behavioural Difficulties*, 18(3), 270-283.

Yager, Z. (2009). Developing wellbeing in first year pre-service teachers: Reflections on a personal approach to professional education. *The Journal of Student Wellbeing*, 3(1), 52-72.

Yager, Z., & O'Dea, J. A. (2005). The role of teachers and other educators in the prevention of eating disorders and child obesity: What are the issues? *Eating Disorders*, 13(3), 261-278.

Yager, Z., Diedrichs, P. C., Ricciardelli, L. A., & Halliwell, E. (2013). What works in secondary schools? A systematic review of classroom-based body image programs. *Body image* 10(3), 271-281.

Yücel, B., Özbey, N., Polat, A., & Yager, J. (2005). Weight fluctuations during early refeeding period in anorexia nervosa: case reports. *International Journal of Eating Disorders*, 37(2), 175-177.

"Zabinski, K. J., Calfas, K. J., Gehrman, C. A., Wilfley, D. E., & Sallis, J. F.

(2001). Effects of a physical activity intervention on body image in

university seniors: Project GRAD. *Annals of Behavioral Medicine*, 23,

247–252."

Zaider T. I., Johnson J. G., Cockell S. J. Psychiatric comorbidity associated with ED symptomatology among adolescents in the community. *International Journal of Eating Disorders* 2000;28:58–67.

## Appendices

### Appendix A: Questionnaire and results from Hardie (2007)

#### Educator's knowledge regarding body weight, eating behaviour and eating disorders

| Question  | TRUE |    | FALSE |    |
|---|------|----|-------|----|
|   | n    | %  | n     | %  |
| Anorexia Nervosa is characterised by an intense fear of becoming fat, even when underweight (True).                           | 48   | 96 | 2     | 4  |
| Overweight teenagers should go on strict weight reducing diets (False).   | 17   | 34 | 33    | 66 |
| Girls begin their growth spurt before boys (True).  | 49   | 98 | 1     | 2  |
| Overweight teenagers usually eat more food than thin teenagers (False).   | 30   | 60 | 20    | 40 |
| Those with anorexia nervosa refuse to maintain their body weight at or above what is expected for their age and height (True) | 44   | 88 | 6     | 12 |
| Teenagers should be encouraged not to eat any junk-food (False).  | 33   | 66 | 17    | 34 |
| It is normal for teenage girls to put on fat around their thighs and hips (True).   | 37   | 74 | 13    | 26 |
| Thin people are generally happier than their overweight counterparts (False).   | 19   | 38 | 31    | 62 |
| Eating disorders such as anorexia nervosa only occur in females in upper and middle class families (False).                   | 19   | 38 | 31    | 62 |
| All those who have suffered from an eating disorder never fully recover (False).  | 14   | 29 | 35    | 71 |
| People with anorexia nervosa lose their appetite (False).   | 32   | 65 | 17    | 35 |
| People with bulimia nervosa are usually within the normal weight range for their age and height (True).                       | 25   | 50 | 25    | 50 |
| People with bulimia nervosa always induce vomiting (False).   | 38   | 76 | 12    | 24 |

Note: Frequencies do not always add up to the sample total due to non-responses on some items.

## **Appendix B: Student Questionnaire used in Study One**

**1. People who with eating disorders can be very good at hiding their problems - do you think you would know enough to tell whether a friend was at risk?**

- a. Yes - I have spotted the signs in the past
- b. Yes - I am confident I would know what I'm looking for
- c. I'm unsure
- d. No - I think it's unlikely I would see the early signs
- e. Other (free text)

**2. Has your school ever taught you about eating disorders, and what to do if you're worried about yourself or a friend?**

- a. Yes, I have been taught and it was helpful
- b. Yes, I have been taught but it was NOT very helpful
- c. No, I have never been taught at school
- d. I can't remember
- e. Other (free text)

**3. Can you think of anything your school could do to help you understand as much as you'd like to about eating disorders and how to help your friends if they're in difficulty? (free text)**

**4. If you were worried that a friend might have an eating disorder what would you do?**

- a. My friend would probably talk to me, and I would listen and try to help
- b. I would approach my friend and raise the issue and we would work out together what to do
- c. I would talk to a teacher I trusted and ask for advice
- d. I would anonymously let a teacher know so they could help my friend, but my friend wouldn't know I had told on them
- e. I would talk to an adult outside of school (e.g. my parents or youth group worker)
- f. I wouldn't do anything at first, I would wait and see if things got worse or better
- g. Other (free text)

**5. If you told a teacher that you were concerned about a friend, what would you want them to do?**

- a. Talk to my friend and find out what was wrong
- b. Help me to help my friend
- c. Tell my friend's parents and get them to help
- d. Make sure my friend got support from a counsellor or doctor

- e. Nothing, just listen
- f. Other (free text)

**6. If you told a teacher that you were concerned about a friend, what do you think they would actually do?**

- a. Talk to my friend and find out what was wrong
- b. Help me to help my friend
- c. Tell my friend's parents and get them to help
- d. Make sure my friend got support from a counsellor or doctor
- e. Nothing, just listen
- f. Other (free text)

**7. If you felt you should tell a teacher about a friend you were worried about - how would you most like to do it (even if it's not possible at the moment)?**

- a. Face to face
- b. On the phone
- c. Text / SMS
- d. Email
- e. Instant messaging

- f. In writing
- g. Other (free text)

**8. If you were suffering from an eating disorder - do you think your school would feel like a safe and supportive place to recover?**

- a. Strongly Agree
- b. Agree
- c. Neutral
- d. Disagree
- e. Strongly Disagree
- f. Other (free text)

**9. Can you think of anything that would make your school an even better place for people recovering from an eating disorder? (free text)**

**10. Has your school ever helped you, or a friend, when you've needed help with regards to an eating disorder? (please explain) (free text)**

**11. Has your school ever failed to help / not noticed / made the situation worse when you or a friend needed help with regards to an eating disorder? (please explain) (free text)**

## **Appendix C: Staff Questionnaire used in Study Two**

### **1. Does your school / college have an eating disorders policy in place?**

- a. Yes we have specific policies relating to eating disorders
- b. Yes - eating disorders are covered in another policy (e.g. child protection)
- c. Unsure
- d. No we definitely do not refer to eating disorders in any of our policies
- e. Any Further Comments(free text)

### **2. Do you think that policies that refer to eating disorders are effective?**

(only asked if answered yes to question 1)

- a. Very Effective
- b. Effective
- c. Ineffective
- d. Very Ineffective

### **3. Has your school offered any form of training / briefing about eating disorders?**

- a. Yes
- b. No

**4. Who attended the training?**

(only asked if answered yes to question 3)

- a. Just me
- b. All Pastoral Staff
- c. All Middle and Senior Managers
- d. Whole Staff
- e. NA
- f. Other (free text)

**5. How was the training delivered?**

(only asked if answered yes to question 3)

- a. Written materials
- b. Face to face - workshop or seminar
- c. Face to face – lecture
- d. Over the Internet
- e. Over the phone
- f. NA
- g. Other (free text)

**6. What did you find useful about the training? (free text)**

(only asked if answered yes to question 3)

**7. What would have made the training more useful? (free text)**

(only asked if answered yes to question 3)

**8. If you have not received any training on eating disorders. Do you think you would find some training useful?**

(only asked if answered no to question 3)

- a. Yes - Very Useful
- b. Yes - Quite Useful
- c. No - Not Very Useful
- d. No - Not at all Useful
- e. Any Further Comments (free text)

**9. Are you aware of any current or past cases of eating disorders in your school / college?**

- a. Yes, I have been directly involved with cases
- b. Yes, I have been aware but not involved with any cases
- c. No, I have not been aware of any cases
- d. No, there have been no cases

e. Any Further Comments (free text)

**10. What would you do if you were concerned that a student may be suffering from an eating disorder? (free text)**

**11. In your school / college; if a student is concerned that one of their peers may have an eating disorder- what are they encouraged to do?**

- a. All concerns are passed on to a specific member of staff
- b. The student could talk to any member of staff
- c. We have a texting / emailing / post-box service that students can anonymously use
- d. This is not something we have discussed with students
- e. Other (free text)

**12. Have you had any particularly positive or negative experiences when communicating with parents regarding eating concerns? If so please briefly outline: (free text)**

**13. Have you worked with any outside agencies to support students with eating disorders? Please outline which agencies you have used and any particularly positive or negative experiences you have had. (free text)**

**14. Has your school / college ever had to re-integrate a student following a period away from school caused by an eating disorder?**

a. Yes

b. No

**15. Did staff or students receive any advice on how to best support the returning student?**

(only asked if answered yes to question 14)

a. Yes

b. No

**16. Can you think of any further support that could have been given to staff or students that would have helped the returning student to reintegrate more successfully? (please outline) (free text)**

**17. When we develop our training materials for schools, we want to make sure they are as useful as possible. In order to do this, instead of**

**inventing examples, we are collecting anonymous case studies from school staff which will be used for training purposes.**

**If you have can think of any instances surrounding students, staff and/ or parents when dealing with eating disorders it would be helpful if you could provide a brief outline below: (free text)**

## **Appendix D: Model Eating Disorders Policy for Schools**

# **XXXX XXXX SCHOOL**

## **Eating Disorders Policy**

### **1. Introduction**

School staff can play an important role in preventing eating disorders and also in supporting students, peers and parents of students currently suffering from or recovering from eating disorders.

### **2. Scope**

This document describes the school's approach to eating disorders. This policy is intended as guidance for all staff including non-teaching staff and governors.

### **3. Aims**

- To increase understanding and awareness of eating disorders
- To alert staff to warning signs and risk factors
- To provide support to staff dealing with students suffering from eating disorders

- To provide support to students currently suffering from or recovering from eating disorders and their peers and parents/carers

## **4. Definition of Eating Disorders**

Anyone can get an eating disorder regardless of their age, sex or cultural background.

People with eating disorders are preoccupied with food and/or their weight and body shape, and are usually highly dissatisfied with their appearance. The majority of eating disorders involve low self-esteem, shame, secrecy and denial.

Anorexia nervosa and bulimia nervosa are the major eating disorders. People with anorexia nervosa live at a low body weight, beyond the point of slimness and in an endless pursuit of thinness by restricting what they eat and sometimes compulsively over-exercising. In contrast, people with bulimia nervosa have intense cravings for food, secretly overeat and then purge to prevent weight gain (by vomiting or use of laxatives, for example).

## **5. Risk Factors**

The following risk factors, particularly in combination, may make a young person particularly vulnerable to developing an eating disorder:

### **Individual Factors:**

- Difficulty expressing feelings and emotions
- A tendency to comply with other's demands
- Very high expectations of achievement

### **Family Factors**

- A home environment where food, eating, weight or appearance have a disproportionate significance
- An over-protective or over-controlling home environment
- Poor parental relationships and arguments
- Neglect or physical, sexual or emotional abuse
- Overly high family expectations of achievement

### **Social Factors**

- Being bullied, teased or ridiculed due to weight or appearance
- Pressure to maintain a high level of fitness / low body weight for e.g. sport or dancing

## **6. Warning Signs**

School staff may become aware of warning signs which indicate a student is experiencing difficulties that may lead to an eating disorder. These warning signs should **always** be taken seriously and staff observing any of these warning signs should seek further advice from one of the designated teachers for safeguarding children – XXXXXXXXXX

### **Physical Signs**

- Weight loss
- Dizziness, tiredness, fainting
- Feeling Cold
- Hair becomes dull or lifeless
- Swollen cheeks
- Callused knuckles
- Tension headaches
- Sore throats / mouth ulcers
- Tooth decay

### **Behavioural Signs**

- Restricted eating
- Skipping meals

- Scheduling activities during lunch
- Strange behaviour around food
- Wearing baggy clothes
- Wearing several layers of clothing
- Excessive chewing of gum/drinking of water
- Increased conscientiousness
- Increasing isolation / loss of friends
- Believes s/he is fat when s/he is not
- Secretive behaviour
- Visits the toilet immediately after meals

### **Psychological Signs**

- Preoccupation with food
- Sensitivity about eating
- Denial of hunger despite lack of food
- Feeling distressed or guilty after eating
- Self dislike
- Fear of gaining weight

- Moodiness
- Excessive perfectionism

## 7. Staff Roles

The most important role school staff can play is to familiarise themselves with the risk factors and warning signs outlined above and to make the designated teacher for safeguarding children – XXXXXXXX aware of any child causing concern.

Following the report, the designated teacher / governor will decide on the appropriate course of action. This may include:

- Contacting parents / carers
- Arranging professional assistance e.g. doctor, nurse
- Arranging an appointment with a counsellor
- Arranging a referral to CAMHS – with parental consent
- Giving advice to parents, teachers and other students

Students may choose to confide in a member of school staff if they are concerned about their own welfare, or that of a peer. Students need to be made aware that it may not be possible for staff to offer complete confidentiality. **If you consider a student is at serious risk of causing themselves harm then confidentiality**

**cannot be kept.** It is important not to make promises of confidentiality that cannot be kept even if a student puts pressure on you to do so.

## **8. Students Undergoing Treatment for / Recovering from Eating Disorders**

The decision about how, or if, to proceed with a student's schooling while they are suffering from an eating disorder should be made on a case by case basis. Input for this decision should come from discussion with the student, their parents, school staff and members of the multi-disciplinary team treating the student.

The reintegration of a student into school following a period of absence should be handled sensitively and carefully and again, the student, their parents, school staff and members of the multi-disciplinary team treating the student should be consulted during both the planning and reintegration phase.

## **9. Further Considerations**

Any meetings with a student, their parents or their peers regarding eating disorders should be recorded in writing including:

- Dates and times

- An action plan
- Concerns raised
- Details of anyone else who has been informed

This information should be stored in the student's child protection file.

## **10. Further Sources of Support**

### **Websites:**

- [www.eatingdisordersadvice.co.uk](http://www.eatingdisordersadvice.co.uk) – info, support and advice
- [www.b-eat.co.uk](http://www.b-eat.co.uk) – world leading ED charity
- [www.feast-ed.org/](http://www.feast-ed.org/) - Includes a info, blog and live forum for families
- [www.youngminds.org.uk](http://www.youngminds.org.uk) – Mental health support for young people

### **Helplines:**

- Beat – adult line: 0845 634 1414
- Beat – youth line: 0745 634 7650

## **Appendix E**

### **Eating Disorders Attitude and Knowledge**

#### **Questionnaire – Schools Version**

[TEMPORARILY INSERTED AS OBJECT: DOUBLE CLICK TO OPEN PDF]

Eating Disorders Attitude and Knowledge Questionnaire

|  |   |   |   |   |   |   |   |   |   |                |
|--|---|---|---|---|---|---|---|---|---|----------------|
| <b>My overall knowledge about eating disorders</b> |   |   |   |   |   |   |   |   |   |                |
| No Knowledge                                       |   |   |   |   |   |   |   |   |   | Full Knowledge |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10             |

|   |   |   |   |   |   |   |   |   |   |                |
|---|---|---|---|---|---|---|---|---|---|----------------|
| <b>My knowledge about the risk factors and causes of eating disorders</b> |   |   |   |   |   |   |   |   |   |                |
| No Knowledge  |   |   |   |   |   |   |   |   |   | Full Knowledge |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10             |

|   |   |   |   |   |   |   |   |   |   |                      |
|---|---|---|---|---|---|---|---|---|---|----------------------|
| <b>My confidence in my ability to recognise the warning signs of an eating disorder in one of my students</b> |   |   |   |   |   |   |   |   |   |                      |
| Not at all Confident  |   |   |   |   |   |   |   |   |   | Completely Confident |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                   |

|   |   |   |   |   |   |   |   |   |   |                |
|---|---|---|---|---|---|---|---|---|---|----------------|
| <b>My knowledge about the symptoms seen in eating disorders</b> |   |   |   |   |   |   |   |   |   |                |
| No Knowledge  |   |   |   |   |   |   |   |   |   | Full Knowledge |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10             |

|  |   |   |   |   |   |   |   |   |   |                |
|--|---|---|---|---|---|---|---|---|---|----------------|
| <b>My knowledge about how to support a student with an eating disorder</b> |   |   |   |   |   |   |   |   |   |                |
| No Knowledge   |   |   |   |   |   |   |   |   |   | Full Knowledge |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10             |

|   |   |   |   |   |   |   |   |   |   |                      |
|---|---|---|---|---|---|---|---|---|---|----------------------|
| <b>My confidence in my ability to support a student with an eating disorder</b> |   |   |   |   |   |   |   |   |   |                      |
| Not at all Confident  |   |   |   |   |   |   |   |   |   | Completely Confident |
|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                   |

|  |   |   |   |   |   |   |   |   |   |                      |
|--|---|---|---|---|---|---|---|---|---|----------------------|
| <b>My confidence in my ability to successfully work with the parent/carer of a student with an eating disorder</b> |   |   |   |   |   |   |   |   |   |                      |
| Not at all Confident   |   |   |   |   |   |   |   |   |   | Completely Confident |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                   |







## **Appendix F**

### **Training Hand-Outs Authored for Study 4**

[TEMPORARILY INSERTED AS OBJECT: DOUBLE CLICK TO OPEN PDF]

# **Eating Disorders Practical Skills Training Day**

Pooky Knightsmith

Institute of Psychiatry  
King's College London  
[www.eatingdisordersadvice.co.uk](http://www.eatingdisordersadvice.co.uk)

# **Appendix G**

## **Post-Intervention**

### **Acceptability Evaluation Form**

INSERT PDF OF EVALUATION FORM HERE – temporarily inserted as object

## Eating Disorders Practical Skills Training Day Evaluation Form

Your answers will remain anonymous. Sharing honest feedback will help this course to be improved for future participants.

|  | Very good | Good | Fair | Poor |
|--|-----------|------|------|------|
| How do you rate the course content?                                      |           |      |      |      |
| How do you rate the course materials?                                    |           |      |      |      |
| How do you rate the course for providing practical strategies and ideas? |           |      |      |      |

Would you recommend this course to colleagues? Why / Why not?

The greatest strengths of this course were:

The course could be improved by:

Any other comments: