

Murray, Sara Helen

Ph.D.

8 May 1992

The University of Sydney

Copyright in relation to this thesis*

Under the Copyright Act 1968 (several provisions of which are referred to below), this thesis must be used only under the normal conditions of scholarly fair dealing for the purposes of research, criticism or review. In particular no results or conclusions should be extracted from it, nor should it be copied or closely paraphrased in whole or in part without the written consent of the author. Proper written acknowledgement should be made for any assistance obtained from this thesis.

Under Section 35(2) of the Copyright Act 1968 'the author of a literary, dramatic, musical or artistic work is the owner of any copyright subsisting in the work'. By virtue of Section 32(1) copyright 'subsists in an original literary, dramatic, musical or artistic work that is unpublished' and of which the author was an Australian citizen, an Australian protected person or a person resident in Australia.

The Act, by Section 36(1) provides: 'Subject to this Act, the copyright in a literary, dramatic, musical or artistic work is infringed by a person who, not being the owner of the copyright and without the licence of the owner of the copyright, does in Australia, or authorises the doing in Australia of, any act comprised in the copyright'.

Section 31(1)(a)(i) provides that copyright includes the exclusive right to 'reproduce the work in a material form'. Thus, copyright is infringed by a person who, not being the owner of the copyright and without the licence of the owner of the copyright, reproduces or authorises the reproduction of a work, or of more than a reasonable part of the work, in a material form, unless the reproduction is a 'fair dealing' with the work 'for the purpose of research or study' as further defined in Sections 40 and 41 of the Act.

Section 51(2) provides that 'Where a manuscript, or a copy, of a thesis or other similar literary work that has not been published is kept in a library of a university or other similar institution or in an archives, the copyright in the thesis or other work is not infringed by the making of a copy of the thesis or other work by or on behalf of the officer in charge of the library or archives if the copy is supplied to a person who satisfies an authorized officer of the library or archives that he requires the copy for the purpose of research or study'.

Keith Jennings

Registrar and Deputy Principal

*'Thesis' includes 'treatise', 'dissertation' and other similar productions.

THIS THESIS HAS BEEN ACCEPTED
FOR THE AWARD OF THE DEGREE
IN THE FACULTY OF MEDICINE

**SOCIOCULTURAL FACTORS
IN EATING DISORDERS**

SARA MURRAY

A thesis submitted in fulfilment
of the requirements for the degree of
Doctor of Philosophy

Department of Psychiatry
Faculty of Medicine

University of Sydney

1991

ABSTRACT

Most researchers acknowledge that sociocultural factors contribute to the aetiology of eating disorders; however, to date, there has been relatively little empirical research on many of these factors. The present study explored sociocultural factors in the development and maintenance of the eating disorders anorexia and bulimia nervosa.

A sample of 82 female and 69 male controls (drawn from a working population), 50 female anorexics and 30 female bulimics was administered an open-ended interview and questionnaires. The interview was shown to be a valid and reliable measure. Qualitative as well as quantitative methods were used to obtain data on issues previously examined only using quantitative measures, and in order to explore previously unexamined issues.

The study had two major aims, each with an accompanying set of hypotheses. The first of these was to examine differences between males and females on a range of weight and body shape related issues, including relatively unexplored aspects such as the salience of weight and shape in their self evaluation, evaluation of others, cognitions and everyday lives. The data from this part of the study revealed clear differences between male and female controls. Males were significantly more satisfied with their weight and shape, were less likely to engage in related behaviours, and weight and shape were less salient in their thoughts and lives. As hypothesised, patients were, in turn, more concerned with weight and shape than female controls, but all of the females shared many qualitatively similar attitudes and behaviours. The conclusions from the first part of the study contribute to an understanding of how weight and shape affect the lives of men and women, and why it is that women constitute the vast majority of sufferers of eating disorders.

The second aim of the study was to examine socioculturally related attitudes and characteristics which may help to explain the fact that some women develop eating disorders while others do not. These variables were: sex role personality orientation; attitudes towards women in society; and awareness, perceived influence, and criticism of current cultural ideals and pressures concerning weight and shape. While patients did not differ from female controls in their attitudes towards women, they were more likely to have "undifferentiated" sex role personality types, suggesting a lack of identity or self definition.

Subjects in all groups were equally highly aware of current cultural ideals and pressures. The great majority believed that these pressures are mainly directed towards women and that women are most affected by them. Moreover, subjects own attitudes reflected the greater emphasis placed on weight and shape in the evaluation of women.

Patients were significantly more likely than controls to report that they were influenced by social pressures, and in the early stages of their illness were more likely to be uncritical of, or to endorse, current cultural ideals. The causal role of these differences in the development of eating disorders cannot be definitely determined, but such attitudes would certainly play a role in the maintenance of eating disorders. Many potentially fruitful areas of future research on the role of sociocultural factors in eating disorders are identified.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to my supervisor Professor Peter Beumont for his encouragement and guidance throughout my research. His keen comments on all aspects of my work have been a great source of inspiration to me. I would also like to acknowledge the interest and support of my associate supervisor, Associate Professor Stephen Touyz.

Ross Cunningham of the Statistics Department, Australian National University, provided invaluable statistical advice throughout the course of my work, for which I am very grateful. He has been both generous with his time and expert in his advice.

Special thanks are also due to Heather Watkins of the Department of Psychiatry for her kind and unstinting assistance with many of the organisational aspects of my research.

I would like to thank the management of the Commonwealth and Westpac banking corporations for their generous cooperation with the study. I would also like to thank the banks' staff, the school students and patients for their enthusiastic participation.

Finally I would like to express my gratitude to my family for their encouragement and support. In particular, my father, sister Sally, and husband Geoff have provided stimulating and motivational comments on my work. Their contribution to the research has been most valuable.

To Sal

Table of Contents

Volume I

REVIEW OF LITERATURE

Introduction	1
---------------------------	----------

CHAPTER 1

Satisfaction with Body Shape, Weight and Other Physical Aspects of Self	7
--	----------

1.1	Satisfaction with Weight and Body Shape	7
1.2	Satisfaction with Health, Eating Habits, Fitness and Exercise	17
1.3	Conclusions from Research on Satisfaction with Weight, Body Shape and Other Aspects of Physical Self	17

CHAPTER 2

Weight and Shape Related Behaviours	19
--	-----------

2.1	Dieting and Related Restrictive Behaviours	19
2.2	Exercising	30
2.3	Uncontrolled Overeating and Purging Behaviours	33
2.4	Scores on Questionnaires Measuring Weight Related Behaviours	38
2.5	Conclusions from Research on Dieting, Exercise and Related Behaviours	42

CHAPTER 3

Qualitative Differences Between Males and Females in Body Shape and Weight Evaluation	44
--	-----------

CHAPTER 4

Saliency of Weight and Body Shape in Self Evaluation, Evaluation of Others, Everyday Functioning and Lifestyle, and Evaluation of Other Concepts	47
---	-----------

4.1	Weight and Body Shape Related Thinking Processes in Eating Disorder Patients and Non-eating Disordered Individuals: Theoretical Approaches	47
4.2	Weight and Body Shape Related Thinking Processes in Eating Disorder Patients and Non-eating Disordered Individuals: Empirical Research	50

CHAPTER 5

Sociocultural Factors in Eating Disorders: A Review of the Theory and Empirical Evidence	81
5.1 The Need for a Sociocultural Explanation of Eating Disorders: The Epidemiology of Eating Disorders	81
5.2 The Components of a Sociocultural Explanation of Eating Disorders: A Review of the Theory and Empirical Evidence . .	84
5.3 Theoretical Perspectives on Sociocultural Factors in Eating Disorders	84
5.4 Cultural Pressures on Women to Attain a Slim Body Shape: A Review of the Empirical Evidence	86

CHAPTER 6

The Role of Sex Role Stereotyped Personality Characteristics and Attitudes Towards Women in Society in Eating Disorders	103
6.1 Sex Role Personality Characteristics and Attitudes Regarding Women in Society in Anorexia and Bulimia Nervosa: Theoretical Perspectives	103
6.2 Sex Role Personality Characteristics and Attitudes Regarding Women in Society in Anorexia and Bulimia Nervosa: Empirical Research	107

CHAPTER 7

Summary of Aims and Hypotheses	120
7.1 Aims	122
7.2 Hypotheses	123

METHOD

CHAPTER 8

Method	126
8.1 Sample	126
8.2 Measures: Rationale and Choice	137
8.3 Procedure	145
8.4 Measures: Validity and Reliability	149
8.5 Summary of Statistical Procedures	154

RESULTS

CHAPTER 9

Responses to Interview Questions and Questionnaires Assessing Satisfaction with Weight, Body Shape and Related Behaviours 159

9.1	Responses to Interview Questions	159
9.2	Results from Questionnaires	170
9.3	Summary of Results from Interview	176
9.4	Summary of Results from Questionnaires	177

CHAPTER 10

Responses to Interview Questions and Questionnaires Assessing Behaviours Directed at Influencing Weight and Shape, and Binge Eating 178

10.1	Responses to Interview Questions	178
10.2	Results from Questionnaires	191
10.3	Summary of Results from Interview	193
10.4	Summary of Results from Questionnaires	196

CHAPTER 11

Responses to Interview Questions and Questionnaires Assessing Saliency of Weight and Body Shape in Self Evaluation, Lifestyle, Understanding of Other Concepts, and Evaluation of Other People 197

11.1	Responses to Interview Questions and Questionnaires Assessing Saliency of Body Image in Self Perception	197
11.2	Responses to Interview Questions Assessing Saliency of Weight and Body Shape in Evaluation of Other People	209
11.3	Responses to Interview Questions Assessing Saliency of Body Image in Lifestyle and Every Day Thoughts	218
11.4	Responses to Interview Questions Assessing the Saliency of Weight and Body Shape in Subjects' Understanding of Other Attributes or Concepts, and Subjects' Understanding of Weight and Body Shape Adjectives.	229

CHAPTER 12

Responses to Interview Questions and Questionnaires Assessing the Nature or Type of Subjects' Weight and Body Shape Concerns 248

12.1	Responses to Interview Questions and Results from Questionnaires	248
12.2	Summary of Results from Interview and Questionnaires ..	258

CHAPTER 13

Responses to Interview Questions Assessing Awareness, Influence, and Criticism of Current Cultural Ideals Concerning Weight and Body Shape	260
13.1 Responses to Interview Questions Assessing Awareness of Current Cultural Ideals Concerning Weight and Body Shape	260
13.2 Responses to Interview Questions Assessing Influence of Social Pressures Concerning Weight and Body Shape	273
13.3 Responses to Interview Questions Assessing Criticism of Current Cultural Ideals Concerning Weight and Body Shape	285

CHAPTER 14

Responses to Questionnaires Assessing Sex Role Personality Characteristics and Attitudes Towards Women in Society	299
14.1 Responses to Questionnaires Assessing Sex Role Personality Characteristics	299
14.2 Responses to Questionnaires Assessing Attitudes Towards Women in Society	302
14.3 Post-hoc Analyses - Relationship Between Subjects' Age and Chronicity of Illness and: Reported Awareness, Influence and Criticism of Current Cultural Ideals, Sex Role Personality Orientation and Attitudes Towards Women	304

Volume II

DISCUSSION

Introductory Remarks	306
-----------------------------------	------------

CHAPTER 15

Satisfaction with Weight, Body Shape and Related Behaviours	307
--	------------

CHAPTER 16

Behaviours Directed at Influencing Weight and Shape, and Binge Eating	314
--	------------

CHAPTER 17

Saliency of Weight and Body Shape in Self Evaluation, Evaluation of Others, Everyday Functioning and Lifestyle, and Evaluation of Other Concepts	321
---	------------

17.1	Saliency of Weight and Body Shape in Self Evaluation	321
17.2	Saliency of Weight and Body Shape in Evaluation of Other People	325
17.3	Saliency of Weight and Body Shape in Lifestyle and Everyday Thoughts	327
17.4	Saliency of Weight and Body Shape in the Understanding of Other Concepts and the Understanding of Weight and Shape Related Adjectives	333

CHAPTER 18

Qualitative Differences Between Males and Females in Body Shape and Weight Evaluation	339
--	------------

CHAPTER 19

Awareness, Influence, and Criticism of Current Cultural Ideas Concerning Weight and Body Shape	342
---	------------

19.1	Awareness of Current Cultural Ideals Concerning Weight and Body Shape	342
19.2	Influence of Social Pressures Concerning Weight and Shape	349
19.3	Criticism of Current Cultural Ideals Concerning Weight and Body Shape	359

CHAPTER 20

The Role of Sex Role Stereotyped Personality Characteristics and Attitudes Towards Women in Society in Eating Disorders	370
--	------------

REFERENCES

References	374
-------------------------	------------

APPENDICES

1. Copy of Letter Sent to Bank Employees Introducing the Study 405
2. Transcript of Interview 407
3. Copy of Paper Based on Part of Thesis, Published in International Journal of Eating Disorders 423
4. Questionnaires and Checklists Administered to Subjects 431
5. Measures Employed for Testing each Hypothesis 452
6. Calculation of Inter-Rater Reliability 457
7. Assumptions Underlying Hypothesis Testing Based on the F Distribution 459

List of Tables

Table 8.1	Patient Sample Categorised by Diagnosed Eating Disorder, Hospital and In/Outpatient Status	127
Table 8.2	Number of Hospital Admissions for Eating Disorder (Including Current Admission)	127
Table 8.3	Mean Age, BMI, Onset and Length of Illness for Anorexics versus Bulimics	128
Table 8.4	Mean Age, BMI, Onset and Length of Illness for Lynton Private Hospital (LPH) Patients and Royal Prince Alfred Hospital (RPAH) Patients ..	129
Table 8.5(a)	Mean Age, Weight, Height and BMI for All Subject Groups	132
Table 8.5(b)	Range of Age, Weight, Height and BMI for all Subject Groups	132
Table 8.6(a)	Patient Sample Categorised by Occupation	133
Table 8.6(b)	Control Sample Categorised by Occupation (Using Banks' Occupational Classification Schemes)	134
Table 8.7	Level of Education Attained by Subjects (School Students Excluded)	134
Table 8.8	Type of Accommodation in which Subjects Live	135
Table 8.9	Marital or Relationship Status of Subjects	136
Table 8.10	Correlation Between Questionnaire Scores and Corresponding Summarised Interview Scores	151
Table 8.11	Cross tabulation of Summarised Interview Scores and Three-Level Criticism Scores	152
Table 9.1	Number (and percentage frequency) of responses to question: Are you happy with your present eating patterns or habits?	159
Table 9.2	Number (and percentage frequency) of responses to question: Why are you, or why are you not satisfied with your present eating patterns or habits?	160
Table 9.3	Number (and percentage frequency) of responses to question: Are you happy with the amount of exercise that you do at the moment? ...	161
Table 9.4	Number (and percentage frequency) of responses to question: Why are you unhappy with the amount of exercise that you do at the moment?	161
Table 9.5	Number (and percentage frequency) of responses to question: Are there some parts of your body which you are happier with than other parts - any parts that you particularly like?	162
Table 9.6	Number (and percentage frequency) of responses to question: (if yes to above) Which parts of your body are you happier with?	162
Table 9.7	Number (and percentage frequency) of responses to question: Are there some parts of your body that you dislike more than other parts? .	163
Table 9.8	Number (and percentage frequency) of responses to question: (if yes to above) Which parts of your body do you dislike?	163
Table 9.9	Number (and percentage frequency) of responses to question: Overall, are you happy with your present shape?	164
Table 9.10	Number (and percentage frequency) of responses to question: Why are you, or why are you not happy with your present shape?	165
Table 9.11	Number (and percentage frequency) of responses to question: Overall, are you happy with your present weight?	165
Table 9.12	Number (and percentage frequency) of responses to question: Why are you unhappy with your present weight?	166

Table 9.13	Number (and percentage frequency) of responses to question: Do you consider yourself to be healthy?	166
Table 9.14	Number (and percentage frequency) of responses to question: Do you think your eating patterns are healthy?	167
Table 9.15	Number (and percentage frequency) of responses to question: Do you think the amount of exercise you do is healthy?	167
Table 9.16	Number (and percentage frequency) of responses to question: Do you think you are fit?	168
Table 9.17	Number (and percentage frequency) of responses to question: What word or words would you use to describe your figure?	168
Table 9.18	Number (and percentage frequency) of responses to question: Do you have to struggle or make a continual effort to maintain your desired weight?	169
Table 9.19	Comparison of Mean Ideal BMI, Ideal BMI/Actual BMI, Actual Weight minus Ideal Weight, and Perceived Age at which Weight Problem Began	171
Table 9.20	Number (and percentage frequency) of subjects who used various body related adjectives to describe themselves	173
Table 9.21	Comparison of Mean BSQ Scores for Groups	174
Table 9.22	Comparison of Mean Body Dissatisfaction Subscale Scores for Groups	175
Table 10.1	Number (and percentage frequency) of responses to question: are you on a diet (to lose weight) at the moment?	178
Table 10.2	Number (and percentage frequency) of responses to question: how do you choose the food that you eat?	179
Table 10.3	Number (and percentage frequency) of responses to question: do you exercise?	179
Table 10.4	Number (and percentage frequency) of responses to question: How often do you exercise?	180
Table 10.5	Number (and percentage frequency) of responses to question: What sort of exercise do you do?	180
Table 10.6	Number (and percentage frequency) of responses to question: Why do you exercise?	181
Table 10.7	Number (and percentage frequency) of responses to question: How often do you weigh yourself?	181
Table 10.8	Number (and percentage frequency) of responses to question: Have you ever been on a diet to lose weight?	182
Table 10.9	Number (and percentage frequency) of responses to question: How many times have you been on diets?	182
Table 10.10	Number (and percentage frequency) of responses to question: What kind of diets have you been on?	183
Table 10.11	Number (and percentage frequency) of responses to question: Where did you find out about the diets you have been on?	184
Table 10.12	Number (and percentage frequency) of responses to question: Why did you end your diets?	184
Table 10.13	Age of subjects when they first started dieting	185
Table 10.14	Number (and percentage frequency) of responses to question: Do you try to control yourself in any way regarding food and dieting?	185

Table 10.15	Number (and percentage frequency) of responses to question: How do you control yourself regarding food and dieting?	186
Table 10.16	Number (and percentage frequency) of responses to question: Do you count calories?	186
Table 10.17	Number (and percentage frequency) of responses to question: In general, do you try to balance the amount of exercise you do with your food intake?	187
Table 10.18	Number (and percentage frequency) of responses to question: How much effort have you put into losing weight or controlling your weight in the last twelve months?	188
Table 10.19	Number (and percentage frequency) of responses to question: In general, how often do you try to lose weight?	188
Table 10.20	Number (and percentage frequency) of responses to question: Do you have cycles of alternating food binges followed by dieting?	189
Table 10.21	Number (and percentage frequency) of responses to question: How often have you gone on eating binges where you feel that you may not be able to stop?	189
Table 10.22	Number (and percentage frequency) of response to question: How often do you vomit after you have eaten?	190
Table 10.23	Number (and percentage frequency) of responses to question: How often do you take laxatives?	190
Table 10.24	Comparison of Mean EAT Scores (and Log Transformations of EAT Scores) for Groups	191
Table 10.25	Comparison of Mean Bulimia Subscale Scores (and Log Transformations of Bulimia Subscale) for Groups	192
Table 10.26	Comparison of Mean Drive for Thinness Subscale Scores (and Log Transformations of Drive for Thinness Subscale) for Groups	193
Table 11.1.1	Number (and percentage frequency) of responses to question: Can you describe a day in which you would be pleased with your behaviour?	197
Table 11.1.2	Number (and percentage frequency) of responses to question: Can you describe a day in which you would be unhappy with your behaviour?	198
Table 11.1.3	Number (and percentage frequency) of responses to question: What do you think people first notice about you?	198
Table 11.1.4	Number (and percentage frequency) of responses to question: What do you like about yourself?	199
Table 11.1.5	Number (and percentage frequency) of responses to question: What do you dislike about yourself?	200
Table 11.1.6	Number (and percentage frequency) of responses to question: What do you think you are good at?	200
Table 11.1.7	Number (and percentage frequency) of responses to question: What do you think you do badly?	201
Table 11.1.8	Number (and percentage frequency) of responses to question: What would you like to be successful at?	201
Table 11.1.9	Number (and percentage frequency) of responses to question: Very generally, do you think that these issues (eating patterns, exercise or feelings about your body) affect the way you feel about yourself?	202
Table 11.1.10	Number (and percentage frequency) of responses to question: How are your feelings about yourself affected by your eating patterns, exercise or feelings about your body?	202

Table 11.1.11	Number (and percentage frequency) of responses to question: Do you compare your body with other women's [men's] bodies?	203
Table 11.1.12	Number (and percentage frequency) of responses to question: When you see a woman [man] on television or in a magazine that you think has a good figure, do you have any feelings about yourself?	203
Table 11.1.13	Number (and percentage frequency) of responses to question: How do you feel when you see a woman/man on television or in a magazine who has what you would consider to be a good figure?	204
Table 11.1.14	Number (and percentage frequency) of responses to question: Do you have any feelings or thoughts about the woman pictured?	204
Table 11.1.15	Number (and percentage frequency) of responses to question: What feelings or thoughts do you have about the woman pictured?	205
Table 11.1.16	Average number of adjectives in total, and number of body image related adjectives used by groups to describe self	206
Table 11.2.1	Number (and percentage frequency) of responses to question: What do you notice first about women?	209
Table 11.2.2	Number (and percentage frequency) of responses to question: What do you notice first about men?	210
Table 11.2.3	Number (and percentage frequency) of responses to question: In general, what sort of qualities do you admire in women?	211
Table 11.2.4	Number (and percentage frequency) of responses to question: In general, what qualities do you dislike in women?	211
Table 11.2.5	Number (and percentage frequency) of responses to question: In general, what sort of qualities do you admire in men?	212
Table 11.2.6	Number (and percentage frequency) of responses to question: In general, what qualities do you dislike in men?	212
Table 11.2.7	Number (and percentage frequency) of responses to question: What do you think constitutes being attractive in women; if you were to call a woman attractive, what would she be like?	213
Table 11.2.8	Number (and percentage frequency) of responses to question: What do you think constitutes being attractive in men; if you were to call a man attractive, what would he be like?	214
Table 11.2.9	Number (and percentage frequency) of responses to question: Do you notice your partner's weight?	214
Table 11.2.10	Number (and percentage frequency) of responses to question: Do you comment on it to him or her?	214
Table 11.2.11	Number (and percentage frequency) of responses to question: Do you notice women's weight?	215
Table 11.2.12	Number (and percentage frequency) of responses to question: Do you comment to women on their weight?	215
Table 11.2.13	Number (and percentage frequency) of responses to question: Do you notice men's weight?	216
Table 11.2.14	Number (and percentage frequency) of responses to question: Do you comment to men on their weight?	216
Table 11.3.1	Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your working life (or schooling) at all?	219
Table 11.3.2	Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your working life?	220

Table 11.3.3	Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your social life at all?	220
Table 11.3.4	Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your social life?	221
Table 11.3.5	Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your romantic or sex life at all?	221
Table 11.3.6	Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your romantic life?	222
Table 11.3.7	Number (and percentage frequency) of responses to question: How often do you think about your weight and/or dieting?	223
Table 11.3.8	Number (and percentage frequency) of responses to question: How often do you talk about your weight and/or dieting?	223
Table 11.3.9	Number (and percentage frequency) of responses to question: Do you find that you are thinking about your weight and/or dieting at some times of the day more than other times, or do you find that you are thinking about your weight and/or dieting in certain situations more than others?	224
Table 11.3.10	Number (and percentage frequency) of responses to question: When are you most likely to be thinking about your weight and/or dieting?	224
Table 11.3.11	Number (and percentage frequency) of responses to question: Do you think that you are too concerned with dieting, body shape and so on?	225
Table 11.3.12	Comparison of Mean EAT Scores (and Log Transformations of BDI Scores) for Groups	226
Table 11.3.13	Comparison of Correlation between modified Beck Depression Inventory scores and measures of weight and body shape concern.	227
Table 11.4.1	Number (and percentage frequency) of responses to question: What do you understand by the term "healthy" or good health?	229
Table 11.4.2	Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "healthy"?	230
Table 11.4.3	Number (and percentage frequency) of responses to question: What sort of food do you think is healthy or good for you?	230
Table 11.4.4	Number (and percentage frequency) of responses to question: Why do you think those types of food are healthy?	231
Table 11.4.5	Number (and percentage frequency) of responses to question: What sort of food do you think is unhealthy or bad for you?	231
Table 11.4.6	Number (and percentage frequency) of responses to question: Why do you think those types of food are unhealthy?	232
Table 11.4.7	Number (and percentage frequency) of responses to question: How is exercise related to health?	232
Table 11.4.8	Number (and percentage frequency) of responses to question: What do you understand by the term "fit"?	233
Table 11.4.9	Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "fit"?	233
Table 11.4.10	Number (and percentage frequency) of responses to question: Do you think that there are any differences between fat and slim people apart from their weight?	234

Table 11.4.11	Number (and percentage frequency) of responses to question: What are the differences between fat and slim people?	235
Table 11.4.12	Number (and percentage frequency) of responses to question: Do you think that anybody can be slim if they want to be?	236
Table 11.4.13	Number (and percentage frequency) of responses to question: If not, why not?	236
Table 11.4.14	Number (and percentage frequency) of responses to question: Do you think that people should try to control their eating in any way (that is, watch what they eat)?	237
Table 11.4.15	Number (and percentage frequency) of responses to question: Why do you think that people should try to control their eating (that is, watch what they eat)?	237
Table 11.4.16	Number (and percentage frequency) of responses to question: What do you understand by the word "slim"?	238
Table 11.4.17	Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "slim"?	239
Table 11.4.18	Percentage frequency with which "slim" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "slim").	239
Table 11.4.19	Number (and percentage frequency) of responses to question: What do you understand by the word "thin"?	239
Table 11.4.20	Percentage frequency with which "thin" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "thin").	240
Table 11.4.21	Number (and percentage frequency) of responses to question: What do you understand by the word "skinny"?	240
Table 11.4.22	Percentage frequency with which "skinny" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "skinny").	241
Table 11.4.23	Number (and percentage frequency) of responses to question: What do you understand by the word "slender"?	241
Table 11.4.24	Percentage frequency with which "slender" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "slender").	242
Table 11.4.25	Number (and percentage frequency) of responses to question: What do you understand by the word "fat"?	242
Table 11.4.26	Number (and percentage frequency) of responses to question: Do any pictures or images come to your mind from the word "fat"?	242
Table 11.4.27	Number (and percentage frequency) of responses to question: What pictures or images come to mind from the word "fat"?	243
Table 11.4.28	Percentage frequency with which "fat" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "fat").	243
Table 11.4.29	Number (and percentage frequency) of responses to question: What do you understand by the word "chubby"?	244
Table 11.4.30	Percentage frequency with which "chubby" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "chubby").	244
Table 11.4.31	Number (and percentage frequency) of responses to question: What do you understand by the word "plump"?	244

Table 11.4.32	Percentage frequency with which "plump" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "plump").	245
Table 11.4.33	Number (and percentage frequency) of responses to question: What do you understand by the word "obese"?	245
Table 11.4.34	Percentage frequency with which "obese" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "obese").	246
Table 12.1	Number (and percentage frequency) of responses to question: Why are you happy with your present shape?	249
Table 12.2	Number (and percentage frequency) of responses to question: When are you more likely to be thinking about your weight and/or dieting?	249
Table 12.3	Number (and percentage frequency) of responses to question: Why are you, or why are you not satisfied with your present eating patterns or habits?	250
Table 12.4	Number (and percentage frequency) of responses to question: Why do you think that people should try to control their eating (that is, watch what they eat)?	250
Table 12.5	Number (and percentage frequency) of responses to question: What sort of food do you think is unhealthy or bad for you?	251
Table 12.6	Number (and percentage frequency) of responses to question: Why do you think those types of food are unhealthy?	251
Table 12.7	Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "healthy"?	251
Table 12.8	Number (and percentage frequency) of responses to question: Which parts of your body are you happier with?	252
Table 12.9	Number (and percentage frequency) of responses to question: Which parts of your body do you dislike?	252
Table 12.10	Number (and percentage frequency) of responses to question: Why are you unhappy with your present shape?	253
Table 12.11	Number (and percentage frequency) of responses to question: Why are you unhappy with your weight?	253
Table 12.12	Comparison of Mean Ideal BMI, Ideal BMI/Actual BMI, and Actual Weight minus Ideal Weight.	254
Table 12.13	Number (and percentage frequency) of subjects who used various adjectives to describe themselves	254
Table 12.14	Number (and percentage frequency) of subjects who used various adjectives to describe their ideal selves	256
Table 12.15	Number (and percentage frequency) of responses to question: What sort of exercise do you do?	256
Table 12.16	Number (and percentage frequency) of responses to question: Why do you exercise?	257
Table 12.17	Number (and percentage frequency) of responses to question: How do you control yourself regarding food and dieting?	257
Table 12.18	Number (and percentage frequency) of responses to question: have you ever been on a diet to lose weight?	258
Table 13.1.1	Number (and percentage frequency) of responses to question: Do you think that society or people in general have an "ideal" or perfect body shape for women?	260
Table 13.1.2	Number (and percentage frequency) of responses to question: What is this ideal?	261

Table 13.1.3	Number (and percentage frequency) of responses to question: Do you think that any types of female figures are considered unacceptable by society in general?	261
Table 13.1.4	Number (and percentage frequency) of responses to question: Which types of figures do you think are considered unacceptable?	262
Table 13.1.5	Number (and percentage frequency) of responses to question: What do you think a woman does to have what you/society call a good figure - how does she obtain or achieve her figure?	263
Table 13.1.6	Number (and percentage frequency) of responses to question: Do you think that society or people in general have an "ideal" or perfect body shape for men?	263
Table 13.1.7	Number (and percentage frequency) of responses to question: What is this ideal?	264
Table 13.1.8	Number (and percentage frequency) of responses to question: Do you think that any types of male figures are considered unacceptable by society in general?	264
Table 13.1.9	Number (and percentage frequency) of responses to question: Which types of figures do you think are considered unacceptable?	265
Table 13.1.10	Number (and percentage frequency) of responses to question: What do you think a man does to have what you/society call a good figure - how does he obtain or achieve his figure?	266
Table 13.1.11	Number (and percentage frequency) of responses to question: Do you think there is a certain image of women presented in the media? .	266
Table 13.1.12	Number (and percentage frequency) of responses to question: What is the image of women presented in the media?	267
Table 13.1.13	Number (and percentage frequency) of responses to question: Do you think there is a certain image of men presented in the media?	267
Table 13.1.14	Number (and percentage frequency) of responses to question: What is the image of men presented in the media?	268
Table 13.1.15	Number (and percentage frequency) of responses to question: Do you think that women in general are too concerned about their weight, dieting and so on?	268
Table 13.1.16	Number (and percentage frequency) of responses to question: Do you think that men in general are too concerned about their weight, dieting and so on?	269
Table 13.1.17	Number (and percentage frequency) of responses to question: Do you think there is more pressure on women than men to conform to a particular body shape?	269
Table 13.1.18	Number (and percentage frequency) of responses to question: Do you think that women are judged to a great extent on their appearance?	270
Table 13.1.19	Number (and percentage frequency) of responses to question: Do you think that men are judged to a great extent on their appearance?	270
Table 13.2.1	Number (and percentage frequency) of responses to question: What magazines and newspapers do you read regularly?	274
Table 13.2.2	Number (and percentage frequency) of responses to question: Do you read the diet or exercise related articles in magazines and newspapers?	274
Table 13.2.3	Responses to question: How much television do you watch on an average day? - Mean number of hours reported for each group	275
Table 13.2.4	Responses to question: How much radio do you listen to on an average day? - Mean number of hours reported for each group	275

Table 13.2.5	Number (and percentage frequency) of responses to question: Do you think that magazines or newspapers have any influence on your eating habits, exercise or the way you feel about your body?	276
Table 13.2.6	Number (and percentage frequency) of responses to question: What effect do magazines and newspapers have on your eating habits, exercise or feelings about your body?	277
Table 13.2.7	Number (and percentage frequency) of responses to question: Do you think that radio has any influence on your eating habits, exercise or the way you feel about your body?	277
Table 13.2.8	Number (and percentage frequency) of responses to question: Do you think that television programmes and advertisements have any influence on your eating habits, exercise or the way you feel about your body?	278
Table 13.2.9	Number (and percentage frequency) of responses to question: What effect do television programmes and advertisements have on your eating habits, exercise or feelings about your body?	279
Table 13.2.10	Number (and percentage frequency) of responses to question: Do you think that members of the opposite sex have any influence on your eating habits, exercise or the way you feel about your body?	279
Table 13.2.11	Number (and percentage frequency) of responses to question: How do members of the opposite sex affect you in relation to your eating habits exercise, or feelings about your body?	280
Table 13.2.12	Number (and percentage frequency) of responses to question: Do you think that members of the same sex have any influence on your eating habits, exercise or the way you feel about your body?	280
Table 13.2.13	Number (and percentage frequency) of responses to question: How do same sex others influence you in regard to your eating habits, exercise or feelings about your body?	281
Table 13.2.14	Number (and percentage frequency) of responses to question: Where do you think you obtained your ideas about good figures for men and women?	282
Table 13.3.1	Number (and percentage frequency) of responses to question: In your own mind, do you have an ideal body shape (or ideas about what a "good figure" is) for women?	285
Table 13.3.2	Number (and percentage frequency) of responses to question: What does this ideal figure look like?	286
Table 13.3.3	Number (and percentage frequency) of responses to question: Do you think that women should try to look like society's body shape ideal?	286
Table 13.3.4	Number (and percentage frequency) of responses to question: Why or why not?	288
Table 13.3.5	Number (and percentage frequency) of responses to question: In your own mind, do you have an ideal body shape (or ideas about what a "good figure" is) for men?	289
Table 13.3.6	Number (and percentage frequency) of responses to question: What does this ideal figure look like?	289
Table 13.3.7	Number (and percentage frequency) of responses to question: Do you think that men should try to look like society's body shape ideal?	290
Table 13.3.8	Number (and percentage frequency) of responses to question: Why or why not?	291
Table 13.3.9	Number (and percentage frequency) of responses to question: How do you feel about the pressures on women to conform to a particular shape?	292

Table 13.3.10	Number (and percentage frequency) of subjects who responded that they thought there are negative aspects for women about the current interest in dieting, slimness and so on?	292
Table 13.3.11	Number (and percentage frequency) of responses to question: What do you see as good (or bad) about the fashion for slimness for women?	293
Table 13.3.12	Number (and percentage frequency) of responses to question: what would you change in society concerning any of the issues we have been talking about?	295
Table 13.3.13	Number (and percentages) of subjects in each group classified as "critical", "partially critical" or "uncritical" of society's ideals concerning weight and body shape.	296
Table 14.1.1	Comparison of Mean Bem Sex Role Inventory "Masculinity" Scores for Groups	299
Table 14.1.2	Comparison of Mean Bem Sex Role Inventory "Femininity" Scores for Groups	300
Table 14.1.3	Median Split Method of Analysis of Bem Sex Role Inventory	300
Table 14.1.4	Bem Sex Role Inventory Median Split Classification of Subjects - Number (and percentage) of subjects in each category	301
Table 14.2.1	Comparison of Mean Attitudes Toward Women Questionnaire Scores for Groups	302
Table 14.2.2	Comparison of Mean Women in Society Questionnaire Scores for Groups	303
Table 14.3.1	Percentage of female controls and patients classified as critical, partially critical or uncritical (Patients further classified according to the chronicity of their eating disorder)	305

INTRODUCTION

There are many theories concerning the aetiology of the eating disorders anorexia nervosa and bulimia nervosa. These include the following:

- **biological** theories, including accounts which argue that anorexia nervosa may be the result of a primary hypothalamic dysfunction;
- **psychological** accounts and theories, according to which certain personality characteristics, constellations of such characteristics, or certain cognitive styles constitute risk factors for the development of eating disorders;
- **psychobiological** theories which hold that eating disorders arise from both psychological and biological features (for example, accounts in which adolescent eating disorders are seen as arising from the joint effects of the specific psychological demands of adolescence and the biological changes occurring during that period of life);
- theories according to which **family dynamics** play a fundamental role in the development of eating disorders;
- theories according to which eating disorders are in fact secondary infestations of **other, primary psychiatric disorders**, such as affective or personality disorders; and
- **sociocultural** theories, concerning the contribution of social mores to the prevalence and development of eating disorders.¹

Most, though not all, researchers in the field contend that no single factor accounts for all cases of eating disorders, and that a comprehensive explanation of these disorders must involve reference to a number of aetiological factors. Garfinkel and Garner (1982) in particular have

1. Overviews of these various accounts and theories include Agras & Kirkley (1986), Beumont, Burrows, & Casper (1987), Garfinkel & Garner (1982), and Heu (1988).

argued that anorexia nervosa is multi-determined in nature, and that the precise circumstances leading to the development of this disorder in any individual "will be highly variable and consist of a complex interaction between contributing forces" (p.210). Thus, they and other authors contend that anorexia nervosa is the "final common pathway" of a number of aetiological factors (Garfinkel & Garner, 1983; Schwartz, Thompson, & Johnson, 1983; and see also Fries, 1974). This aetiological model has also been extended to bulimia nervosa (Striegel-Moore, Silberstein, & Rodin, 1986).

The present study explores the contribution of sociocultural factors to the aetiology of eating disorders. It proceeds on the premise that such factors, while certainly not the sole cause of these disorders, are nevertheless essential to an understanding of their epidemiological, clinical and experiential character.

Many authors who have assessed the contribution of sociocultural factors to eating disorders have done so by attempting to answer one or more of the following questions. First, why do women constitute the great majority of sufferers of eating disorders? Second, why do some women but not others develop an eating disorder? Or, as many other authors have asked: Given the cultural emphasis on thinness for females, and the prevalence of weight and shape concern among females, why don't all women develop an eating disorder? A great deal of research on this general question has been conducted using a risk factor model (Schwartz et al., 1983). This model assumes that there are a number of factors which may increase the likelihood that an individual will develop a disease or disorder. The third question asked in the context of research on sociocultural factors is: Why has there been an apparent increase in the incidence of eating disorders over the past two decades? These questions will be explored in detail in Chapter 5.

The present study investigates empirically the first two of these questions. The first aim of the study is to examine the differences in weight and shape related attitudes and behaviour between normal males and females, and between normal females and females with either

anorexia or bulimia nervosa. In doing so, important differences between males and females may emerge which will provide a partial explanation for the sex difference in the incidence of eating disorders. To date, most studies which have compared the weight and shape related attitudes and behaviours of men and women have examined a narrow range of issues; most have investigated only satisfaction with body shape and weight and/or related behaviours such as dieting. Clearly, these issues are of central importance in understanding the differences between males and females. However, the present study will extend this research to include also an exploration of several other attitudinal domains which remain relatively unexamined. These areas include the salience or importance of weight and body shape in self evaluation, evaluation of other people, everyday functioning and lifestyle, and in the understanding of other concepts such as health, fitness, attractiveness, and the nutritional status of foods. Findings concerning these issues may not only help to explain the sex differences in the incidence of eating disorders, but are also of interest in their own right as they will provide further information about the way in which men and women experience their bodies and the implications of weight and shape for their lives.

Normal females and females with eating disorders will also be compared on these dimensions, as to date there has been little research comparing these two groups on these issues (Fairburn & Garner, 1986, p.416; Welch, Hall, & Norring, 1990, p.84).

A second major aim of the present study is to examine the question of why some women develop eating disorders while others do not, by examining **socioculturally related** variables which may constitute risk factors for the development of an eating disorder. It is widely acknowledged that Western society has adopted for females a thin or slim body shape ideal, and that considerable pressures or "forces" are exerted on women to achieve this ideal. But as Schwartz et al. point out: "perhaps the most challenging question is how does the culture actually influence the parameters of psychopathology" (1982, p.28). And as Garner, Garfinkel, and Olmsted observe, "... it must be emphasised that cultural

influences do not in a precise sense cause serious eating disorders like bulimia and anorexia nervosa. Culture is mediated by the psychology of the individual as well as the more immediate social context of the family" (1983, p.79). Thus in this study those attitudes which represent the interface between cultural norms and the individual will be examined; that is, attitudes held by eating disordered and normal females towards current cultural ideals concerning weight and body shape will be assessed. Specifically, the study will examine the extent of their awareness of these ideals and "pressures", the degree to which they report that they are influenced by them, and the extent to which they endorse (or alternately are critical of) these ideals. Possible differences in such attitudes between anorexics, bulimics and normal women may represent important risk factors for the development of an eating disorder.²

Several researchers have proposed that certain sex role related personality characteristics and/or attitudes concerning the role of women in society may be implicated in the development of eating disorders. These dimensions will also be explored in the present study. They too represent an interface between sociocultural values and norms and individual psychology.

Previous research on weight and shape related attitudes and behaviours has been limited in the type of methodology which has been employed. Most research has used self report written questionnaires, with a fixed choice format. Fairburn and Garner (1986) have pointed out that many of the attitudes and values associated with eating disorders cannot be adequately assessed by such questionnaires. While they allow for easy quantitative comparisons to be made between groups, they do not allow for full exploration of respondents' viewpoints, and frequently do not capture the experiential nature of respondents' attitudes and behaviours. One of the major aims of the present study was to obtain more detailed

2. As with all cross-sectional attitudinal research, it is not possible to establish causality, only associations between variables. In the final analysis any claims about risk factors must be tempered with caution. Nevertheless, this research can certainly shed light on factors which may help to maintain eating disorders once they have developed.

and personalised data from subjects regarding weight and body shape. For this reason, an interview was used as the major methodology for the study, in conjunction with questionnaires. In addition, many of the issues addressed in the present study have not been previously examined, and an open-ended interview format is an ideal method of obtaining data on issues for which there are few data. Chapter 8 outlines several other advantages of interviews as methods of eliciting data, and presents validity and reliability data for the interview used in the present study.

In summary, the major aims of the present study are to:

1. compare the weight and shape related behaviours and attitudes of normal males and females, and normal females and females with either anorexia or bulimia nervosa. Several dimensions will be assessed including:
 - a. satisfaction with weight and shape;
 - b. weight and shape related behaviours; and
 - c. salience of weight and shape in self evaluation, evaluation of other people, everyday life and functioning, and understanding of other concepts.
2. compare the attitudes and characteristics of normal and eating disordered females concerning several socioculturally related dimensions, in an attempt to identify possible risk factors for the development of an eating disorder, or factors which contribute to the maintenance of an established eating disorder. These dimensions include:
 - a. awareness of current cultural ideals concerning weight and body shape;
 - b. the perceived influence of these ideals and pressures to achieve them;

- c. criticism or endorsement of these ideals;
- d. sex role personality characteristics; and
- e. attitudes regarding the role of women in society.

Throughout the following review of research, studies will be examined under three broad headings: research comparing the weight and body shape related attitudes and behaviours of normal males and females, research on normal females only, and research comparing normal females and females with an eating disorder.

CHAPTER 1

SATISFACTION WITH BODY SHAPE, WEIGHT AND OTHER PHYSICAL ASPECTS OF SELF

There are a great many studies which have examined the nature and extent of body satisfaction. Most of this research has focused on the specific issues of satisfaction with body weight and shape. There has been far less research (in the context of eating disorders) on people's satisfaction with their health, the amount of exercise which they undertake, their physical fitness and their eating habits. Given the current cultural emphasis on health, nutrition, fitness and exercise, it is possible that there may be differences in the way in which men, women and women with eating disorders view these aspects of themselves. The present review will examine research on all of these issues which compares normal males, normal females and females with eating disorders, expanding on those issues which have received relatively little attention to date.

1.1 Satisfaction with Weight and Body Shape

While satisfaction with body **weight** is perhaps a conceptually distinct issue from satisfaction with **shape**, in practice many studies have not made a clear distinction between the two dimensions, and it is not clear whether people always make such a distinction when thinking about their bodies. For example, studies have found that a certain percentage of subjects consider themselves to be "fat": are people referring here to their weight, shape or both? For the purposes of this review only those studies which explicitly asked subjects about their weight will be included under the section on satisfaction with weight, but it should be noted that such a distinction may well be an artificial one.

It should also be noted that there is a vast literature on patients' and controls' estimations of their body size (for reviews see Slade, 1984; Touyz & Beumont, 1987). These studies are discussed here only insofar as they directly examine subjects' satisfaction with body shape or weight.

1.1.1 Satisfaction with Weight

a) Studies Comparing Normal Males and Females

Numerous studies have found that females are much more likely than males to wish to weigh less and/or to rate themselves overweight (Calden, Lundy, & Schlafer, 1959; Carroll, Gleeson, Rigsby, & Dugdale, 1986; Choice, 1985; Crawford & Worsley, 1987; Desmond, Price, Gray, & O'Connell, 1986; Dolan, Birtchnell, & Lacey, 1987; Dornbusch et al., 1984; Drewnowski & Yee, 1987; Dwyer, Feldman, & Mayer, 1970; Franzoi & Herzog, 1987; George & Kronl, 1983; Gray, 1977; Greenfeld, Quinlan, Harding, Glass, & Bliss, 1987; Halmi, Falk, & Schwartz, 1981; Huenemann, Shapiro, Hampton, & Mitchell, 1966; Huon & Brown, 1986; Kaplan, Busner, & Pollack, 1988; Klesges, Mizes, & Klesges, 1987; Leon, Carroll, Chernyk, & Finn, 1985; Levinson, Powell, & Steelman, 1986; McCaulay, Mintz, & Glenn, 1988; Miller, Coffman, & Linke, 1980; Mintz & Betz, 1986; Rand & Kulda, 1990; Rozin & Fallon, 1988; Silberstein, Striegel-Moore, Timko, & Rodin, 1988; Stake & Lauer, 1987; U.S. Department of Health, Education, & Welfare, 1975, cited in Stuart & Jacobson, 1979; Wardle & Beales, 1986; Zellner, Harner, & Adler, 1989; Zuckerman, Colby, Ware, & Lazerson, 1986). These findings have been reported for child, adolescent and adult groups, and are not explicable in terms of objective differences in subjects' weight: in all of the cited studies the two groups did not differ on objective measures of "overweight".

The **absolute** extent of reported dissatisfaction with weight is difficult to compare briefly from study to study. However, it can be noted that in the majority of studies cited above, at least 50 percent of female subjects wished to weigh less and/or rated themselves as overweight, and that in about half of those studies in turn, at least 70 percent of female subjects were in this category. The corresponding figure for male subjects in the studies cited above was generally about 40 percent or lower, and in a number of those studies only about 20 percent of males wished to weigh less and/or rated themselves as overweight.

Further, many of the cited studies indicate that males are more likely than females to wish to gain weight or to consider themselves underweight (Calden et al., 1959; Carroll et al., 1986; Choice, 1985; Desmond et al., 1986; Dolan et al., 1987; Drewnowski & Yee, 1987; George & Kronl, 1983; Gray, 1977; Halimi et al., 1981; Huenemann et al., 1966; Kaplan et al., 1988; Leon, Carroll, Chernyk, & Finn, 1985; Levinson et al., 1986; McCaulay et al., 1988; Silberstein et al., 1988; U.S. Department of Health, Education, & Welfare, 1975, cited in Stuart & Jacobson, 1979; Wardle & Beales, 1986). In their seminal study Huenemann and colleagues speculated in this regard that "the boys who considered themselves too thin and wanted to gain weight were not interested in gaining weight per se but rather in becoming more muscular, and equated this with added weight" (1966, p.334). (See also Tucker, 1982, and further discussion on this issue in Chapter 3.)

Dornbusch et al. (1984) conducted one of the largest and most impressive explorations of adolescents' satisfaction with their weight. These authors examined the relationship between social class, sexual maturation (measured using genital and pubic hair development) and the desire to be thin, using a nation-wide, representative sample of over 7500 adolescents aged between 12 and 17 years. They found that for girls there is a clear increase in fatness (measured by skin fold thickness) with each stage of sexual maturation; for boys there is no apparent relationship between these two measures. The authors noted that:

"Sexual maturation is associated with heaviness in both boys and girls, with larger muscles as the boys mature and increased fatness as the girls mature. ... This difference in the impact of sexual maturation among adolescents produces sex differences in responses to heaviness. Female adolescents are dissatisfied with their heaviness because it represents fatness, and most male adolescents are satisfied with their heaviness because it represents muscularity" (p.312).

Dornbusch et al. also found that as the level of sexual maturity for girls increased, so too did the proportion of females wishing to be thinner. However, there was no tendency for males to wish to be thinner as their level of sexual maturity increased. A further finding was that even when

level of fatness was controlled (or held equal for males and females) more females than males at a given level of fatness wished to be thinner. (As an interesting aside, Dornbusch et al. found that amongst females, after controlling for level of fatness, those in higher social classes reported greater desire to be thinner. This relationship with social class was not observed for males.)

Kelly and Patten (1985) reported results inconsistent with the general thrust of the research discussed thus far. In their study of adolescents they found that about 40 percent of both males and females wanted to weigh less and that about 30 percent of both sexes wanted to weigh more. They also pointed out, however, that for adolescent males "a desire to weigh less than one's indicated weight seems to exist in the absence of drastic measures to modify weight. Behaviours such as exercising or controlling food intake do not seem to represent the more generalized preoccupation with weight or eating that characterizes adolescent females" (p.195).

Very few studies have examined the issue of perceived problems with weight control. Salmons (1987) found that females (24 percent) were more than twice as likely as males (11 percent) to report that they had a "problem with weight control". In the present study this issue will be investigated as it is possible that the perception that one has a weight problem may also discriminate normal males from females and the latter from patients.

b) Studies of Normal Females Only

Studies in this category have reported findings consistent with the bulk of the research discussed above, with subjects generally dissatisfied with their weight regardless of their actual weight (Birtchnell, Dolan, & Lacey, 1987; Buvat-Herbaut, Hebbinckuys, Lemaire, & Buvat, 1983; Crisp, Kalucy, & Palmer, 1983; Davies & Furnham, 1986a; Eisele, Hertsgaard, & Light, 1986; Galgan & Mable, 1986; Grunewald, 1985; *Glamour* survey, cited in Muss, 1985; Singer & Lamb, 1966; Vanderheyden, Fekken, & Boland, 1988; Williams, Schaefer, Shisslak, Gronwaldt, & Comerci, 1986).

c) Studies Comparing Females with Eating Disorders and Normal Females

Abraham, Mira, Beumont, Sowerbutts, and Llewellyn-Jones (1983) found in a study of school and university students, ballet school students, anorexics and bulimics that most of the women wanted to lose weight - including over 90 percent of the school and university students.

Generally, however, and not surprisingly, studies in this category have reported moderate to large differences in weight satisfaction between females with eating disorders and normal females (Birchnell, Lacey, & Harte, 1985; Button & Whitehouse, 1981; Hendren, Barber, & Sigafos, 1986; Leon, Carroll, Chernyk, & Finn, 1985; and see also Carter & Duncan, 1984a and b).

Several studies have found that anorexics have significantly lower desired weights than female controls (Button & Whitehouse, 1981; Crisp, Matthews, Norton, & Oakey, 1986). Crisp et al., for example, found that the mean desired BMI for a group of anorexics was 17.4, while that for a group of female controls was 20.4. The actual average BMI of the anorexics was 15.5, compared to 22 for the controls. Thus while on average the anorexics wished to gain weight, this must be considered in the light of the low BMI to which they were aspiring. This point should be borne in mind for all studies of anorexics' satisfaction with their weight and shape. Although anorexics may profess satisfaction equal to that of controls (or in some cases even wish to gain weight), their very low current body weights mean that this satisfaction may be inappropriate or pathological.

d) Conclusions from Research on Satisfaction with Weight

Studies comparing the weight satisfaction of normal males and females have almost universally concluded that males are considerably more satisfied than females. Further, males are more likely than females to consider themselves underweight or to wish to gain weight. Females with eating disorders (especially bulimics - the results are mixed for anorexics) are even less satisfied with their weight than other females.

1.1.2 Satisfaction with Body Shape

a) Studies Comparing Normal Males and Females

In his early paper, Kurtz (1969) made the observation that:

"... in American society, differential attitudes toward the body are readily apparent. General and specific aspects of the female body, for instance, are held in high esteem. One need only glance through a few of countless magazines, walk past movie marquees, beauty shops or cosmetic counters to verify the importance placed on the human body. It is also a commonplace observation that women expend more effort, time, and money on personal grooming than do men" (p.626).

Oddly, this observation about society's concern with the female figure led Kurtz to hypothesise that women would evaluate their own bodies more positively than men would evaluate theirs. (He does not elucidate why a societal concern with the evaluation of female bodies should lead individual females to view their bodies positively.) Even more intriguingly, Kurtz confirmed his hypothesis in a sample of undergraduates. This finding has not been replicated elsewhere; indeed, the bulk of the subsequent research reports an opposite sex difference (Drewnowski & Yee, 1987; Franzoi & Herzog, 1987; McCaulay et al., 1988; Salmons, Lewis, Rogers, Gatherer, & Booth, 1988; Silberstein et al., 1988; Stake & Lauer, 1987). (As for the studies of satisfaction with weight, it can be assumed that all of the studies mentioned in this section of the review reported objective measures of body shape which were equal for males and females in their sample, unless it is specifically stated otherwise.)

When Kurtz's measures are closely examined, however, the discrepancy between his finding and those of other studies becomes explicable. Kurtz asked subjects to rate 30 aspects of their bodies, and took a mean rating for each subject. At least 80 percent of these items were ones for which later studies have also reported either no sex difference or more positive evaluation by females (see Franzoi & Herzog, 1987, and Silberstein et al., 1988), and most had little to do with overall body shape: items such as skin colour, skin texture, hair colour, ears and complexion. Further, Kurtz's scale did not include thighs, buttocks or stomach, body parts

which other research indicates are negatively evaluated by females (Dolan et al., 1987; Dwyer et al., 1970; Franzoi & Herzog, 1987; Heunemann et al., 1966; Miller et al., 1980; Silberstein et al., 1988).

Kurtz's observation about society's concern with the female body also led him to hypothesise that women should have a more clearly differentiated notion of the aspects which they like and dislike about their bodies than is the case for men: "Females can, therefore, be expected to draw finer evaluative distinctions about the various aspects of their bodies and might be less inclined to respond to their bodily appearance in a global manner than men" (1969, p.626). This hypothesis was supported and further research on this issue will be examined below in Chapter 3.

Kurtz also contended that muscular strength is an admired quality in men but not in women, and that men would judge their bodies as stronger or more "potent" than would women. This hypothesis was also supported in his study, but other studies have reported mixed findings (Franzoi & Herzog, 1987; Silberstein et al., 1988).

b) Studies of Normal Females Only

The few studies on normal females only have reported findings consistent with the bulk of the research in the previous category. Davies and Furnham (1986a and b) and Galgan and Mable (1986) both found, for adolescents and undergraduates respectively, that subjects generally had negative feelings about bodily features affecting overall "build", such as thighs, buttocks, stomach and hips, but not about features not affecting overall build, such as feet, hands, lips, eyes and hair colour. Similarly, Crisp et al. (1983), Thomas and James (1988), Thompson and Psaltis (1988), and Wardle and Foley (1989) found a high level of dissatisfaction with overall body image among their adolescent or young adult samples.

c) Studies Comparing Females with Eating Disorders and Normal Females

There have been several studies of body dissatisfaction which have used a "distorting lens" apparatus, which enables subjects to adjust an image of themselves until they are satisfied that it approximates their own body size or desired body size. Thus measures of the discrepancies between desired, actual and perceived size can be obtained. Some studies have found a significant difference between bulimics and female controls in the extent to which their desired size differs from their actual size (Cooper & Taylor, 1988; Freeman, Thomas, Solyom, & Koopman, 1985; Garner, Garfinkel, & O'Shaughnessy, 1985; and for contrary findings, see Touyz, Beumont, Collins, McCabe, & Jupp, 1984, and Touyz, Collins, & Cowie, 1985). All of the studies have found a significant difference between bulimics and controls in the discrepancy between desired and perceived size.

Freeman et al. (1985) compared the body size dissatisfaction (discrepancy between estimates of actual and ideal size) of normal controls, phobic controls, "restricting" anorexics, bulimics and previously anorexic bulimics. All groups were dissatisfied with their body size, with the two bulimic groups reporting the greatest dissatisfaction. There was not a significant difference between the anorexics and the controls, but the two bulimic groups were significantly more dissatisfied than the other three. Gross and Rosen (1988) reported that bulimic adolescents were significantly less satisfied with their body shape than normal females. Similarly, Gleghorn, Penner, Powers, & Schulman (1987) and Mintz and Betz (1988) found that the bulimics in their study were significantly less satisfied with their bodies (on various measures of body satisfaction and body distortion) than controls.

Counts and Adams (1985) compared satisfaction with body shape in a group of bulimics, "restrained" eaters with a history of obesity but currently not as heavy as previously, and "restrained" eaters with no history of obesity. Contrary to the authors' hypothesis, the three groups reported equal dissatisfaction with their bodies.

1.1.3 Scores on Relevant Questionnaires

1.1.4 Body Dissatisfaction Subscale of the Eating Disorders Inventory

The Body Dissatisfaction subscale (BDS) of the Eating Disorders Inventory (EDI) is an eight item scale measuring dissatisfaction with overall body shape and various body parts. It is useful as a summary measure with which to compare groups.

Garner, Omsted, and Polivy (1983a) reported a mean score on the subscale for "restricting" anorexics of 14.2, for "bulimic" anorexics of 17.4, for normal females of 10.2 and normal males of 3.0.

a) Studies Comparing Normal Males and Females

Rosen, Silberg, and Gross (1988) reported means of 11.3 and 4.3 for female and male high school students respectively. More recently, Shore and Porter (1990) have obtained 8.4 and 12.1 respectively for groups of 11-13 and 14-18 year old high school females, compared with 4.7 and 3.9 for the corresponding age groups of males.

b) Studies of Normal Females Only

Johnson, Tobin, and Lipkin (1989) compared a group of high school females first assessed in 1981 with a similar sample from the same school in 1986. They found that the average BDS scores for the two groups were almost equal (10.5 and 11 respectively).

Other reported means for female groups include the following: 10.4 for high school students (Eisele, Hertsgaard, & Light, 1986); 10.55 for adults (Hollin, Houston, & Kent, 1985); and 11.2 for university students (Vanderheyden et al., 1988). In addition, Williams et al. (1986) obtained a mean score of 9.7 for normal adolescents compared with 12.6 for a group of suspected bulimic adolescents.

c) Studies Comparing Females with Eating Disorders and Normal Females

Johnson, Lewis, Love, Lewis, and Stuckey (1984) reported an average BDS score for female bulimic high school students of 16.8, significantly higher than the 10.0 for their sample of normal high school girls.

Other reported means include: 18.1 and 10.6 for bulimic and normal adolescents respectively (Gross & Rosen, 1988); 10.6 for anorexic adults compared with 7.7 for normal adults (Toner, Garfinkel, & Garner, 1987); and 14.6 for bulimic adults compared with 5.0 for symptom-free control adults (Thompson, Berg, & Shatford, 1987).

1.1.5 Body Shape Questionnaire

The Body Shape Questionnaire (BSQ) is a 34 item self report questionnaire developed as a measure of body shape concerns amongst women.

a) Studies Comparing Females with Eating Disorders and Normal Females

In their paper on the development and validation of the BSQ, Cooper, Taylor, Cooper and Fairburn (1987) reported large differences between a group of bulimic women and other groups of women in the community. Patients with bulimia nervosa obtained an average score of 136.9 and "definite non-cases" of bulimia nervosa obtained an average score of 71.9.

1.1.6 Conclusions from Research on Satisfaction with Body Shape

Clearly, males are more satisfied with their body shape than normal females, who in turn are more satisfied than bulimics. Some studies have concluded that anorexics are less satisfied with their shape than female controls but this has not been a consistent finding. There are qualitative differences between males' and females' perceptions of their shape, some of which have been mentioned above, and which will be discussed in further detail in Chapter 3.

1.2 Satisfaction with Health, Eating Habits, Fitness and Exercise

The vast majority of studies which have examined the question of people's satisfaction with their bodies have investigated satisfaction with weight, body shape or various body parts. In the context of eating disorders these issues are clearly of central importance. However, other issues such as people's satisfaction with their health, their eating habits, the amount of exercise they do and their fitness are also of interest in this context, particularly given the current cultural emphasis on health, nutrition and exercise. The present study will examine these questions.

There are few existing studies on these issues in the literature on body weight and shape and eating pathology. Silberstein et al. (1988) reported that a group of undergraduate males were more satisfied with their physical stamina and appetite than females, but that there were no differences in their satisfaction with their physical condition, physical coordination, agility, health or energy level. Franzoi and Herzog (1987) found that male undergraduates were more satisfied than females with their physical stamina, energy level, physical coordination and physical condition. Finally, Cash and Brown (1989) asked male and female undergraduates to evaluate their liking for and satisfaction with a number of domains, and to rate the degree of importance and attention paid to the domain. Females were more "illness oriented" and less "fitness oriented" than males, but equally as "health oriented". The sexes did not differ in their **evaluation** of their fitness or health.

1.3 Conclusions from Research on Satisfaction with Weight, Body Shape and Other Aspects of Physical Self

Males are more satisfied with their weight and shape than females, who are in turn more satisfied than patients. In addition, normal males and females have qualitatively different concerns about weight and shape: males are more likely than females to wish to be heavier, and females more likely than males to wish to be lighter. Further qualitative differences between the sexes are explored in the next section.

In the context of eating disorders there has been very little research on other aspects of physical self. The present study will include questions concerning fitness, exercise, nutrition and health.

The following hypothesis will be tested in the present study:

Males will be more satisfied with their weight and body shape and related behaviours than normal females. Normal females will be more satisfied with their weight and body shape and related behaviours than females with eating disorders.

Given the paucity of evidence concerning satisfaction with fitness, exercise, nutrition and health, no specific hypotheses are advanced concerning these domains.

CHAPTER 2

WEIGHT AND SHAPE RELATED BEHAVIOURS

In recent years there has been a proliferation of studies on weight and shape related behaviours of males and females. Many of these studies have compared the behaviours of males and females without eating disorders, others have examined the behaviours of normal females only, and some have compared the behaviours of normal females and females with eating disorders. In accordance with the established structure of this review, each of these comparisons will be examined. Many types of behaviour have been investigated, ranging from dieting to more extreme, pathological behaviours such as self-induced vomiting. Each of these behaviours will be considered in turn.

2.1 Dieting and Related Restrictive Behaviours

One of the major areas of research in weight related behaviours is dieting. Studies have examined the incidence of dieting and related behaviours such as calorie counting and weighing in populations of adolescents and adults.

2.1.1 Frequency of Dieting

a) Studies Comparing Normal Males and Females

There have been several comprehensive studies of the dieting behaviours of high school students. Some of these suffer from a lamentable failure to define carefully the behavioural terms used (Whitaker et al. (1989) is a noteworthy exception), and comparisons between all are hindered by the usual problems of differing samples and measures. It remains nonetheless that the overwhelming majority of this research has reported marked sex differences in the incidence of dieting, however defined and measured, with girls significantly more likely than boys to report that they are dieting or have done so recently. (Huenneman et al. (1966) and Dwyer et al. (1970) are seminal studies; subsequent research includes

Greenfeld, Quinlan, Harding, Glass, & Bliss (1987); Huon & Brown (1986); Kelly & Patten (1985); Wardle & Beales (1986); Whitaker et al. (1989).)

Very few studies have not found a sex difference in the prevalence of dieting in adolescents. Desmond et al. (1986) reported that approximately equal numbers of average and heavy weight males and females (approximately 50 percent) had dieted in the past six months. However, these authors did find that while six percent of the thin females had dieted in the past six months, none of the thin males had done so.

Studies of adult populations have also consistently reported a large sex difference in the incidence of dieting (Drewnowski & Yee, 1987; Klesges et al., 1988; Miller et al., 1980; Rand & Kaldau, 1986; Salmons, 1987; Stake & Lauer, 1987; Striegel-Moore, Silberstein, Frensch, & Rodin, 1989; Tiggemann & Rothblum, 1988). Much of this research on adults has been confined to university and college populations; the present study involves a workforce sample and is thus more representative of the general adult community.

Thus, while the exact prevalence of dieting and magnitude of the sex difference vary from study to study, it has been consistently found that normal females are more likely than normal males to undertake diets.

b) Studies of Normal Females Only

Most studies of normal females indicate that at any one time at least one half are either dieting or have done so recently. For example, a 1978 Nielson survey (cited in Johnson & Schlundt, 1985) of older women in the community found that approximately one half of women surveyed between the ages of 24 and 54 years were currently dieting. Arrington, Bonner, and Stitt (1985) similarly found in their large college sample that about one half reported following a weight loss programme since their enrolment at university (see also Grunewald, 1985). Mintz and Betz (1988) report an even higher level of dieting: in their sample of college women, 82 percent engaged in dieting behaviour every day. Studies of adolescent females have indicated that smaller proportions but

nonetheless large minorities in this age group also engage in dieting behaviour, again regardless of how the latter is defined and measured (for example, Davies & Furnham, 1986b; Johnson-Sabine, Wood, Patton, Mann, & Wakeling, 1988; Williams et al., 1986).

The results of these studies and those comparing normal males and females reveal that dieting is a common behaviour amongst girls and increases in prevalence with age, such that it is extremely common among women.

c) Studies Comparing Females with Eating Disorders and Normal Females

As one would expect, most research in this category has found that females with an eating disorder, whether anorexia or bulimia nervosa, are significantly more likely to report being on a diet than normal females (see, for example, Abraham et al., 1983; Johnson et al., 1984; Mallick, Whipple, & Huerta, 1987). Of greater interest is research reporting the existence of a small group of women who, while not fulfilling the DSM-III criteria for a diagnosis of anorexia or bulimia nervosa, report that they constantly or very frequently diet and also score highly on one or more measures of disordered eating. Button and Whitehouse (1981) identified such a sub-sample, whom they denoted as having "subclinical anorexia nervosa".

2.1.2 Conclusions from Research on the Frequency of Dieting

Clearly, there is a significantly higher incidence of dieting in normal females than males. In turn, there is a higher incidence of dieting in both bulimics and anorexics than in normal females. The present study will compare the frequency of dieting in all of these groups.

2.1.3 Types of Diets Undertaken

The research on dieting is not confined to studies of frequency. Other issues such as the types of diets undertaken, sources of information diets, reasons for cessation of diets and the age at onset of dieting are all

important in the study of weight related behaviours. However, to date research on these topics has been much more limited than that on the prevalence of dieting.

Studies which have examined the types of diets undertaken by subjects have investigated a range of behaviours including fasting, "crash" dieting, "diet pill" use and laxative and diuretic use.

a) Studies Comparing Normal Males and Females

Studies of high school and university students have consistently found a sex difference in the reported use of laxatives (Stake & Lauer, 1987; Whitaker et al., 1989), diuretics (Killen et al., 1986; Stake & Lauer, 1987; Whitaker et al., 1989; Zuckerman et al., 1986) and "diet pills" (Greenfeld et al., 1987; Killen et al., 1986; Lachenmeyer & Muni-Brander, 1987; Stake & Lauer, 1987; Whitaker et al., 1989), with females being more likely than males to use these medications for the purposes of weight control or reduction.

It has also been consistently reported that females are more likely than males to miss meals, fast or to undertake "crash" diets (Greenfeld et al., 1987; Healy, Conroy, & Walsh, 1985; Kagan & Squires, 1984; Klesges et al., 1987; Whitaker et al., 1989; Zuckerman et al., 1986).

Other diet strategies studied include eliminating or reducing intake of sweets, reducing fat intake, smoking and using caffeine, and simple behavioural techniques such as avoiding places that encourage eating and not keeping certain foods in the house. Klesges et al. (1987) examined a wide range of dieting strategies in a college student sample and found that the female subjects were much more likely to report that they had adopted one or more of these strategies during the previous six months. Of note, 61 percent of the females in their sample reported using strategies that the authors considered inappropriate, ineffective or dangerous, compared to 26 percent of the males. In a later study, Klesges and Klesges (1988) confirmed these findings, and reported in addition that females are more likely than males to use cigarette smoking as a diet

strategy. (See also, concerning habitual avoidance of carbohydrates, Crisp et al., 1983, and various dieting strategies among black Americans, Thomas & James, 1988.)

b) Studies of Normal Females Only

Arrington et al. (1985) and Grunewald (1985) have undertaken detailed analyses of the methods of weight reduction used by college women. Both found that the most popular dieting approach was calorie reduction, reported by 47 and 55 percent of women in these studies respectively. Other popular approaches included "liquid formula" diets (19 and 16 percent), diuretics (10 and three percent), laxatives (7 and five percent), fasting or starvation (35 percent in the Grunewald study), and diets from books or magazines (23 percent in the Grunewald study). Fifteen percent of the college women in Nevo's (1985) sample reported going on "crash diets" at least once a month.

Shefer (1987) reported the following diet methods in a sample of South African undergraduates: diet pills (12 percent), laxatives (9 percent), "strict diets" (16 percent) and fasting (15 percent).

Nearly eight percent of the college women in the Mintz and Betz (1988) study reported using laxatives for weight control at least once per month, and 17 percent using appetite control pills at this frequency. Almost 29 percent of the sample fasted at least once per month, 41 and 89 percent respectively skipped meals at least once per day and at least once per month.

Williams et al. (1986) reported the following diet methods in their female adolescent sample: regularly skipping meals (60 percent), avoiding carbohydrates (19 percent), adhering to a "stereotyped" diet (18 percent), and use of laxatives (one percent). In another study of adolescent females, Crowther, Post, and Zaynor (1985) found that 35 percent of their sample reported fasting at least once per month (of whom 30 percent reported fasting at least once per week), and that five percent reported using laxatives for weight control or reduction (of whom 12 percent reported such use of laxatives at least weekly).

c) Studies Comparing Females with Eating Disorders and Normal Females

Abraham et al. (1983) compared the type of weight loss methods employed by ordinary students, students of ballet, anorexics and bulimics. They found that students tended to use conventional, "sensible" calorie restriction methods in the main, while subjects with eating disorders used a wide range of unorthodox and even bizarre methods (for example, disposing of food, disguising the amount of food on their plates, chewing food and spitting it out, hypnosis and acupuncture). Laxative and diuretic use was greatest in bulimics followed by anorexics and students. Johnson et al. (1984) found similar differences in laxative and diuretic use between bulimics and controls. Similarly, Hendren et al. (1986) found that school girls with eating disorders were more likely than controls to take diet pills and undertake crash diets.

In their study of over 100 anorexics, O'Connor, Touyz, Dunn, and Beumont (1987) found that over 50 percent of the patients were found to be avoiding red meat. Only six percent of these patients were avoiding red meat before the onset of their illness, and the authors conclude that vegetarianism is another popular "dieting" strategy adopted by anorexics. (See also the findings of Kadambari, Gowers, & Crisp (1986) and King (1989) on vegetarianism in eating disorders.) To date, the extent of this type of weight loss strategy in non-eating disordered females is not known.

2.1.4 Conclusions from Research on the Types of Diets Undertaken

The majority of studies indicate that females use a wide range of dieting methods, with the most common being some variation of reduced calorie intake. Males have been found to use the same methods, but the reported incidence is always lower than for females. Females with eating disorders also utilise conventional methods of dieting, but resort much more frequently than other females to methods other than reduced calorie intake.

2.1.5 Sources of Information about Weight Reduction Diets

a) Studies Comparing Normal Males and Females

Desmond et al. (1986) asked male and female students to identify their major sources of information about weight control from a list of sources. The three leading sources for males were family members (mentioned by 41 percent of males), television (34 percent) and their sports coach (28 percent), and for females family members (61 percent), magazines (49 percent) and friends (48 percent). Relatively few subjects of either sex obtained information from schools, teachers or newspapers.

b) Studies of Normal Females Only

Grunewald (1985) obtained similar results to those of Desmond et al. (1986) from her sample of female college students. The major sources of information reported by students were magazines or newspapers (44 percent), friends or relatives (27 percent), books on health, cookery or diets (10 percent) and labels on products (eight percent). Very few reported dietitians or doctors as sources of information.

c) Conclusions from Research on the Sources of Information About Diets Undertaken

Relatively few researchers have investigated subjects' sources of information about weight reduction diets. The consensus among those that have appears to be that relatively few subjects obtain information about diets from "reputable" sources such as educational institutions, doctors and dietitians. Instead, the most popular sources of information are magazines and friends.

2.1.6 Reasons For Termination of Diets

There has been relatively little research into the question of why people terminate their diets. The reasons for cessation of diets may be important in understanding the development of eating disorders, as many patients with eating disorders report that their disorder began as a "normal" diet which led to increasingly restricted intake of food (Beumont, Booth, Abraham, Griffiths, & Turner, 1983).

a) Studies of Normal Females Only

Arrington et al. (1985) investigated the duration, cost and side effects of diets undertaken by female college students. Their findings suggest that expense, unpleasant side effects and lack of efficacy may be common reasons for termination of diets by women.

2.1.7 Age at which Dieting Began

While there is a reasonably large literature concerning the onset of anorexia nervosa, fewer researchers have investigated the age at which people begin "normal" dieting. There has been some suggestion that women with eating disorders may have experienced concern about their weight earlier than other women and may also have experienced more social disapproval of their weight than is the case for other females (Gordon, 1990, p.86). The sex difference in the age at which puberty is reached and the differing sociocultural environments of boys and girls would suggest that dieting would occur much earlier in girls on average than boys. In one of the few studies of this issue, Grunewald (1985) found that the average age at which the first weight reduction diet was undertaken reported by female college students was 16.2 years. The present study will investigate this question for normal males, females and patients with eating disorders.

2.1.8 Calorie Counting

The prevalence of calorie counting, as distinct from the undertaking of low calorie diets, has been investigated by several authors.

a) Studies Comparing Normal Males and Females

Greenfeld et al. (1987) found that eight percent of females and only one percent of males in their high school student sample counted calories one or more times per day. Kelly and Patten (1985) reported similar statistics. Ten percent of the females and one percent of the males in their high school sample stated that they knew how many calories that they ate in a day. Further, 32 percent of the females but only nine percent of the males reported that they mentally reviewed their food intake at the end

of each day. Similarly, Kagan and Squires (1984) found that nine percent of the females and only two percent of the males were aware of the calorie content of the food that they ate on at least one occasion per week.

b) Studies of Normal Females Only

Mintz and Betz (1988) found that 22 percent of their college sample counted calories at least daily. Williams et al. (1986) reported that 17 percent of the adolescent females in their study were regularly counting calories at the time of investigation.

2.1.9 Frequency of Weighing

a) Studies Comparing Normal Males and Females

Frequency of weighing is one behavioural indicator of weight and body shape concern. In their study of an adolescent population, Greenfeld et al. (1987) found that 14 percent of females weighed themselves at least once a day compared to ten percent of the males. The sex difference in that study is the smallest reported in the literature; in general it has been reported that females weigh themselves significantly more frequently than males (see, for example, Dwyer et al., 1970; Huon & Brown, 1986; and Kelly & Patten, 1985).

b) Studies Comparing Females with Eating Disorders and Normal Females

Buvat-Herbaut et al. (1983) found that 41 percent of their anorexic sample weighed themselves at least once per day, compared with 12 percent of their sample of normal females.

2.1.10 Degree of Effort Directed at Weight Control

While many studies have examined the prevalence of dieting and related behaviours, few have directly investigated the degree of effort that people **perceive** that they exert in controlling their weight. This question is to some extent addressed by examining the type and frequency of diets that people undertake, but not wholly so. In the present study the degree of effort that people perceive that they exert in weight control will be directly assessed.

2.1.11 Reasons for Weight Control and Food Choice

A limited number of studies have looked at the reasons or motivations for people's weight control behaviour. This is an important issue as the same behaviours may have different meanings for different groups.

a) Studies Comparing Normal Males and Females

In their study of high school students' weight related behaviours and attitudes, Huenemann et al. (1966) asked subjects about their reasons for attempting to control their weight. The major goals for the boys, in decreasing order of importance, were to gain weight and/or size, to gain strength, to lose weight and/or size, to retain their present weight, to change their proportions and to improve their appearance. The most important goals for girls were to lose weight and/or size, to retain their present weight, to gain weight and/or size, to change their proportions and to improve their appearance.

Huenemann et al.'s (1966) finding that boys are more likely than girls to wish to gain weight, while girls are more likely than boys to wish to lose weight, has been replicated by several other studies. However, the relatively minor emphasis placed on appearance as a reason for weight control given by the girls in their study has not been found elsewhere; most studies have concluded that appearance is a primary motivation for females' weight control efforts. For example, in their large scale survey of school children, Whitaker et al. (1989) found that girls mainly reported cosmetic reasons for weight control (95 percent as opposed to 59 percent for boys) and boys primarily reported reasons related to athletic ability (64 percent as opposed to 26 percent for girls). This study also compared girls' and boys' use of fasting, diet pills and self-induced vomiting, and found that girls were more likely than boys to adopt these strategies for cosmetic reasons, while boys used them more frequently for reasons related to athletic prowess (see also Dwyer et al., 1970).

In a study of male and female undergraduates Klesges et al. (1987) asked subjects to rate the benefits to be derived from achieving or maintaining their ideal weight. Males and females rated the health and psychological

benefits of an ideal weight equally. However, females rated the appearance benefits of attaining an ideal weight as more important than did males.

There has been some research on the more specific issue of the reasons people give for their food choice. A study by Wardle and Beales (1986) asked students to rate several types of food along several dimensions, one of which was the extent to which "the food makes you fat". The girls rated high calorie foods (defined as "fattening" by the authors) and "neutral" foods as more likely to "make one fat" than did the boys. Girls were also more likely to state that they felt guilty about eating these types of food.

b) Studies of Normal Females Only

Arrington et al. (1985) surveyed female undergraduates about their reasons for attempting to lose weight. Figure improvement was the major reason given for following a weight reduction programme; 75 percent of subjects gave this reason. Only 23 percent reported that they were reducing their weight for health reasons. These results are consistent with an earlier Nielsen survey (cited in Johnson & Schlundt, 1985) which found that 75 percent of women on a diet at the time of the survey (dieters constituted 56 percent of women aged between 24 and 54 years) were dieting for cosmetic rather than health related reasons.

2.1.12 Summary of Findings concerning Reasons For Weight Control and Food Choice

The bulk of the evidence suggests that males control their weight for reasons related to fitness or athletic prowess more than do females, while for females weight control appears to be motivated by reasons of appearance. (This conclusion is consistent with findings presented earlier on qualitative differences in males' and females' body shape concern.) It should be borne in mind that, as will be discussed in Chapter 4, the whole issue of weight control has lower salience for males than females. The studies also suggest that females tend to choose their food on the basis of calories or how "fattening" a food is perceived to be more than do males.

To date there have been not been any studies comparing normal females with eating disorder patients on motivations for weight control and food choice. It could be assumed that the calorie content of food would be even more central to eating disorder patients' food choice than is the case for normal females. It is more difficult however to hypothesise about differences in reasons for weight control. In the present study motivations for both weight control and food choice will be examined in normal males and females and females with eating disorders.

2.2 Exercising

To date, few studies have investigated exercise in the context of disordered eating and concern with weight and body shape. Several commentators have speculated that a concern with exercise and fitness constitutes a new focus for pathological concern with weight and shape (Johnson et al., 1989). Thus the prevalence of exercising for the purposes of weight and shape control in males, females and females with eating disorders is of great interest.

a) Studies Comparing Normal Males and Females

Most studies which have investigated exercise in the context of weight and shape concern have asked subjects how frequently they exercise for the specific purpose of weight control, as opposed to the frequency of their exercising for any reason. Stake and Lauer (1987) asked subjects about exercising in general and about exercising for the purposes of weight control, and an intriguing finding emerged. While 91 percent of average weight men in their sample were currently exercising (for any purpose), only 48 percent of average weight women were doing so. However, 91 percent of all women reported using exercise as a means of weight control, compared to only 55 percent of men.

Many researchers have compared the use of dieting and exercise as methods of weight control by men and women. It has been found that men who are attempting to control or reduce their weight are more likely to do so via exercise than women, while women are more likely to use dieting than men (Drewnowski & Yee, 1987; Salmons, 1987).

Huenemann et al. (1966) found that teenage boys were equally likely to use either dieting or exercise as a means of adjusting their weight, but that girls favoured dieting over exercising to a great extent. In their study of teenagers, Huon and Brown (1986) found that while dieting was far more common in girls than in boys, the use of exercise as a means of weight control was equally common in boys and girls.

Silberstein et al. (1988) developed an inventory which assessed subjects' reasons for exercising. Items were chosen to represent seven general domains: exercising for weight control, for fitness, for health, for improving body tone, for improving overall physical attractiveness, for improving one's mood and for enjoyment. Only one gender difference emerged on this inventory. Women reported significantly more often than men that they exercised for weight control.

Klesges et al. (1987) have also presented a comprehensive study of the use of physical activity as a weight loss strategy. In their study, 80 percent of females and 46 percent of the males reported using some type of physical activity as a means of weight reduction in the last six months. The researchers listed 21 activities and subjects were asked to indicate whether or not they had participated in them for the purposes of weight loss. Both appropriate and/or effective activities (e.g. running, jogging, walking) and ineffective or dangerous activities (such as the use of saunas, plastic wraps and vibrating belts) were listed. Females reported significantly more frequent participation than males in 11 of the 21 activities, and there were no activities for which males' participation was greater than females'. As this is one of the few detailed studies of this issue, it is worthwhile presenting some detailed results. Running or jogging were used as a method of weight loss by 41 percent of females, but only 19 percent of males. The other activities for which there were significant sex differences in participation for the purposes of weight loss were: increasing routine exercise (46 versus 13 percent), exercise programs/aerobic classes (20 versus one percent), skipping with a rope (19 percent versus five percent), daily walks (17 versus 0 percent), bicycling (15 versus three percent), dancing/dancing classes (12 versus

0 percent), and "jazzercise" (five versus 0 percent). Amongst those activities for which there was no sex difference were: situps/chinups/pushups (33 versus 34 percent) and weight lifting (19 versus 15 percent). Interestingly, females (six percent) were more likely than males (0 percent) to reward themselves for daily exercise. The authors concluded that of those activities for which a significant sex difference was found, the vast majority were effective and appropriate weight loss strategies. However, females did report using "foods that will increase metabolic rate" (nine versus two percent) and products aimed at reducing cellulite (4 versus 0 percent) more frequently than males.

b) Studies of Normal Females Only

Davies and Furnham (1986b) examined female school students' contemplation of exercise as a means of body shape alteration. They found significant differences according to age. The percentage of girls who had considered using exercise to lose weight rose steadily with age, from 48 percent in the 12 year age group to 81 percent in the 18 year age group. Actual participation in exercise in order to lose weight did not differ significantly with age; 36 percent of all girls reported that they were doing this. The percentage of girls who had considered using exercise to "tone up" their body also increased with age, with 41 percent of 12 year olds and 96 percent of 18 year olds reporting such consideration. Overall, 47 percent of girls were actually using exercise to tone up their bodies. Older girls were significantly more likely than younger girls to have considered using exercise to tone up their stomachs, thighs, buttocks and busts.

A large proportion (68 percent) of Shefer's (1987) South African sample reported using exercise as a means of weight control.

c) Studies Comparing Females with Eating Disorders and Normal Females

Mallick et al. (1987) found that eating disorder patients, athletes and control students from a high school population were equally likely to participate in callisthenics and running or jogging, but the athletes and patients devoted longer periods of times to these activities than did the other students.

2.3 Uncontrolled Overeating and Purging Behaviours

2.3.1 Prevalence of Binge Eating

a) Studies Comparing Normal Males and Females

There is a vast amount of research on the prevalence of uncontrolled overeating. The term "binge eating" is often used for this type of behaviour without clear definition of how a "binge" actually differs from other overeating episodes. Perhaps the major differentiating feature is the subjective feeling of loss of control in a binge, but this is not always explicit in the studies reported. As for other weight related behaviours, much of this research has investigated samples of high school and university students. The reported incidence of binge eating in these samples varies markedly from study to study. Much of this variation is probably due to the widely differing definitions and criteria used by researchers for the term "binge", and the differing usages of the term "binge" by subjects themselves (on the latter point see, for example, Rand & Kaldau, 1986). Whitaker et al. (1989) carefully defined the criteria for the various types of bingeing they measured in their high school sample. Large differences emerged in the prevalence of the different types of binges, indicating the need to define the term clearly. For example, using criteria for a "high calorie" binge they found that 93 percent of girls and 91 percent of boys reported such behaviour, yet only six percent of girls and 19 percent of boys reported "recurrent" binges.

Like many other studies, Whitaker et al. (1989) found that bingeing, when defined simply in terms of overeating, is equally prevalent amongst males and females (Halmi et al., 1981; Hawkins & Clement, 1984; Healy et al., 1985; Kagan & Squires, 1984; Lachenmeyer & Muni-Brander,

1988; Leon, Carroll, Chernyk, & Finn, 1985; Maceyko & Nagelberg, 1985; Schotte & Stunkard, 1987). However, females are significantly more likely than males to feel distressed, guilty or depressed as a result of bingeing (Halmi et al., 1981; Hawkins & Clement, 1984; Kagan & Squires, 1984; Whitaker et al., 1989), to experience feelings of being out of control or of being unable to stop eating (Halmi et al., 1981; Healy et al., 1985; Salmons, 1987; Schotte & Stunkard, 1987), or to experience some other negative emotion in response to bingeing (Pyle et al. 1983; Leon, Carroll, Chernyk, & Finn, 1985).

When psychological dimensions are included in definitions of bingeing, the reported incidence in both males and females decreases (Healy et al., 1985; Rand & Kaldau, 1986). Healy et al. (1985), for example, found that 37 percent of the females and 18 percent of the males in their university sample claimed that they "binged" (this was the term presented to the subjects). However, dysphoric mood after bingeing was experienced by only 16 percent of the females and 2.8 percent of the males.

b) Studies of Normal Females Only

There have been a great number of studies of the prevalence of binge eating in samples of normal females (Carter & Moss, 1984; Hart & Ollendick, 1985; Johnson et al., 1984; Nagelberg, Hale, & Ware, 1984; Nevo, 1985). These studies have, again, employed widely varying definitions of bingeing, so it is difficult to compare them directly. Nagelberg et al. (1984) found that 79 percent of their university sample had experienced "excessive, uncontrolled eating" at least once a year, but that only 3.3 percent reported this behaviour on a daily basis.

Research by Carter and Moss (1984) shows the difficulty of obtaining reliable data concerning bingeing. Over 16 percent of female undergraduates in their study reported binge eating. However, on examination of interview data it was found that the subjects' descriptions of binges were often not consistent with the definitions they were instructed to consider by the researchers. The women often described a

binge as having dinner at a "fast food" restaurant or as sharing a pizza with a friend. A similar problem has been raised by Stein and Brinza (1989).

Crowther, Post, and Zaynor (1985) found that 46 percent of an adolescent female sample claimed to binge eat. However, when strict criteria were applied (at least weekly bingeing plus purging via only self-induced vomiting or use of laxatives), this figure was reduced to 2.8 percent. Similarly, Nagelberg et al. (1984) found that 79 percent of their university sample experienced "excessive, uncontrolled eating" at least once a year, but that only 3.3 percent reported experiencing this behaviour on a daily basis. Drewnowski, Yee, and Krahn (1988) found that ten percent of the college women in their survey reported binge eating more than once a week, but prevalence rates were sharply reduced as additional DSM-III-R criteria were added.

Hart and Ollendick (1985) compared the rates of various components of bingeing (eating an enormous amount of food in a short time, consequently feeling depressed with self deprecating thoughts, and fear of not being able to stop eating voluntarily) between a sample of university and non-student ("working") women. For both groups they found that the experience of overeating was more common than the experience of negative thoughts or feeling out of control. Interestingly, they found that there was a higher incidence of all of these components in university women than in "working" women. This is one of the few studies in which the prevalence of disordered eating in working women and undergraduates has been directly compared. Given the significant differences between the groups, it is likely that the results of the many studies using university populations may not be able to be generalised to other women.

c) Studies Comparing Females with Eating Disorders and Normal Females

By definition all bulimics experience binge eating. The DSM-III-R includes the following diagnostic criterion for bulimia nervosa:

“Recurrent episodes of binge-eating (rapid consumption of a large amount of food in a discrete period of time, usually less than 2 hours), frequency of at least once a week over the previous four weeks”.

However it is interesting to consider the prevalence of binge eating in anorexia nervosa. Abraham et al. (1983) found that 63 percent of control students, 90 percent of ballet students, and 64 percent of anorexics had experienced binge eating at some time. When the criterion was restricted to binge eating at least once a week, 17 percent of the control students, 36 percent of the ballet students and 46 percent of the anorexics met this criterion. Abraham & Beumont (1982a), Beumont & Abraham (1983), Beumont et al. (1983), and Halmi (1974) have also reported binge eating in anorexics.

Johnson et al. (1984) compared the frequency of binge eating in the bulimics they identified in their high school sample with this behaviour in the non-bulimics. Over 55 percent of the non-bulimics reported that they “rarely” or “never” binged, 29 percent reported that they binged once a month, 14 percent said that they binged once a week and 2.8 percent stated that they binged at least once a day. All of the bulimics reported weekly or daily bingeing.

2.3.2 Prevalence of Self-Induced Vomiting

a) Studies Comparing Normal Males and Females

Studies of both high school and university samples have almost all concluded that females are significantly more likely than males to induce vomiting as a means of weight control (Greenfeld et al., 1987; Hawkins & Clement, 1984; Kagan & Squires, 1984; Kelly & Patten, 1985; Killen et al., 1986; Koslow, 1988; Schotte & Stunkard, 1987; Whitaker et al., 1989; Zuckerman et al., 1986). The reported prevalence of self-induced vomiting varies to some extent between studies, but rates are more

consistent than those for bingeing. The latter finding is probably due, at least in part, to the agreement on what constitutes self-induced vomiting as opposed to the different usages of the term bingeing. The reported incidence of self-induced vomiting (of at least weekly frequency) for females is about one to four percent, and for boys is about 0.4 to one percent.

Lachenmeyer and Muni-Brander (1988) found much higher rates of vomiting in their high school population than those discussed above - 21 percent for females and 23 percent for males. Unfortunately, it is not clear what frequency criterion (if any) they had applied. Carter and Eason (1983) identified women who engaged in self-induced vomiting "for reasons of weight control". Of their 93 subjects, 34 percent reported that they engaged in this behaviour. This relatively high rate is possibly explained by the nature of the sample (members of four social "sororities") and by the researchers' failure to ascertain the frequency of vomiting. Halimi et al. (1981) also found high rates of self-induced vomiting in their university sample - almost 12 percent of females and six percent of males.

b) Studies of Normal Females Only

Studies examining normal females only report the following rates of self-induced vomiting: almost two percent in a college sample (no frequency criterion) (Carter & Moss, 1984); two percent of an undergraduate sample at least weekly (Shefer, 1987); three percent of an adolescent sample "quite often" or "frequently" (Crisp et al., 1983); four percent of a college sample at least weekly (Mintz & Betz, 1988); about eight percent of a high school sample (Carter & Duncan, 1984b) and of a college sample (Nagelberg et al., 1984) (no frequency criterion in either study); about 11 percent of a college sample "sometimes" or "almost always"; and about another 11 percent of an adolescent sample, about one quarter of whom did so at least weekly (Crowther et al., 1985). Hendren et al. (1986) found that about 12 percent of a sample of boarding schoolgirls and six percent of a sample of girls attending day school reported self-induced vomiting

(no frequency criterion was applied); and of Grunewald's (1985) sample of college students, about five percent said that they had tried self-induced vomiting as a means of weight loss.

c) Studies Comparing Females with Eating Disorders and Normal Males and Females

Abraham et al. (1983) found that none of the ballet students or other students in their sample "regularly" induced vomiting after eating. However, ten percent of both of these groups did so "occasionally", either to lose weight or to remove feelings of fatness after eating a large amount of food. In contrast, 28 percent of the anorexics and 48 percent of the bulimics induced vomiting "regularly". Buvat-Herbaut et al. (1983) reported that 1.6 percent of a normal schoolgirl sample claimed to induce vomiting "sometimes", compared with 22 percent of the anorexics in the study. Abraham & Beumont (1982a), Beumont & Abraham (1983), Beumont et al. (1983), and Halmi (1974) have also reported a high incidence of vomiting in anorexics.

Of the bulimics identified in Johnson et al.'s (1984) sample, eight percent were inducing vomiting daily compared with only 1.2 percent of the controls. Ten percent of the bulimics were inducing vomiting weekly, but only two percent of the controls were doing so.

In their comparison of females with eating disorders, athletes and other female high school students, Mallick et al. (1987) found that 53 percent of the eating disorder group were using vomiting as a weight loss method, versus 17 percent of the athletes and seven percent of the other students. On average the patients were vomiting 52 times a week, compared with nine times and once a week, respectively, for the athletes and other students.

2.4 Scores on Questionnaires Measuring Weight Related Behaviours

Research using standardised self-report measures of weight-related attitudes and behaviours also provides valuable evidence concerning the differences in weight-related behaviour between normal males and

females and females with eating disorders. Two such measures have been extensively used - the Eating Attitudes Test and the Eating Disorders Inventory.

2.4.1 Scores on the Eating Attitudes Test

The Eating Attitudes Test (EAT) is a 40 item self rated instrument using Likert scales in which the respondent is asked to rate statements about their own attitudes and **behaviour** related to weight and eating. It was designed as a measure of the symptoms of anorexia nervosa.

Since its publication the EAT has been administered widely, to a variety of populations. The research utilising the EAT is of interest to the present study as, like the Eating Disorders Inventory, it is a summary measure which is useful for making general comparisons between groups.

In early research using the EAT, Garner and Garfinkel (1979) found that a "cut-off" score of 30 maximally differentiated anorexics from normal weight university students.

a) Studies Comparing Normal Males and Females

While there is considerable variation in the actual average EAT scores reported, it has invariably been found that females score significantly higher on the EAT than males, in both high school and university populations (Clarke & Palmer, 1983; Gibbs, 1986; Leichner, Arnett, Rallo, Sriameswaran, & Vulcano, 1986; Schmolling, 1988; Silberstein et al., 1988; Whitaker et al. 1989). Females are also significantly more likely than males to score above 30 on the EAT (Clarke & Palmer, 1983; Leichner et al., 1986; Schmolling, 1988).

b) Studies of Normal Females Only

Hawkins and Clement (1984) and Shefer (1987) both found that over 11 percent of samples of normal weight female university students obtained EAT scores of 30 or greater. Cooper, Waterman, and Fairburn (1984) administered the EAT to a sample of females attending a family planning clinic and found that almost fifteen percent of their sample scored 20 or greater and 6.5 percent scored 30 or above. Wells, Coope, Gabb, and

Pears (1985) reported that 4.5 percent of their sample of adolescent schoolgirls scored 30 or above. Johnson-Sabine et al. (1988) reported that 8.2 percent of another teenage schoolgirl sample scored 20 or above.

Reported average scores on the EAT include the following: 10.7 for adolescent females (Williams et al. 1986); 10.7 and 12.6 for private and state schoolgirls respectively, with an overall mean age of about 16 (Eisler & Szumukler, 1985); almost 10 for a sample of female university students (Vanderheyden et al., 1988); and about 12 and 15 respectively for the studies by Wells et al. (1985) and Shefer (1987).

c) Studies Comparing Females with Eating Disorders and Normal Males and Females

In their paper reporting on the development and validation of the EAT, Garner and Garfinkel (1979) presented data comparing several groups' scores on the EAT. Anorexics scored significantly higher than normal female controls, who in turn had a higher average than male controls. Seven percent of the female controls scored in the range which overlapped with the lowest scoring anorexic subjects. Button and Whitehouse (1981) administered the EAT to a large sample of undergraduates and a small sample of anorexics. They found that 6.3 percent of the female students scored 32 or above, but none of the male students. The mean score for female students was 12.0 and for males 7.6. The mean for the anorexics was 43.3. Clinton and McKinlay (1986) compared the EAT scores for a group of anorexics and female controls. They also found a large difference, with an average score of 51.5 for the anorexics and 7.9 for the female controls. The anorexics in the study by Toner et al. (1987) had a mean of almost 30, and the controls of 6.5. Fairburn and Cooper (1984) reported mean EAT scores for bulimic women with and without a history of anorexia nervosa of 60 and 48 respectively.

2.4.2 Scores on the Drive For Thinness Subscale of the Eating Disorders Inventory

The Drive for Thinness subscale (DTS) of the Eating Disorders Inventory (EDI) measures preoccupation with weight related behaviours.

Garner et al. (1983a) reported a mean score of the subscale for anorexics of 14.4, normal females of 5.0 and for normal males of 1.6.

a) Studies Comparing Normal Males and Females

Shore and Porter (1990) reported average scores on the DTS of 6.6 and 7.1 for their groups of 11-13 and 14-18 year old females respectively, and of 3.0 and 2.1 for the corresponding groups of males. Rosen et al. (1988) earlier reported similar scores for their groups of high school females (5.6) and males (1.7).

b) Studies of Normal Females Only

Reported DTS averages for female only groups include: 3.2 for adults (Hollin et al., 1985); 4.8 for adolescent schoolgirls (Eisele et al., 1986); and 5.17 for university students (Vanderheyden et al., 1988). In addition, Williams et al. (1986) reported a mean of 4.8 for non-dieting adolescents and of 8.9 for a group of suspected bulimic adolescents. Galgan, Mable, Ouellette, and Balance (1989) reported that approximately 25 percent of their college sample had scores on the DTS of 13 or greater.

c) Studies Comparing Females with Eating Disorders and Normal Females

Johnson et al. (1984) administered the Drive for Thinness subscale to over 1200 female school students, aged between 13 and 19 years. A bulimic subsample (identified using a questionnaire) scored significantly higher (average score of 12) than the non-bulimic group (average score of five).

Other reported means include 8.1 for anorexics versus 2.5 for control adults (Toner et al. 1987), and 10.2 for bulimics compared with almost 1 for symptom-free adults (Thompson et al., 1987).

2.4.3 Scores on the Bulimia Subscale of the Eating Disorders Inventory

The Bulimia subscale (BS) measures the tendency toward episodes of uncontrollable overeating (bingeing) and the subsequent impulse to engage in self-induced vomiting.

Garner et al. (1983a) reported a mean score on the subscale for "restricting" anorexics of 2.7, for "bulimic" anorexics of 10.8, normal females of 2.0 and normal males of 1.0.

a) Studies Comparing Normal Males and Females

Shore and Porter (1990) reported average scores on the BS of 1.9 and 2.2 respectively for their 11-13 and 14-18 year old female groups, and 1.6 and almost 2.0 for the corresponding male groups. Rosen et al. (1988) reported 2.1 and 1.2 respectively for their female and male high school students.

b) Studies of Normal Females Only

Reported BS averages for female only groups include: 1.1 for adults (Hollin et al., 1985); 1.8 for adolescent schoolgirls (Eisele et al., 1986); and 1.8 for female university students (Vanderheyden et al., 1988). In addition, Williams et al. (1986) reported a mean of 1.3 for non-dieting adolescent females and of 2.4 for a group of suspected bulimic adolescents.

c) Studies Comparing Females with Eating Disorders and Normal Females

Toner et al. (1987) reported means of 3.6 for anorexics versus 0.6 for control adults; and Thompson et al. (1987) reported 4.4 for bulimics compared with 0.3 for symptom-free adults.

2.5 Conclusions from Research on Dieting, Exercise and Related Behaviours

There is consistent evidence that females are more likely than males to engage in dieting (including stringent diets and use of various forms of medication), calorie counting, weighing and exercising for the purposes of weight control or weight reduction. While some studies have concluded that males are equally likely to report overeating, females are significantly more likely to report negative feelings as a result of such overeating. Females are also more likely to report that they induce vomiting for the purposes of weight control. Females' behaviour is motivated to a great extent by reasons related to their appearance, while males are more likely

to report that they undertake various behaviours for reasons related to fitness or athletic ability, a pattern consistent with their body shape preferences, outlined earlier. Females with eating disorders report significantly higher rates of all of the behaviours listed above than normal females.

On the basis of the evidence discussed, the following hypothesis will be tested in the present study:

Patients will engage in behaviours directed at influencing weight and body shape, and also binge eating, more frequently than female controls. Female controls will report engaging in these behaviours more frequently than will be the case for male controls.

CHAPTER 3

QUALITATIVE DIFFERENCES BETWEEN MALES AND FEMALES IN BODY SHAPE AND WEIGHT EVALUATION

The research reviewed thus far indicates that males are significantly more satisfied than females with their weight and shape. However, the research also suggests another important sex difference, that is, that males are concerned about their bodies in a different way to females. There has been a substantial amount of research addressing this issue, some of which has already been mentioned.

One major difference between males and females which was identified in the preceding review is that males are more likely than females to wish to be heavier, while females are more likely than males to wish to be lighter. In addition to this, males and females aspire to different body shapes: in general, males wish to be muscular or "mesomorphic", while females wish to be thin or at least smaller than an average body build. This difference in body shape preference has been well established in the literature (Buree, Papageorgis, & Solyom, 1984; Fallon & Rozin, 1985; Mishkind, Rodin, Silberstein, & Striegel-Moore, 1986; Tucker, 1982).

A second qualitative difference concerns the way in which males and females conceive of their bodies: males are more concerned than females with the strength and muscularity of their bodies, whereas females are more concerned with the appearance of their bodies. Connell (1983) addresses this issue on a theoretical and philosophical level. In an early empirical study, Huenemann et al. (1966) noted:

"We speculate that the boys who considered themselves too thin and wanted to gain weight were not interested in gaining weight per se but rather in becoming more muscular, and equated this with added weight" (p.334).

Dwyer et al. (1970) also reported that adolescent boys wanted to be larger in almost all dimensions, especially in those that might signify strength or athletic prowess, such as the upper torso or arms. In a more recent

study, Franzoi and Shields (1984) assessed the nature of body image concern for males and females and concluded that "body esteem is a multidimensional construct which differs for males and females" (p.173). The three dimensions of body esteem that emerged as important for males in their study were physical attractiveness (this dimension included items such as lips, face, ears), upper body strength (e.g. muscular strength, biceps, width of shoulders, arms, chest) and physical condition (e.g. physical stamina, physical coordination, reflexes, energy level, and health). For females the dimensions of importance were sexual attractiveness (including items similar to physical attractiveness but also items such as sex drive, sex activities, body hair, and breasts), weight concern (e.g. appetite, thighs, appearance of stomach, hips, buttocks, figure) and physical condition (similar to this dimension for males).

Thirdly, Franzoi and Shields (1984) also found that the three aspects of men's body esteem were more highly interrelated than those of women. This led the authors to conclude that women differentiate parts of their bodies to a greater extent than do men. This conclusion has also been reached by earlier studies (Shontz, 1963; Fisher, 1964; Kurtz, 1969) and by a subsequent study by Franzoi, Kessenich, & Sugrue (1989). The latter study employed experiential sampling methodology (discussed in Section 4.2) and found that when females were aware of their bodies, they were more likely than males to be aware of specific body parts than to be experiencing a global awareness of their bodies.

Finally, not only are females more likely than males to evaluate their bodies on a part-by-part basis, but, as indicated by several studies already cited, females are also concerned about **different** parts of their bodies to those about which men appear concerned. For example, Franzoi et al. (1989) reported that when females were aware of specific parts of their bodies, the parts most frequently thought of were items on the weight concern dimension of the Body Esteem Scale. When males were aware of specific parts, they most frequently were aware of items on the physical condition dimension of the Scale. Consistent with this, much research has shown that females express most dissatisfaction with parts

of their bodies different to those about which men express most dissatisfaction. Females express greatest dissatisfaction with their hips, thighs, stomach, buttocks, and legs (Davies & Furnham, 1986a and b; Dolan et al., 1987; Dwyer et al., 1970; Franzoi & Herzog, 1987; Galgan & Mable, 1986; Huennemann et al., 1966; Miller et al., 1980; Salmons et al., 1988; Silberstein et al., 1988). To the extent that males do express dissatisfaction with body parts, they express greatest dissatisfaction with their arms, stomach, chest and waist (Dolan et al., 1987; Dwyer et al., 1970; Huennemann et al., 1966; Miller et al., 1980; Mishkind et al., 1986).

Thus, males and females have qualitatively different body shape concerns: they desire different body shapes; males are more concerned with muscularity and physical condition, females with the appearance of their bodies; males are less likely to evaluate their bodies on a part-by-part basis; and to the extent that males do evaluate specific parts of their bodies, they are concerned with different parts to those which are of concern to females. While these qualitative differences are of interest, it is worth re-emphasising here the conclusion from the previous section that males are generally considerably more satisfied with their overall body shape, weight and individual body parts than women.

On the basis of the existing research evidence the following hypothesis is advanced:

Males' attitudes regarding weight and body shape will be **qualitatively** different to those of females. Females will conceive of their bodies in terms of appearance while males will place more emphasis on physical effectiveness. Males will be more likely than females to desire to be bigger or weigh more, while females will be more likely than males to desire to be slimmer or weigh less than they do currently.

CHAPTER 4

SALIENCE OF WEIGHT AND BODY SHAPE IN SELF EVALUATION, EVALUATION OF OTHERS, EVERYDAY FUNCTIONING AND LIFESTYLE, AND EVALUATION OF OTHER CONCEPTS

4.1 Weight and Body Shape Related Thinking Processes in Eating Disorder Patients and Non-eating Disordered Individuals: Theoretical Approaches

4.1.1 Cognitive Behavioural Approaches to Understanding Anorexia and Bulimia Nervosa

Several authors have presented a cognitive-behavioural theoretical approach to anorexia and bulimia nervosa (for example, Fairburn, 1981; Garfinkel & Garner, 1982; Garner & Bemis, 1982). This approach emphasises the prominence of persistent, distorted attitudes and concepts in the thinking patterns of patients with eating disorders. It draws largely from the work of Beck and his colleagues (Beck, 1976). Garfinkel and Garner (1982) note that these thinking patterns not only relate directly to food and body shape, but also "beyond these areas to the understanding of one's self and one's environment" (p.155). Garner characterises the cognitive behavioural (or simply cognitive) approach as follows:

"The cognitive approach to understanding anorexia nervosa emphasises how the symptom pattern logically derives from the patient's faulty assumptions. The apparently bizarre eating patterns and the resolute refusal of adequate nourishment become plausible given the anorexic patient's conviction that thinness is essential for her happiness or well-being" (Garner, 1986, p.302).

The concerns about shape and weight of patients with anorexia and bulimia nervosa are relatively uniform in their content although their precise form varies (Fairburn & Cooper, 1987). Patients tend to evaluate their self worth in terms of shape and weight, to see fatness as inherently bad, to see slimness as attractive, to see complete self control as desirable and so on. These attitudes are "implicit, unarticulated rules" (Fairburn &

Cooper, 1987, p.284) or assumptions by which patients assign meaning and value to their experiences. These rules determine the way anorexics and bulimics perceive the world and organize their experiences, the goals they set themselves, and their evaluation of themselves and their behaviour.

Garner and Bemis (1982) note that various external and internal reinforcements (many related to the value attached to slimness in our society) contribute significantly to the development of anorexia and bulimia nervosa. However they contend that the environmental supports that may be present at the inception of the disorder become less significant in its regulation over time. They argue that over time a "schema" or cognitive set develops to which incoming data are shaped to fit. When anorexics and bulimics follow their internal rules they are protected against information that could modify their beliefs. "Once the idea that thinness is of paramount importance has been firmly established, the complex of anorexic beliefs and behaviours may become functionally autonomous" (Garner & Bemis, 1982, p. 127). Fairburn and Cooper (1987) argue that these beliefs become "so much part of these patients' conceptual scheme that they are barely recognised or questioned" (p.284).

Garfinkel and Garner (1982) point out that these convictions are partly the product of philosophies promoted by our society. Garner and Bemis (1982) have also noted more specifically that over-valuation of thinness is a belief which is particularly difficult to expunge because it is reinforced by the fashion industry and the female role models promoted by the mass media, in which thinness is associated with beauty, happiness and success. To a great extent then the "faulty" assumptions of anorexics and bulimics are distortions or over-valuations of widely held social values. But as Fairburn and Cooper (1987) point out they are dysfunctional precisely because they are extreme and are imbued with great personal significance.

4.1.2 The Application of Schema Theory to Understanding Weight and Shape Related Thinking in Eating Disordered and Non-Eating Disordered Individuals

Another cognitive approach which has been utilised in the study of attitudes towards weight and body shape is "schema theory". This theory is in many respects very similar to the approach just outlined - it utilises the same principles, and is indeed in many respects a rose by another name. However, schema theory has developed most recently in the context of information processing theory, and for that reason has a slightly different emphasis. It has been applied to a wide range of contexts, one of them the thinking styles of "normal" subjects. Empirical work on weight and body shape based on schema theory has as one of its assumptions the notion that **all** people organise their thinking to some extent according to body image.

The schema concept is by no means a new one. It derives from the constructive view of memory proposed by Bartlett in 1932. Briefly, a schema is a cognitive structure composed of organised social knowledge that has been extracted from experience in the world. Schemas are essentially stereotypes - they represent a simplified view of the world based on major themes (Ashmore & Del Boca, 1979). The variety and amount of information from complex social environments is at any time greater than a person can process or even attend to (Markus, 1977). So, people must be selective and this selectivity is not random but is determined by individual schemas. Schemas are abstracted from observation and participation in society, and come to influence future interactions. They can be conceptualised as "naive theories" that guide information processing by "structuring experiences, regulating behaviour and providing bases for making inferences and interpretations" (Martin & Halverson, 1981, p.1120). Schemas determine what information is attended to, how it is structured in memory, how much importance is attached to it, and what effect the information has on subsequent encounters with the environment.

Markus, Hamill, & Sentis (1987) contend that the body weight schema is a universal schema, that virtually everyone develops some type of rudimentary organisation of knowledge pertaining to body weight or body image. As early as 1920, Head (cited in Markus et al., 1987) described the "body schema" as fundamental in an individual's judgement system for categorising and interpreting objects and events in the environment.

Markus et al. (1987) have presented a framework for understanding the processing of weight relevant information, based on the theory of self-schemas. Self-schemas can be defined as "cognitive generalizations about the self derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences" (Markus, 1977, p.64). Markus et al. contend that individuals for whom weight is important in self evaluation will be more likely to process information using weight as an organising principle. Markus et al. and other authors have used the theory of self-schemas as the basis for research on the weight and body shape related thinking of normal males and females.

In a paper based on self-schema theory, Phelan (1987) discusses the validity of this approach in understanding bulimia. To date, this is the only paper that has used self-schema theory as a basis for empirical research on eating disorders. This paper and other relevant literature on schematic processing will be discussed later in this chapter.

4.2 Weight and Body Shape Related Thinking Processes in Eating Disorder Patients and Non-eating Disordered Individuals: Empirical Research

The study of the salience of weight and body shape in the thinking of anorexics, bulimics and normal people has to date been limited in a number of ways. First, most studies of patients and normal individuals have examined the salience of weight and shape in **self** perception and evaluation only. To date, the salience of weight and body shape in other types of attitudes and functioning has been relatively unstudied. Obviously the consequences of such attitudes for self perception are of fundamental importance. However, the salience of weight and body shape

in other aspects of functioning also deserve attention, for example the salience of weight and body shape in: evaluation of **other people**; understanding of **concepts** such as health, nutrition and exercise; and everyday **lifestyle** and functioning.

Secondly, most of the studies examining the importance of weight and body shape in people's thinking and everyday lives have utilised questionnaires, which do not tap the qualitative experience of weight and body shape concern. Garner addresses this point: "Various standardised self report measures have been developed to assess eating patterns or symptoms of anorexia nervosa and bulimia. Although these instruments are useful for assessing thoughts or behaviours related to food, eating and the body, they are limited by the narrow range of cognitive material that they assess" (1986, p.310).

In the following section, research on the salience of weight and body shape in the thinking and lifestyles of anorexics, bulimics, normal females and males will be examined. Specifically, the section will review research on the salience of weight and body shape in self evaluation; evaluation of other people; understanding of other concepts; and everyday functioning.

4.2.1 Salience of Weight and Body Shape in Self Evaluation

a) Studies Comparing Normal Females and Males

The major type of research that has been conducted on the relationship between self evaluation and body shape and weight concerns the association between self esteem and satisfaction with body shape. Most of this research has compared the relationship between self esteem and body satisfaction for normal males and normal females. The results of these studies are conflicting, with some finding no difference between males and females in the relationship between self esteem and satisfaction with body, and others concluding that a negative relationship exists for women but not men.

Jackson, Sullivan, and Rostker (1988) found that self esteem of both males and females predicted their ratings of their bodies. Grant and Fodor (1986) explored the relationship between anorexic behaviour and self esteem for a sample of college males and females. For the combined sample they found a significant relationship between self esteem and tendency towards anorexic behaviour, but this relationship was not significant for the separated male and female samples.

Contrary to the latter findings, Thompson and Thompson (1986) found that for female undergraduates but not males there was a significant negative correlation between the total extent to which they overestimated their body size (averaged over four sites of the body) and self esteem. When distortion of particular body parts was examined, a significant negative correlation between overestimation of the size of thighs and self esteem for women was found. The only significant relationship for men was a positive correlation between overestimation of waist size and self esteem. Stake and Lauer (1987) explored the relationship between performance self esteem (a self rated measure of general competence) and body satisfaction. They found that self ratings of overall appearance were significantly positively related to performance self esteem for women but not for men. Correlations between performance self esteem and self ratings of attractiveness of 19 separate body parts showed that self esteem was positively related to 17 of the ratings and significantly related to nine of these: hair, lips, nose, shoulders, chest, hands, fingernails, abdomen and feet. Of the nineteen corresponding correlations for men only five were in the positive direction and only two were significant: shoulders and arms.

Studies by Silberstein et al. (1988) and Harmatz, Gronendyke, and Thomas (1985) have reached conclusions at odds with the rest of the literature on self evaluation and body satisfaction in women and men. Harmatz et al. compared groups of overweight, underweight, and normal weight undergraduate males and females. They concluded that on many of the items reflecting self-image and interpersonal status, the underweight males and overweight females were indistinguishable from

one another. They reported that where differences did occur it was always the underweight males who indicated the more negative self view and lower self esteem. They state: "Overweight females have traditionally been viewed as the most negatively affected by their body size relative to the socially accepted limits. The present study suggests that the underweight males must be considered at least as important a problem group in terms of future self-concept research" (p.265-266). Their strong conclusion is negated somewhat by Mintz and Betz's finding (1986) that the relationship between social self esteem and satisfaction with body was stronger for underweight females than underweight males.

Silberstein et al. (1988) found in their sample of male and female undergraduates that a measure of weight dissatisfaction was significantly correlated with self esteem for men but not for women. This result has not been reported elsewhere. The authors attempt to account for their results in the following way:

"In a culture that promotes the extremely thin female beauty ideal and thus creates a normative discontent with weight ..., the woman who experiences herself as dissatisfied with her weight resembles rather than deviates from her peers. In this sense, weight dissatisfaction may not be felt as unique and distinctive for a woman, and therefore does not play a central role in her sense of self ... If our current cultural emphasis on slimness has created a feeling for women that their weight dissatisfaction is normative, then ironically this may prevent a negative influence of weight dissatisfaction on self-esteem" (p.230).

This argument is certainly counter-intuitive, and would appear to rest on the assumption that the fact that a discontent is experienced as non-unique diminishes its potency. Further research concurring with Silberstein et al.'s findings has not been published, and it remains something of a puzzle within the context of other research which shows in general that there is a relationship between women's body satisfaction and self esteem.

In addition to research on the specific domain of self esteem, there is a small body of research which addresses the salience of body shape and weight concerns in self evaluation more generally. An interesting study

by Franzoi et al. (1989) examined the relationship between weight and body awareness and self-evaluation in males and females. They investigated the degree and type of attention subjects paid to their bodies using an "experiential sampling" methodology which involved monitoring subjects' awareness of their bodies and related attitudes and feelings over a two day period. As the authors point out, an analysis of people's experience of their bodies in natural settings is important since all prior research has utilized retrospective survey methodology, with participants "describing their body experience while in large classroom settings" (p.502). One of the major questions Franzoi et al.'s research attempted to address was how the differing body-related social pressures brought to bear on men and women influence their experience of their bodies during normal daily activities.

Franzoi et al. found that when women were attentive to their bodies, the feelings they experienced were significantly more negative than those of men. Interestingly, the more favourably men evaluated the various dimensions of their bodies, the more attention they paid to their bodies during the day. Further, the more positively that males rated various dimensions of their bodies, the more important they believed these dimensions to be in determining how the opposite sex would evaluate their attractiveness. These relationships were not found for women. Instead, the more important that females believed various body dimensions to be in determining their attractiveness to the opposite sex, the more attention they paid to these dimensions, and the more importance they placed on them. The authors suggest that males may have a "self-serving bias" which leads them to pay more attention to, and believe that women find attractive, those aspects of their bodies about which they themselves feel positive. Women's daily body experience, on the other hand, seems primarily determined by their beliefs about what men find attractive. "In other words, women's greater cognizance of and concern about physical attractiveness standards appears to attenuate the sort of self-serving body awareness pattern found in men" (p.512).

Consistent with Franzoi et al.'s conclusions, Lerner and Karabenick (1974) suggested that the female self concept may be more inter- than intra-personally determined. More specifically they stated that "it may be expected that future research will demonstrate that the adolescent female's assumptions about the physical attractiveness of her body will have important implications for her personality, social and sexual adjustments" (p.316). Davies and Furnham (1986a) contend that at about the age of 15, girls tend to experience a sharp increase in self-consciousness which continues to rise in later adolescence while that of boys declines. They cite research which has found that girls are extremely concerned about the impressions others have of them, evaluating themselves and their bodies through the eyes of others (Rosenberg & Simmons, 1975, cited in Davies & Furnham, 1986a). In further support of this contention, Tiggemann and Rothblum (1988) found in their study of undergraduates in the United States and Australia that women reported a greater degree of public consciousness of their bodies than men. Davies and Furnham further suggest that girls' self concept is constructed more of interpersonal attractiveness than by other factors such as academic or job success. Certainly, there is evidence of a stronger relationship in late adolescent girls between self esteem and satisfaction with physical attractiveness than in boys (Lerner, Orlos, & Knapp, 1976).

b) Studies of Normal Females Only

Other studies have examined the relationship between self perception and attitudes regarding weight and shape by correlating measures of these dimensions within samples of normal females. The following discussion commences with research concerning the specific domain of self esteem.

In their study of young adult females, Ben-Tovim, Murray, Walker, and Chin (1990) found that negative attitudes towards the body (for example, feeling fat, unattractive and weak) were strongly linked to lower self esteem, but were generally independent of subjects' actual sizes and relative weights. Powers and Erickson (1986) used a different measure of

self esteem to that used by most studies. They administered a verbal checklist, consisting of pairs of adjectives or adjectival phrases, and subjects were asked to indicate those items they thought described them. In their sample of female undergraduates they found that women who perceived themselves as moderately underweight attributed significantly more positive adjectives to themselves than the other groups. Subjects who perceived themselves as slightly underweight or average weight attributed significantly more positive adjectives to themselves than those who perceived themselves as moderately overweight. The authors concluded that the perception that women have of their bodies is an important factor in the perception they have of themselves.

Radke-Sharpe, Whitney-Saltiel, and Rodin (1990) examined fat distribution as a risk factor for weight and eating concerns in a non-student sample of females. They concluded that women who had the greatest deposition of their fat in the hip and buttocks region relative to the abdominal region were the most eating disordered and concerned about their weight and viewed being at the "right" weight as more central to their sense of self. Women with a more abdominal distribution of fat reported less disordered behaviour and that weight was not as central to their overall sense of self. Fabian and Thompson (1989) similarly found that self esteem was correlated with eating disturbance in their sample of female adolescents (10 to 15 years).

The research of Markus et al. (1987), based on the theory of self-schemas, addresses the relationship between attitudes concerning weight and body shape and self evaluation from a different perspective from the questionnaire based research discussed above. As part of their investigation into self-schemas pertaining to body weight, Markus et al. identified individuals who indicated that weight was important to their self evaluation (these individuals were labelled as schematic), and people who indicated that weight was unimportant to their self evaluation (aschematic). Markus et al. assumed that even the aschematic group would hold very basic and universal schemas about body weight. For the purposes of their research they were able to identify four groups -

schematic overweight and schematic obese, aschematic average weight and aschematic overweight. Interestingly, they note as an aside in their paper that almost none of the males in their initial sample rated weight as important in their self evaluation, and their sample was thus restricted to females. This of course is a valuable finding in its own right.

Markus et al. performed a number of experiments in which schematics and aschematics were given a series of processing tasks to perform, in which subjects had to label various stimuli as either "me" or "not me". Response time was measured. The stimuli were "fat" and "thin" adjectives (e.g. "pudgy", "stout", "skinny", "scrawny"); silhouettes of bodies; and pictures of various types of food. The results indicated that both schematics and aschematics were reliably faster in making judgments about adjectives that were consistent with their body image than to stimuli that were inconsistent. Thus the schematic overweight and obese were faster in making "not me" judgements to thin words than to fat words, and the aschematic subjects were faster to respond "me" to thin words than to fat words. The researchers concluded that these findings are consistent with the idea that everyone has some type of knowledge structure or simple schema about body weight:

"Even though they do not think that weight is important to their overall self evaluation and even though they do not characteristically attend to it, the Aschematic subjects appear to have some concept or general organization of information about their body weight that allows them to evaluate verbal stimuli for self-relevance" (p.60).

When asked to evaluate various body shape silhouettes as "me" or "not me" the obese and overweight schematics were consistently faster at judging the fat silhouettes as "me" than they were at judging the thin silhouettes as "not me". However, the aschematic subjects were equally fast at labelling thin and medium silhouettes as "me". The researchers concluded that the schematic subjects seem to possess relatively more specific schemas that allowed them to differentiate both verbal and pictorial information.

Finally the subjects were asked to make "me/not me" judgements to a series of slides of food, where "me" indicated a food they would like to eat and "not me" indicated a food they would not like to eat. The major finding with these stimuli was that the two schematic groups were significantly slower at making "me" judgements to food than were the aschematics. The researchers suggested that the longer response times of the schematics reflected the fact that schematic subjects not only had to consider the taste of the food but also its caloric value and the relationship between calories and body weight. "Hence the decision process involved in relating the stimulus to the self may have consumed considerable processing time. The aschematics on the other hand were unlikely to evaluate food for its relevance to body weight" (1987, pp.67-68).

The latter results and conclusions illustrate very well one of the major problems with schematic processing research of this type, that is, that schema theory can be (and is) used to explain any findings in any direction, but is often not able to predict beforehand the direction of any particular result. For example, while the explanation of the delayed processing times in terms of extra time needed to assess calorie value is intuitively appealing, when the previous result (with the silhouettes) is considered it is not obvious why a similar delay should not have occurred in schematics' processing times there too. For example, it could be hypothesised that schematics would take **longer** to judge each silhouette because they were making more detailed comparisons with their own shapes. This criticism bears directly on the present research as it illuminates one of the reasons for selecting an interview format for eliciting data. It would seem important when researching attitudes and thinking styles about relatively unexplored concepts to obtain direct responses from subjects themselves about the nature of the links between their self evaluation and weight and body shape. Data such as processing response times remain ambiguous and highly speculative without any supporting self report information.

Striegel-Moore, McAvay, and Rodin (1986) used Markus et al.'s framework to explore correlates of "feeling fat" in women. They hypothesised that women who feel fat would process self-relevant information with their weight in mind, and that any experience leading to self evaluation would also lead to the evaluation of their body and weight in particular. While a significant correlation was found between feeling fat and an objective index of subjects' body weight, this relationship was at least equalled, and in some instances surpassed by, the relationships between feeling fat and the psychological variables Striegel-Moore et al. were investigating. They found that feeling fat was correlated with a tendency to compare one's own body with the bodies of other women and that women who felt fat were more likely to report that failures adversely affected the way they felt about their bodies. They concluded that:

"More work is needed to assess the self-schemas of women with eating disorders. If the self-schemas of binge eaters and women who feel fat, for example, revolve around weight, eating and appearance, then any stimulus related to these domains would become automatically self-relevant and would be processed within the context of the self-schema. For these individuals a schema-relevant stimulus becomes 'more' of a stimulus than it is for others because the self-schema is implicated in the information processing sequence. Thus the very way they process and extract information from their world would reinforce and perpetuate their preoccupation with body weight and eating, making it even more difficult to break out of their bulimic behaviour" (1986, p.945).

Eldredge, Wilson, and Whaley (1990) investigated Striegel-Moore et al.'s hypothesis that women who feel fat (and thus have self-schemas in which weight is a central component) will evaluate their bodies and weight after any experience which gives rise to self evaluation. They tested whether women with restrained eating patterns would evaluate their bodies more negatively after experiencing an experimentally manipulated "failure". However, neither the restrained nor unrestrained eaters felt worse about their bodies after experiencing failure. The authors explained this finding by suggesting that the hypothesised effect may be demonstrable after a longer period, when the individual is confronted with some weight-related stimuli. Regardless of having experienced success or failure, the way in

which all restrained women (unlike unrestrained women) subsequently described their bodies was mainly evaluative in nature (e.g. "ugly"/"beautiful").

An intriguing issue which neither Eldredge et al. nor Striegel-Moore et al. take up is the possibility that the effect of weight-related self schemas may also work in the opposite direction, that is, that women who feel negatively about their bodies may subsequently evaluate other aspects of themselves more negatively. The present study aims to examine this issue.

c) Studies Comparing Females with Eating Disorders and Normal Females

Several studies have examined the relationship between self evaluation and concern with body shape and weight by comparing subjects with diagnosed eating disorders (or sub-clinically disordered eating) with female controls on various measures of self evaluation, including, again, self esteem.

Nagelberg et al. (1984) compared three groups of undergraduates, women who binged only ("bingers"), women who induced vomiting after bingeing ("vomitters"), and controls. They reported that "vomitters" but not "bingers" scored significantly lower than controls on a measure of self esteem. The differences between the controls and vomitters derived mainly from questionnaire items assessing identity (how the individual perceives herself) and family self (one's feelings of adequacy, worth and value as a family member). In another study of female undergraduates, Katzman and Wolchik (1984) compared groups of bulimics, binge eaters and controls on several personality measures. Bulimic women were characterised by higher self-expectations and lower self esteem than the women in the control group. Bulimics also demonstrated lower self esteem than the binge eaters. Mintz and Betz (1988) also compared groups of bulimics, binge eaters and controls and found the same group differences for self esteem. The bulimics in their study also reported that weight and body shape were more important sources of self esteem than was the case for controls. Post and Crowther (1985) compared bulimic

and non-bulimic female high school students on a number of dimensions. They found that the bulimic adolescents had significantly lower self esteem than the control group. The bulimics also rated achieving their ideal weight as significantly more important to them than the controls. Hendren et al. (1986) found that female high school students with at least one symptom of an eating disorder were significantly more likely than other female students to state that they "always" had a low opinion of themselves. Gross and Rosen (1988) identified a sample of bulimics in a high school population, and found that they were characterised by lower self esteem than female controls. Grace, Jacobson, and Fullager (1985) replicated this finding with their sample of bulimics and controls.

It has also been reported that anorexics have lower self esteem (Huon & Brown, 1984; Toner et al., 1987) and poorer self concept (Swift, Bushnell, Hanson, & Logemann, 1986) than normal women.

Studies using the repertory grid technique (a technique designed to elicit the ways in which subjects think about or "construe" themselves and others) have documented the anorexic's tendency to construe herself in terms of body weight. Mottram (1985) conducted a repertory grid study of anorexics and matched controls. He found that, unlike the control group, the anorexic group construed their "ideal" selves as representing a complete change from their "present" selves, indicating the latter groups' low self esteem. The anorexics also tended to construe themselves and the world in a uni-dimensional way, while the control group exhibited a multi-dimensional mode of viewing themselves and the world. Fransella and Button (1983) found marked individual differences between anorexic patients' assessment of the meaningfulness of "self" in terms of the "thin-fat" construct. Moreover, patients whose self evaluation went beyond the concept of weight had a positive treatment outcome.

In her paper based on self-schema theory, Phelan (1987) presents empirical evidence for the validity of a cognitive approach in understanding bulimia. She found that weight was a more important

dimension in bulimics' self evaluation than was the case for female controls. Schotte, McNally, and Turner (1990) used a classic information processing procedure, a dichotic listening task, to test their hypothesis that bulimics would exhibit enhanced perceptual and physiological sensitivity for material related to their concerns about body shape and weight than for neutral material. Their hypothesis was supported: bulimics detected the target word "fat" more often than the neutral target word "pick" when both were presented to the "unattended channel" (that is, the ear to which incidental information was being relayed). Additionally, bulimics tended to exhibit larger skin conductance responses to "fat" than "pick". These differences were not observed in normal female controls.

In one of the few studies dealing directly with the issue of salience of weight and shape in self perception, Yager, Landsverk, and Edelstein (1987) found that both anorexics and bulimics reported that their eating problem affected their feelings about themselves a great deal. Both groups rated the degree of interference as between "very much" and "total".

4.2.2 Conclusions from Research on Self Evaluation

Overall then, much of the existing research on self evaluation and weight and body shape concern has used questionnaire ratings (usually of self esteem) as the measures of self evaluation. As noted earlier, the present study aims to assess the salience of weight and body shape in several other domains of self evaluation, using open-ended interview questions as well as written questionnaires. These domains include evaluation of liked and disliked aspects of self, evaluation of daily behaviour, identification of activities in which subjects think they perform well and those at which they think they perform poorly and those in which they would like to succeed.

On the basis of the research evidence to date the following hypothesis will be assessed in the present study:

Attitudes regarding weight and body shape will be more salient (that is, prominent) in the self evaluation of patients than female controls. In turn, these issues will be more salient in female controls' self evaluation than will be the case for male controls.

4.2.3 Saliency of Weight and Body Shape in Evaluation of Other People

There has been a great deal of research to show that men and women use attractiveness (including weight and shape) as a criterion in their judgements of other people. However, there has been little research on the question of whether patients with eating disorders are more likely than normal men or women to evaluate other people in terms of their weight and/or shape. Given the saliency of weight and shape in eating disorder patients' thoughts about themselves it is possible that this extends to their judgements of other people. The following hypothesis will be tested in the present study:

Patients will be more likely than female controls to evaluate other people in terms of weight or body shape. In turn, female controls will be more likely than male controls to evaluate other people in terms of weight or body shape.

4.2.4 Saliency of Weight and Body Shape in Everyday Functioning and Lifestyle

In this section research examining the saliency of weight and shape in individuals' everyday functioning will be examined. This will include research that has examined the relationship between eating pathology and weight and shape concern on the one hand and social, work-related and sexual functioning on the other. Research which has explored the frequency and importance of thoughts about weight, shape and food in everyday cognitions, and the relationship between eating, weight and shape concern and depression, will also be reviewed.

a) Studies Comparing Normal Females and Males

Studies correlating body satisfaction and a specific measure of social self esteem (the Janis-Field Feelings of Inadequacy Scale - a measure of how comfortable subjects are in various social situations) have produced mixed results. Mintz and Betz (1986) found that higher levels of body satisfaction were associated with higher levels of social self esteem for women and men, but the relationship was significantly stronger for women than for men. In contrast, McCaulay et al. (1988) found that higher levels of body satisfaction were associated with higher levels of social self esteem for both women and men and that this relationship was equally strong for males and females.

However, research using other measures of social activity has reported clear differences between males and females. Tiggemann and Rothblum (1988) investigated the extent to which male and female undergraduates reported that their weight had interfered with activities which the authors labelled as "social". The items which they included on their questionnaire were in fact very wide-ranging, and included attending a party, asking someone out on a date, being asked out on a date, having a close friend, wearing fashionable clothing, wearing a bathing suit, renting a house or apartment, getting a job, and being considered sexually attractive by others. Items were rated on a five point Likert scale from "not at all interfered" to "definitely interfered". Women scored significantly higher than men on the questionnaire.

Thomas and James (1988) investigated similar variables in a sample of black women. They found that 43 percent of the sample indicated that they did not "feel good" when they looked in a mirror, 44 percent indicated that they felt a woman must be slim to be attractive to men, 52 percent indicated they did not feel comfortable with their body in front of a man, 29 percent reported that their weight affected their desire for sex, and 36 percent reported that their weight affected their desire to enjoy sport or exercise. (Curiously, the authors present these statistics as evidence that women's negative perception of their bodies **did not** negatively influence other aspects of their lives. Presumably this is

because for most of the effects that were studied less than 50 percent of women reported being affected. This represents a somewhat glib perspective on the data: the fact that such a significant minority of women did report being affected would seem to be of considerable importance.)

There have been relatively few studies which have directly examined the amount of time which males and females spend thinking about their weight and shape. Franzoi et al. (1989) found that men and women spent approximately the same amount of time engaged in body awareness during the day, and rated this awareness as being of approximately equal importance to them. Unfortunately however, these findings do not specifically address the issue of the salience of **weight and shape** concern in thinking as the researchers did not ask subjects to report on the specific aspects of their bodies of which they were aware. Research by Stake and Lauer (1987) provides an indirect comparison of the salience of weight and shape in males' and females' thinking. They asked subjects to rate the attractiveness of several body parts, and subjects were given the option of indicating that they had "not given it any thought before". Interestingly, regardless of subjects' weight, men were more likely than women to use this option as a response to the task of rating their body parts. Hendren et al. (1986) asked female high school students to rate the amount of time they spent thinking about weight and food. Overall, 11 percent of the sample reported that they thought about weight and food "all of the time".

While few researchers have directly investigated the issue of the amount of time males and females spend thinking about weight and shape, the greater dissatisfaction females feel about their bodies and their greater involvement in weight and shape related behaviours would certainly indicate that they spend more time thinking about these issues than males. The Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987) is a measure of concern about body shape, and includes

items which assess preoccupation with body shape and the extent to which body shape disparagement interferes with functioning. This questionnaire will be used in the present study.

Other researchers have examined the relationship between depression and satisfaction with weight and body shape, with mixed results. Mintz and Betz (1986) concluded that for both sexes negative attitudes towards the body were related to greater proneness to depression. McCaulay et al. (1988) found that higher levels of body satisfaction were associated with lower levels of depression proneness, and this relationship was found for men but not women. Kaplan et al. (1988) observed an interesting sex difference in their high school sample: they found that females tended to be less depressed if they were underweight, while males tended to be less depressed if they were overweight. Clearly then, the nature or direction of body image dissatisfaction may be of importance in its role in depression.

b) Studies Comparing Females with Eating Disorders and Normal Females and Studies of Normal Women Only

Thompson and Schwartz (1981) compared three groups of college women on measures of social adjustment and symptomatic distress; these groups were anorexics, college women manifesting high levels of "anorexic-like" behaviour, and asymptomatic controls. They found that anorexics were significantly less well adjusted according to ratings on the Weissman Social Adjustment Scale than the other two groups. There was a non-significant trend for the anorexic-like women to be less well adjusted than the asymptomatic group. The restricted social lives of anorexics have been described at length by many authors (e.g Bruch, 1974; Crisp, 1980). Concerning the social lives of the three groups in their study, Thompson and Schwartz found that many of the anorexics did not have any friends, and never dated. Anorexics reported lost time off work because of illness (often bouts of bingeing and vomiting). They experienced friction with co-workers, and reported feelings of inadequacy and lack of interest in their work. The normal weight "anorexic-like" group were not impaired in their work, although they often reported that they were struggling. Thompson and Schwartz concluded that the

anorexics led "...depressing, restricted, and joyless lives, with feelings of personal inadequacy at work, and often overwhelming social and family problems" (p.56).

Toner et al. (1987) also found that the anorexics in their study displayed poorer social adjustment than the controls; and in another study (Leon, Lucas, Colligan, Ferdinande, & Kamp, 1985) anorexics were found to have poorer social skills than controls.

In an interesting study employing methodology similar to that used by Franzoi et al. (1989), Larson and Johnson (1981) studied the daily lives of two anorexic women and compared them with the lives of 24 normal females. The subjects were asked to fill out reports on their experience at random times during an "ordinary week in their lives" (p.455). The two anorexics spent far more of their time alone than their normal peers, and experienced more depression, guilt and feelings of vulnerability. The researchers concluded that the "Experience Sampling Method provided a concrete assessment of how their [the anorexics'] daily experience differed from that of others, showing their unhappiness, their isolation, and the role of food in their lives" (p.471). Garner and Bemis (1982) also emphasise the social isolation of anorexics and describe how such isolation may add to patients' vulnerability to distorted perceptions.

Herzog, Pepose, Norman, and Rigotti (1985) and Herzog, Horman, Rigotti, and Pepose (1986) examined social maladjustment in female students with bulimia nervosa. Using the Weissman Social Adjustment Scale, they found that bulimic students and those with a previous history of bulimia had considerably higher (more maladjusted) scores on the work and social and leisure subscales of the test. Items accounting for the difference included feeling unable to keep up with one's work, being ashamed of one's academic performance, feeling upset at work, feeling shy or uncomfortable with people, feeling lonely, being unable to talk about one's feelings with a friend and having spare time for hobbies. When frequency of bingeing and purging was included in the analysis, it was found that students who binged and purged at least once a week had significantly elevated overall social maladjustment scores, while those

whose symptoms were less frequent did not significantly differ in social maladjustment from non-eating disorder students. Carter and Duncan (1984a) investigated social functioning in a group of female students who practised self induced vomiting for weight control. They found that compared to a group of female controls the "vomitters" had significantly higher levels of social dysfunction. Mallick et al. (1987) investigated the self-image, social and sexual relationships of three groups of female high school students, a group of students with eating disorders, athletes and normal controls. They found that the eating disorder group had significantly poorer self-image and were regressed in their social relationships and sexual attitudes compared with the other groups. The only dimension of functioning for which the eating disordered students were similar to the other groups was educational and vocational goals.

Mintz and Betz (1988) found that bulimics reported that their weight affected other aspects of their lives to a much greater extent than was the case for controls; these aspects were their feelings about themselves and about sex, and social enjoyment. The bulimics also thought about weight more often than the controls.

The Thompson and Schwartz study (1981) already discussed also investigated sexual adjustment in anorexic, "anorexic-like" and asymptomatic college women. The three groups were statistically distinguishable from each other with respect to past sexual experience, suggesting a "continuum of sexual activity related to eating disorder" (p.54). In contrast, Abraham et al. (1985) concluded that the bulimics in their study were very similar to controls in sexual attitudes and behaviour. Interestingly though, the bulimics in Abraham et al.'s study were significantly more likely than the controls to consider that their weight affected their libido.

Many studies have reported a link between eating and subsequent mood and body-related feelings, thus illuminating another domain in which weight concern can affect functioning. In a study of binge eating in otherwise normal men and women, Edelman (1981) found that about one third of these subjects stated that after such a binge they felt disgusted,

guilty, angry at themselves or unhappy. Crisp and Kalucy (1974) reported that anorexics rated themselves as having increased in body weight following ingestion of a carbohydrate meal, but did not report an increase following a non-carbohydrate meal containing a similar number of calories. This effect is not confined to anorexics. Wardle and Foley (1989) investigated the effects of eating an apparently "fattening" or "non-fattening" meal on normal female subjects' satisfaction with their bodies. Post-meal assessments of body image were consistently more negative than pre-meal assessments and there was a (non-significant) trend for a more negative shift after the apparently "fattening" meal. Using a longer time frame, Rosen, Tacy, and Howell (1990) investigated the relationship between dieting and stress in a sample of female high school students. Dieting behaviour predicted increased stress (assessed using a measure of the perceived impact and undesirability of negative daily and life events) over a subsequent four month period.

Eckert, Goldberg, Halmi, Casper, and Davis (1982) reviewed research concerning depression in anorexia nervosa, most of which has reported that anorexics are significantly more depressed than control females. In their own investigation they found that anorexics were mildly to moderately depressed as a group, and were significantly more depressed than a control group of anxious neurotics. The three groups in the Thompson and Schwartz (1981) study (anorexics, "anorexic-like" women, and female controls) fell along a continuum for their scores on the Beck Depression inventory, with significant differences between the groups. However, the anorexic-like and asymptomatic groups did not score highly enough to be classified as depressed according to Beck's criteria.

Katzman and Wolchik (1984) and Krueger and Bornstein (1987) compared depression in bulimics, "binge eaters" and normal females. Both studies concluded that bulimic women were characterised by greater depression than the women in the control group. Bulimics also demonstrated greater depression than the binge eaters. In a study of teenage "vomitters", Carter and Duncan (1984a) found that female students who practised self induced vomiting for weight control had

higher levels of depression than a control group. Post and Crowther (1985) also found that the bulimic adolescents in their sample were significantly more depressed than the control group. Gross and Rosen (1988) found that the bulimics in their high school sample exhibited more social anxiety and depression than the normal females.

Thompson and Psaltis (1988) also found a significant relationship between measures of body satisfaction and depression in their sample of normal female college students. Fabian and Thompson (1989) reported that body esteem was negatively correlated with depression in a sample of 10 to 15 year old females. Similarly, Noles, Cash, & Winstead found in their normal sample a positive relationship between depression and dissatisfaction with various body parts. Ruderman (1986) found that women who scored high on the Bulimia Test (BULIT), a measure of bulimic symptoms, experienced more depressive cognitions than other women. In their study of relapsed bulimics, Freeman et al. (1985) found that body image dissatisfaction among relapsed patients was significantly correlated with depression.¹

c) Studies of Females with Eating Disorders

Laessle, Kittl, Fichter, and Pirke (1988) found a positive relationship between depression and bodily attitudes for patients with eating disorders, both anorexics and bulimics.

Clearly, having an eating disorder also affects other domains of cognition and behaviour. Existing research suggests that bulimics may be more sexually active than anorexics, but both groups report that their eating disorder has an effect on their interest in sex and/or sexual activity (Abraham & Beumont, 1982b; Casper et al., 1980; Garfinkel, 1981; Garfinkel & Garner, 1982; Haimes & Katz, 1984; Pyle, Mitchell, & Eckert,

1. It should be noted that some researchers contend that anorexia and bulimia nervosa are secondary manifestations of a major affective disorder (Hudson, Laffer, & Pope, 1982; Pope & Hudson, 1984), in which case the research discussed here must be interpreted in a different light. However, most researchers believe that depression is secondary to these disorders. (For a review of the research evidence see Swift, Andrews, & Barklage, 1986.)

1981; Turnbull, Freeman, Barry, & Henderson, 1989). In Garfinkel's (1981) study, bulimics reported that sex was rarely enjoyed and often that they felt used in sexual relationships.

Numerous studies have reported that anorexia and bulimia have a negative, often severely negative, effect on the interpersonal relationships in general of sufferers, as well as on their social and working lives (Johnson & Love, 1985; Johnson, Stuckey, Lewis, & Schwartz, 1985; Lowenkopf, 1983; Turnbull et al., 1989; Yager et al., 1987).

Yager et al. were able to obtain a global picture of the effect that eating disorders had on the lives of the sufferers in their study. They asked anorexics and bulimics to rate the extent to which their eating problem influenced their work, non-work daily activities, personal relationships and thoughts. Both of the groups reported a high degree of interference with their lives: for work, non-work activities and personal relationships they rated the influence of their eating problem as somewhere between "some" and "very much", and for their thoughts as somewhere between "very much" and "totally". Johnson et al. (1985) obtained a similar picture of the lives of their bulimics.

In a small study of ten couples, the female partner of which had an eating disorder, Van den Broucke and Vandereycken (1988) found that both partners believed that the disorder had interfered with the overall quality of the relationship, their conversations, leisure activities, child rearing practices, contacts with the extended family and (to a lesser extent) their household activities.

Refining this, Johnson and Love (1985) were able to conclude that the bulimics in their study who suffered most life impairment as a result of their problem were those who reported one or more of the following: frequent binge eating episodes; frequent use of laxatives for weight control; feeling guilty after a binge episode; feeling out of control with their eating; an early age at onset; and a history of a low body weight.

Bruch (1974) has observed: "Developing the anorexic state is not a process that takes place suddenly and automatically; it demands active and alert attention from its victim, every hour. It is not just a habit they cannot break; to maintain it requires suffering and continuous hard work" (p.74). This statement, to a large extent, can be applied to bulimics also, and sums up the great impact of weight and shape concern on the everyday lives and thinking of women with eating disorders.

4.2.5 Conclusions from Research on Everyday Functioning, Cognitions and Affect

The existing research indicates that there are clear differences between normal males and normal females in the impact of weight and body shape concerns on social functioning and everyday cognitions and affect. Similar clear differences, with the addition of differences in sexual functioning, have been found between normal females and females with eating disorders.

On this basis, the following hypothesis will be examined in the present study:

Weight and body shape related issues will be more salient in the general lifestyle (that is, have a greater effect on other areas of functioning) and everyday thoughts of patients than female controls. In turn, weight and body shape will be more salient in the lifestyle and everyday thoughts of female controls than will be the case for male controls.

Clearly, not all of the areas of functioning discussed above (social, sexual, everyday cognitions and affect) have been thoroughly investigated for all three groups. One of the aims of the present study is to contribute to this body of research. In addition, the present study will examine the impact of weight and body shape concerns on work functioning, an area which has not been examined to date in detail.

4.2.6 Saliency of Weight and Body Shape in the Understanding of Other Concepts and the Understanding of Weight and Shape Related Adjectives

There has been relatively little research on the saliency of weight and body shape in people's understanding of other concepts, such as health, nutrition, exercise, attractiveness and self control. To what extent do people define and understand these concepts in terms of weight and shape? Another issue which has received relatively little attention is people's understanding of weight and shape related adjectives. While words such as "fat" and "thin" are in common usage, there has been little research on what people mean by these terms and the connotations they place on them.

Kalucy (1987) has commented on the increasing trend in Western society to link health, slimness, physical attractiveness, weight reduction and certain types of eating patterns together. Our society's interest in health and its link with foods is clearly reflected in the media. Reilly (1985) surveyed the nutrition-related content of over fifty Queensland newspapers, and found that the second most highly covered topic was "health foods", second only to items concerning weight control.

Kalucy also discusses the trend in anorexia nervosa patients towards a vegetarian diet (Kadambari et al., 1986; King, 1989; O'Connor et al., 1987), and contends that anorexics are able to defend their basically unhealthy stance by pointing to the widespread literature which suggests that a high intake of fruit and vegetables is healthy. Kalucy points out that: "In these cases, a cultural pattern is used by individuals for individual ends and is part of their illness." He argues that the links between ideas about health, diet and weight in our society have positive by-products, but also "paradoxical" and negative consequences (1983, 1987).

a) Studies Comparing Normal Females and Males

i) Perception of Food

Wardle and Beales (1986) asked male and female primary school children of different ages to rate various "fattening", "slimming" and "neutral" foods in terms of how much they liked them, how "good" or "bad" they thought the foods were for them, how fattening they thought they were and how guilty they felt about eating them. The children also completed a questionnaire which assessed restrained eating. Overall the children reported liking the fattening foods best, although they thought that these foods were less good for them. A number of sex differences emerged: in particular, the girls thought fattening foods to be less good for them, liked fattening and neutral foods less, felt more guilty about eating neutral and fattening foods and thought slimming foods were better for them. The authors noted that on the food intake patterns reported, many of the girls would have experienced "a burden of guilt about eating, reminiscent of patients with eating disorders, although of a quite different order of severity" (p.216).

Huenneman et al. (1966) assessed high school students' attitudes regarding healthy foods. They asked male and female students in four high school grades "What foods should be eaten every day for health?" Contrary to the authors expectations, fruit and vegetables and meat were mentioned more frequently than milk. Cereal grain foods were not commonly considered essential. About half the subjects failed to mention all four food groups. Interestingly, fewer boys than girls included each of the four food groups in their replies. The students were also asked how they felt about certain diet measures for changing body shape and size. Overall, girls were more accepting of dietary modifications than boys. For example, about two thirds of the girls, but less than half of the boys, said that they favoured the use of skim instead of whole milk as a means of losing weight.

George and Kronl (1983) examined gender differences in the intake and perceptions of "healthiness" and palatability of various foods in a sample of teenagers, from 14 to 17 years old. Boys were more likely than girls to

consume all of the "treat" foods listed, predominantly sweet and salty processed items. They were also more likely than the girls to consume meats, while girls were more likely to consume vegetables. The health beliefs of the boys and girls were also significantly different. The health ratings that males gave the "treat" foods were in the neutral or negative end of the scale, but the girls gave considerably more negative ratings. The girls, on the other hand, rated 11 foods significantly more highly than the boys, and all but one of these foods (skim milk) was a type of vegetable. Paralleling the health-belief results, a number of the vegetables were rated more positively in terms of taste by the girls. There were no gender differences in the perceived taste of the treat foods. The authors concluded that many of the gender differences in consumption of, and health beliefs concerning, food were at least in part a consequence of differences in body image between the sexes - with boys wishing to gain weight and girls wishing to become thinner.

ii) Perception of Attractiveness

Franzoi and Herzog (1987) attempted to determine what body parts and functions young adults (undergraduates) use in judging physical attractiveness. College students rated the importance of many body items in determining same-sex and opposite-sex attractiveness. (It should be noted that in this study subjects were asked to rate physical attractiveness, rather than attractiveness in general.) Results indicated much similarity in men's and women's judgements of physical attractiveness. The most prominent feature of subjects' criteria for women's attractiveness were items related to weight, and items dealing with upper body strength were most prominent in subjects' criteria for male attractiveness. While there was considerable agreement in men's and women's judgements, there were a few interesting differences. Men rated "sex drive", "sex organs" and "sex activities" as more important in determining a woman's attractiveness than did women. Women judged body scent, physical stamina, buttocks, appearance of eyes, legs and health to be more important in determining a man's attractiveness than did men, although men did rate these features as important.

The results of Franzoi and Herzog's study are interesting, but do not address the question of how salient weight and shape are in people's assessments of general attractiveness. There is considerable research to suggest that women's attractiveness is more likely to be judged in terms of weight and slenderness (see Chapter 5), but little research compares the extent to which men and women (and women with eating disorders) use these dimensions in their judgements.

iii) Understanding of Weight Related Adjectives

Very few studies have directly investigated people's understanding of weight and shape related adjectives. There have, however, been many studies of people's attitudes regarding obesity and these studies certainly provide information about the connotation placed on this term.

In 1970, Dwyer et al. argued that pervasive negative attitudes towards obesity permeated the general social climate, and presented evidence that obese people were generally rated as less likeable than other people, and were even judged by some as "immoral". More recent research reveals that social attitudes do not appear to have changed. Wooley, Wooley, and Dyrenforth (1979) reviewed a great deal of evidence to support this claim. Still more recently, Harris and Smith (1982) assessed males' and females' beliefs about obesity. Their sample included a wide range of ages from primary school children to adults. They found that female subjects were more likely than males to give complex explanations of obesity (and were less likely to list faulty eating habits as a reason for obesity), and were also more likely to report that they knew someone who was "fat". The latter finding may have reflected true differences in actual acquaintances, or more probably, differences in perception of what is considered fat. Tiggemann and Rothblum (1988) found that both Australian and American university students believed that "fat" people are less happy, confident, self-disciplined and more lazy and self-indulgent than "thin" people. Tiggemann and Rothblum reported that the discrepancy between female students' ratings of thin people and their ratings of fat people was greater than that evidenced by males. Blumberg and Mellis (1985) investigated medical students' attitudes towards obese

and morbidly obese people. The students demonstrated strong negative attitudes towards obese individuals, particularly towards the morbidly obese. For example, students perceived moderately obese people to be more ugly, awkward, weak and depressed than average weight people. For the morbidly obese, students perceived even greater differences in these qualities, and also held negative stereotypes about the personalities of morbidly obese people, rating them as more unpleasant, worthless and immoral than average weight people.

b) Studies Comparing Females with Eating Disorders and Normal Females

i) Perception of Food

Beumont, Chambers, Rouse, and Abraham (1981) compared anorexics' and female controls' scores on a nutritional knowledge questionnaire. The mean score for the patients was higher than that for the controls, with the difference deriving from the anorexics' relatively greater knowledge of calorie content of foods, dieting, cooking methods and roughage. Laessle, Schweiger, Daute-Herold, Schweiger, Fichter, and Pirke (1988) assessed the nutritional knowledge of a group of anorexics, bulimics, females with an atypical eating disorder and normal controls. Patients with anorexia nervosa did not differ significantly from bulimics in the level of their nutritional knowledge. Combined, these two groups scored significantly better than the controls on the total scale and on the subscales dealing with "macronutrients and roughage" and "calories", but not on the subscale assessing knowledge of "micronutrients and vitamins". The mean nutritional knowledge scores of patients with atypical eating disorders did not differ significantly from those of the controls.

King, Herman, and Polivy (1987) addressed the issue of whether dieters and non-dieters differ in the way in which they perceive food. Their research had two specific aims. First they wished to determine whether dieters were more likely to categorise foods spontaneously in terms of caloric content and in terms of emotions (e.g.guilt) than were non-dieters. A second aim was to determine whether dieters perceived foods in a more

complex manner than did non-dieters. The authors point out that theories can be used to support both the view that dieters would form fewer food categories than non-dieters and the view that dieters would form more categories. For example, Garner, Garfinkel, and Bemis (1982) have suggested that anorexics simply think of food as either "good" or "bad", and thus a similar dichotomisation could be expected in dieters. Self-schema theory, however, states that people develop self-schemas around those aspects of their behaviour that are important to them, and that people who are schematic on a particular dimension have more information about that domain than do people without schemas. Thus, self-schema theory would predict that dieters would form more food categories, reflecting their more detailed knowledge of food, than would non-dieters.

In King et al.'s study, female undergraduates were given cards containing the names of randomly selected, commonly eaten generic foods (e.g. cakes, peaches) and were asked to "group the foods according to how you think about them when it comes to eating them". Subjects were then asked to label the food groups they had formed using an experimenter provided list (e.g. "foods I enjoy eating", "snack foods", "low calorie foods"). Subjects were allowed to assign more than one label to each group of foods. Subjects were classified as dieters and non-dieters using Herman and Polivy's Restraint Scale. Over all subjects four reliable clusters of food-group labels were found: an enjoyment cluster (including labels such as "foods I enjoy eating" "good tasting foods"), a sensory qualities cluster (e.g. "salty foods", "soft foods"), an absence of guilt cluster (e.g. "foods I don't feel guilty about eating", "low calorie foods"), and a nutritional qualities cluster (e.g. "low protein foods", "high carbohydrate" foods). The authors concluded that these clusters represent general attributes of food that are important to females of university age. Dieters differed from non-dieters primarily in terms of their use of labels in the "no guilt" cluster, indicating that dieters tend to categorise foods as ones they do not feel guilty about eating. Further analyses also revealed that dieters tended to feel guilty about a wider range of foods than did non-dieters. Dieters felt guilty about eating both

sweet and salty snacks, whereas non-dieters felt guilty only about sweet foods. There was also some evidence that guilt was felt for different reasons. Guilt was associated with poor nutritional qualities of food for non-dieters whereas dieters primarily felt guilt concerning highly caloric, diet-breaking foods.

With respect to the issue of complexity in perception, restrained and unrestrained eaters did not differ in the number of food groups formed. However, restrained subjects were found to use more labels, on average, to describe each food group they formed than did unrestrained subjects.

"Clearly, the findings do not support the view that dieters engage in dichotomous thinking when it comes to thinking about food with the goal of eating it in mind. Dieters do not simply dichotomise food into 'good' and 'bad' categories" (pp.156-157).

In fact the authors contend that dieters make categorisations of food that are richer and more complex than non-dieters because they have a more detailed knowledge of and/or reaction to food. They conclude that overall the results conform to self-schema theory.

ii) Understanding of Weight Related Adjectives

Bell, Kirkpatrick, and Rinn (1986) asked obese, anorexic and normal females to rate three different body silhouettes, an obese, a normal and a thin figure, using a semantic differential measure. The scale consisted of ten personality dimensions, such as "happy"/"sad", "good"/"bad", "smart"/"stupid". There were no significant differences in the overall way in which subjects viewed the normal and thin figures. However, the obese subjects gave significantly more favourable ratings to the obese figure than the control group, and the anorexics gave the obese figure the least favourable ratings. Overall, the normal figure was judged as having the most desirable personality traits, and the obese and thin figures were judged equally unfavourably, and far less favourably than the normal figure. The normal figure was rated higher than the obese or thin figures on all personality dimensions by all three groups, with one exception. The obese subjects rated the obese shape as warmer than the thin or normal figure. When the ratings of individual personality dimensions were

analysed, some interesting results emerged. Anorexics judged the thin figure to be the least positive on eight dimensions, but considered the thin figure to be more popular and competent than the obese figure.

4.2.7 Conclusions from Research on Understanding of Other Concepts and Definitions of Weight-Related Adjectives

As the preceding discussion reveals, there is very little research in these subject areas, and that which there is confined to the salience of weight and shape in the perception of food and attractiveness and the connotations placed on weight-related adjectives. The present study aims to examine these issues more fully and to investigate the salience of weight and shape in subjects' understanding of health, exercise, fitness and nutrition.

On the basis of the research to date the following hypotheses are advanced:

1. Patients will be more likely than female controls to associate weight or body shape with other attributes or concepts such as attractiveness, health, nutrition, exercise, fitness and personality. In turn, female controls will be more likely than male controls to associate weight or body shape with these concepts.
2. Patients will hold different definitions of weight and body shape adjectives to those of female controls. Specifically, they will be more likely than female controls to report that adjectives such as "fat" are negative or undesirable, and to report that adjectives such as "thin" are positive or desirable. In turn, female controls will be more likely than male controls to report that adjectives such as "fat" are negative or undesirable and that adjectives such as "thin" are positive or desirable.

CHAPTER 5

SOCIOCULTURAL FACTORS IN EATING DISORDERS: A REVIEW OF THE THEORY AND EMPIRICAL EVIDENCE

Schwartz et al. (1982) contend that "Any etiological theory about eating disorders must be comprehensive enough to answer two questions: Why the increase in recent years? Why the disproportionate number of women rather than men affected by this problem?" (p.23). Given the array of evidence presented in the preceding chapters, a further question can be added to these two: Why are women generally more concerned and dissatisfied with their weight and shape than men? Many writers have argued that because of the epidemiological nature of eating disorders and of weight concern generally, any understanding of these phenomena must incorporate a sociocultural interpretation.

It is beyond the scope of this study to examine fully the extent to which the epidemiological data support the need for a sociocultural explanation of eating disorders. However a brief summary of the conclusions from that data will provide a context in which to discuss the substance of the sociocultural arguments which have been advanced in the literature.

5.1 The Need for a Sociocultural Explanation of Eating Disorders: The Epidemiology of Eating Disorders

5.1.1 Increased Incidence of Eating Disorders in Recent Years

Most researchers who have commented on this issue have argued or merely stated that the incidence of the eating disorders anorexia nervosa and bulimia nervosa has increased in recent years (see, for example, Beumont & Touyz, 1987; Garner, Garfinkel, & Olmsted, 1983; Gordon, 1990; Schwartz et al., 1982; Striegel-Moore, Silberstein, & Rodin, 1986; and see also Health and Public Policy Committee, American College of Physicians, 1986). Many explicitly link this to changing sociocultural conditions. For example, Bruch (1975) states: "Anorexia nervosa appears

to be on the increase and this seems to be directly related to the more frantic concern of the affluent Western world with extreme slenderness as the only acceptable form of beauty" (p.160).

It should be noted that not all researchers agree with this view. Williams and King (1987a and b), for example, while agreeing that the incidence of anorexia nervosa has risen, argue that this is due entirely to a rise in the size of the population at risk rather than to an increased risk of morbidity. Many other researchers believe that some of the apparent increase may be due to improved record keeping and reporting of the disorders.

With respect to subclinical forms of weight pathology Schwartz et al. (1982, p.25) make the following comment:

"This evidence does not even begin to shed light on the relatively newly identified phenomena of anorexia-like behaviour, attitudes and lifestyle of otherwise normal weight women. The depth and extent of these problems has only come to the attention of clinicians and researchers in the past few years. There is little or no epidemiological data with respect to this problem in the present, much less a bank of historical documentation with which to make comparisons. There are few who are not struck, however, by the epidemic proportions of this behavior now that the surface has been scratched."

The preceding review of research on the attitudes towards weight and body shape of "normal" women certainly attests to this claim, and the present study will shed further light on the extent and nature of "normal" women's concerns.

5.1.2 Sex distribution of eating disorders

The most consistent epidemiological finding concerning eating disorders is their sex distribution, with females accounting for 85-95 percent of the cases of anorexia nervosa (Bemis, 1978; Leichner & Gertler, 1988) and at least 90 percent of the cases of bulimia nervosa (Striegel-Moore, Silberstein, & Rodin, 1986).

5.1.3 Social class, educational, racial, cultural and age distribution of eating disorders

Evidence has also been advanced to suggest that eating disorders are over-represented in the upper social classes, the highly educated, the white population and in Western or Westernised cultures. In addition, there is strong evidence that in the majority of cases of eating disorders the age of onset is during adolescence or early adulthood. (For a review of these epidemiological characteristics see, for anorexia nervosa, Leichner and Gertler, 1988, for bulimia nervosa, Fairburn and Beglin, 1990, and, for both anorexia nervosa and bulimia nervosa, Dolan, 1991, Gordon, 1990, Nasser, 1988, and Szmukler, 1985.)

5.1.4 The greater incidence of eating disorders (and concern with weight and body shape) in certain subcultures

Further support for a sociocultural theory of eating disorders comes from studies of various subcultures within Western cultures. A sociocultural explanation for eating disorders would predict that within certain subcultures where there is an apparently even greater emphasis on weight and shape than in the normal population, concern with weight and shape and the incidence of eating disorders would be greater than in other populations.

Reviews by Gordon (1990) and Leichner and Gertler (1988) indicate that there is a relatively high incidence of eating disorders among professional dancers, fashion models, dietitians, and competitive athletes.

As Garner, Garfinkel, and Olmsted (1983) point out, although any one of these epidemiological observations could have alternative explanations (for example, over-representation of anorexia nervosa in the upper classes may reflect a greater likelihood of the illness being reported by this group rather than a real difference in incidence), taken together they are strongly suggestive of sociocultural influences.

5.2 The Components of a Sociocultural Explanation of Eating Disorders: A Review of the Theory and Empirical Evidence

Given that the epidemiology of eating disorders lends itself to a sociocultural interpretation, what is the specific nature of the explanation offered by such a theory? There has been much research on this issue, both theoretical and empirical.

One strand of the research (mainly theoretical in nature) has concentrated on deeply-rooted cultural factors which may account for the occurrence and increased incidence of eating disorders in our culture, such as ascetism, the preoccupation with control over the body and the gender imbalance in the distribution of power. (The last point has been the subject of a large body of research in its own right and is discussed in detail in Section 6.1.) In contrast, another strand of research (mainly empirical in nature) has attempted to answer questions such as: Are there greater pressures on women than men to be slim, how are these pressures manifested, have these pressures changed in recent years, and do women with eating disorders differ from other women in their sex role related personality characteristics or attitudes? Both levels of analysis have something to contribute to an understanding of eating disorders. The former (theoretical) level of the sociocultural explanation will be briefly reviewed first, followed by a review of the more empirically oriented research on pressures on women regarding weight, body shape and dieting. The empirical research is more fully discussed as it bears more directly on the aims of the present research.

5.3 Theoretical Perspectives on Sociocultural Factors in Eating Disorders

It is interesting to note first that most of the work on sociocultural factors in eating disorders has examined anorexia rather than bulimia nervosa. (This may reflect the fact that bulimia nervosa, as a relatively recently reported phenomenon, does not lend itself so easily to an historical analysis.) However, it seems reasonable to assume that to the extent that

bulimia nervosa reflects the same preoccupations and behaviours as anorexia nervosa many of the conclusions from the research apply equally well to it.

5.3.1 Anorexia Nervosa as a Culture-bound Syndrome or as The Crystallisation of Culture

The combination of all of the epidemiological observations discussed above has led Swartz (1985a) to propose that anorexia nervosa is a "culture-bound syndrome". A full discussion of the tenets of this approach lies outside the scope of this thesis (see Ritenbaugh, 1982), but one important defining characteristic of a culture-bound syndrome is that it "cannot be understood apart from its specific cultural or subcultural context" (Swartz, 1985a, p.726). Such an analysis thus focuses clearly and exclusively on the role of culture in the illness, rather than using culture as just one explanation in a smorgasbord of explanatory offerings. Another characteristic of a culture-bound syndrome is that its "aetiology summarises and symbolizes core meanings and behavioral norms of that culture" (Swartz, 1985a, p.726). Thus, another aspect of such an approach is that it militates against an aetiological explanation which locates all of the pathology within the sufferer. Swartz is careful to point out, however, that conceiving of anorexia nervosa as a culture-bound syndrome does not deny some role to individual, psychological factors in its aetiology.

In her article entitled "Anorexia nervosa: Psychopathology as the crystallisation of culture", Bordo (1985-86) takes up in more concrete detail some of the issues addressed by Swartz's analysis (although without reference to either the latter's work or the general notion of a culture-bound syndrome). In her paper, Bordo starts from a similar assumption that the psychopathologies that develop within a culture are far from being aberrations or anomalies, but rather are "characteristic expressions of that culture, ... the crystallisation, indeed, of much that is wrong with it" (p.75).

Bordo discusses three characteristics of Western culture which she believes are crystallised in anorexia nervosa¹. The first of these is the dualist conception of the body, that is, the split between the mind and body which causes the body to be considered as apart from or alien to the self, as a confinement or even prison and finally, in some instances, as the "enemy". Implicit in each of these notions of the body is the idea that the body must be controlled, and this is the second culturally prevalent idea to which Bordo refers. (Closely related to these ideas about the body is the ascetic tradition in our culture, the relationship of which to anorexia nervosa has been discussed by many authors (e.g. Bell, 1985; Comerci & Williams, 1985; Lawrence, 1979; Rampling, 1985).) Thirdly, Bordo discusses the relative powerlessness of women in our society and the cultural fear and disdain for femininity and the female social role. (A detailed discussion of this point is presented later.) For all of these characteristics, Bordo demonstrates the way in which anorexia nervosa does indeed, at a descriptive level at least, represent an exaggeration or crystallisation of our culture.

Brumberg (1988) and Gordon (1990) also discuss eating disorders in another broad sociocultural perspective, relating to food and eating styles in the advanced industrial societies. These issues include the decline of regular meals, the "desocialisation" of eating, and the transformation of food into a "designer" product, packaged and marketed by the mechanisms of advanced capitalism. These sociological issues are not examined in the present study.

5.4 Cultural Pressures on Women to Attain a Slim Body Shape: A Review of the Empirical Evidence

One part of the sociocultural explanation for eating disorders has already been alluded to, in discussing studies which have reported a difference between the weight and shape concern of normal females and males: the

1. Bordo is by no means the only, nor the first, author to have addressed these aspects of Western culture and their relationship to, or expression as, anorexia nervosa. (For other discussions of these issues, see for example Bemporad, Raley, O'Driscoll, & Daehler, 1988; Brumberg, 1986 and 1988; Comerci & Williams, 1985; Gordon, 1988 and 1990; Lawrence, 1979, 1984a and 1984b; Macleod, 1981; Swartz, 1985b.) Bordo's work is highlighted here because of the comprehensive but reasonably concise nature of her analysis.

current cultural pressures on women to be slim. Few papers on the prevalence and epidemiology of anorexia and bulimia nervosa do not comment, at least in passing, on the pressures placed upon females in Western cultures to be slim and to diet. Consider one such comment from the myriad in print:

"Americans have created a society that is not only food sufficient but has a greater array of food choices than ever existed before. ... In the midst of this bounty there exists a cultural ideal for body shape that emphasizes extreme slenderness, especially for females. ... Self-control is exhibited by 'keeping one's weight down', with the accompanying fear of loss of control over one's eating behavior. The cultural ideal is more stringently defined for females than males. ... The enormous significance with which American society imbues physical appearance and slenderness form a cultural backdrop for the serious eating disorders that are increasing in incidence among adolescents and young adults (Kelly & Patten, 1985, pp.191, 203).

There are several ways in which pressures on females to be slim are manifested. Many of these pressures do not affect females only, but the evidence suggests that they apply disproportionately to females. The following review of research on such cultural pressures is necessarily sketchy in parts, as there has been very little research on some of the issues involved.

The central role of weight, body shape and physical attractiveness (and their interrelationships) in Western culture has been the subject of much empirical work. Points 1, 2 and 3 below are well-established and require only brief explication here; they provide a context in which to discuss other, more specific elements of the sociocultural model.

5.4.1 The Importance in Western Culture of Physical Attractiveness in Evaluating People

Rodin, Silberstein, and Striegel-Moore (1984) present a comprehensive discussion of the many factors involved in the cultural emphasis on slenderness for women. One of the foundations for this preoccupation is the central role which physical attractiveness, in general, plays in our culture.

Rodin et al. review an extensive body of research which consistently demonstrates that physically attractive people are perceived to have positive personality and intellectual traits. Research suggests that this stereotype is acquired in early childhood. As well as being stereotyped in a positive way, physically attractive people are treated more favourably by others, even in spheres such as employment.

5.4.2 The Role of Physical Appearance in Defining the Worth and Status of Males and Females

The finding that physically attractive people are positively stereotyped holds to some extent for both males and females but several authors have argued that beauty or physical attractiveness is even more important in determining females' status than males'. Chernin (1981), Lawrence (1984a), Macleod (1981), Wolf (1990) and others have all argued this case from a feminist theoretical perspective. There are also empirical studies which provide strong support for this assertion. Reviews of this literature are provided by Bar-Tal and Saxe (1976), Mazur (1986), Rodin, Silberstein, and Striegel-Moore (1984) and Stake and Lauer (1987).

5.4.3 The Importance of Weight in Judgements of Males' and Females' Attractiveness

Rodin et al. (1984) and Striegel-Moore, Silberstein, and Rodin (1986) review much literature that indicates that a woman's own judgements of her attractiveness as well as others' judgements of her attractiveness are more dependent on her weight and body shape than is the case for males.

Franzoi and Herzog (1987) have provided further data on this issue. They asked male and female college students to rate the importance of various body parts and functions in their judgements of attractiveness for males and females. They found that although there were some differences in the criteria which men and women use to evaluate other men and women, there was also substantial agreement. Weight-related criteria (e.g. figure, weight, body build, thighs, hips and appetite) featured most prominently in subjects' evaluations of women's attractiveness. Criteria related to

upper body strength-related criteria (e.g. muscular strength, width of shoulders, biceps and physical coordination) were most prominent in subjects' ratings of men's attractiveness.

Given all of the research indicating that weight and body shape are more important in judgements of women than men, what evidence is there that the current cultural "ideal" body shape for women is, in fact, slim or thin? Research addressing this point will now be reviewed.

5.4.4 Stigmatisation of Obesity or Overweight, Particularly in Women

From a very early age, children learn negative stereotypes concerning obese people. These stereotypes contain several negative characteristics including ugliness, laziness, stupidity, dirtiness and unpopularity. This stigmatisation of obese people is displayed by people of all ages. (These various issues are treated in Blumberg & Mellis, 1985; Counts, Jones, Frame, Jarvie, & Strauss, 1986; Harris, 1983; Harris & Smith, 1982 and 1983; Stager & Burke, 1982; Wadden & Stunkard, 1985; and see the surveys of research in Harris, Harris, & Bochner, 1982; Powers, 1988; Rodin et al., 1984.) But most importantly for a sociocultural explanation of eating disorders (and for an explanation for widespread discontent with weight and shape among normal women) is the consistent finding that negative social stereotypes concerning obesity are applied more strongly to females than males (Furnham & Radley, 1989; Gordon, 1990; Harris, Harris, & Bochner, 1982; Tiggemann & Rothblum, 1988; Wadden & Stunkard, 1985; Wooley & Wooley, 1979; Wooley et al., 1979; Worsley, 1981. The Harris, Harris, & Bochner study is an exception: it found that obese males and obese females were equally stigmatised.).

A great deal of research has indicated that the negative stereotypes associated with obesity are translated into negative behaviours towards obese people and adversely affect the achievements of obese people (Powers, 1988; Wooley et al., 1979). Once again, the research has shown that females are significantly more likely than males to experience negative outcomes as a result of their weight in areas such as work-related achievements, friendships and sexual relationships (Gordon,

1990; Rodin et al., 1984; Smith, Pruitt, Mann, & Thelen, 1986; Wooley & Wooley, 1981). In fact, Kelly and Patten (1985), Stake and Lauer (1987) and Tiggemann and Rothblum (1988) found this to be true even for individuals who were overweight without being obese. Kelly and Patten, for example, found that girls in the higher weight categories of their high school sample had fewer friends, obtained lower marks and were less interested in dating than girls in the lower weight categories. No such correlations existed for males.

5.4.5 The Relatively Recent Change Towards a Thinner Body Shape Ideal for Females - Data from Magazines, Fashion Models, Actresses and "Beauty" Contests.

Data from magazine centrefolds and Miss America Pageant contestants (Garner et al., 1980) reveal a significant trend towards a thinner body shape ideal for females over the past 20 years. Garner et al. (1980) also show that there has been a significant increase in the number of articles on dieting in women's magazines in the last 20 years. They point out that this trend is occurring in a culture where, on average, people are becoming heavier.

Morris, Cooper, and Cooper (1989) examined the changes in the physical features of the fashion models recruited by one British agency over the period 1967 to 1987. There was a significant increase in height, waist and bust measurements, but no change in the hip measurement. The researchers commented that this indicates a trend for models' shapes to have become less curvaceous, or more "tubular". They concluded that "if this change in the body shape women are being presented with in fashion magazines is associated with a corresponding increase in the prevalence of dieting to alter body shape, this social change could be of significance in the apparent rise in prevalence of eating disorders in recent years" (p.596).

Silverstein, Perdue, Peterson, and Kelly (1986) conducted an analysis of female figures in popular women's magazines over an even longer period, from 1901 to 1981. They found that the bust-to-waist and hip-to-waist ratios of depicted female figures declined sharply from 1901 (where it was

at its all time high) to a low in the 1920s. The ratios climbed slightly thereafter to a second peak in the 1940s and after 1949 the ratios dropped again, reaching the level of the 1920s by the 1960s. The ratios had not increased at all by 1981. Silverstein et al. also conducted an analysis of the figures of popular female actresses and obtained similar results. They noted that many young women would have been exposed to a very non-curvaceous standard all of their lives, and like Garner et al. they link this exposure to the increased incidence of eating disorders among women. Mazur (1986) presents a descriptive historical analysis of female body shape ideals, and he also explicitly links the current non-curvaceous ideal to the increased incidence of eating disorders. More specifically, Silverstein, Perdue, Peterson, Vogel, and Fantini (1986) present historical data to draw a link between the increasingly non-curvaceous bodily standard for women and the increasing rates of women's professional employment and higher education. Silverstein, Peterson, and Perdue (1986) contend that in the mid 1920s, a time at which models were as non-curvaceous as they were in 1981, an "epidemic" of eating disorders appeared among young women.

Silverstein, Peterson, and Perdue pose a number of questions for future research:

"The results indicate that eating disorders are not just instances of individual psychopathology. They are rooted in societal pressures experienced by women. When the standard of bodily attractiveness becomes very thin many women develop eating disorders. These findings point up several questions deserving of further study. What is the role of the mass media in promoting the thin standard? ... What role do men play in persuading women that thinness is important? What factors cause the standard to change over time and why are some women more likely to adhere to a thin standard than others?" (p.904).

The present study will attempt to provide some answers to these questions.

5.4.6 The Difference between the Cultural Ideal Body Shape for Males and Females

There is a great deal of research on opinions about "ideal" figures for women that is consistent with the findings of the research reviewed above. There is considerable evidence that a thin body shape (or an ectomorphic shape) is considered to be the "ideal" female figure, that is, the female figure that is considered the most attractive figure by both males and females (Bell, Kirkpatrick, & Rinn, 1986; L.L. Davis, 1985; Fallon & Rozin, 1985; Furnham, Hester, & Weir, 1990; Lippa, 1983). L.L. Davis (1985), for example, asked female undergraduates to select the ideal female figure from a series of drawings. Over half of the subjects selected the thinnest body shape and an additional 30 percent chose the next most thin figure. Gitter, Lomranz, Saxe, and Bar-Tal (1983) found that both sexes in a sample of college students preferred an hourglass shape for women, with men also preferring large breasts. The former finding is at odds with the bulk of relevant research (Furnham et al., 1990).

There is also evidence that a muscular (mesomorphic) shape is considered the ideal figure for males (Beck, Ward-Hull, & McLearn, 1976; Franzoi & Herzog, 1987; Lerner, 1969; Lerner & Korn, 1972; Lippa, 1983; Mishkind et al., 1986; Rodin et al., 1984). However, it is important to reiterate that research to date suggests that this ideal is not as strongly emphasised for males as the thin body shape ideal is stressed for females.

Fallon and Rozin (1985) asked male and female undergraduates to indicate their current figure, their ideal figure (for themselves), the figure they felt would be most attractive to the opposite sex and the opposite sex figure to which they would be most attracted. On average, men rated their current figure, ideal figure and the figure which they considered would be most attractive to the opposite sex as almost identical. This figure was significantly "heavier looking" or bulkier than the figures which the women rated as their current or ideal shapes for men. The male figure which the women rated as being most attractive to them was significantly heavier than their own ideal figure or the figure which they considered

attractive to men. Most importantly, perhaps, the female figure which the men rated as being most attractive to them was thinner than the women's average actual current figure. The women perceived that men preferred an even thinner body shape than the men actually did prefer, while the men perceived that women preferred a heavier body shape than the women actually did prefer.

To return briefly to research based on an analysis of the mass media, Silverstein, Perdue, Peterson, and Kelly (1986) found that female television characters were significantly thinner, on average, than male characters. In earlier research, Dyrenforth, Wooley, and Wooley (1980) analysed the appearances of overweight women and men in popular television shows. They found that overweight women, but not overweight men, were highly under-represented in these shows.

There is also some research to suggest that in Western cultures thinness is associated with femininity, while muscularity is associated with masculinity. Guy, Rankin, and Norvell (1980) asked male and female subjects to describe various types of figures using the Bem Sex Role Inventory. The male mesomorph was clearly sex-typed as masculine, while the female ectomorph was equally strongly sex-typed as feminine. The remaining male and female figure types were sex-typed as "androgynous".

Interestingly, even eating itself appears to be considered unfeminine. This point is made eloquently by Chernin (1981) and Lawrence (1984) at a descriptive level. In an empirical study, Chaiken and Pliner (1984, cited in Striegel-Moore, Silberstein, & Kelly, 1986) found that women who were described as eating small meals were rated as significantly more feminine, less masculine, and more attractive than women who were described as eating large meals. Descriptions of meal size had no effect on subjects' perceptions of men. Another study by these authors (also cited in Striegel-Moore, Silberstein, & Kelly, 1986) found that women may actually restrict their food intake in order to make a favourable impression on men.

The relationship between sex-role stereotyping, femininity and masculinity and women's role in society on the one hand, and eating and weight related pathology on the other, are taken up in detail in Chapter 6. The role of these factors was briefly noted here because of their link with the pressures on women to conform to a particular body shape.

5.4.7 The Sex Differential in the Emphasis of Media Articles and Advertisements Dealing with Dieting and Slimness

Garner and Garfinkel (1980) have commented that: "Although it may appear superficial to ascribe to cultural ideals a role in the development of anorexia nervosa, the potential impact of the media in establishing identificatory role models cannot be overemphasized" (p.652).

Silverstein, Perdue, Peterson, and Kelly (1986) conducted a content analysis of several of the most popular women's and men's magazines in the United States. They found that not only did the women's magazines contain far more articles and advertisements about diet foods and other dieting products, and articles dealing with body shape or size, but also far more advertisements for food of all types and dining and cooking. The only category for which there were more advertisements in the men's magazines was alcoholic beverages. Silverstein et al. concluded that: "The messages women receive and the aspects of life they must attend to are gender specific, including the message to stay in shape and get slim while at the same time thinking about food and cooking" (p.526).

Although not a direct comparison between magazines directed at men and women, work by Reilly, Yann, and Cumming (1987) is also of interest. These researchers analysed the content of nutrition-related articles in several Australian "women's" magazines. They found that there was a heavy emphasis on weight control and weight loss in these articles.

In another relevant study, American researchers (Ogletree, Williams, Raffeld, Mason, & Fricke, 1990) conducted a content analysis of commercials shown during children's television programs. They found that commercials for "appearance enhancing" products had significantly more female than male main characters, supporting characters,

narrators and consumers. The researchers concluded that this provided evidence that "the media differentiates between males and females ... in the importance of appearance for the female", and that this differential emphasis may start in childhood and may help explain the sex differential in eating disorders (pp.796-797).

Silverstein, Perdue, Peterson, and Kelly make the point that while the media are obviously important agents of social pressures, other sources of such pressures such as fathers, husbands and boyfriends and friends (who themselves are influenced by media ideals) also need to be considered. The present study will examine the effect of all of these sources of pressures on subjects' attitudes about weight and body shape.

There are a few remaining factors which are important in understanding the role of sociocultural factors in eating disorders and in women's weight related concern.

5.4.8 The Cultural Emphasis on the Relationship between Health and Slimness

It is part of the conventional wisdom of Western culture that to be overweight, and certainly to be obese, constitutes a serious health risk. Kalucy (1987) notes that:

"It is most unclear what constitutes obesity per se and when it constitutes a health-risk factor. Nevertheless, weight reduction as a means to improve long-term health has been advocated widely by the health industry and has spawned a new commercial endeavour. ... The result has been that very large numbers of persons, and particularly women, have been seduced into believing that weight loss would be a desirable and admirable goal for them and they would be healthier. ... It is a sad coincidence that the concentration on obesity has occurred at a time in history when the forces that determine women's attitudes about their bodies (for example, the fashion industry) have dictated that thinness is a desirable shape. These are powerful forces and have become confused in people's minds in the sense that not only is thinness seen as a desirable body image in the interests of women's feelings about themselves, but it is also equated with being healthy" (pp.529-530).

While the relationship between obesity and certain health risks remains a matter of debate (Wooley & Wooley, 1979), this debate has not yet been given a great deal of exposure in popular media. The extent to which the concepts of health, fitness, obesity and certain food types are linked together in people's minds is one of the subjects under investigation in the present study (formalised in Hypothesis 3).

In a thoughtful analysis of the conceptualisation of health in general in Western cultures, Crawford (1984) has argued that many aspects of our health are considered to be within our own control. Consequently, health has been linked to morality, in the sense that people with various kinds of ill health or who engage in certain types of behaviours are perceived to be lacking in self-discipline, lazy or ignorant. The issue of self control in relation to eating and weight will also be considered in the present study.

5.4.9 The Widespread Belief that People can Lose Weight and Maintain this Loss of Weight

Another area of debate is the question of whether "overweight" people are capable of losing weight and of maintaining a lowered body weight. Once again a detailed review of this debate is not possible here; however, some of the major points of debate will be noted.

There is a large literature concerning "set point" theory and metabolic function, some of which would suggest that it is extremely difficult for individuals to maintain a weight very different to their biologically (possibly genetically) determined weight. There is also some evidence that only a very small percentage of overweight people are able to maintain a significant weight loss (Kalucy, 1987; Rodin et al., 1984; Stunkard & Penick, 1979; Wooley, Wooley, & Dyrenforth, 1980). Wooley and Wooley remark:

"Even if obesity were a 'disease', even if it were unhealthy, there is no effective treatment for it. There is no safe method of losing a significant amount of weight and keeping it off for even two years" (p.68, 1982).

Many researchers now believe that dieting results in disregulation of metabolic functioning, eating behaviours and psychological functioning in relation to eating (e.g. Polivy & Herman, 1985; Rodin et al., 1984; Spencer & Fremouw, 1979; Striegel-Moore, Silberstein, & Rodin, 1986; Tuschl, Platte, Laessle, Stichler, & Pirke, 1990; Wardle, 1980; Wardle & Beinart, 1981; Warren & Cooper, 1988; Wooley & Wooley, 1981). There is evidence that dieting may in fact contribute to subsequent weight gain and binge eating.

Whatever the resolution of this debate, the prevailing notion in Western culture is that obesity is unhealthy and a result of gluttony, and that overweight people can and should lose weight:

“The result has been recurring cycles of dietary endeavour which are followed by failure, which surely contributes nothing to the general problems of self-esteem in women. More tragically, it has produced very widespread behaviours that are associated with episodic starvation, binge-eating, laxative abuse and periodic vomiting; at times enduring illnesses such as anorexia nervosa and bulimia nervosa emerge” (Kalucy, 1987, pp.529-530).

5.4.10 The Relatively Recent Cultural Preoccupation with Fitness

Davies and Furnham (1986b) found that the teenage girls they studied were more likely to direct their body image concern towards exercise than dieting. They speculated that the “fitness” industry may have fostered this interest in exercise. Johnson et al. (1989) compared the prevalence of bulimic behaviours in a high school sample in 1981 and 1986. They found that although the prevalence of bulimic behaviours had decreased over that five year period, the level of body dissatisfaction had not changed. This discrepancy led Johnson and his colleagues to speculate that the “pursuit of strength” may be replacing the “drive for thinness”. The authors suggest that the negative feelings associated with the emaciation resulting from AIDS, the recent emergence of an “anti-dieting” literature and greater publicity given to the dangers of eating disorders may have combined to reduce the incidence of bulimic behaviours. However, they further contend that the self esteem deficits associated

with body dissatisfaction will be manifested in a new form of bodily manipulation: that of the "pursuit of strength" or exercise abuse - merely, as they put it "old wine in slightly different bottles" (p.654, 1989).

Touyz, Beumont, and Hook (1987) describe a series of patients for whom excessive exercising was a prominent feature of clinical presentation. The authors describe these patients as having "exercise anorexia" and relate this variant to the current popularity for fitness, in particular long distance running. Touyz et al. found that over half of the exercise anorexics claimed that their initial motivation for exercising was fitness, while for the remaining 40 percent dieting preceded exercising. It is clear that even in exercise anorexia, restricted food intake is still central to the disorder: "debting" behaviour (that is, making the consumption of a certain amount of food dependent on completing a certain amount of exercise) was present in all of the exercise anorexics.

A new body shape ideal may be emerging for women which emphasises muscularity, strength or fitness. Whether or not this criterion has simply been added to the existing one of slimness has not been the subject of much research. The present study will examine the current body shape ideals for both men and women.

5.4.11 The Effect of Increased Media Attention to Anorexia and Bulimia Nervosa

Bruch (1985) speculated that increased information about eating disorders in the media may have resulted in the emergence of "me-too" syndromes. Both Russell (1985) and Striegel-Moore, Silberstein, and Rodin (1986) have also raised this possibility. Striegel-Moore and her colleagues go so far as to suggest that the mass marketing of certain diets constitutes the provision of "manuals for 'how to develop an eating disorder'" (p.256). Indeed, Wooley and Wooley (1982) had earlier presented a detailed analysis of one such diet - the Beverley Hills diet - and revealed the anorexic mentality underlying its principles. Striegel-Moore et al. also point out that females directly teach each other how to "binge, purge and starve" (p.256; see, for an example, Bearn & Robinson, 1985). Neither Striegel-Moore et al. nor Russell attempt to argue that an

individual could develop an eating disorder solely as the result of exposure to such information, but they do contend that such exposure represents one risk factor for the development of an eating disorder. A recent study, conducted as part of the present research, found that in fact women do report being influenced by their knowledge of eating disorders, and that a minority of women actually choose to adopt the behaviours about which they have learned (Murray, Touyz, & Beumont, 1990; and see also Fairburn & Cooper, 1982; Turnbull et al., 1989). Of equal concern is research by Branch and Eurman (1980) which found that the family and friends of anorexics were often envious of the patient's self control.

It is clear then that there are significant sociocultural pressures on women to conform to a particular body shape. However, it is equally obvious that not all women have anorexia or bulimia nervosa.

"That such sociocultural pressure generates a greater likelihood for the development of anorexia nervosa in women is probably not in dispute. It is, however, obvious that not all women exposed to such pressure develop anorexia nervosa. Other factors must also occur to precipitate the final development of the illness" (Hsu, 1983, p. 232).

The question of why it is that particular women develop an eating disorder has been the subject of a vast amount of research, from a range of theoretical perspectives, outlined in the introduction to this study. While a great deal of research has been directed at family, personality, cognitive and biological answers to this question, relatively little research has attempted to answer this question by reference to sociocultural factors themselves. To repeat a quote from Schwartz et al.: "perhaps the most challenging question is how does the culture actually influence the parameters of psychopathology" (1982, p.28). Little research has attempted to examine those attitudes which represent the interface between cultural norms and the individual, that is, attitudes towards current cultural ideals concerning weight and body shape. Do women with eating disorders have different attitudes towards these ideals to those of other women?

Some existing research indicates that women with eating disorders have similar ideas to those of other women about what constitutes an "ideal" body shape for females, and that ideal is a thin body (Bell, Kirkpatrick, & Rinn, 1986). However, this issue has not been explored in detail.

Mintz and Betz (1988) administered to a group of bulimics and normal college women a questionnaire which they described as measuring endorsement of sociocultural mores concerning the importance of attractiveness. Bulimics reported significantly greater endorsement of such mores than the controls.

Steiner-Adair (1986) has conducted one of the few studies which has examined in detail the attitudes of women towards current cultural ideals concerning weight and body shape. (This study is discussed again in greater detail in Chapter 6.) Steiner-Adair questioned female subjects about their perceptions of cultural and individual images or ideals for women, but did not refer at all in these questions to dieting or food. Interestingly, the issue of body shape still emerged strongly in the women's responses.

On the basis of the responses, Steiner-Adair was able to divide subjects into two groups, which she labelled "Wise Women" and "Super Women". "Wise Women" were girls who believed that **society's** ideal woman is, amongst other things, thin and attractive, but whose **own** ideal woman was not defined by appearance. "Super Women" also described society's ideal woman in terms of appearance but this group **endorsed** this ideal as their own ideal. The "Super Women" subjects scored far higher than "Wise Women" on measures of eating and weight related pathology. In fact, all of the "Wise Women" subjects scored in the non-eating disordered range of the EAT, and all but one of the "Super Women" scored in the eating disordered range.

Steiner-Adair's findings suggest that women with eating disorders are unable to take a critical stance towards prevailing cultural ideals for women, including ideals for weight and shape. It is also possible that women with eating disorders would be more likely than other women to

report that they are **aware** of the various pressures on women concerning body shape, and that these pressures have an **influence** on their own attitudes and behaviours. All of these issues will be explored in the present study.

In addition, the attitudes and experiences of males concerning cultural pressures will be examined. While there is a great deal of evidence to suggest that cultural pressures concerning weight and shape are not as strongly directed towards males as they are for females, there has been little investigation of males' attitudes regarding such pressures, either in terms of their own experiences or their attitudes towards such pressures as they are directed towards women.

Specifically, the study will examine the extent of subjects' awareness of these ideals and "pressures", the degree to which they report that they are influenced by them, and the extent to which they endorse (or alternatively are critical of) these ideals. Possible differences in such attitudes between normal men and women will illuminate the ways in which these pressures influence males' and females' weight and shape related attitudes and behaviours. Possible differences in such attitudes between anorexics, bulimics and normal women may represent important risk factors for the development of an eating disorder.

The following hypotheses will be tested:

1. Patients will be more likely than female controls to report that society has weight and body shape ideals. No hypothesis is put forward with regard to male controls.
2. Patients will be more likely than female controls to report that "cultural pressures" of various kinds influence their own weight and body shape related attitudes and behaviours. In turn, female controls will be more likely than male controls to report that such cultural factors have an effect on their attitudes and behaviours.
3. Patients will be more likely than female controls to endorse prevailing cultural ideals and stereotypes concerning weight and body shape uncritically. No hypothesis is put forward regarding the degree of criticism evidenced by male controls.

CHAPTER 6

THE ROLE OF SEX ROLE STEREOTYPED PERSONALITY CHARACTERISTICS AND ATTITUDES TOWARDS WOMEN IN SOCIETY IN EATING DISORDERS

6.1 Sex Role Personality Characteristics and Attitudes Regarding Women in Society in Anorexia and Bulimia Nervosa: Theoretical Perspectives

Many writers have attempted to address the question of why women constitute the great majority of sufferers of anorexia and bulimia nervosa by exploring the nature of femininity and the female sex role in our society. Some writers have proposed that these disorders represent a rejection of femininity or the traditional female role, while others have understood it as an exaggerated striving to attain a feminine ideal. Still other theorists have contended that these disorders are a response to sex role conflict or confusion.

Bordo (1985-86) has argued that anorexia nervosa is a psychopathology that represents the "crystallisation of culture". She believes that anorexia nervosa, in part, represents a fear and disdain for traditional female roles and limitations. For example, Bordo comments that many of her students with eating disorders reported that their anorexia had developed after their families had dissuaded them from embarking on a traditionally male career. More profoundly, Bordo argues that anorexia nervosa represents a deep fear of "The Female" with "all its nightmarish archetypal associations, voracious hungers and sexual insatiability" (p.87). Bordo and several other authors (e.g. Bruch, 1974, Crisp, 1980,

and Macleod, 1981) have reported that adolescent anorexics express characteristic fears about growing up to be mature, sexually developed and potentially reproductive women:

"It is important to recognize, too, that the anorexic is terrified and repelled, not only by the traditional female domestic role - which she associates with mental lassitude and weakness - but by a certain archetypal image of the female: as hungering, voracious, all-needing, and all-wanting" (p.90).

Chernin (1981) too has presented this argument, and developed it further to suggest that the mature female body with its associations of fertility and sexuality is a profound source of fear and envy for men in our culture. She argues that our patriarchal culture consequently instils an ambivalence in women about their bodies.

Chernin, Bordo and others have seen anorexia nervosa as a protest against the female role or as a metaphor for women's struggle (Orbach, 1986). However, Bordo points out that the anorexic's "protest" is "written on the bodies of anorexic women, and not embraced as a conscious politics, nor, indeed, does it reflect any social or political understanding at all" (p.90). In fact, Bordo argues that paradoxically this "protest" actually colludes with the cultural conditions which produced it. She argues that the same is true for more moderate expressions of the contemporary obsession with slenderness: "... Each hour, each minute that is spent in anxious pursuit of that ideal... is in fact time and energy deprived of inner development and social achievement" (p.90). Thus, it does not necessarily follow (indeed it probably does not) from Bordo's argument that anorexics are more consciously "feminist" or "masculine" in their sex role orientation than other women.

W.N. Davis (1985) draws on the work of Gilligan (1982) in his attempt to understand anorexia nervosa in sex role related terms. Gilligan has argued that women have a basic need for affiliative relationships and that their development is based on this need, rather than the individualism which characterises male development. Davis contends that in contemporary culture, women are inundated with an ideal female image

which is "aggressive, assertive and ambitious" (p.184), and that as a result female adolescents may be faced with a "cultural mandate" for which they are ill prepared:

"If women have strong natural needs to secure and maintain interpersonal connections, then requiring them to ignore affiliation and focus instead upon acquiring power might easily produce deep confusion, uncertainty, and fear. ... Indeed, anorexia could be seen as a tragic caricature of the disconnected, self-sufficient female, unable to affiliate and driven by an obsessive desire for power and mastery" (p.185).

Lawrence (1984b) has presented a more specific (and in some respects more superficial) argument about the importance of sex role conflict in the development of anorexia nervosa. She argues that educational achievement, or striving towards such achievement, represents a significant risk factor for the development of the disorder. Educational achievement is problematic for girls because:

"To take education seriously not only contradicts with the injunction that motherhood is the primary component of female sexuality, it actually threatens the girls with a sexual identity which is negative and almost universally disapproved of" (p.204).

Lawrence goes on to describe these negative identities as the "business woman" and "blue stocking". She also notes that an alternative image of the "superwoman" is also promoted in contemporary society, but that this image is the most "terrifying" of all, as it involves being excellent in all roles.

Striegel-Moore, Silberstein, and Rodin (1986) argue similarly that bulimia may be partly a response to sex role conflict or confusion. Like Lawrence, they point out that the messages communicated to girls in our society are complex and confusing: "Work hard at school, but be sure to be popular and pretty; be a lawyer, but be feminine" (p257). They report that their clinical experience has been that bulimic women often express confusion about their roles. They conclude that when women "strive to match the unrealistically successful as well as the unrealistically thin public model, the consequences may be unhealthy" (p.257).

Boskind-Lodahl (1976) suggests that the pursuit of thinness associated with bulimia nervosa represents an expression of perfectionistic striving to achieve an exaggerated ideal of femininity. She has described bulimics as "hyperfeminine" and argues that through this hyperfemininity the bulimic gains the approval of others and validates her own self worth. Orbach (1978) on the other hand sees compulsive eating as a reaction to and subconscious rejection of the sex role stereotype of women in contemporary culture. For Orbach, compulsive eating represents covert anger among women, who literally stuff their mouths with food rather than openly express resentment at the traditional feminine sex role. More recently, Orbach (1986) has extended her analysis to anorexia nervosa, which she also sees as a rejection of the socially defined feminine role¹.

While each of these theorists offers a slightly different perspective on the gender related causes of eating disorders, their arguments have a common thread, and are certainly not mutually exclusive. All of the theorists argue that women's role and femininity as they are currently defined in society are problematic for women (the specific nature of the perceived problem differing amongst authors) and that anorexia and bulimia nervosa represent a response or "solution" to this problem.

Many of the contentions discussed above are intuitively appealing and would appear to reflect the reported experience of many experienced clinicians in the field (for example Bruch, 1974). However, as Striegel-Moore, Silberstein, and Rodin (1986) have pointed out, the question for empirical research is whether women with eating disorders express characteristics, attitudes or feelings about the female role or femininity which distinguish them from other women. It is to this research that the review now turns.

1. Orbach's thesis, like all psychodynamically-oriented theories, is difficult to test empirically, as many of the sex role conflicts experienced by bulimics are said to operate at a subconscious or even unconscious level. For this reason criticisms of Orbach's thesis based on the fact that bulimics and anorexics themselves do not express anger or political views about the role of women (see for example, DiNicola, 1988) are not valid. Nevertheless, Orbach's theory can be criticised precisely because it is not testable.

6.2 Sex Role Personality Characteristics and Attitudes Regarding Women in Society in Anorexia and Bulimia Nervosa: Empirical Research

Empirical research examining the issue of sex roles in eating disorders can be divided into two types. First, there is research which compares the **sex role personality characteristics** of patients and female controls. This research has mainly used either the Bem Sex Role Inventory (BSRI; Bem, 1981) or the Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978). Both of these questionnaires require subjects to indicate the extent to which various "masculine" and "feminine" personality adjectives describe themselves. Subjects are given a score on both the masculinity and femininity scales, and are categorised as predominantly "feminine", "masculine", "androgynous" (equally feminine and masculine) or, for the BSRI, "undifferentiated" (scoring lowly on both femininity and masculinity). Other research on the issue of sex role personality characteristics has examined the extent to which patients and controls express satisfaction with their own sex role orientation.

The second type of research has examined patients' and controls' **attitudes regarding the role of women in society**. Much of this research has examined the degree to which subjects' views could be described as "feminist", by using questionnaires which tap their general attitudes. Other research in this area has explored subjects' attitudes regarding the role of women in society by asking them about their own sex role related aspirations and their sex role related behaviours.

6.2.1 Sex Role Personality Characteristics

a) Studies of Normal Females

In studies of normal females there appears to be a fairly consistent, although not universal, finding that there is a significant relationship between masculinity or androgyny and satisfaction with body shape or weight. Some studies have reported a negative relationship between femininity and satisfaction with body, but this result is less consistently reported.

Kimlicka, Cross, and Tarnai (1983) explored the relationships between scores on the BSRI and measures of body image and self esteem in a group of female undergraduates. Women who scored highly on the masculinity subscale of the BSRI also had high body satisfaction and self esteem, regardless of their femininity scores. When grouped as androgynous, masculine, feminine or undifferentiated, differences emerged with respect to subjects' satisfaction with various body parts. Androgynous women were most satisfied with their overall appearance, muscle tone, buttocks, and sex organs, followed by masculine subjects. Undifferentiated and feminine subjects were least satisfied with all of these aspects of themselves. Thus in this study, androgyny and masculinity were associated with high self esteem and satisfaction with one's body, while feminine or undifferentiated sex role orientations were associated with low self esteem and lack of body satisfaction.

Jackson, Sullivan, and Rostker (1988) examined the relationship between sex role and body image in a sample of female undergraduates. They used the BSRI as their measure of sex role orientation. They found that feminine and androgynous females rated the importance of their physical appearance equally, and as significantly more important than did the masculine and undifferentiated females. The authors concluded that femininity, present in both feminine and androgynous females, may be related to an acceptance of cultural standards about the importance of appearance for women. However, feminine females evaluated their physical appearance less favourably than androgynous, masculine and undifferentiated females. There were no significant differences between the latter three groups in their ratings of satisfaction with their appearance. Feminine females also rated their physical fitness more negatively than the other three groups.

Hawkins, Turell, and Jackson (1983) investigated the relationships between psychological masculinity and femininity and dieting tendencies and dissatisfaction with physical appearance in a group of undergraduate women. Masculinity and femininity were measured using the Personality Attributes Questionnaire (PAQ). Restrictive dieting

tendencies were positively correlated with trait femininity. Dissatisfaction with weight-related physical appearance was associated with lower scores on the socially desirable masculine traits scale.

Brown, Cross and Nelson (1990) investigated differences in attitudes towards women and sex role identity in college women who scored in the upper and lower quartiles of the BULIT (a measure of bulimic behaviour). Those women who obtained low scores on the BULIT had a slightly higher average score than the other group on the instrumental masculinity scale of the PAQ.

Using the PAQ, Thomas and James (1988) examined the relationship between dieting tendencies and body satisfaction and sex role orientation in a sample of black women. They found that there was a positive correlation between masculinity and happiness with one's body, but no relationship emerged between femininity and body satisfaction. A negative relationship between masculinity and restrictive dieting tendencies was found, but once again there was no relationship between dieting tendencies and femininity.

Van Strien and Bergers (1988) investigated the relationship between overeating and sex role orientation in a sample of over 500 young women. They found that overeating was related to adherence to stereotypically feminine traits. However, the relationship was relatively weak, and a much stronger relationship was found between overeating and negative self concept and anxiety. In fact, when the effects of anxiety and negative self concept were "partialled out", femininity was no longer significantly related to overeating. Using the same sample, van Strien (1989) explored the relationship between sex role orientation, dieting and satisfaction with figure. Contrary to other reports, the highest degree of restraint was found in women who had a high degree of both masculinity and femininity, that is, who were androgynous. However, the relationship between androgyny and restraint was once again a weak one. Women who were dissatisfied with their bodies had higher femininity scores than those who were satisfied.

b) Studies Comparing Normal and Eating Disordered Females

Sitnick and Katz (1984) compared anorexics' and normal females' scores on the BSRI. Anorexics scored significantly lower on the masculinity scale, but there was no difference between the groups on their femininity scores. The authors suggest that many masculine characteristics, such as independence and assertiveness, may be necessary for healthy functioning in today's society. The authors also make the valuable, and frequently overlooked, point that the responses of the anorexics may have been a consequence rather than a contributing cause of the disorder. They further note, however, that even if these self perceptions are secondary to the illness, they may then serve to sustain the disorder because they are likely further to impair self confidence and adaptability.

Lewis and Johnson (1985) administered the BSRI to a sample of bulimics and normal females. They found that the bulimics scored significantly lower on the femininity scale than the normal controls and there was also a (non-significant) trend for bulimics to score lower on the masculinity scale. When the samples were classified as masculine, feminine androgynous and undifferentiated, significant differences also emerged. Over 46 percent of the normals had an androgynous orientation, compared with only 21 percent of the bulimics. About eight percent of the normals were "undifferentiated" compared with 30 percent of the bulimics. Lewis and Johnson interpreted these findings as suggesting that bulimics are low in self esteem, since several studies have found that subjects who fall into the undifferentiated category have significantly lower self esteem than androgynous subjects, with masculine and feminine subjects lying between these two groups (Bem, 1977). They extended their argument further to speculate that the bulimic sample, compared with normal controls, may not have a clearly defined sense of self-identity.

The conclusions of Lewis and Johnson gain support from findings by Striegel-Moore and colleagues (cited in Striegel-Moore, Silberstein, and Rodin, 1986). They found an inverse relationship between masculinity scores on the PAQ and measures of eating pathology and body

dissatisfaction, but no relationship between these measures and femininity scores on the PAQ. They argued that masculinity as measured on the PAQ reflects such traits as decisiveness, self confidence and independence, and that the relative absence of masculine traits in bulimics represents a lack of self confidence and sense of competence. Striegel-Moore et al. (1986) suggest that the absence of these traits has a clear link with the development of eating disorders, but that "it is interesting but not surprising" that the presence of feminine traits (such as gentleness, being aware of others' feelings) is not predictive of eating pathology.

Contrary to the studies discussed thus far, Katzman and Wolchik (1984) compared the PAQ scores of bulimics, "binge eaters" and controls and found no significant differences between the groups.

Dunn and Ondercin (1981) compared normal female undergraduates with compulsive eaters (characterised by episodic bouts of uncontrolled, excessive eating) on the BSRI. Subjects were asked to describe their actual characteristics and their ideal characteristics. No differences were found between the two groups in their description of their actual sex role orientation, or on their endorsement of feminine characteristics in their ideal-self description. However, the compulsive eaters endorsed masculine characteristics as significantly more desirable than the controls. Dunn and Ondercin concluded that their data did not directly support either the hypothesis that compulsive eating involves the rejection of the feminine sex role stereotype, or the notion that it represents "hyperfemininity".

Squires and Kagan (1985) conducted a similar study to that of Dunn and Ondercin, comparing the sex role orientation and sex role satisfaction of a group of undergraduate females. Subjects who scored highly on a measure of compulsive eating had low scores on the femininity scale of the PAQ, and they desired to be more rather than less feminine. These results are the opposite of those of Dunn and Ondercin. Dieting behaviour, on the other hand, was correlated with actual femininity as well as with the desire to be more feminine. Squires and Kagan also

investigated the role of need for social approval and hostility in compulsive eating and dieting. They concluded that compulsive eating was associated with dissatisfaction with one's femininity, a relatively low need for social approval and hostility about the female role. Dieting, in contrast, was associated with need for social approval and higher femininity. They concluded that these data support the theory that dieting and concern with body weight are inherent in femininity, as it is currently defined by young adults.

While the work of Squires and Kagan builds on Dunn and Ondercin's study by including restrictive eaters, the former authors made no attempt to explain the difference in findings between the two studies, nor did they attempt to explore sex role issues for bulimics - women who both eat "compulsively" and diet. Indeed, bulimics would appear to be a contradictory or impossible group according to Squires and Kagan.

Cantelon, Lechner, and Harper (1986) used the BSRI and a sex role satisfaction questionnaire to compare sex role conflict between anorexic, bulimic and control groups. Conflict was defined as the discrepancy between actual and ideally perceived sex role identity. Subjects were asked to complete the BSRI as it described their actual selves, and then to complete the inventory as they would ideally like to be. The results from the subjects' actual self descriptions revealed that a higher percentage of the bulimics (60 percent) were categorised as feminine than was the case for the other two groups (anorexics 33 percent, controls 23 percent). All three groups expressed an approximately equal degree of conflict about their sex role orientation, as measured by the BSRI. Interestingly, in response to a direct question about the consequences of their disorder, anorexics and bulimics frequently related their sex role conflict to their illness. All three groups expressed a wish to become more androgynous from undifferentiated and feminine identities. The researchers suggested that these findings may indicate a wish on the part of these individuals to become more masculine, which would be consistent with Sitnick and Katz's view that women with eating disorders may not have developed the masculine traits which are perceived as

necessary for optimal functioning in today's society. Subjects were also asked to report how satisfied they were with their role as housekeepers, as wife or girlfriend, at work and as a woman. There were no significant differences among the groups in their satisfaction with their roles as housekeeper, wife or girlfriend, or at work. However, bulimics reported significantly more dissatisfaction with the qualities they possessed as "a woman" compared with those they thought they ideally should possess than did the anorexic and controls groups. This result is consistent with a finding by Lacey, Coker, and Birtchnell (1986) that 78 percent of their sample of bulimic patients reported a discrepancy between their concepts of themselves as a woman and their idea of a stereotypical ideal woman.

6.2.2 Conclusions from Research on Sex Role Related Personality Characteristics

The research on sex role related personality characteristics has not reached consistent conclusions. However, a majority of studies have found that women with eating disorders have lower scores than female controls on scales measuring "masculinity". The conclusions of Sitnick and Katz (1984), Lewis and Johnson (1985) and Striegel-Moore, Silberstein, and Rodin (1986) all suggest that masculine traits may be associated with self esteem and self confidence. The Lewis and Johnson (1985) finding that bulimics are more likely to be classified as "undifferentiated" on the BSRI further suggests that a lack of self identity or "sense of self" may be underlying patients' sex role related self descriptions. The finding that femininity is positively associated with eating disturbance and body dissatisfaction has only been reported with any consistency in studies of normal women. The results from studies with anorexics and bulimics are too inconsistent to reach a conclusion regarding differences between these two groups.

Using the BSRI as a measure of masculinity and femininity, the following hypothesis will be tested:

Patients will be more likely than female controls to be either "feminine" or "undifferentiated" in sex role personality characteristics. Female controls will be more likely than patients to be either "masculine" or "androgynous" in sex role orientation.

No hypothesis is put forward with regard to male controls.

6.2.3 Attitudes Towards the Role of Women in Society

a) Studies of Normal Females

There have been several studies of the relationship between attitudes towards women in society and weight related ideals and behaviours. The research has produced conflicting and somewhat confusing results, but a few conclusions can be tentatively drawn, and will be presented at the end of this section.

Beck, Ward-Hull, and McLearn (1982) found that women who valued academic achievement, higher education and professional careers preferred less curvaceous bodies than other women. Silverstein and Perdue (1988) further investigated the relationship between attitudes towards women's role and weight related behaviours. They asked female university students about their weight, dieting, bingeing and purging behaviours and to answer the question "How important do you think each of the following attributes are in order for a woman to achieve satisfaction?" The attributes included slimness, physical attractiveness, intelligence, popularity and professional success. They found that dieting amongst college women was related to desiring a thin or non-curvaceous body and believing that attractiveness is important for women "to achieve satisfaction". Bingeing was also related to believing that attractiveness is important for women to achieve satisfaction, but not to the desire for a thin body. Purging (defined as self induced vomiting, using laxatives or using diuretics) was related to believing that being slim and professional success are important for women to achieve satisfaction, and to the

desire for a non-curvaceous body. Being underweight was related to desiring a thin body, and to believing that being popular and intelligent are important in order for women to achieve satisfaction. It is difficult to interpret these findings, primarily because of the nature of the questions presented to the subjects. A subject could rate a dimension such as slimness as extremely important because she believed that cultural ideals are such that women in general (not necessarily herself) would be dissatisfied with themselves unless they are slim, or she may respond in this way because she herself wished to be slim. The authors appear to approach their findings using the latter interpretation. Secondly, the significance of some groups selecting "physical attractiveness" as important to a woman's satisfaction and others selecting "slimness" is not at all clear. The latter problem could have been clarified had the researchers established the subjects' definitions of attractiveness.

Silverstein, Perdue, Wolf, and Pizzolo (1988) examined female undergraduates' beliefs about their parents' attitudes regarding females' achievement. They identified a group of "bingers" and "purgers" (women who either intentionally vomited or took laxatives or diuretics after eating) within their sample, but pointed out that these groups did not constitute a clinical sample. Their results were clearest for the group who reported frequent binge eating. These women were significantly more likely than other women to report that their parents believed "a woman's place is in the home", that their mothers were unhappy with their own careers, that their fathers thought that the respondents' mothers were not intelligent, and that their fathers treated males as the more intelligent children in the family. The results for the purging group were not as straightforward. Women who reported purging were more likely than the other women to believe that their fathers thought that the respondents' mothers were not intelligent, and that their parents believed a woman's place is in the home, but these differences only held for those purgers who were concerned with academic achievement. There were no differences between purgers who were more concerned with traditional female domains such as household skills and the other women. The fact that a number of variables concerning female achievement were related

to bingeing but not purging is at odds with these authors' earlier finding (Silverstein and Perdue, 1988) that the importance placed upon professional or intellectual achievement for women was related to purging and to the degree to which the subject was underweight, but not to bingeing. While the differences between the studies were a "puzzle" to the authors, they nevertheless concluded that the "difficulties surrounding female intellectual and professional achievement" play a "major role" in the aetiology of some forms of disordered eating (p.732). The authors themselves point out that a possible weakness of their research is the fact that their sample was drawn from a university population, and thus may not have included women who have been most affected by familial attitudes regarding women's role.

Steiner-Adair (1986) examined attitudes towards the role of women in society in a small group of young females, aged 14-18 years, using an interview to elicit the subjects' views. She asked subjects to list those characteristics that they believed society values in women, to describe society's image of the ideal woman, and to describe their own image of the ideal woman. On the basis of their responses, Steiner-Adair was able to divide subjects into two groups, which she labelled "Wise Women" and "Super Women". "Wise Women" were girls who believed that society's ideal woman values autonomy, is independent, successful in a career, and thin and attractive, but whose own ideal woman did not value autonomy, but rather emphasised relationships with other people, and was not defined by appearance. These subjects represented 60 percent of the sample. "Super Women", who represented the remaining 40 percent of subjects, also described society's ideal woman in terms of independence, career success and appearance, but this group endorsed this ideal as their own ideal. The ideal female image of the "Super Women"

included an emphasis on relationships as accomplishments or appendages and "... remaking the body to fit a rigid body ideal" (p.105). Adair-Steiner noted that "Wise Women" responses were:

"... marked by a clear recognition of the new societal values and expectations of autonomy, independence, and success for women and an ability to stand apart from these values and maintain conflicting or different values that focus on the importance of interrelatedness. Inherent in the process of being able to take a stand apart from the culture is the capacity for reflective thinking about the self, which comes through in an emphasis on self-awareness" (pp.104-105).

This capacity was missing from women who endorsed society's image of the super woman. When asked to imagine their lives in the future, "Super Women" used superlatives when describing ambitions such as becoming a famous actress or fabulously wealthy. "Wise Women" talked about their futures in terms of self, using terms such as "believing in ones-self", self-fulfilment and self-satisfaction. Steiner-Adair argued, based on Gilligan's work (1982), that it is the latter vision, which incorporates interrelatedness, that leads to successful maturation for women.

Steiner-Adair compared the two groups of subjects on the EAT and another questionnaire concerning attitudes towards weight. All of the "Wise Women" subjects scored in the non-eating disordered range of the EAT, and all but one of the "Super Women" scored in the eating disordered range. The exception scored in the "anorexic-like" range identified by Thompson and Schwartz (1982). The other questionnaire revealed that "Wise Women" were significantly less concerned with their ideal body weight and that weight affected the self image of "Wise Women" significantly less than "Super Women". "Wise Women" also reported eating significantly fewer "diet" foods, as well as engaging in less dieting behaviour. Furthermore, "Wise Women" less frequently reported worrying about how they looked than "Super Women".

Steiner-Adair summarised these findings in the following way:

“The central finding of this research is that girls who are able to identify contemporary cultural values and ideal images of women that are unsupportive of core female adolescent developmental needs and who are also able to reject these values in choosing their own female ideal image are not prone to eating disorders. Girls who are unable to identify the societal values that are detrimental to their developmental needs, and who identify with the ideal image that is projected by these values, are at risk for developing eating disorders” (p.107).

b) Studies Comparing Normal and Eating Disordered Females

Rost, Neuhaus, and Florin (1982) compared the attitudes toward women's role in society (assessed by questionnaire items such as “I admire women who make their own way”) and the sex role related behaviours of bulimics and normal women (assessed by items such as “I invest a lot in my job/studies to be successful”). They found that bulimics expressed significantly less “liberated” views about the role of women than controls, and also reported more traditional sex role behaviour than controls. Further, for bulimics there was a discrepancy between their expressed attitudes and their behaviour that was not found for controls. In other words, bulimics were more likely than controls to express “liberated” views but not to act on them. In addition, bulimics reported significantly more “fatalism” about their roles as women than did controls, significantly greater feelings of external control over their futures and significantly less internal control over outcomes. The authors concluded that “the inability to live by their general sex role attitude was shown in our bulimarexic population to go together with a profound sense of helplessness” (p.407).

Srikameswaran, Leichner, and Harper (1984) compared anorexics', bulimics' and undergraduate female controls' scores on a measure of beliefs about the role of women in society. They found in contrast to Rost et al. that bulimics on average reported significantly more “feminist” views than anorexics, but that there was no difference between each patient group and the control group. They concluded that all groups expressed more “feminist” views than the average female population. Brown et al. (1990) found that women who scored highly on the BULIT

had slightly lower scores on the AWS than a group who had relatively low BULIT scores. Krueger and Bornstein (1987) administered a similar questionnaire to bulimics, "binge-eating" and undergraduate controls. No differences were found between any of the groups and all subjects, regardless of group, scored in the range of "egalitarianism". Xinaris and Boland (1990) also failed to find a correlation between sex role ideology and disordered eating.

6.2.4 Conclusions from Research on Attitudes Towards the Role of Women in Society

Empirical research comparing the attitudes regarding women's role in society of anorexic, bulimic and normal women has reached conflicting conclusions but the weight of the evidence suggests that women with eating disorders express similar attitudes to those of normal females about the role of women in society. However, the evidence further suggests that anorexics and bulimics do not seem to incorporate these abstract or general attitudes into their behaviour, nor perhaps into their **personal** ideals (what they perceive an ideal women to be) to the same extent as normal females.

The following hypothesis will be tested in the present study:

Patients and female controls will hold equally "feminist" views concerning the role of women in society.

No hypothesis is put forward with regard to male controls.

CHAPTER 7

SUMMARY OF AIMS AND HYPOTHESES

The present study is an exploration of sociocultural factors in eating disorders and in the weight and shape related concern of normal males and females. The first aim of the study is to examine the differences in weight and shape related attitudes and behaviour between normal males and females, and between normal females and females with either anorexia or bulimia nervosa. Important differences between males and females may emerge which will provide a partial explanation for the sex difference in weight and shape concern and in the prevalence of eating disorders.

To date, most studies which have compared the weight and shape related attitudes and behaviours of men and women have examined a narrow range of issues; most have investigated only satisfaction with body shape and weight and/or related behaviours such as dieting. These studies have revealed clear differences between men and women: women report significantly less satisfaction with their weight and shape and are more likely to engage in behaviours directed at altering these aspects of themselves. Clearly, the issues of satisfaction and related behaviours are of central importance in understanding the differences between males and females. However, the present study will extend this research to include also an exploration of several other attitudinal domains which remain relatively unexamined. These areas include the salience or importance of weight and body shape in self evaluation, evaluation of other people, every day functioning and lifestyle, and in the understanding of other concepts such as health, fitness, attractiveness, and the nutritional value of foods. Research on these issues may help to explain the sex differences in the incidence of eating disorders, and will also provide further information about the way in which men and women experience their bodies and the implications of weight and shape for their lives.

Normal females and females with eating disorders will also be compared on these dimensions, as to date there has been little research comparing these two groups on these issues.

A second major aim of the present study is to examine the question of why some women develop eating disorders while others do not, by examining **sociocultural** variables which may constitute risk factors for the development of an eating disorder. A large body of evidence has been reviewed which shows that Western society has adopted for females a thin or slim body shape ideal, and that considerable pressures or "forces" are exerted on women to achieve this ideal. To date, most research has focused on establishing the objective existence of these pressures, rather than on the subjective experience resulting from these pressures. The limited research on this issue suggests that women with eating disorders may hold different attitudes to other women towards prevailing cultural weight and body shape ideals.

Several researchers have proposed that certain sex role related personality characteristics and/or attitudes concerning the role of women in society may be implicated in the development of eating disorders. These dimensions will also be explored in the present study. They too represent an interface between sociocultural values and norms and individual psychology.

Most of the research which has been reviewed has used self report written questionnaires, with a fixed choice format. While this type of measure allows for easy quantitative comparisons to be made between groups, it does not allow for full exploration of respondents' viewpoints, and frequently does not capture the experiential nature of respondents' attitudes and behaviours. Therefore, in the present study qualitative measures were used in order to obtain more detailed and personalised data from subjects.

Before reiterating the study's hypotheses and aims it is useful to re-emphasise the way in which the role of sociocultural factors is conceptualised in the present study. The cultural pressure for women to

diet and to assume a thin body shape may be viewed as one of several predisposing factors leading to the expression of anorexia or bulimia nervosa. Garner and Garfinkel (1980) emphasise that although the pressure to assume a thin shape may be one salient factor in the development of some cases of anorexia nervosa the bulk of the evidence suggests that the disorder is multi-determined. Brumberg (1986) explicates this position well:

"In sum, I am arguing for a conception of anorexia nervosa that incorporates culture as well as biomedical and psychological models. I am not suggesting simply that culture causes anorexia nervosa - that is, that modern advertising single-handedly generates the compulsion to starve. Culture, like cognition or socialisation, must be conceived as a many-layered process; the cultural factors that put contemporary adolescents 'at risk' for anorexia nervosa are multidimensional but relatively unexplored" (p.104).

7.1 Aims

In summary, the major aims of the present study are to:

1. compare the weight and shape related behaviours and attitudes of normal males and females, and normal females and females with either anorexia or bulimia nervosa. Several dimensions will be assessed including:
 - a. satisfaction with weight and shape;
 - b. weight and shape related behaviours; and
 - c. salience of weight and shape in self evaluation, evaluation of other people, everyday life and functioning, and understanding of other concepts.
2. compare the attitudes and characteristics of normal and eating disordered females on several socioculturally related dimensions, in an attempt to identify possible risk factors for the development of an eating disorder, or factors which contribute to the maintenance of an established eating disorder. These dimensions include:

- a. awareness of current cultural ideals concerning weight and body shape;
- b. the perceived influence of these ideals and pressures to achieve them;
- c. criticism or endorsement of these ideals;
- d. sex role personality characteristics; and
- e. attitudes regarding the role of women in society

7.2 Hypotheses

7.2.1 Hypotheses Relating to First Aim

1. Patients will report greater dissatisfaction with their weight and body shape and with related behaviours than will be the case for female controls. Female controls will report greater dissatisfaction with these aspects of themselves than will be the case for male controls.
2. Patients will engage in behaviours directed at influencing weight and body shape, and also binge eating, more frequently than female controls. Female controls will report engaging in these behaviours more frequently than will be the case for male controls.
3. Males' attitudes regarding weight and body shape will be qualitatively different to those of females. Females will conceive of their bodies in terms of appearance while males will place more emphasis on physical effectiveness. Males will be more likely than females to desire to be bigger or weigh more, while females will be more likely than males to desire to be slimmer or weigh less than they do currently.

4. Attitudes regarding weight and body shape will be more salient (that is, prominent) in the self evaluation of patients than female controls. In turn, these issues will be more salient in female controls' self evaluation than will be the case for male controls.
5. Patients will be more likely than female controls to evaluate other people in terms of weight or body shape. In turn, female controls will be more likely than male controls to evaluate other people in terms of weight or body shape.
6. Weight and body shape related issues will be more salient in the general lifestyle (that is, have a greater effect on other areas of functioning) and everyday thoughts of patients than female controls. In turn, weight and body shape will be more salient in the lifestyle and everyday thoughts of female controls than will be the case for male controls.
7.
 - a. Patients will be more likely than female controls to associate weight or body shape with other attributes or concepts such as attractiveness, health, nutrition, exercise, fitness and personality. In turn, female controls will be more likely than male controls to associate weight or body shape with these concepts.
 - b. Patients will hold different definitions of weight and body shape adjectives to those of female controls. Specifically, they will be more likely than female controls to report that adjectives such as "fat" are negative or undesirable, and to report that adjectives such as "thin" are positive or desirable. In turn, female controls will be more likely than male controls to report that adjectives such as "fat" are negative or undesirable and that adjectives such as "thin" are positive or desirable.

7.2.2 Hypotheses Relating to Second Aim

8. Patients will be more likely than female controls to report that society has weight and body shape ideals. No hypothesis is put forward with regard to male controls.
9. Patients will be more likely than female controls to report that "cultural pressures" of various kinds influence their own weight and body shape related attitudes and behaviours. In turn, female controls will be more likely than male controls to report that such cultural factors have an effect on their attitudes and behaviours.
10. Patients will be more likely than female controls uncritically to endorse prevailing cultural ideals and stereotypes concerning weight and body shape. No hypothesis is put forward regarding the degree of criticism evidenced by male controls.
11. Patients will be more likely than female controls to be either "feminine" or "undifferentiated" in sex role personality characteristics. Female controls will be more likely than patients to be either "masculine" or "androgynous" in sex role orientation. No hypothesis is put forward with regard to male controls.
12. Patients and female controls will hold equally "feminist" views concerning the role of women in society. No hypothesis is put forward with regard to male controls.

CHAPTER 8

METHOD

8.1 Sample

The aims of the research required two samples: a group of patients with eating disorders (hereafter "eating disorder patients"), and a group of controls, female and male.

8.1.1 Patient Sample

The patient sample consisted of eating disorder patients who were interviewed while attending a public teaching hospital outpatient clinic, or while inpatients at the same hospital or inpatients at a private psychiatric hospital. Both hospitals run specialist eating disorder services.

Data from inpatients at both hospitals and from outpatients at the public hospital were collected during four sampling intervals, each of about three months, over a total period of 24 months. During sampling intervals all consecutive eligible female patients were included in the study. (All agreed to participate.) Data from each patient were obtained in a single session. In order to be eligible for inclusion, patients had to have been diagnosed as having either anorexia or bulimia nervosa. Additionally, in the case of outpatients, only those who had attended only one or two outpatient consultations were included. In the case of inpatients, only those who had been hospitalised for a period of less than two weeks at the time of interviewing were included. These criteria ensured that all patients had only recently been accepted into treatment. Some patients had previously received treatment for an eating disorder but were included in the study as long as that treatment had ended more than six months prior to interviewing. Male patients were not included. (During the sampling intervals only two males were diagnosed as having anorexia nervosa.)

All patients were diagnosed by either a senior psychiatrist or a clinical psychologist, both experienced in this area of practice. The diagnoses were based on DSM-III criteria. The researcher was not involved in making the diagnoses.

The final eating disorder sample consisted of 50 anorexics and 30 bulimics. Thirty three percent (n=26) were outpatients and 67 percent (n=54) were inpatients. Table 8.1 presents the sample categorized according to the hospital at which the patients were seen and according to diagnosed eating disorder. Fifty percent of the bulimics were inpatients at Lynton Private Hospital (LPH) and the remaining 50 percent were outpatients at Royal Prince Alfred Hospital (RPAH). Sixty four percent of the anorexics were inpatients at LPH; 14 percent were inpatients at RPAH and 22 percent were outpatients at RPAH.

Table 8.2 outlines the number of hospital admissions that patients had undergone for treatment of an eating disorder, including their admission at the time of interview.

Table 8.1 Patient Sample Categorised by Diagnosed Eating Disorder, Hospital and In/Outpatient Status

	Anorexic				Bulimic			
	Inpatients		Outpatients		Inpatients		Outpatients	
	n	%	n	%	n	%	n	%
RPAH	7	14	22	11	-	-	15	50
LPH	32	64	-	-	15	50	-	-

Table 8.2 Number of Hospital Admissions for Eating Disorder (Including Current Admission)

	Anorexic		Bulimic		All Patients	
	n	%	n	%	n	%
None	9	18	13	43	22	28
1	29	58	13	43	42	53
2	7	14	0	0	7	9
3	2	4	2	7	4	5
4,5 or 6	3	6	2	7	5	6

Table 8.3 presents a comparison of the age, Body Mass Index (BMI)¹, age at onset and length of illness of anorexics versus bulimics. The mean age for the bulimic patients (23.6 years) was higher than the mean age of anorexics (19.9 years). As expected, the mean BMI at the time of assessment and mean BMI on admission (for inpatients) for the anorexics was significantly lower than the corresponding means for the bulimics. The mean BMI for the bulimics (21.3) was at the lower end of the "healthy" weight range (Australian Nutrition Foundation, 1984), while the mean BMI for the anorexics (16.4) was slightly higher than the diagnostic cut off point of 16. (However, the mean BMI upon admission for anorexics - 15.2 - was well under this limit.)

There is some debate concerning how to define or determine the onset of anorexia and bulimia nervosa (Beumont, Abraham, Argall, George, & Glaun, 1978). The figures given in Table 8.3 are derived from the patients' self reports. Mean reported age at onset for anorexics was not significantly different from that for bulimics - both groups had an average reported age at onset of about 17 years. Bulimics had a significantly longer average length of illness than anorexics, reflecting the fact that as a group they were significantly older.

Table 8.3 Mean Age, BMI, Onset and Length of Illness for Anorexics versus Bulimics

	Anorexic		Bulimic		T	DF	P
	\bar{x}	(SD)	\bar{x}	(SD)			
Age	19.9	5.5	23.6	5.6	2.94	78	.004
BMI at interview	16.4	1.6	21.3	2.7	9.90	76	.00001
BMI on admission	15.2	1.5	20.7	2.9	8.80	49	.00001
Age at onset	17.0	4.0	17.4	3.2	0.48	78	.63
Length of illness(mths)	35.6	37.7	72.6	53.9	3.6	78	.0005

1. Body Mass Index (BMI) is calculated using the formula:

$$BMI = \frac{W}{H^2}$$

where W is Weight (kg) and H is Height (m).

A comparison of the patient samples from RPAH and LPH is provided in Table 8.4. The groups were very similar on all dimensions.

Table 8.4 Mean Age, BMI, Onset and Length of Illness for Lynton Private Hospital (LPH) Patients and Royal Prince Alfred Hospital (RPAH) Patients

	LPH		RPAH		T	DF	P
	\bar{x}	(SD)	\bar{x}	(SD)			
Age	21.1	6.6	21.5	4.6	0.31	78	0.76
BMI at interview (AN)	16.4	1.7	16.5	1.6	0.16	48	0.88
BMI at interview (BN)	21.3	2.5	21.3	3.1	0.05	28	0.96
BMI on admission (AN)	15.3	1.5	14.9	1.6	0.69	37	0.50
BMI on admission (BN)	20.7	2.9	-	-	-	-	-
Age at onset	16.9	4.2	17.5	3.0	0.61	77	0.55
Length of illness (months)	49.4	45.4	50.8	51.7	0.13	77	0.90

8.1.2 Control Sample

The control subjects for the study were obtained from three sources. The majority of subjects was obtained from two large banking corporations. A smaller sample of school students was also obtained.

a) Bank Sample

In their review of research problems in the eating disorders Shaw and Garfinkel (1990) call for more representative samples drawn from the community and family practice settings to be used in research on eating disorders. Banking corporations were chosen as a source of subjects for the present study for a number of reasons. First, these organisations have employment positions which cover a wide range of education levels, and so may be seen to reflect the composition of the general population in this respect. Secondly, there is evidence that university and college student populations, who are often used in eating disorder research, have a higher incidence of eating disorders and eating pathology than the general working population (Welch & Hall, 1989). There is no suggestion that this is the case for bank employees. Finally, the age range of bank employees is sufficiently wide to allow age matching with the majority of the eating disorder patients.

Among the demographic variables for which there was prior information about control subjects it was considered that age was the most important on which to attempt to match patients and controls. As the control data were collected simultaneously with eating disorder patient data it was not possible to match the samples exactly. Therefore the control sample was selected to age-match as closely as possible a large eating disorder patient sample previously obtained at Royal Prince Alfred Hospital (Al-Alami, 1986).

Each banking corporation provided the researcher with a list of all employees working at one of its large city offices. The list provided name, sex, age and occupational status for all employees. A random stratified sample of employees was drawn from each bank to approximate the age distribution of the patient sample.

A preliminary letter was sent to all selected bank employees. The letter briefly outlined the purpose of the study - described in very general terms as an investigation of lifestyles - and sought recipients' participation. (A copy of this letter is included in Appendix 1.) The letter was followed by a personal visit by the researcher to each subject during which an interview appointment was arranged. (Data from each subject were obtained in a single session.)

One hundred and twenty Commonwealth bank employees were approached by letter. Of these, four females and eight males were unable to be included as they had either resigned from the bank or had been transferred to other bank branches by the time data collection had begun. Two females and two males refused to participate in the study, citing heavy workload as their reason. The final sample from the Commonwealth Bank thus comprised 54 females and 50 males, with an overall participation rate (calculated on the number of people actually able to participate) of 96 percent.

Thirty Westpac Bank employees were approached by letter and introductory interview. Three female employees were no longer employed by the bank at the time of interviewing and a further two employees (one

female and one male) refused to participate, also citing heavy workload as their reason. The final sample from Westpac comprised 11 females and 14 males, with an overall participation rate of 93 percent.

Thus an extremely high participation rate was obtained for the bank sample. This was due in large part to the fact that the management of both banks permitted staff to participate in the study during working hours, and actively encouraged them to do so. This extremely high rate ensured that the sample was a representative one.

b) School Sample

A smaller sample of high school students was obtained to age-match school aged eating disorder patients. This sample was obtained from several classes at two public coeducational high schools. A random stratified sample (approximately the same age distribution as Al-Alami's (1986) sample) was selected from class rolls. Students were initially asked to participate by their teachers, and 100 percent of students agreed to do so. The school sample comprised 5 males and 17 females. All students participated during school hours.

c) Total Control Sample

The final sample of controls comprised 82 females and 69 males, with an overall participation rate of 96 percent.

8.1.3 Comparison of Patient Samples and Control Samples

Table 8.5(a) compares the mean age, weight and height of the four groups in the study, and Table 8.5(b) presents the ranges of these variables for each group. (The data for the sample description were analysed using the methods described later in this chapter.) The average age of the male controls was significantly higher than the mean age of the female controls and anorexics. The latter two groups were well matched with respect to age, with mean ages of 19.3 and 19.9 years respectively. The mean age of the bulimics (23.6 years) was close to the average male age of 22.6 years, and was significantly higher than the average ages of the female control and anorexic groups.

The female controls and bulimics were extremely well matched with respect to the important variables of weight and BMI, with both groups having a mean weight of approximately 58 kg and a BMI of approximately 21. As expected, the anorexics had a significantly lower mean weight and BMI than these two groups, while the mean weight and BMI of male controls was significantly higher than that for all the female groups. Mean heights followed the same pattern as weight and BMI, with the anorexic group having a significantly lower mean height than the other two female groups. Bulimics and female controls had similar mean heights. As expected, the mean height of males was significantly greater than the mean height of females. (It should be noted here that subjects were not weighed by the researcher. It was considered that this would be unduly invasive and unnecessary. Current weight is one of the items included in the cover sheet for the Eating Disorders Inventory and these data were used to establish subjects' weight. Several studies have demonstrated that males' and females' reported weights and heights are very close to their actual weights and heights, with neither sex showing a consistent bias to over- or underestimate either dimension (Lass, Andes, McNair, Cline, & Pecora, 1982).)

Table 8.5(a) Mean Age, Weight, Height and BMI for All Subject Groups

	Anorexic n=50	Bulimic n=30	Female Control n=82	Male Control n=69	Approx LSD ²	S	F	DF
Age	19.9	23.6	19.3	22.6	2.42	4.51	11.0	3.227
Weight (kg)	43.1	58.5	58.0	71.7	4.94	9.20	89.4	3.220
Height (m)	1.61	1.66	1.64	1.76	.043	0.08	46.2	3.221
BMI	16.4	21.3	21.5	23.0	1.45	2.7	58.4	3.220

Table 8.5(b) Range of Age, Weight, Height and BMI for all Subject Groups

	Anorexic n=50	Bulimic n=30	Female Control n=82	Male Control n=69
Age	12-38	17-35	12-28	12-30
Weight (kg)	31-56	47-84	45-90	49-96
Height (m)	1.41-1.76	1.50-1.80	1.50-1.80	1.50-1.93
BMI	13.2-19.3	17.6-28.2	15.9-31.6	18.5-32.5

2. Approximate least significant difference (LSD) is an approximation of the smallest difference required between means for statistical significance (see Section 8.5.2).

Tables 8.6(a) and (b) present the categorized occupations of the patient and control samples respectively. Twenty six percent of the patient sample were high school students and all but one of these students were anorexics. A similar percentage (21 percent) of female controls were school students. Twenty percent of the bulimics and six percent of the anorexics were full time tertiary students. The majority of non-student subjects across all patient and control groups were in occupations that do not require tertiary qualifications. The largest employment category for anorexics and bulimics was the miscellaneous "skilled" occupational category, which included jobs such as computer operator, video technician and marketing assistant. Fourteen percent of anorexics and 20 percent of bulimics were employed in this class of occupations. A further 14 percent of anorexics and seven percent of bulimics were employed in miscellaneous "unskilled" occupations. This category included jobs such as shop assistant, library assistant and waitress. Three anorexics (six percent) and six bulimics (17 percent) were employed in professional occupations, such as nursing and teaching.

The occupations of the bank employees, shown in Table 8.6(b), were categorized according to the banks' own job classification system. The majority of both males and females worked in some clerical capacity, although the exact nature of the work varied across positions. Many of the managers and all of the research officers were working in specialized fields such as accounting, economics and psychology.

Table 8.6(a) Patient Sample Categorized by Occupation

	Anorexic		Bulimic		All Patients	
	n	%	n	%	n	%
School student	20	40.0	1	3.3	21	26.3
Tertiary student	3	6.0	6	20.0	9	11.3
Tertiary trained	3	6.0	5	16.7	8	10.0
<u>Occupation</u>						
Misc. skilled	8	16.0	6	20.0	14	16.3
Misc. unskilled	7	14.0	2	6.7	9	11.3
Clerical/secretarial	2	4.0	4	13.3	6	7.5
Housework	2	4.0	3	10.0	5	6.3
Unemployed	3	6.0	3	10.0	6	7.5
Own business	2	4.0	0	0.0	2	2.5

Table 8.6(b) Control Sample Categorised by Occupation (Using Banks' Occupational Classification Schemes)

	Female Control		Male Control	
	n	%	n	%
School student	17	20.7	5	7.3
Typist	5	6.1	-	-
General clerk	40	48.8	26	37.7
Senior clerk	12	14.6	15	21.7
Manager	6	7.3	19	27.5
Research officer	2	2.4	4	5.8

From Tables 8.6(a) and (b) it is difficult to assess how well the patients and controls were matched in terms of occupational categories. Table 8.7, however, which sets out the educational levels of the groups, enables a more meaningful comparison to be made. About 70 percent of the patients had obtained their Higher School Certificate (HSC) or equivalent qualification, as had a similar percentage of male controls. The percentage of female controls who had obtained their HSC was slightly lower at 60 percent. (Chi-square for the comparison of the combined patients group with male and female controls is non-significant at 1.8.) Fifteen percent of the patient sample had obtained a tertiary qualification of some kind. About nine and ten percent of female and male controls respectively had a tertiary qualification. (Chi-square for the comparison of the combined patients group with male and female controls is non-significant at 1.1.) Thus, the educational profiles of the groups were very similar.

Table 8.7 Level of Education Attained by Subjects (School Students Excluded)

	Anorexic		Bulimic		All Patients		Female Control		Male Control	
	n=30		n=29		n=59		n=65		n=64	
	n	%	n	%	n	%	n	%	n	%
HSC	21	70.0	21	72.4	42	71.2	39	60.0	43	67.2
No HSC	9	30.0	8	27.6	17	28.8	26	40.0	21	32.8
Tertiary	4	13.3	3	17.2	9	15.3	6	9.2	7	10.9
No tertiary	26	86.7	24	82.8	50	84.7	59	90.8	57	89.1

The living arrangements of subjects in each group are categorized and compared in Table 8.8. The vast majority of anorexics (80 percent) lived at home with their parents. Only ten percent of anorexics lived with a spouse or partner. By contrast, 37 percent of the bulimics lived with a spouse or partner, and only 40 percent lived with parents. (Chi-square for the comparison of accommodation arrangements between anorexics and bulimics is 15.2, $df=3$, $p < .025$.) About 60 percent of the control females and males lived with their parents, and approximately 27 percent of controls lived with a spouse or partner. Less than ten percent of subjects in all groups lived in non-family group accommodation. Living alone was the least common living arrangement for all groups except bulimics, of whom 13 percent lived by themselves. Overall, the control groups closely resembled the **combined** patient group with regard to living arrangements. (The chi-square for this comparison is non-significant at 3.32, $df=6$.)

Table 8.8 Type of Accommodation in which Subjects Live

	Anorexic		Bulimic		All Patients		Female Control		Male Control	
	n=50		n=30		n=80		n=82		n=69	
	n	%	n	%	n	%	n	%	n	%
With parents	40	80.0	12	40.0	52	65.0	52	63.4	42	60.9
With partner	5	10.0	11	36.7	16	20.0	20	24.4	21	30.4
Non-family group	4	8.0	3	10.0	7	8.8	7	8.5	4	5.8
By self	1	2.0	4	13.3	5	6.2	3	3.7	2	2.9

The pattern of relationships for the female control group was reasonably similar to that for the males, as shown in Table 8.9. The pattern of relationships amongst anorexics was quite dissimilar to that for bulimics. Seventy percent of the anorexic patients were single, compared to only 33 percent of the bulimics. Thirty percent of the bulimics were married or in a cohabiting relationship, compared to only 12 percent of the anorexics. (The chi-square for the comparison between anorexics and bulimics with regard to relationships is 11.7, $df=3$, $p < .01$.) Compared to the combined patient group slightly more of the controls were in a committed relationship of some kind. (Chi-square for the comparison of the

combined patient group with male and female controls is 18.7, $df=6$, $p<.01$.) Overall, however, the control groups were fairly similar to the combined patient group with regard to relationship and marital status.

Table 8.9 Marital or Relationship Status of Subjects

	Anorexic		Bulimic		All Patients		Female Control		Male Control	
	n=50		n=30		n=80		n=82		n=69	
	n	%	n	%	n	%	n	%	n	%
Single	35	70.0	10	33.3	45	56.3	28	34.2	33	47.8
Steady girl or boyfriend	9	18.0	11	36.7	20	25.0	37	45.1	16	23.2
Cohabiting	3	6.0	2	6.7	5	6.3	2	2.4	1	1.5
Married	3	6.0	7	26.3	10	12.5	15	18.3	19	27.5

8.1.4 Summary of Comparisons Between Patient and Control Groups

The anorexic group were significantly different from the bulimics on a number of dimensions, including weight, height, age, type of accommodation and relationship status. The two patient groups were similar with regard to occupations and educational achievement. Given the differences between the patient groups it was not possible for the control groups to match both anorexics and bulimics on all dimensions. However, the female controls and bulimics were well matched with respect to the important dimensions of weight and BMI. The four groups were also reasonably similar in age, with the average age of bulimics and male controls being very well matched, as were the average ages of anorexics and female controls. For the other dimensions of accommodation, education and relationship status, the control groups fairly closely resembled the combined patient group.

8.2 Measures: Rationale and Choice

All subjects were administered a standardized interview, which was recorded on an audiotape. They were also given three short written questionnaires at set times throughout the interview, and six written questionnaires after completion of the interview.

8.2.1 Rationale

The hypotheses of the present study were investigated using both qualitative and quantitative methods. The specific methods employed to assess each hypothesis depended on the nature of the issues being examined and on whether relevant pre-existing questionnaires were available. Thus some hypotheses were examined using questionnaires only, others were assessed using qualitative measures (via the interview), while yet others were tested using a combination of qualitative and quantitative measures.

There were two reasons for selecting an interview as the method of assessing some of the research questions. First, one of the major aims of the present study was to obtain qualitative data on eating and body image related attitudes which to date have been mainly assessed by fixed choice questionnaires. A free response interview elicits such qualitative data and offers many important advantages over other methods of data collection.

One major advantage of personal interviews is the ability of the interviewer to notice and correct the respondents' misunderstandings, to probe inadequate or vague responses, and to answer questions and allay concerns. This ability is important in obtaining complete and meaningful data. Furthermore, the interviewer can control the order in which the respondent answers the questions, which is not possible with written questionnaires. The interviewer can also control the context of the interview, including the possible biasing presence of other people.

However, the most important advantage of interviews as a method of data collection concerns data quality. A face-to-face interviewer can best establish rapport and motivate the respondent to answer fully and

accurately, thus ensuring data of high quality. Personal interviews also allow for a relatively long period of contact with subjects, and this permits extensive, in depth questioning about complex or multi-faceted issues. (Detailed discussions of the advantages of qualitative data are provided by Bryman, 1988; Kidder, Judd, & Smith, c1986; Patton, 1987 and 1990.)

The second reason for selection of an interview as the primary method of assessment arises from the fact that several of the questions posed in this study have not been examined before. The nature of these questions (awareness of sociocultural ideals, criticism of such ideals and so on) is such that they could be explored most fully using a free response format.

In the specific context of eating disorder research Fairburn and Garner (1986) support the use of such measures. They state:

"One limitation of the proposed diagnostic scheme [for the classification of eating disorders] is that no guidelines are provided for the identification and definition of the characteristic extreme concerns about weight and shape. Although it has been accepted for many years that such concerns are a core feature of anorexia nervosa, they have been the subject of surprisingly little research. In part, this must be attributed to the difficulties inherent in their assessment. While several self-report measures address these concerns ... it is questionable whether self-report measures are truly capable of evaluating complex beliefs and values of this type" (pp.415-416).

In a later paper Cooper and Fairburn (1987) outline the advantages of a semi-structured interview for eliciting such concerns.

8.2.2 Interview

a) Principles Underlying Interview Design

The interview format was semi-structured and consisted of standardized questions presented verbally by the researcher in a fixed order. Most of the questions were free response or open-ended items. The interview was designed to minimize demand effects, and to encourage subjects to respond freely.

The questions were designed to test several of the study's hypotheses, and specific sets of questions were devised accordingly. The exception to this was hypothesis 6. This hypothesis addresses the nature or type of body shape and weight concerns reported by males versus females. It was considered that the nature of subjects' concerns would emerge from their responses to questions directed at several of the study's other hypotheses (that is, hypotheses 1-5). Therefore, hypothesis 6 was tested by drawing together responses from several sets of questions.

Each set of questions was designed to cover the relevant research question as thoroughly as possible. Thorough coverage was achieved in two ways. First, many questions were posed in one form and subsequently in their reverse form, for example, "What do you dislike about yourself?" and "What do you like about yourself?". Secondly, several dimensions of each question were examined; for example subjects' satisfaction with their bodies was assessed with reference to their weight, shape, exercise, body parts and so on.

One of the advantages of open-ended items is that subjects' reasoning and motivations can be explored. Many of the interview questions were phrased in two parts: the first part sought the respondents' views concerning an issue, and the second asked them to elaborate upon or justify their view. (For example, the question "Are you happy with your present shape?" was followed by "Why" or "Why not?".)

One of the questions of interest in the study was whether or not subjects used different dimensions to evaluate females and males. For this reason many questions were posed with regard to both females and males, for example, "What do you think constitutes being attractive for a woman?" and "What do you think constitutes being attractive for a man?".

The interview included a few fixed choice items for which the choices were verbally presented. The order in which possible responses were presented for these items was randomised across subjects.

The overall sequence of questions within the interview followed the "funnel" principle (Moser & Kalton, 1975) with general questions being followed by increasingly specific ones. This practice contrasts with the situation in which answers to specific questions are elicited first, possibly prompting or influencing subjects' responses to general questions. The funnel principle was also followed within sets of related questions. Standard transition statements were included between sets of questions in order to maximise the continuity of the interview.

The questions were as clear and unambiguous as possible. If subjects gave an incomplete response to a question, neutral probes were used to elicit more information or to clarify the question, following the guidelines proposed by Moser & Kalton (1975). A standard list of probes was included for a few questions; if these were required, they were presented in a randomised order.

b) Pilot Interview

A draft interview was pilot tested on ten consecutive patients and ten university students (five males and five females). After analysis of these interviews ambiguous questions were clarified and non-informative questions eliminated. The pilot data were not included for analysis, and the subjects were not interviewed again for the study proper.

c) Interview Content

As described earlier the interview contained several sets of questions designed to assess some of the study's hypotheses. Throughout the interview several themes were addressed relating to current cultural body shape related concerns. As well as the specific themes of body shape and weight, issues of attractiveness, health, physical fitness, fashion and exercise were examined.

The complete interview is presented in Appendix 2.

A standard introductory paragraph was read to all subjects before commencement of the interview questions. The introduction stressed the confidentiality of the interview and the need for subjects to give their own

opinions. The first section of the interview contained demographic questions and introductory items. These items were designed to introduce lifestyle related issues gradually in a non-invasive way and to establish rapport with the respondents. (Some of these items were included solely for this purpose and were not designed to assess any of the hypotheses.)

The second section of the interview contained general questions which were not specifically related to food or body image. These questions were designed to assess the salience of food and body shape issues in subjects' evaluation of themselves and others. Placing these questions near the beginning of the interview ensured that responses were not prompted or directed by discussion of food and body image issues.

The interview subject areas can be summarised in approximate order of presentation as follows:

- **introductory** questions - demographic items (occupation, education, place of residence, marital status etc) and questions to establish rapport;
- non-directed questions assessing salience of weight and body shape in evaluation of **self** and **other people**;
- weight and shape related **behaviours**;
- **satisfaction** with weight and body shape and satisfaction with related behaviours;
- salience of weight and body shape in attitudes towards **other concepts**;
- salience of eating, exercise and body shape in **lifestyle** and **general functioning**;
- **awareness of prevailing cultural ideals** concerning weight and body shape;

- **perception of the influence of cultural pressures** on own attitudes and on those of other people of the same sex;
- **criticism of prevailing cultural ideals** concerning body shape;
- **knowledge of anorexia and bulimia nervosa** and the effect of this knowledge on subjects' own attitudes and behaviours (These questions were only asked of controls. The data from this section of the interview have been published as a separate paper and appear in Appendix 3); and
- **differences in the way in which men and women are evaluated** with regard to weight and body shape. These were assessed throughout the interview.

In order to quantify responses to some of the questions, three checklists were administered to each subject at set times during the interview. These were two self description checklists, and a set of items that summarized responses to a subset of interview questions on a Likert scale. These checklists are described in detail below.

The interview contained a set of questions designed to elicit subjects' definitions and usage of various body related adjectives, such as "fat" and "slim". These questions were of interest in relation to one of the hypotheses of the study (that is, salience of body shape and weight in attitudes towards other physical concepts) but they also provided a measure of subjects' usage or understanding of these commonly used words. Thus the researcher was able to understand responses in terms of the subjects' own meanings of the words in question.

8.2.3 Questionnaires

Six questionnaires were administered to all subjects after completion of the interview. Brief verbal instructions were given for each questionnaire. All subjects completed them with the researcher present. The order in which questionnaires were presented was randomised across subjects.

The following questionnaires were administered:

- Eating Attitudes Test (EAT) (Garner & Garfinkel, 1979);
- Eating Disorders Inventory (EDI) (Garner & Olmsted, 1983) - cover sheet plus the Body Dissatisfaction, Bulimia, and Drive for Thinness subscales;
- Body Shape Questionnaire (BSQ) (Cooper, Taylor, Cooper, & Fairburn, 1987);
- Attitudes towards Women Scale (AWS) (Spence, Helmreich, & Stapp, 1973);
- Bem Sex Role Inventory (BSRI) (Bem, 1981); and
- Beck Depression Inventory (BDI) (Beck, Ward, Mendelson, & Erbaugh, 1961).

During the course of data collection the researcher obtained permission to use a new Australian questionnaire designed to assess attitudes towards women. This questionnaire, the Women in Society Questionnaire (WSQ), was intended to improve on existing scales (Lewis, Grieve, & Bell, 1987). The WSQ was administered to all patients in the last sampling interval and to a small percentage of the controls.

Each of these measures has been shown to be valid and reliable (AWS - Smith & Bradley, 1980; Stanley, Boots, & Johnson, 1975; BSQ - Cooper, Taylor, Cooper, & Fairburn, 1987; BSRI - Bem, 1981; Schmitt & Millard, 1988; EAT - Berland, Thompson, & Linton, 1986; Garner & Garfinkel, 1979; Garner, Olmsted, Bohr, & Garfinkel, 1982; Mann et al., 1983; Raciti & Norcross, 1987; EDI - Garner, Olmsted, & Polivy, 1983a and b; Raciti & Norcross, 1987; Welch & Hall, 1989 and 1990).

In addition to these questionnaires, all subjects were given the three checklists already mentioned to complete during the course of the interview. These measures were developed by the researcher specifically

for the present study. They were not developed as standardized questionnaires, but rather were intended merely to quantify some of the issues addressed by the interview.

Immediately following section two of the interview, subjects were given two identical checklists to complete, each containing 20 body image related adjectives, together with 35 general personality adjectives. These two measures were developed as measures of hypotheses 1, 3 and 4. The first of these checklists required subjects to mark those words which they felt "best" described them. For the second list subjects were asked to mark those words which best described the way they would like to be. Subjects were permitted to mark as many words as they wished.

The 20 body image adjectives related to the cultural concerns which were addressed throughout the interview, including health, weight, fashion, attractiveness and fitness. The remaining 35 items consisted of the 30 BSRI items and five "filler" adjectives.

After section five of the interview subjects were given a set of questions which quantified their responses to some of the open-ended interview questions on a Likert scale. This checklist was designed to measure hypotheses 1, 2 and 6, relating to body image related behaviours and satisfaction with body image and behaviours, and salience of weight and body shape in everyday functioning.

Each questionnaire and checklist is reproduced in Appendix 4.

8.2.4 Summary of Measures Used to Test Hypotheses

The specific measures employed for testing each hypothesis are summarised in Appendix 5.

8.3 Procedure

8.3.1 Interview Setting

The control subjects were seen individually in a private office in the banks' buildings. All subjects were seen during working hours. During patient sampling periods all outpatients were interviewed by the researcher following their consultations with Professor Peter Beumont or Dr. Stephen Touyz. Inpatients were seen at suitable times throughout the day. All patients were seen in a private office at the hospital in which they were being treated.

8.3.2 Administration of Interview and Questionnaires

As already noted, the interview was prefaced by a brief discussion in which subjects were informed that all information received would be treated in confidence. Subjects were given a brief and very general description of the interview's purpose - to find out about peoples' lifestyles (see Appendix 2 for full transcript of opening remarks). Permission was sought from subjects to tape the interview. All subjects agreed to this.

All interviews were conducted by the researcher. Time taken to complete the interview, excluding completion of the questionnaires, ranged from 45 minutes to 100 minutes, with an average time of 80 minutes.

8.3.3 Coding of Interview Responses

A system for coding responses to some of the interview items was formulated at the stage of questionnaire design. These items included demographic variables and questions for which there was a limited range of possible responses.

The remaining open-ended interview questions were coded after all of the interviews had been conducted. A two stage system of coding was employed. Initially the data were coded using the inductive approach outlined by several researchers (for example Lazarsfeld, 1958; Nachmias & Nachmias, 1976). This method of coding involves categorising the data as closely as possible to the raw data, allowing the complexity of the

responses to be retained. This type of coding fulfilled one of the major aims of the study: to obtain qualitative data concerning body image and related attitudes and behaviours. After the initial detailed coding scheme was applied, the data were recoded using a simplified set of categories.

a) Stage 1 of the Coding System

A random sample of forty interviews was drawn. Answers to each open-ended question were noted until an exhaustive set of categories was established for each question. The coding system was constructed using dimensions which were relevant to the study's hypotheses, but retained other details of subjects' responses. An example of such a coding frame is as follows:

Question: Can you describe to me a day in which at the end of the day you would feel pleased with the way you had behaved - a day about which you could say "I've done well today"?

Coding frame for question:

1. eating/weight related success
2. school/job success
3. interpersonal success
4. sport success
5. general success - things "going well"
6. "All days are good."
7. "I never have a good day."
8. don't know
9. other response

Categories containing very few cases were combined into a miscellaneous "other response" category. As the questions were open-ended, subjects were able to give more than one response and the number of responses to each question varied across subjects. Missing data were allocated a separate code.

As the interview tapes were played the appropriate categories were marked on coding forms as the questions were answered. Responses which fell into the "other" or miscellaneous categories were written out in full. The data were fully analysed using this initial coding system.

As the researcher acted as both interviewer and coder several procedures were followed to minimize bias in the coding procedure. The completed tapes were labelled with an identifying number by the researcher. The first section of the interview, containing indentifying demographic questions, was coded first for all subjects. The tape was then stopped and the first section of the next tape was coded and so on.

A colleague then renumbered the tapes in a random fashion and retained a list of the corresponding original numbers. The researcher then coded the remaining part of the interview for each subject. The researcher was unaware of the original identity number of the subjects until all coding had been completed.

b) Stage 2 of the Coding System

The data were then recoded using a simplified coding system, in which all responses to each question were reduced to one of two alternative categories. Responses to open-ended questions were recoded to retain only the specific variables relevant to the research hypotheses. An example of a simplified coding frame is as follows:

Question: Can you describe to me a day in which at the end of the day you would feel pleased with the way you had behaved - a day about which you could say "I've done well today"?

Revised coding frame for question:

1. eating/weight related success mentioned
2. eating/weight related success not mentioned (other criteria given)

Responses to all fixed choice questions were also dichotomised, collapsing the original categories of the variable into two categories. For instance, the items on the checklist presented to subjects after section five of the interview were originally scaled on a six point scale. This scale was reduced to a two point scale after recoding. An example of this simplified coding is as follows:

Question: In general, how often are you happy with your eating habits?

Revised coding frame for question:

1. often, usually or always
2. never, rarely or sometimes.

All recoding of the interviews using the second simplified coding categories was completed using a computer program.

The recoded responses were used for a second stage of analysis for a subsection of the data, the results of which appear in Chapter 14. They were also used in assessing the validity of part of the interview.

c) Coding of Interview Questions Concerning Criticism of Cultural Ideals

As shown in Appendix 2 there were several interview questions designed to assess the hypotheses concerning criticism of current social ideals concerning body shape. However, after completion of several interviews it became apparent that respondents made comments relevant to this issue throughout the interview and not only in response to the questions designed for this purpose. For this reason a criticism rating score based both on responses to questions specifically addressing these issues and

other relevant responses was incorporated into the coding system. Each respondent was given a "criticism" rating at the completion of coding of their interview. The rating scale contained three levels which can be summarised briefly as follows:

1. Uncritical of societal ideals - subject endorses current ideals (outlined in Chapter 5) concerning body shape, slimness, and so on and subject expresses view that such ideals are reasonable or desirable.
2. Partially critical of societal ideals - subject expresses view that current body shape ideals are overemphasized in society, or that current ideals are too difficult to attain; subject does not take issue with the notion of a body shape ideal per se.
3. Critical of societal ideals - subject expresses view that the notion of a body shape ideal is wrong or unfair, that people should not be judged according to any type of body shape criteria at all.

8.4 Measures: Validity and Reliability

8.4.1 Validity of Interview

a) Correlation Between Responses to Sets of Interview Questions and Scores on Related Questionnaires

Exploratory interviews using open-ended questions are not easily subjected to tests of validity. There are thus no standard measures for assessing their validity. However, estimates of construct validity of the interview could be obtained by comparing responses to interview questions (coded using the condensed coding frames) with scores on standardized questionnaires purporting to tap the same dimension.

The interview assessed several dimensions of subjects' body image attitudes and behaviours. Two of the dimensions, satisfaction with body image, and body image related behaviour, were also tapped by the standardized questionnaires administered at the end of the interview. While these measures served different purposes (the interview to elicit

qualitative data, and the questionnaires to elicit quantitative data) it was possible to estimate the correlation between them using the second dichotomised coding system. This coding system reduced subjects' responses to one of two alternatives and hence all responses could be coded as either one or zero.

The questionnaires which measured subjects' body satisfaction were the BSQ and the Body Dissatisfaction Subscale of the EDI. The questionnaires which measured body image related behaviours were the EAT and the Drive for Thinness subscale of the EDI.

A single score summarizing subjects' responses to each set of interview questions could be obtained by summing their recoded responses for each question in the set. The possible score ranged from a maximum equal to the number of questions in the set to zero. This process reduced responses to several interview questions to a single score.

The remaining sets of interview questions could not be validated in this way, as the issues they addressed had not been addressed via questionnaires.

Table 8.10 shows the correlation between questionnaire totals and interview summary scores. Correlations were calculated for the entire sample, and for the female subjects only. There were consistently high significant correlations ($p < .001$ for all correlations) between the questionnaire totals and summary interview scores, both for the entire subject group and for females only. This approximate measure indicates that the sets of interview questions which were able to be assessed had high construct validity.

Table 8.10 Correlation Between Questionnaire Scores and Corresponding Summarised Interview Scores

Set of Interview Questions	Corresponding Questionnaires	Pearsons R for Correlation of Interview Questions with Questionnaires	
		All Subjects n=231	Females Only n=162
Satisfaction with weight and body shape	BSQ	0.74	0.67
	Dissatisfaction Subscale (EDI)	0.71	0.63
Weight and body shape related behaviours	EAT	0.74	0.72
	Drive for Thinness Subscale (EDI)	0.80	0.77

8.4.2 Correlation Between Criticism Questions and Overall Criticism Score

The seven questions assessing criticism of body image related ideals were reduced to a single score for each subject. This was achieved using the dichotomised coding system and summing subjects' responses to the seven questions.

The three-level criticism score allocated to each subject was based on a combination of their responses to a set of seven relevant interview questions and other comments made throughout the interview. A reasonable correlation could therefore be expected between subjects' summary interview totals and criticism scores.

The cross-tabulation of summarized interview scores, ranging from one to seven, and the three-level criticism score (zero, one, or two) is shown in Table 8.11. Seven represents the least critical total, and zero the most critical.

Table 8.11 shows a significant association between subjects' summarised interview scores and their score on the three-level criticism scale ($\chi^2=64$, $p<.001$). It can therefore be concluded that the allocation of criticism scores was significantly related to their responses to relevant interview questions, and was not arbitrarily assigned.

Table 8.11 Cross tabulation of Summarised Interview Scores and Three-Level Criticism Scores

Summarised Interview Score	Three-level Criticism Score							
	Not Critical		Part Critical		Critical		Total	
	n	(col %)	n	(col %)	n	(col %)	n	(col %)
1	3	(6.3)	5	(5.4)	4	(4.4)	12	(5.2)
2	12	(25.0)	22	(23.9)	7	(7.7)	41	(17.8)
3	22	(45.8)	36	(39.1)	13	(14.3)	71	(30.7)
4	10	(20.8)	25	(27.2)	32	(35.2)	67	(29.0)
5	1	(2.1)	3	(3.3)	18	(19.8)	22	(9.5)
6	0	(0)	1	(1.1)	16	(17.6)	17	(7.4)
7	0	(0)	0	(0)	1	(1.1)	1	(0.4)
Total	48	(100)	92	(100)	91	(100)	231	(100)

χ^2 (df=12) = 64.4, p<.001

8.4.3 Inter-Rater Reliability

a) Open-ended Questions

After initial coding of all interviews a random stratified sample of 45 interviews was obtained from which inter-rater reliability was calculated for the open-ended questions. Interviews with 30 controls and 15 patients were selected, maintaining the same ratio of controls to patients as was in the complete sample. A random sample of five open-ended interview questions was selected on which to base the reliability check.

A colleague who was unaware of the research hypotheses and the original coding given to the interviews listened to the 45 interviews in their entirety and coded the five check questions for each of the interviews. The coding frames for the interview were explained to the colleague before she began coding.

Details of the way in which inter-rater reliability was estimated, and reliability, sensitivity and specificity measures for each of the five check questions, are provided in Appendix 6. The average reliability across the five check questions was 0.98, an extremely high correlation. This result may be due to the fact that the subject matter dealt with in the questions was relatively well defined.

b) Criticism Score

A random sample of 70 taped interviews (consisting of the 45 interviews in the first reliability sample and a further 25 interviews) was drawn up from which to calculate inter-rater reliability for the three-level criticism ratings. This sample comprised interviews with 45 controls and 25 patients.

The researcher's colleague (who had also co-rated the five open-ended check questions) listened to the 70 interviews in their entirety before allocating a criticism score. The meanings of each level of the criticism scale were explained to the co-rater before she began coding.

The index of reliability or agreement used was the number of interviews for which the researcher and colleague awarded the same criticism score divided by the number of interviews checked (i.e. 70). Inter-rater reliability for control interviews was 0.88 and for patients was 0.84. Overall reliability was 0.87.

8.4.4 Conclusions from Validity and Reliability Measures

Measures of inter-rater reliability indicate that the coding system employed had very satisfactory inter-rater reliability both for coding of open-ended questions and the three-level criticism scale.

Measures of validity indicate that roughly scaled interview responses correlated significantly with standardized questionnaires purporting to measure the same dimension. A significant association was also found between subjects' scaled responses to relevant interview questions and their score on the more broadly based criticism scale.

8.5 Summary of Statistical Procedures

As outlined above, most of the study's hypotheses were tested using interview questions. A subset of the hypotheses were also tested using questionnaires and the remainder were assessed using questionnaires only.

The main statistical techniques used to analyse the questionnaire and interview data are discussed below. (Other types of analysis employed only once or twice will be identified as the relevant results are outlined in Chapters 9 to 14).

8.5.1 Analysis of the Responses to the Interview

Responses to the fixed single choice interview questions were tabulated and categorized by group. Responses to the scaled items presented to respondents during the interview were also analysed in this manner.

For open ended questions respondents were able to offer as many responses to questions as they wished. Each response for a question was tabulated separately and categorized according to group. Chi-squared statistics were calculated for each table.

There is no agreement in the statistical literature about the minimum expected value allowable for cells for the calculation of chi-square (Ostle & Mensing, 1975). Everitt (1977) cites Lewontin and Felsenstein (1965) who state that "the 2 x c table can be tested if all the expectations are 1 or greater" (Everitt, 1977, p.40). Snedecor and Cochran (1967) also present this rule for minimum expected values. This rule was followed for the present analysis. Everitt points out that this rule is extremely conservative. When frequencies in a table did not meet these criteria the chi-squared for that table was not calculated. (The practice of pooling classification categories in order to overcome the problem of small expected frequencies was avoided because of the many problems associated with this procedure (Everitt, 1977).)

Standardized residual values were calculated for all cells of the tables. The residuals were examined for each table to obtain an indication of the statistical significance of the contribution of individual cells to the overall χ^2 . Haberman (1973) suggests this procedure.

As many chi-squared calculations were computed a conservative alpha level of 0.01 was generally used throughout the analysis. Some findings which were significant at the 0.05 or 0.025 level are discussed where they are of interest in the context of other findings. For these results the level of significance is stated in the text.

Hypotheses 1-7 and 9 propose a continuum of findings with patients most concerned with the specific issue being assessed, followed by female controls, with males least concerned. For these hypotheses all groups were included in the chi-square analysis.

Males were not included in hypotheses 8, 10, 11 and 12 and therefore chi-square statistics were calculated for the comparison between the female groups only. While no hypotheses were put forward regarding the males, the comparison between the female controls and males was nevertheless of interest. Therefore the chi-square statistics for the comparison between the male and female controls were also calculated and are reported in the tables.

As there were a great many different responses to the open ended questions only the most frequent responses and responses for which there were significant differences among groups are presented. Residuals are not reported.

8.5.2 Statistical Analysis Used For Questionnaire Data

The majority of questionnaires were analysed by analysis of variance (ANOVA). One way analysis of variance, with the four subject groups forming the independent variable, was carried out using a standardized procedure for each ANOVA.

Initially, an overall F test was conducted and diagnostic checks were undertaken at this point to ascertain whether the fundamental assumptions underlying ANOVA had been met. Two important assumptions of ANOVA are firstly that observations are drawn from randomly distributed populations, and hence that errors are randomly distributed; and secondly that the variances of the populations are equal (Kirk, 1968). See Appendix 7 for a full description of the assumptions underlying hypothesis testing based on the F distribution.

Everitt and Dunn (1983) stress that the plotting of variables is of considerable importance when assessing the applicability of a given model to a set of data. For ANOVA they specifically recommend examination of residual values. Residual values are defined as the observed responses minus responses predicted by the model ($y_i - \hat{y}_i$). In accordance with Everitt and Dunn's recommendations, two plots of the residuals were obtained for each ANOVA:

1. residuals plotted against the fitted values of the response variable. This plot revealed whether the assumption of homogeneous variances had been met; and
2. residuals plotted against the expected normal order scores of the response variable. This graph indicated whether the assumption of normality of residuals had been met.

Where there were significant departures from assumptions (ascertained by examining the graphs) scores were appropriately transformed so that the assumptions were met. A number of well documented procedures exist for determining which transformation is appropriate for a set of data (for example Kirk, 1968), and these procedures were followed. Appendix 7 discusses the use of transformations in greater detail.

It is not always possible to find an appropriate transformation for a given set of data (see Appendix 7). This situation arose in the case of two sets of data from the present study. In both cases the male sample was removed from the ANOVA, and separate t tests were performed for males versus female controls.

Four planned non-orthogonal comparisons were carried out for each ANOVA. They can be described as follows:

1. male controls versus female controls;
2. female controls versus anorexics;
3. female controls versus bulimics; and
4. anorexics versus bulimics.

Dunn's multiple comparison procedure, the outcomes of which are also named Bonferroni t-statistics (Kirk, 1968), was used for making these comparisons. The difference, d , that a comparison must exceed in order to be declared significant according to Dunn's procedure is presented in Kirk, 1968, p.79.

Dunn's procedure (or Bonferroni t-statistics) was chosen as the most appropriate comparison amongst means for two reasons:

1. Error rate per experiment (or ANOVA) can be set at a selected alpha for a collection of C comparisons by using Dunn's multiple comparison procedure. If an experiment contains k means, and C comparisons are to be made, each one is tested at the α/C level of significance.
2. For a relatively small number of non-orthogonal comparisons (as is the case in this study) Dunn's *a priori* procedure is more powerful than *a posteriori* procedures (Kirk, 1968).

The F ratio and the approximate least significant difference (LSD) between means are presented for each ANOVA. This figure was based on the t value required for significance according to Dunn's procedure and was calculated as follows:

$$LSD = tS\sqrt{\frac{2}{n}}$$

where S is the experimental standard deviation, n is the number of observations for each mean, and t is the critical value of the t statistic (Andrews, Snee and Sarner, 1980).

The approximate LSD is not intended as a substitute for formal comparisons but is useful as it provides the reader with some idea of the size of the differences between means required for significance.

All calculations were carried out using the GENSTAT statistical package (Lawes Agricultural Trust (Rothamsted Experimental Station), 1984). In addition, it should be noted that a checking program was used to identify and eliminate any errors in data entry.

CHAPTER 9

RESPONSES TO INTERVIEW QUESTIONS AND QUESTIONNAIRES ASSESSING SATISFACTION WITH WEIGHT, BODY SHAPE AND RELATED BEHAVIOURS

Hypothesis 1: Patients will report greater dissatisfaction with their weight and body shape and with related behaviours than will be the case for female controls. Female controls will report greater dissatisfaction with these aspects of themselves than will be the case for male controls.

9.1 Responses to Interview Questions

Table 9.1 reveals that a significantly higher percentage of controls than patients were satisfied with their current eating habits.¹

Table 9.1 Number (and percentage frequency) of responses to question: Are you happy with your present eating patterns or habits?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	18	(36)	6	(20)	53	(65)	52	(75)	38.1
No	32	(64)	24	(80)	29	(35)	17	(25)	

The reasons which subjects gave for their satisfaction or dissatisfaction are outlined in Table 9.2. (Bulimics were excluded from the chi-squared analysis of reasons for satisfaction because of the small number of bulimics who expressed satisfaction with their eating habits.) More anorexics than female controls said they were satisfied with their eating habits because they were able to lose weight while eating as they currently did. In turn, female controls were more likely than males to express this view. Significantly more female and male controls than

1. Subjects were also asked about their satisfaction with their eating habits "in general", as well as about their satisfaction with the amount of exercise they did, their weight and their body shape "in general". These issues were assessed via the set of written questions presented to subjects after section four of the interview. (These questions are presented in full in Appendix 4.) For each of these dimensions subjects were asked to rate the frequency of their satisfaction on a Likert scale, ranging from "always" to "never". The results from these questions are not presented here as they are essentially similar to those of the corresponding interview questions about current satisfaction, and their inclusion here would be repetitive.

anorexics stated that they were happy with their eating habits because they considered them to be healthy, because they enjoyed them, or because their weight was satisfactory.

The reason for dissatisfaction with eating habits most frequently given by female controls was that they considered that they ate too much and consequently weighed more than they would like. The most common reason for dissatisfaction given by patients was that their eating was pathological, and bulimics were more likely than anorexics to express this view. The most commonly offered cause of dissatisfaction from males was that their eating habits were unhealthy. Forty three percent of the combined control group commented that they thought their eating habits were unhealthy or not as healthy as they would wish, but only two patients expressed a health related concern.

Table 9.2 Number (and percentage frequency) of responses to question: Why are you, or why are you not satisfied with your present eating patterns or habits?

	Anorexic	Bulimic	Female Control	Male Control	χ^2
Reasons for satisfaction:²	n=18	n=6	n=53	n=52	
Wt is okay	1 (5)	0 (0)	11 (21)	13 (25)	3.9
Able to lose wt	9 (50)	2 (33)	7 (13)	1 (2)	-
They are healthy	0 (0)	1 (17)	20 (38)	25 (48)	19.3
I feel well	1 (5)	1 (17)	5 (9)	8 (15)	-
I enjoy them	0 (0)	1 (17)	11 (21)	11 (21)	7.7
Reasons for dissatisfaction:	n=32	n=24	n=29	n=17	
Eat too much	5 (16)	2 (8)	17 (59)	1 (6)	25.1
They are rigid	10 (31)	1 (4)	1 (3)	0 (0)	17.1
They are "sick" or pathological ³	18 (56)	21 (88)	0 (0)	0 (0)	6.8
They are unhlthy	2 (6)	0 (0)	10 (34)	10 (59)	31.0
Meals irregular	0 (0)	3 (13)	3 (10)	5 (29)	11.8

2. Bulimics excluded from chi-square analysis (df=3).

3. Chi-square calculated for anorexics versus bulimics comparison (df=1)

Table 9.3 reveals that there were no significant differences between groups with regard to satisfaction with the amount of exercise they were undertaking at the time of interviewing. An average of 47 percent of subjects across all groups expressed satisfaction with the amount of exercise they obtained.

Table 9.3 Number (and percentage frequency) of responses to question: Are you happy with the amount of exercise that you do at the moment?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	25	(50)	10	(33)	44	(54)	29	(42)	4.6
No	25	(50)	20	(67)	38	(46)	40	(58)	

Table 9.4 reveals that the great majority of subjects in all groups who were unhappy with their exercise were dissatisfied because they felt they did not do enough exercise.

Table 9.4 Number (and percentage frequency) of responses to question: Why are you unhappy with the amount of exercise that you do at the moment?

	Anorexic n=25		Bulimic n=20		Female Control n=38		Male Control n=40		χ^2
Do too much	5	(20)	0	(0)	0	(0)	1	(3)	13.6
Do not do enough	20	(80)	20	(100)	38	(100)	39	(98)	

There were no significant differences in the frequency with which groups reported having a preference for particular body parts. Table 9.5 shows that 35 percent of subjects overall said that there were some parts of their bodies which they particularly liked.

Table 9.5 Number (and percentage frequency) of responses to question: Are there some parts of your body which you are happier with than other parts - any parts that you particularly like?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	17	(34)	11	(37)	32	(39)	21	(30)	1.3
No	33	(66)	19	(63)	50	(61)	48	(70)	

Table 9.6 reveals that for females in all three groups the most frequently "liked" body part was the lower legs (from the knees down), nominated by 35 percent of females, while for males it was legs (nominated by 67 percent of males). Females were more likely than males to report that their face, hair or eyes were preferred body parts.

Table 9.6 Number (and percentage frequency) of responses to question: (if yes to above) Which parts of your body are you happier with?

	Anorexic n=17		Bulimic n=11		Female Control n=32		Male Control n=21		χ^2
Arms	4	(24)	5	(45)	9	(28)	8	(38)	2.0
Lower legs(fem) legs (males)	4	(24)	5	(45)	12	(38)	14	(67)	8.0
"Waist up"	3	(18)	2	(18)	10	(31)	1	(5)	6.4
Chest/breasts	2	(12)	1	(9)	2	(6)	2	(10)	-
Face/hair/eyes	4	(24)	2	(18)	6	(19)	0	(0)	8.1

Far higher percentages of female subjects reported that they particularly disliked some parts of their bodies than said there were parts they particularly liked, as shown in Table 9.7. An average of 89 percent of females across the three groups stated that they particularly disliked some parts of their bodies. This was a significantly higher percentage than the corresponding 55 percent of males.

Table 9.7 Number (and percentage frequency) of responses to question: Are there some parts of your body that you dislike more than other parts?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	44	(88)	29	(97)	71	(87)	38	(55)	33.7
No	6	(12)	1	(3)	11	(13)	31	(45)	

Table 9.8 shows that females were significantly more likely than males to state that they particularly disliked their thighs (nominated by an average of 39 percent of all females) and "bottoms" (nominated by an average of 29 percent of all females). Males and, to a lesser extent, patients stated more frequently than female controls that they disliked their stomachs. Bulimics stated more frequently than other groups that they disliked their hips.

Table 9.8 Number (and percentage frequency) of responses to question: (if yes to above) Which parts of your body do you dislike?

	Anorexic n=44		Bulimic n=29		Female Control n=72		Male Control n=38		χ^2
Thighs	12	(27)	13	(45)	31	(43)	0	(0)	36.5
"Bottom"	7	(16)	7	(24)	28	(39)	2	(5)	20.0
Stomach	16	(36)	11	(38)	12	(17)	19	(50)	14.5
Chest/breasts	5	(11)	7	(24)	8	(11)	3	(8)	4.2
Legs	7	(16)	6	(21)	8	(11)	7	(18)	2.0
Hips	2	(5)	10	(34)	9	(13)	0	(0)	23.3
All parts	8	(18)	4	(14)	4	(6)	1	(3)	7.9

There were clear group differences with regard to satisfaction with present body shape, as shown in Table 9.9. Males were most satisfied with their present body shape, followed by female controls, anorexics and bulimics. Female controls and anorexics more frequently expressed ambivalence about their body shape than bulimics and males - that is, they said that they were unsure whether or not they liked their figures, or said that they sometimes liked them and sometimes did not like them.

Table 9.9 Number (and percentage frequency) of responses to question: Overall, are you happy with your present shape?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	13	(26)	4	(13)	39	(48)	50	(72)	57.0
No	30	(60)	26	(87)	32	(39)	18	(26)	
Ambivalent	7	(14)	0	(0)	11	(13)	1	(1)	

The reasons given by subjects for their satisfaction or dissatisfaction with their body shape are outlined in Table 9.10. (Bulimics were excluded from the chi-squared analysis of reasons for satisfaction because of the small number of bulimics who expressed satisfaction with their body shape.) The only reason given for which there was a large difference between groups concerned fitness. Over one quarter of males said that they were satisfied with their shape because they considered themselves to be fit but only one female offered this reason. The most commonly offered reasons for satisfaction with body shape were appearance (e.g. "it looks fine", offered by over 57 percent of the subjects overall) and not being overweight (24 percent).

When accounting for dissatisfaction with body shape, males and anorexics were more likely than the other two groups to consider that they were too thin. This result from the anorexic group is consistent with objective observation, as the anorexics were in fact much thinner than the other subjects, and objectively "thin". This was the only reason for dissatisfaction for which there was as significant difference between groups. Overall, the most common reason given for dissatisfaction was

being overweight or fat - mentioned by 44 percent of all subjects. A further 22 percent of all subjects commented that they disliked their shape because of particular parts of their body with which they were unhappy.

Table 9.10 Number (and percentage frequency) of responses to question: Why are you, or why are you not happy with your present shape?

	Anorexic	Bulimic	Female Control	Male Control	χ^2
Reasons for satisfaction:⁴	n=12	n=4	n=32	n=40	
It looks okay	9 (75)	3 (75)	21 (66)	18 (45)	5.0
Not overweight	2 (17)	0 (0)	9 (28)	9 (22)	-
Am fit	0 (0)	0 (0)	1 (3)	11 (28)	-
Reasons for dissatisfaction:	n=37	n=26	n=43	n=19	
Too fat	16 (43)	13 (50)	22 (51)	5 (26)	3.8
Too thin	8 (22)	0 (0)	2 (5)	6 (32)	17.1
Because of parts mentioned in table 9.8	10 (27)	10 (38)	6 (14)	2 (11)	7.6

Table 9.11 presents the frequency with which subjects expressed satisfaction with their present weight. Clearly, males were most satisfied with their weight and bulimics least satisfied.

Table 9.11 Number (and percentage frequency) of responses to question: Overall, are you happy with your present weight?

	Anorexic	Bulimic	Female Control	Male Control	χ^2
	n=50	n=30	n=82	n=69	
Yes	18 (36)	7 (23)	36 (44)	44 (64)	25.6
No	22 (44)	22 (73)	39 (48)	22 (32)	
Ambivalent	10 (20)	1 (3)	7 (9)	3 (4)	

4. 88 of the 106 subjects who were happy with their shape gave a specific reason for their satisfaction. The remaining 18 simply repeated that they were happy with it and were not more specific. The percentages for this section of the table are based on total n=88.

The reasons which subjects gave for being unhappy with their weight are set out in Table 9.12. This table provides the context in which results from Table 9.11 should be viewed. The great majority of female controls, bulimics and anorexics who were dissatisfied with their current weight wanted to lose weight, and most of these subjects wished to lose more than a few pounds. Only one female control wished to gain weight. In contrast, less than half of males who were unhappy with their weight wished to lose weight and over half of males wished to gain weight. Over one quarter of anorexics wanted to gain weight, a finding which should be viewed in the context of the anorexics' low body weights.

Table 9.12 Number (and percentage frequency) of responses to question: Why are you unhappy with your present weight?

	Anorexic n=32		Bulimic n=23		Female Control n=46		Male Control n=25		χ^2
Would like to:									
lose weight-more than a few lbs	20	(63)	18	(78)	30	(65)	6	(24)	46.3
lose "a few lbs" gain weight	3	(10)	5	(22)	15	(33)	5	(20)	
	9	(28)	0	(0)	1	(2)	14	(56)	

Table 9.13 reveals that while a large majority of both male and female controls considered themselves to be healthy, less than one half of patients did so.

Table 9.13 Number (and percentage frequency) of responses to question: Do you consider yourself to be healthy?

	Anorexic n=49		Bulimic n=30		Female Control n=76		Male Control n=69		χ^2
Yes	24	(49)	9	(30)	56	(74)	58	(84)	40.8
No	21	(43)	17	(57)	12	(16)	10	(14)	
Sometimes	4	(8)	4	(13)	8	(11)	1	(1)	

A similar pattern is evident in Table 9.14. Over 60 percent of both male and female controls regarded their eating habits as healthy compared to less than one third of patients.

Table 9.14 Number (and percentage frequency) of responses to question: Do you think your eating patterns are healthy?

	Anorexic n=49		Bulimic n=30		Female Control n=76		Male Control n=69		χ^2
Yes	16	(33)	5	(17)	46	(61)	47	(68)	41.7
No	28	(57)	22	(73)	18	(24)	19	(28)	
Sometimes	5	(10)	3	(10)	12	(16)	3	(4)	

Table 9.15 shows that there was a difference between groups in the frequency with which subjects reported that they undertook a healthy amount of exercise. Males were most likely to answer in the affirmative, followed by female controls, anorexics and lastly bulimics.

Table 9.15 Number (and percentage frequency) of responses to question: Do you think the amount of exercise you do is healthy?

	Anorexic n=49		Bulimic n=30		Female Control n=76		Male Control n=69		χ^2
Yes	30	(61)	13	(43)	47	(62)	51	(74)	8.6
No	19	(39)	17	(57)	29	(38)	18	(26)	

Table 9.16 reveals that anorexics and bulimics were less likely than controls to regard themselves as fit. An average of 61 percent of controls considered that they were at least reasonably fit compared to an average of 19 percent of patients.

Table 9.16 Number (and percentage frequency) of responses to question: Do you think you are fit?

	Anorexic Bulimic Female		Male		χ^2				
	Control	Control	n=76	n=69					
	n=49	n=30	n=76	n=69					
Yes	14	(29)	6	(20)	28	(37)	30	(43)	29.0
No	30	(61)	24	(80)	35	(46)	22	(32)	
Yes, but could be fitter	5	(10)	0	(0)	13	(17)	17	(25)	

The words which subjects used to describe their figures are listed in Table 9.17. There were differences between the groups in the frequencies with which specific words were used, which when considered together indicate a more general trend. Overall, female controls were more likely than males to use negative words to describe their figures, and patients in turn were more likely than female controls to use negative adjectives.

Table 9.17 Number (and percentage frequency) of responses to question: What word or words would you use to describe your figure?

	Anorexic		Bulimic		Female Control		Male Control		χ^2
	n=50	n=29	n=82	n=69					
Normal/average	10	(20)	4	(14)	23	(28)	22	(32)	4.9
Okay/acceptable	3	(6)	0	(0)	4	(5)	4	(6)	3.1
Slim	5	(10)	7	(24)	14	(17)	17	(25)	5.1
Thin	10	(20)	1	(3)	4	(5)	8	(12)	9.3
Overweight	0	(0)	2	(7)	8	(10)	3	(4)	8.3
"Just a bit owt"	0	(0)	5	(17)	8	(10)	6	(9)	11.3
Chubby, plump	0	(0)	1	(3)	10	(12)	2	(3)	12.3
Fat	7	(14)	6	(21)	4	(5)	1	(1)	13.8
Revoltng etc	5	(10)	2	(7)	1	(1)	0	(0)	11.6
Flabby	7	(14)	5	(17)	2	(2)	0	(0)	19.5
Fit	0	(0)	0	(0)	1	(1)	7	(10)	13.4
Out of proportion	4	(8)	5	(17)	1	(1)	1	(1)	12.6
Other specific negative e.g. "blob"	15	(30)	12	(41)	20	(24)	1	(1)	33.6
Nice, good	0	(0)	0	(0)	1	(1)	10	(14)	20.4
Height mentioned	1	(2)	2	(7)	7	(9)	9	(13)	5.5
Don't know	1	(2)	0	(0)	0	(0)	1	(1)	-

Table 9.18 indicates the extent to which subjects perceived that they had to struggle to maintain their desired weight. Bulimics were most likely to perceive that they had to struggle to maintain their desired weight, followed by anorexics, female controls and lastly males.

Table 9.18 Number (and percentage frequency) of responses to question: Do you have to struggle or make a continual effort to maintain your desired weight?

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Always	10	(20)	15	(50)	8	(10)	2	(3)	119
Usually	14	(29)	6	(20)	4	(5)	2	(3)	
Often	6	(12)	4	(13)	4	(5)	1	(1)	
Sometimes	10	(20)	3	(10)	20	(24)	9	(13)	
Rarely	8	(16)	2	(7)	25	(30)	17	(25)	
Never	1	(2)	0	(0)	21	(26)	38	(55)	

9.2 Results from Questionnaires

a) Results From EDI Cover Sheet - Ideal and Actual Weights

On the cover sheet of the EDI respondents are asked to answer the question "What do you consider your ideal weight?" and they are also required to record their actual weight. Several statistics were calculated from these data, and they provide further measures of body dissatisfaction for the four groups. They are presented in Table 9.19.

Table 9.19 reveals that the anorexics had a significantly lower ideal BMI than both the bulimics and the female controls. On average the ideal BMI desired by the anorexics was far lower than the minimum for "healthy" weight. (Australian Nutrition Foundation, 1984). There was not a significant difference in the average ideal BMIs reported by the bulimics and female controls. Each of these groups had an average ideal BMI of over 19, still slightly under the minimum "healthy" BMI. Males desired a BMI significantly higher than all of the female groups. At 23.4 the average BMI desired by the male group was in the upper part of the healthy weight range.

The average ratios of actual BMI to ideal BMI for each group are also presented in Table 9.19. (These averages were obtained by calculating the ratio for each subject and then averaging these ratios.) The ratios for the bulimic and female control groups were similar - both of these groups reported an average ideal BMI of around 90 percent of current BMI. The anorexics, on average, had an ideal BMI of about six percent greater than their current BMI (still placing their absolute ideal BMI very low, as seen earlier). The figure for the male group was significantly different from the ratio for the female controls, and indicated their satisfaction as a group with their current weight: the average ideal BMI reported by the males equalled their current BMI.

On average, anorexics desired to weigh about two kilograms more than they did at the time of interviewing. Female controls and bulimics considered their ideal weights to be about five kilograms less than their

current weight on average. There was a significant difference between male and female controls, with the males' average ideal weight being very close to current average weight.

Table 9.19 Comparison of Mean Ideal BMI, Ideal BMI/Actual BMI, Actual Weight minus Ideal Weight, and Perceived Age at which Weight Problem Began

	Anorexic	Bulimic	Female Control	Male Control	Residual Mean SQ-S ²	F Value
Ideal BMI						
	n=44	n=29	n=74	n=60		
Mean	17.4	19.5	19.8	23.4	1.73	109
df	203					
Approx LSD	0.96					
Ideal BMI/Actual BMI						
	n=43	n=29	n=74	n=60		
Mean	1.06	0.92	0.92	1.00	0.084	33.7
df	202					
Approx LSD	0.046					
Actual Weight - Ideal Weight (kg)						
	n=43	n=29	n=74	n=60		
Mean	-2.24	5.34	5.37	-0.3	5.43	25.4
df	202					
Approx LSD	3.01					

Taken together the results from Table 9.19 provide further support for the hypothesis regarding satisfaction with body shape and weight. Both the bulimic and female control groups desired, on average, to weigh considerably less than their current average weight. While the anorexics desired to weigh a little more than they did currently, the average ideal weight for the anorexic group was still significantly underweight. It must be concluded that as a group the male controls were satisfied with their current weights.

b) Results From the Self Description Inventory

Table 9.20 provides an analysis of the body related adjectives used by subjects to describe themselves. These data were obtained using the self description adjective inventory administered during the interview. The frequency with which the various words were chosen by groups provides another measure of their satisfaction with their bodies.

There were several highly significant differences in the frequency with which the groups used various body image related words to describe themselves.

There was a highly significant difference in the frequency with which the groups described themselves as "self controlled". Males were far more likely than the other groups to select this term. Bulimics used this term least frequently.

Males were also significantly more likely than all females to describe themselves as healthy, and female controls were more likely than patients to choose this word. Patients were more likely than both male and female controls to describe themselves as "unhealthy".

A difference between males and bulimics and female controls emerged with respect to use of the term "underweight." None of the control females, and only one bulimic, used the adjective "underweight" to describe themselves, compared to ten (or 14 percent) of males. Although 18 percent of anorexics marked this word, once again this must be considered in the context of their generally objectively low body weights.

Patients were significantly less likely than both female and male controls to describe themselves as being of "average weight".

Several differences emerged between groups in their use of negative body size adjectives. Marked differences in usage of the word "fat" emerged across groups. About one fifth of anorexics and female controls described themselves as fat, and an even larger percentage of bulimics did so. In contrast to all of the female groups, only three percent of males indicated the word "fat".

A similar pattern emerged for the terms "overweight" and "flabby".

There was a tendency for males to use "fit" as a self-description more frequently than the female subjects (25 percent versus 43 percent). Bulimics described themselves as "unfit" more frequently than other groups. Forty percent of bulimics selected "unfit", compared to about 14 percent of all other subjects.

About ten percent of all females described themselves as "well toned", compared with 28 percent of males.

While there were no differences in groups' usage of the term "attractive" (overall, 13 percent of subjects considered selected "attractive" to describe themselves), differences did emerge with respect to use of the term "unattractive." Very few male or female controls described themselves this way but over one third of patients did so.

Table 9.20 Number (and percentage frequency) of subjects who used various body related adjectives to describe themselves

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Self-controlled	14	(28)	5	(17)	33	(40)	47	(68)	32.3
Healthy	15	(30)	8	(27)	46	(56)	48	(70)	27.1
Underweight	9	(18)	1	(3)	0	(0)	10	(14)	23.1
Fit	10	(20)	9	(30)	21	(26)	30	(43)	8.9
Attractive	2	(4)	5	(17)	11	(13)	12	(17)	6.2
Slim	6	(12)	6	(20)	11	(13)	20	(29)	7.6
Dowdy	7	(14)	3	(10)	1	(1)	1	(1)	13.1
Fat	9	(18)	12	(40)	13	(16)	2	(3)	22.6
Fashionable	12	(24)	9	(30)	35	(43)	15	(22)	9.1
Average Weight	10	(20)	10	(33)	47	(57)	41	(59)	25.9
Thin	4	(8)	2	(7)	5	(6)	6	(9)	0.4
Athletic	17	(34)	7	(23)	25	(30)	32	(46)	6.5
Unhealthy	10	(20)	7	(23)	5	(6)	6	(9)	9.6
Well groomed	13	(26)	10	(33)	48	(59)	38	(55)	17.8
Flabby	19	(38)	16	(53)	13	(16)	5	(7)	33.4
Unattractive	22	(44)	10	(33)	7	(9)	2	(3)	43.3
Overweight	11	(22)	11	(37)	16	(20)	4	(6)	15.4
Muscular	2	(4)	3	(10)	3	(4)	8	(12)	4.8
Unfit	10	(20)	12	(40)	8	(10)	11	(16)	12.6
Well toned	4	(8)	4	(13)	9	(11)	19	(28)	10.5

c) Results From the Body Shape Questionnaire (BSQ)

The mean BSQ total scores for the four groups are presented in Table 9.21. The check for homogeneity of variance revealed that the variance of scores for the male controls was markedly different, being much lower than the variances for the female groups. As a transformation of the scores would not correct this problem, males were eliminated from the ANOVA. The statistics which appear in Table 9.21 apply to the ANOVA conducted on the three female groups only. A separate t-test was performed to compare males with female controls.

A two-tailed t-test (for groups with unequal standard deviations) was performed to test for a difference between the mean BSQ totals for the male and female controls. A highly significant t value of 8.7 was found ($p < .001$), indicating that the average BSQ score for the males was significantly lower than the average for the female controls. In turn, the planned contrasts indicated that the average BSQ score for female controls was significantly lower than the average BSQ score for the both the anorexics and bulimics. The average BSQ score for the bulimics was significantly higher than the mean for the anorexics.

The pattern of these results parallels the results from many of the interview questions, with groups fairly evenly spread on a continuum: patients least satisfied (and bulimics even less satisfied than anorexics), followed by female controls, with males most satisfied.

Table 9.21 Comparison of Mean BSQ Scores for Groups

	Anorexic n=49	Bulimic n=28	Female Control n=80	Male Control n=67	F
BSQ Score	130.0	150.9	82.8	49.0	53.0
df	154				
SE	34.41				
Approx LSD	19.11				
P	0.0001				

d) Results From the Body Dissatisfaction Subscale of the Eating Disorders Inventory (EDI)

The Body Dissatisfaction Subscale of the EDI provides a measure of subjects' dissatisfaction with their body shape, and more specifically their belief that specific body parts are "too large" (Garner, Olmsted & Polivy, 1983a and b). The mean Body Dissatisfaction scores for the four groups are presented in Table 9.22. The check for homogeneity of variance once again revealed that the variance of scores for the male controls was markedly lower than the variances for the female groups. Males were eliminated from the ANOVA, and the statistics which appear in Table 9.22 apply to the ANOVA conducted on the three female groups only. A separate t-test was performed to compare males with female controls.

A two-tailed t-test (for groups with unequal standard deviations) was performed to test for a difference between the mean subscale totals for the male and female controls. A highly significant t value of 9.4 was found ($p < .001$), indicating that the average score for the males was significantly lower than the average for the female controls. The planned contrasts indicated that the average dissatisfaction score for female controls was not significantly lower than that for anorexics, and these two groups had a significantly lower body dissatisfaction mean than the bulimics.

The relatively low variances of the male groups' BSQ and EDI Body Dissatisfaction scores are worth noting. They suggest that not only are the males on average more satisfied with their body shape but also that as a group the males are more homogeneous in this respect.

Table 9.22 Comparison of Mean Body Dissatisfaction Subscale Scores for Groups

	Anorexic n=49	Bulimic n=28	Female Control n=78	Male Control n=67	F
Dissatisfaction Score	15.59	21.14	12.97	3.21	10.7
df	152				
SE	8.04				
Approx LSD	4.48				
P	0.0001				

9.3 Summary of Results from Interview

Overall the results concerning subjects satisfaction with weight, body shape and related behaviours provide strong support for the hypothesis. Males expressed most satisfaction, followed by female controls, and the patient groups reported least satisfaction.

There were only four questions concerning satisfaction which did not elicit significantly different responses from the groups, and of these questions, three concerned exercise. Approximately equal percentages of subjects in the four groups expressed satisfaction with the amount of exercise that they were currently doing and most subjects who expressed dissatisfaction believed that they were currently not doing enough exercise. There was also no difference between groups in the frequency with which they stated that the amount of exercise they were currently doing was "healthy". Finally all groups were equally likely to state that they liked some parts of their bodies more than other parts.

The remaining questions resulted in differences in the hypothesised direction between the four groups. For the issues of current weight, current shape, and adjectives chosen to describe body shape the groups were fairly evenly spread along a continuum, with males most likely to express satisfaction, followed by female controls and patients least likely to express satisfaction.

For a few of the concerns addressed, female controls presented a similar pattern of responses to male controls with patients reporting more dissatisfaction than both female and male controls. These issues included satisfaction with current eating habits, satisfaction with fitness, health, perceived "healthiness" of eating habits and perception of having to struggle to maintain an ideal weight. However even for these issues a trend in the hypothesised direction was observed: slightly more female controls than males expressed dissatisfaction.

With regard to some issues the pattern of responses of female controls closely resembled patients and was dissimilar to the pattern exhibited by the male group. Patients and female controls were equally likely to state

that they would like to lose weight, and that they disliked particular parts of their bodies. Males were less likely than females in all groups to express these views. Over fifty percent of males who expressed dissatisfaction with their weight wished to gain weight. Only one female control and nine patients (all anorexics) expressed a desire to gain weight. Almost all females in all groups reported that they particularly disliked some parts of their bodies, while just over half of the males did so.

There were also some significant differences between the anorexic and bulimic groups. A higher percentage of bulimics than anorexics reported being "rarely" or "never" happy with their weight, and that they always or usually had to struggle to maintain their ideal weight. Bulimics were also more likely than anorexics to mention their hips as a disliked part of their bodies. Bulimics were more likely than anorexics to refer to the pathological or "sick" nature of their eating habits to explain dissatisfaction, while anorexics were more likely than bulimics to state that their eating habits were "too rigid".

It is important to note that while some of the differences were not statistically significant, for **all** of the issues addressed by the interview questions bulimics were less likely to express satisfaction than the anorexics.

9.4 Summary of Results from Questionnaires

The results from the questionnaires provide further strong support for the hypothesis. For all of the measures males exhibited the most satisfaction with weight and body shape, followed by female controls and patients. The scores for the EDI

Body Dissatisfaction scale and the BSQ revealed that not only were the men more satisfied with their weight and body shape as a group, but also that the variance of their scores was significantly lower than was the case for all of the female groups. For all of the measures bulimics reported the least satisfaction of **all** of the groups, echoing the results from the interview questions.

CHAPTER 10

RESPONSES TO INTERVIEW QUESTIONS AND QUESTIONNAIRES ASSESSING BEHAVIOURS DIRECTED AT INFLUENCING WEIGHT AND SHAPE, AND BINGE EATING

Hypothesis 2: Patients will engage in behaviours directed at influencing weight and body shape (and also binge eating) more frequently than female controls. In turn, female controls will engage in these behaviours more frequently than will be the case for male controls.

10.1 Responses to Interview Questions

Table 10.1 presents the number of subjects who stated that they were on a "diet" at the time of interviewing. The percentages for anorexics and bulimics should be ignored as a proportion of those questioned were receiving dietary guidance from a dietician at the time of interviewing. The notable finding from this question is that one fifth of female controls were on a diet at the time of interviewing, compared to only three percent of males.

Table 10.1 Number (and percentage frequency) of responses to question: are you on a diet (to lose weight) at the moment?

	Anorexic n=21		Bulimic n=25		Female Control n=75		Male Control n=69		χ^2
On diet	11	(52)	11	(44)	15	(20)	2	(3)	36.4
Not on diet	10	(48)	14	(56)	60	(80)	67	(97)	

With regard to factors affecting food choice, female controls resembled male controls more closely than they did eating disorder patients. Table 10.2 shows that the most common food selection criterion for eating disorder patients was calorie value, while controls of both sexes most frequently reported that they ate "what they felt like". Nonetheless, although only nine percent of female controls considered the calorie value of food, this was a significantly higher percentage than for males. All groups mentioned health factors to some extent.

Table 10.2 Number (and percentage frequency) of responses to question: how do you choose the food that you eat?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Calorie value	36	(72)	18	(60)	7	(9)	1	(1)	11.0
Health value	9	(18)	10	(33)	25	(31)	17	(25)	3.6
What I feel like	12	(24)	12	(40)	60	(74)	52	(75)	45.9
Cost/convenience	0	(0)	0	(0)	7	(9)	6	(9)	11.5

The majority of subjects in all groups claimed that they undertook some form of exercise. Males were more likely than females to make this claim.

Table 10.3 Number (and percentage frequency) of responses to question: do you exercise?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Exercise	34	(68)	20	(67)	61	(75)	62	(90)	11.6
Do not exercise	16	(32)	10	(33)	20	(25)	7	(10)	

As shown in Table 10.3, female controls were less likely to participate in exercise than males. However of those subjects that did exercise, males showed a similar pattern of frequency of exercising to the pattern for control females. Table 10.4 shows that exercising frequency amongst male and female controls was fairly evenly distributed from 2 or 3 times to 6 or 7 times per week. The pattern of exercising frequency amongst patients was very different. The majority of bulimics and anorexics who reported that they exercised claimed to do so 6 or 7 times a week or several times a day, but only one fifth of controls reported exercising with this frequency.

Table 10.4 Number (and percentage frequency) of responses to question: How often do you exercise? (excludes subjects who responded "never" - shown in Table 10.3)

	Anorexic n=34		Bulimic n=20		Female Control n=61		Male Control n=62		χ^2
Once a week	2	(6)	0	(0)	12	(20)	10	(16)	53.5
2or3 times/week	5	(15)	3	(15)	18	(30)	18	(29)	
4or5 times/week	5	(15)	3	(15)	19	(31)	20	(32)	
6or7 times/week	12	(35)	13	(65)	12	(20)	13	(21)	
Several times/ all day	10	(29)	1	(5)	0	(0)	1	(2)	

Table 10.5 reveals that the groups varied considerably in the type of exercise in which they participated. Differences emerged between males and all females as well as between controls and patients. The most common form of exercise for all controls was some type of social or team sport, but a significantly higher percentage of males than female controls reported that they played this type of sport. The most popular form of sport amongst anorexics was running or jogging and more patients than controls reported that they undertook the solitary sport of swimming.

Table 10.5 Number (and percentage frequency) of responses to question: What sort of exercise do you do?

	Anorexic n=34		Bulimic n=20		Female Control n=61		Male Control n=62		χ^2
Social or team sport	6	(18)	2	(10)	31	(51)	44	(71)	40.8
Aerobics	10	(29)	6	(30)	14	(23)	2	(3)	18.3
Floor exercises	10	(29)	5	(25)	12	(20)	11	(18)	2.2
Weights	0	(0)	0	(0)	1	(1)	13	(21)	24.0
Running/jogging	14	(41)	4	(20)	6	(10)	20	(32)	15.2
Walking	13	(38)	7	(35)	18	(30)	7	(11)	11.8
Swimming	5	(15)	4	(20)	1	(2)	3	(5)	10.3

Table 10.6 lists subjects' reasons for exercising. The reason most frequently given by males for exercising was to achieve fitness - over half of the males offered this reason, compared to an average of 28 percent for the three female groups. The most popular reason given by female controls for exercising was enjoyment, and a similar percentage of male

controls also gave this response. Patients were significantly less likely than controls to nominate enjoyment as a reason for exercise. The most frequently reported reason for exercise given by patients was to lose weight.

Table 10.6 Number (and percentage frequency) of responses to question: Why do you exercise?

	Anorexic n=34		Bulimic n=20		Female Control n=61		Male Control n=62		χ^2
Wt control- to avoid wt gain	3	(9)	6	(30)	9	(15)	7	(11)	4.6
To lose weight	18	(53)	12	(60)	8	(13)	1	(2)	55.1
To become fit	9	(26)	3	(15)	20	(33)	36	(58)	18.1
For enjoyment	7	(21)	3	(15)	31	(51)	35	(56)	20.9
To "tone up"	4	(12)	6	(30)	7	(11)	3	(5)	8.3

Table 10.7 reveals that the frequency of weighing amongst female controls followed a fairly similar pattern to that amongst males. Patients were far more likely than controls to weigh themselves at least daily.

Table 10.7 Number (and percentage frequency) of responses to question: How often do you weigh yourself?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Never	4	(8)	5	(17)	1	(1)	3	(4)	135
Once/twice year	0	(0)	2	(7)	12	(15)	17	(25)	
Once every 2 or 3 months	0	(0)	3	(10)	10	(12)	13	(19)	
Once a month	1	(2)	1	(3)	23	(28)	6	(9)	
Once a fortnight	5	(10)	1	(3)	12	(15)	8	(12)	
Once a week	8	(16)	4	(13)	17	(21)	12	(17)	
Once every 2 or 3 days	7	(14)	4	(13)	6	(7)	8	(11)	
Once a day	10	(20)	3	(10)	1	(1)	2	(3)	
Two or more times a day	15	(30)	7	(23)	0	(0)	0	(0)	

Table 10.8 shows that, as expected, all patients reported that they had at one time been on a diet to lose weight. A more striking finding is that the great majority of female controls but less than one third of males said they had ever been on a diet.

Table 10.8 Number (and percentage frequency) of responses to question: Have you ever been on a diet to lose weight?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	50	(100)	30	(100)	66	(80)	22	(32)	103
No	0	(0)	0	(0)	16	(20)	47	(68)	

The number of diets subjects reported having undertaken is revealed in Table 10.9. First, the male group reported far fewer diets than the female groups. Female controls reported far more frequent dieting than males, but exhibited a somewhat different pattern to patients. A total of 51 percent of female controls reported dieting frequencies between two to 10 diets, with a reasonably even distribution of subjects within this range. A high proportion of female controls also claimed that they had been on "countless" diets. In contrast, relatively few patients reported dieting frequencies within the range two to 10 diets. Instead the majority of anorexics, and an even greater percentage of bulimics reported that they had been on "countless" diets. Thus the majority of patients reported either only one diet or "countless" diets.

Table 10.9 Number (and percentage frequency) of responses to question: How many times have you been on diets? (those who have never been on a diet are excluded - shown in Table 10.8)

	Anorexic n=49		Bulimic n=30		Female Control n=66		Male Control n=22		χ^2
Once	14	(29)	4	(13)	9	(14)	11	(50)	64.2
2 or 3 times	4	(8)	1	(3)	16	(24)	8	(36)	
4 or 5 times	3	(6)	0	(0)	12	(18)	2	(9)	
6 to 10 times	2	(4)	0	(0)	6	(9)	0	(0)	
"Countless"	26	(53)	25	(83)	23	(35)	1	(5)	

Table 10.10 highlights several differences between groups concerning the types of diets undertaken. From a glance at the table it is clear that the vast majority of males reported that the type of diets which they had tried involved "just cutting down" on the quantity of food they were eating. Very few males had been on other types of diets. Females showed a much more diverse pattern of dieting. There were some similarities between patients and female controls. Similar percentages of patients and female controls stated that their diets had included those which they had devised themselves and that they had attempted the "Scarsdale" diet. A surprisingly high percentage (12 percent) of female controls had gone on starvation diets, a similar figure to that for patients. A further six percent of all females had dieted by only eating fruit and vegetables. On the other hand, patients were more likely than female controls to have gone on diets which they had obtained from magazines or books. A further difference was that female controls were more likely than patients to state that they simply "cut down" on their food intake. A small percentage of bulimics and female controls stated that they had followed diets set for them by doctors or had used "diet tablets" or "injections". These two groups were also slightly more likely than anorexics to have tried a weight reduction group or clinic such as Weight Watchers.

Table 10.10 Number (and percentage frequency) of responses to question: What kind of diets have you been on?

	Anorexic n=50		Bulimic n=30		Female Control n=66		Male Control n=22		χ^2
Made up by self	29	(58)	16	(53)	25	(38)	2	(9)	19.0
From mags/books	15	(30)	10	(33)	7	(11)	1	(5)	14.4
Scarsdale	5	(10)	4	(13)	6	(9)	0	(0)	-
"Just cutting down"	21	(42)	11	(37)	43	(65)	20	(91)	23.8
Doctor's diets	0	(0)	2	(7)	5	(8)	0	(0)	-
"Injections" or "diet tablets"	0	(0)	3	(10)	3	(5)	1	(5)	-
Wt Watchers etc	1	(2)	5	(17)	6	(9)	0	(0)	9.4
Not eating anything at all	7	(14)	5	(17)	8	(12)	1	(5)	2.2
Eating only fruit and veges	6	(12)	1	(3)	3	(5)	0	(0)	5.8

Table 10.11 presents the source(s) of subjects' diets. By far the most frequent response from all groups was that they had composed their own diets. (Only one male had obtained diet ideas from another source.) Bulimics were slightly more likely than the other females to report that they had obtained their diets from magazines, but the proportions mentioning this source were quite high (over one quarter of subjects) for all female groups.

Table 10.11 Number (and percentage frequency) of responses to question: Where did you find out about the diets you have been on?

	Anorexic n=50		Bulimic n=30		Female Control n=66		Male Control n=22		χ^2
Made up by self	35	(70)	21	(70)	50	(76)	22	(100)	13.6
Mags/books	16	(32)	16	(53)	19	(29)	1	(5)	16.4
Doctor	0	(0)	2	(7)	4	(6)	0	(0)	-
Wt Watchers etc	1	(2)	4	(13)	5	(8)	0	(0)	7.0

The reasons given by subjects for ending their diets are given below in Table 10.12. The most frequent reason given overall was that subjects were not able to adhere to the diet - that is, that they "broke" their diets (43 percent of all subjects offered this reason). The most common reason given by males for ending a diet was that they had achieved their goal or desired weight loss. Most of the anorexics and almost half of the bulimics remarked that they were still on their most recent diet.

Table 10.12 Number (and percentage frequency) of responses to question: Why did you end your diets?

	Anorexic n=50		Bulimic n=30		Female Control n=66		Male Control n=22		χ^2
Not working/having any effect	4	(8)	5	(17)	4	(6)	0	(0)	6.4
They were boring	2	(4)	1	(3)	8	(12)	0	(0)	7.7
Couldn't/didn't keep to them	20	(44)	14	(47)	31	(47)	7	(32)	3.0
Achieved success	1	(2)	2	(7)	15	(23)	11	(50)	28.8
They made me ill	1	(2)	1	(3)	4	(6)	1	(5)	-
Did not end diet	43	(86)	13	(43)	1	(2)	2	(9)	112

Table 10.13 shows the average ages for the start of dieting for each group. Planned non-orthogonal contrasts were performed, using the procedure outlined in Chapter 8. This analysis revealed no significant differences between all female groups in age at which dieting commenced. The male group on average began dieting at a significantly higher age than the females.

Table 10.13 Age of subjects when they first started dieting

	Anorexic n=48	Bulimic n=30	Female Control n=62	Male Control n=21	F
Age	14.7	15.5	16.0	21.3	25.1
df	157				
SE	3.0				
Approx LSD	1.91				
P	0.0001				

Table 10.14 reveals that female controls were almost as likely as patients to state that they tried to control their eating in some way, but males were much less likely to make this claim.

Table 10.14 Number (and percentage frequency) of responses to question: Do you try to control yourself in any way regarding food and dieting?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	47	(94)	29	(97)	67	(83)	33	(48)	49.1
No	3	(6)	1	(3)	14	(17)	36	(52)	

The difference between males and females with regard to dietary control is further illuminated in Table 10.15. Almost all females in all groups (an average of 94 percent overall) stated that they attempted to restrict their intake in order to lose weight or to control their weight. (This response category included restriction of quantity or type of food for the purposes of weight control.) Far fewer males (less than half) stated that they controlled their eating for the purposes of weight control. Instead, health

was the major concern for males. Over half of the males asserted that they attempted to control the "healthiness" of their diets, but relatively few females in all groups did so.

Table 10.15 Number (and percentage frequency) of responses to question: How do you control yourself regarding food and dieting?

	Anorexic n=47		Bulimic n=29		Female Control n=67		Male Control n=33		χ^2
Try to eat less (for wt control)	45	(96)	28	(96)	62	(92)	16	(48)	37.3
Try to eat more (to gain weight)	3	(6)	0	(0)	0	(0)	1	(3)	-
Try to eat healthy foods	0	(0)	2	(7)	8	(12)	19	(58)	47.4

The reported frequencies with which subjects counted calories are given in Table 10.16. The great majority of males reported that they never counted calories, and the remainder reported that they did so only rarely or sometimes. Just over half of female controls reported that they never counted calories, with the majority of the remaining subjects stating that they sometimes or rarely did so. This contrasts strikingly with patients, one third of whom acknowledged that they always or usually counted calories. However, such behaviour was by no means universal in this group either - 17 percent of patients claimed that they never counted calories.

Table 10.16 Number (and percentage frequency) of responses to question: Do you count calories?

	Anorexic n=49		Bulimic n=29		Female Control n=82		Male Control n=69		χ^2
Always	12	(24)	3	(10)	2	(2)	0	(0)	118
Usually	4	(8)	7	(24)	1	(1)	0	(0)	
Often	5	(10)	1	(3)	3	(4)	0	(0)	
Sometimes	10	(20)	7	(24)	11	(13)	2	(3)	
Rarely	12	(24)	4	(14)	20	(24)	6	(9)	
Never	6	(12)	7	(24)	45	(55)	61	(88)	

With regard to balancing food intake and exercise, female controls resembled males more closely than they did patients. Table 10.17 reveals that the frequency with which patients reported balancing food and exercise was fairly evenly distributed from "always" to "never". In contrast, over half of controls stated that they rarely or never balanced food and exercise. While over 30 percent of patients acknowledged that they always or usually balanced food and exercise, only 13 percent of controls did so.

Table 10.17 Number (and percentage frequency) of responses to question: In general, do you try to balance the amount of exercise you do with your food intake?

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Always	10	(20)	6	(20)	3	(4)	2	(3)	34.2
Usually	7	(14)	4	(13)	8	(10)	7	(10)	
Often	8	(16)	5	(17)	4	(5)	5	(7)	
Sometimes	8	(16)	3	(10)	23	(28)	12	(17)	
Rarely	10	(20)	6	(20)	25	(30)	21	(30)	
Never	6	(12)	6	(20)	19	(23)	22	(32)	

Table 10.18 presents the reported effort which subjects directed towards controlling their weight. The bulimics and anorexic groups responded in a similar way, with 18 percent of patients asserting that they had made a 100 percent effort towards weight control in the past 12 months, and a further 61 percent asserting that they had made a considerable effort. Far fewer females claimed to make total or considerable effort than patients, the proportions that did so were higher than those for males.

Table 10.18 Number (and percentage frequency) of responses to question: How much effort have you put into losing weight or controlling your weight in the last twelve months?

	Anorexic n=49		Bulimic n=30		Female Control n=66		Male Control n=68		χ^2
Total (100%)	8	(16)	6	(20)	1	(2)	2	(3)	145
A great deal. much	30	(61)	18	(60)	11	(17)	4	(5)	
Some/moderate	4	(8)	2	(7)	24	(36)	12	(18)	
Little	6	(12)	4	(13)	21	(32)	16	(24)	
None	1	(2)	0	(0)	9	(14)	34	(50)	

The frequency of weight loss attempts across groups are outlined in Table 10.19. The majority of anorexics and an even higher percentage of bulimics reported that they tried to lose weight at least once a week, compared to only seven percent of male and female controls. Female controls attempted to lose weight more frequently than males. The most striking difference between males and females was that only 22 percent of female controls reported that they never attempted to lose weight compared to 57 percent of males.

Table 10.19 Number (and percentage frequency) of responses to question: In general, how often do you try to lose weight?

	Anorexic n=48		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
At least once a week	31	(65)	25	(83)	6	(7)	5	(7)	145
Once every month or 2 to 3 weeks	4	(8)	2	(7)	11	(13)	2	(3)	
Once every several weeks	4	(8)	2	(7)	22	(27)	5	(7)	
Once a year or less	3	(6)	0	(0)	25	(30)	18	(26)	
Never	6	(13)	1	(3)	18	(22)	39	(57)	

The frequency with which alternating bingeing and dieting was reported by subjects is shown in Table 10.20. As expected, bulimics were far more likely than other groups to report a high frequency of this behaviour. (Three bulimics claimed that they never or rarely experienced such

cycles, possibly because at the time of interviewing they were in a period of abstinence from bingeing.) Anorexics and female controls shared a somewhat similar pattern of responses. A significant minority of anorexics and female controls reported that they often, usually or always experienced cycles of bingeing and dieting. In contrast, only two males reported usually or often doing so.

Table 10.20 Number (and percentage frequency) of responses to question: Do you have cycles of alternating food binges followed by dieting?

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Always	4	(8)	13	(43)	1	(1)	0	(0)	96.4
Usually	2	(4)	5	(17)	4	(5)	1	(1)	
Often	4	(8)	5	(17)	8	(10)	1	(1)	
Sometimes	9	(18)	4	(13)	14	(17)	5	(7)	
Rarely	6	(12)	2	(7)	21	(26)	12	(17)	
Never	24	(49)	1	(3)	34	(41)	50	(72)	

Table 10.21 shows that bulimics reported the most frequent eating binges, with over 60 percent stating that they always or usually binged. None of the anorexics reported that they always binged, but 12 percent reported usually bingeing. Female controls were slightly more likely than males to report that they often or sometimes binged.

Table 10.21 Number (and percentage frequency) of responses to question: How often have you gone on eating binges where you feel that you may not be able to stop?

	Anorexic n=49		Bulimic n=29		Female Control n=81		Male Control n=67		χ^2
Always	0	(0)	8	(28)	0	(0)	0	(0)	136
Usually	6	(12)	10	(35)	0	(0)	0	(0)	
Often	3	(6)	4	(14)	5	(6)	0	(0)	
Sometimes	7	(14)	4	(14)	6	(7)	1	(1)	
Rarely	7	(14)	2	(7)	14	(17)	11	(16)	
Never	26	(53)	1	(3)	56	(69)	55	(82)	

Table 10.22 reveals that 43 percent of bulimics reported that they always or usually vomited after they had eaten, compared with eight percent of the anorexics and only one (female) control. Female and male controls reported similar rates of vomiting, with about 90 percent of both groups reporting that they never vomited.

Table 10.22 Number (and percentage frequency) of response to question: How often do you vomit after you have eaten?

	Anorexic n=49		Bulimic n=29		Female Control n=81		Male Control n=67		χ^2
Always	1	(2)	7	(24)	1	(1)	0	(0)	115
Usually	3	(6)	6	(21)	0	(0)	0	(0)	
Often	2	(4)	5	(17)	0	(0)	0	(0)	
Sometimes	6	(12)	2	(7)	1	(1)	0	(0)	
Rarely	5	(10)	3	(10)	6	(7)	6	(9)	
Never	32	(65)	6	(21)	73	(90)	61	(91)	

Table 10.23 shows that the rate of laxative use was highest among the bulimics, with 24 percent of this group reporting that they usually or always took laxatives. Anorexics were in turn more likely than female controls to report taking laxatives and female controls reported a slightly higher rate of use than males.

Table 10.23 Number (and percentage frequency) of responses to question: How often do you take laxatives?

	Anorexic n=49		Bulimic n=29		Female Control n=81		Male Control n=67		χ^2
Always	2	(4)	3	(10)	1	(1)	0	(0)	-
Usually	1	(2)	4	(14)	0	(0)	0	(0)	
Often	3	(6)	0	(0)	0	(0)	1	(1)	
Sometimes	8	(16)	8	(28)	4	(5)	0	(0)	
Rarely	6	(12)	4	(14)	7	(9)	2	(3)	
Never	29	(59)	10	(35)	69	(85)	64	(96)	

10.2 Results from Questionnaires

a) Results From the Eating Attitudes Test

The EAT, while not solely a measure of body image related behaviours, contains several items pertaining to these behaviours. The EAT was used to gain a quantitative comparison of these behaviours amongst the groups.

The mean EAT total scores for the four groups are presented in Table 10.24. A log transformation of the scores was required in order to satisfy the assumptions for ANOVA.

The planned contrasts performed indicated that the average EAT score for female controls was significantly higher than the average EAT score for the males. The average EAT scores for both the anorexic and bulimic groups were in turn significantly higher than the average for female controls. There was not a significant difference between the average scores for anorexics and bulimics.

The pattern of these results parallels the results from many of the interview questions, with a large difference emerging between patients and female controls, and a much smaller but still significant difference between female and male controls.

Table 10.24 Comparison of Mean EAT Scores (and Log Transformations of EAT Scores) for Groups

	Anorexic n=49	Bulimic n=29	Female Control n=81	Male Control n=67	F
Log (EAT Score)	1.665	1.662	0.991	0.846	151
EAT Score	52.1	51.8	11.4	6.9	
df	222				
SE	0.2513				
Approx LSD	0.1376				
P	0.0001				

b) Results From the Bulimia Subscale of the Eating Disorders Inventory (EDI)

The Bulimia subscale of the EDI provides a measure of bulimic attitudes and behaviours. The average scores for this subscale for the four groups are shown in Table 10.25. A log transformation of these scores was again required in order to satisfy the assumptions of ANOVA.

The planned contrasts performed indicated that the average Bulimia subscale score for female controls was not significantly different from the average score for the males. The mean Bulimia subscale scores for both the anorexic and bulimic groups were significantly higher than the average for female controls. As expected, there was a significant difference between the average scores for anorexics and bulimics, with bulimics having a significantly higher mean score.

Table 10.25 Comparison of Mean Bulimia Subscale Scores (and Log Transformations of Bulimia Subscale) for Groups

	Anorexic n=49	Bulimic n=28	Female Control n=78	Male Control n=67	F
Log (Bulimia) Bulimia Score	0.328 2.41	0.988 10.64	0.153 0.96	0.088 0.34	71.5
df	218				
SE	0.2887				
Approx LSD	0.1609				
P	0.0001				

c) Results From the Drive for Thinness Subscale of the Eating Disorders Inventory (EDI)

The mean Drive for Thinness subscale total scores for the four groups are presented in Table 10.26. A log transformation of the scores was required in order to satisfy the assumptions for ANOVA.

The planned contrasts performed indicate that the average Drive for Thinness subscale score for female controls was significantly higher than the average Drive for Thinness subscale score for the males. The average Drive for Thinness subscale scores for both the anorexic and bulimic

groups were in turn significantly higher than the average for female controls. There was not a significant difference between the average scores for anorexics and bulimics.

Once again the pattern of these results parallels the results from many of the interview questions, with a large difference emerging between the patient and female control groups, and a smaller but still significant difference between female and male controls.

Table 10.26 Comparison of Mean Drive for Thinness Subscale Scores (and Log Transformations of Drive for Thinness Subscale) for Groups

	Anorexic n=49	Bulimic n=28	Female Control n=78	Male Control n=67	F
Log (drive) Drive for Thinness Score	1.0457 12.816	1.1723 15.071	0.3912 2.808	0.0841 0.507	129
df	218				
SE	0.3187				
Approx LSD	0.1776				
P	0.0001				

10.3 Summary of Results from Interview

Overall, subjects' reported behaviours supported the hypotheses that eating disorder patients would more frequently engage in weight related behaviours than female controls, and female controls would report such behaviours more frequently than males.

A striking difference emerged between male and female controls with regard to many dieting behaviours. For several dieting behaviours female controls were in fact very similar to patients. First, relatively few males (less than one third) had ever been on a diet, compared to 80 percent of female controls and all of the patients. Of those males that had dieted at some time, their diets tended to be less diverse in nature and they were less likely than females from all groups to have acquired their diets from media sources. Males also reported fewer dieting attempts on average than all of the female groups. The average age at which males began dieting was significantly higher than for the female groups. Males were

also less likely than females to report the less extreme behaviour of merely "controlling" food intake. Of those males that did report controlling their food intake, their reasons were more frequently related to health (rather than body size) than was the case for the female groups.

While female controls were similar to patients regarding the specific dieting behaviours mentioned above, two differences amongst the groups emerged. Firstly, bulimics were slightly more likely than female controls and anorexics to learn about diets from magazines and books. Secondly, anorexics and bulimics were more likely than female controls to admit to either continual dieting attempts or only one dieting attempt (which ended in their presentation for treatment). The number of dieting attempts across the female control group was fairly evenly distributed from one to many attempts.

For other behaviours a large difference emerged between patients and female controls, and a small but still significant difference was found between female controls and males. These behaviours included frequency of weight loss attempts, frequency of cycles of binge eating and dieting, reported effort directed towards weight control, choice of food on the basis of calorie value, bingeing and laxative use.

The type of exercise undertaken by subjects and their reasons for exercising revealed some similarities amongst males and female controls, as well as some differences. Approximately equal percentages of male and female controls participated in social or team sports, while the patient groups were less likely to participate in this type of exercise. However female controls were similar to patients in their rate of participation in walking and aerobics, while relatively few males engaged in these types of exercise. Males were more likely than all females to undertake weight training.

More male and female controls than patients mentioned enjoyment as a reason for exercising. Weight related reasons were the most frequently offered responses from the patient groups and patients were far more likely than female controls to give this response. In turn, female controls

mentioned weight related reasons more frequently than males. Males mentioned fitness as a reason for exercising more frequently than female controls and patients.

Male and female controls were similar to each other with regard to the percentage frequency of exercising, balancing food intake with exercise, and weighing. Patients engaged in these behaviours more frequently than both control groups.

Thus, males were less likely than female controls and patients to engage in dieting behaviours and their concern focused on fitness and health to a greater extent than was the case for females. (These qualitative differences between males and females will be discussed further in Chapter 12.) Female controls shared many similar concerns and behaviours to those reported by patients. However, for some of the weight loss behaviours - particularly the more extreme or pathological behaviours, such as bingeing, vomiting and laxative use - the percentage frequencies of participation for patients were higher than for female controls.

There were very few differences between anorexics and bulimics. Anorexics were more likely than bulimics to exercise several times a day and were also likely to run or jog as a form of exercise. A higher percentage of bulimics than anorexics reported that they had been on "countless" diets. As expected, bulimics also reported a greater frequency of bingeing behaviours. Overall, however, the group profiles of behaviours reported by anorexics and bulimics were very similar.

10.4 Summary of Results from Questionnaires

The results from the questionnaires lend further support to the hypothesis. The pattern of group differences for mean scores on both the EAT and Drive for Thinness subscale of the EDI was similar to the pattern of many interview responses, with a large difference between patients and female controls and a smaller, but still significant difference between male and female controls. For these questionnaires there was not a significant difference between anorexics and bulimics.

As expected, the bulimic group reported the greatest degree of bulimic behaviour, as measured by the Bulimia subscale of the EDI. The mean score for the bulimics on this subscale was significantly higher than the average for the anorexics, which in turn was higher than the mean for the female controls. Although the trend was in the hypothesised direction, there was not a significant difference between the two control groups.

CHAPTER 11

RESPONSES TO INTERVIEW QUESTIONS AND QUESTIONNAIRES ASSESSING SALIENCE OF WEIGHT AND BODY SHAPE IN SELF EVALUATION, LIFESTYLE, UNDERSTANDING OF OTHER CONCEPTS, AND EVALUATION OF OTHER PEOPLE

11.1 Responses to Interview Questions and Questionnaires Assessing Salience of Body Image in Self Perception

Hypothesis 4: Attitudes regarding weight and body shape will be more salient (that is, prominent) in the self evaluation of patients than female controls. In turn, these issues will be more salient in female controls' self evaluation than will be the case for male controls.

11.1.1 Responses to Interview Questions

Table 11.1.1 presents responses to the question which asked subjects to describe a day in which they would feel pleased with their behaviour. There were clear differences between patients and controls, while the responses of the male and female controls were similar. Eating and/or weight were the factors most commonly mentioned by both eating disorder groups. No control subjects mentioned these factors. Six percent of anorexics and 13 percent of bulimics stated that they never experienced days when they were pleased with their behaviour.

Table 11.1.1 Number (and percentage frequency) of responses to question: Can you describe a day in which you would be pleased with your behaviour?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Weight success	24	(48)	22	(73)	0	(0)	0	(0)	127
Work success	15	(30)	10	(33)	65	(79)	48	(70)	43.6
General success	6	(12)	3	(10)	10	(12)	23	(33)	14.2
All days bad	3	(6)	4	(13)	0	(0)	0	(0)	

A similar picture to that described above emerged from subjects' descriptions of a day in which they would feel unhappy with their behaviour. Subjects' responses are summarised in Table 11.1.2.¹

Table 11.1.2 Number (and percentage frequency) of responses to question: Can you describe a day in which you would be unhappy with your behaviour?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Weight problem	30	(60)	23	(77)	0	(0)	0	(0)	149
Work failure	8	(16)	9	(30)	60	(73)	46	(67)	55.4

Table 11.1.3 summarises responses to the question "What do you think people first notice about you?". Their weights, figures or aspects of their figures were mentioned more frequently by eating disorder subjects than by both female and male control subjects. Males were significantly more likely than female controls to believe that the first aspect of themselves which people noticed was some aspect of their personalities.

Table 11.1.3 Number (and percentage frequency) of responses to question: What do you think people first notice about you?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Appearance	6	(12)	6	(20)	7	(9)	3	(4)	6.1
Figure/weight	14	(28)	9	(30)	5	(6)	4	(6)	21.7
Hair, eyes, etc	3	(6)	3	(10)	10	(12)	3	(4)	3.6
Height	1	(2)	2	(7)	7	(9)	5	(7)	2.8
Personality	5	(10)	3	(10)	9	(11)	23	(33)	16.3
Don't know	14	(28)	5	(17)	34	(41)	23	(33)	7.2

Subjects' responses to the question "What do you like about yourself?" are presented in Table 11.1.4. Personality or specific personality traits were most frequently mentioned by male controls, then female controls, bulimics and lastly, anorexics. Only 16 percent of anorexics stated that

1. It should be noted that the responses to the questions shown in Tables 11.1.1 and 11.1.2 may have been affected by the setting of the interview, which for patients was a hospital, and for controls was a work environment.

their personality was a feature which they liked about themselves, a significantly lower percentage than the corresponding percentage for female controls. Eating disorder subjects (34 percent of the combined patient group) were far more likely than female controls (four percent) to state that they did not like anything about themselves. None of the males expressed this view.

Table 11.1.4 Number (and percentage frequency) of responses to question: What do you like about yourself?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Appearance	1	(2)	0	(0)	3	(4)	2	(3)	-
Figure/weight	1	(2)	2	(7)	3	(4)	3	(4)	1.1
Hair, eyes, etc	6	(12)	3	(10)	11	(14)	1	(1)	9.5
Personality	8	(16)	9	(30)	41	(51)	48	(70)	39.7
Work/family skills	2	(4)	2	(7)	2	(2)	11	(16)	10.5
Nothing	20	(40)	7	(23)	3	(4)	0	(0)	52.6

Table 11.1.5 presents responses to the question "What do you dislike about yourself?". On average, over one quarter of all female subjects commented that they disliked their weight and/or figures, compared to only one tenth of male subjects and the difference between the male and female controls was significant at the 0.025 level ($df=3$). Bulimics, but not anorexics, differed from controls in the frequency with which they mentioned eating related problems as a source of dissatisfaction with themselves. Only one quarter of eating disorder subjects stated that they disliked their personalities (or some aspect thereof), compared to almost one half of the controls. However, one quarter of the combined patient group said that they disliked everything about themselves, but no control subjects did so. Few patients and female controls remarked that they did not dislike anything about themselves but almost one in five males made this claim.

Table 11.1.5 Number (and percentage frequency) of responses to question: What do you dislike about yourself?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Appearance	1	(2)	2	(7)	4	(5)	0	(0)	-
Figure/weight	10	(20)	10	(33)	21	(26)	7	(10)	9.4
Hair, eyes, etc	1	(2)	1	(3)	15	(19)	3	(4)	15.0
Personality	11	(22)	7	(23)	36	(44)	34	(49)	13.8
Everything	13	(26)	7	(23)	0	(0)	0	(0)	46.0
Nothing	1	(2)	1	(2)	4	(5)	13	(19)	13.9
Eating problem	3	(6)	6	(20)	1	(1)	0	(0)	18.8

Responses to the question "What do you think you are good at?" are summarised in Table 11.1.6. Overall, only three subjects (all anorexics) mentioned weight related features in response to this question. Over one quarter of female and male controls, and 10 percent of bulimics, claimed to be good at communication with other people, or to have well developed interpersonal skills, but only one anorexic did so. Eighteen percent of eating disorder subjects stated that they were not good at anything at all, compared to only one (female) control.

Table 11.1.6 Number (and percentage frequency) of responses to question: What do you think you are good at?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Communication	1	(2)	3	(10)	21	(26)	18	(26)	20.4
Sport	15	(30)	0	(0)	20	(25)	31	(45)	29.2
Weight control	3	(6)	0	(0)	0	(0)	0	(0)	-
Nothing	9	(18)	5	(17)	1	(1)	0	(0)	26.0

Subjects' perceptions of the activities they perform poorly are summarised in Table 11.1.7. There were no significant differences between the groups in response to this question. While bulimic patients were more likely than other groups to state that they were unable to control their eating, very few subjects mentioned this aspect of themselves and a chi-square could not be calculated. Nine percent of all eating disorder subjects stated that they did everything poorly, while none of the controls did so.

A number of patients stated that they did not like anything about themselves and were not good at anything and these responses suggest that these patients may have been depressed. The Beck Depression Inventory was administered to all subjects and the results from this questionnaire are presented later, in Section 11.3.

Table 11.1.7 Number (and percentage frequency) of responses to question: What do you think you do badly?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Communication	11	(22)	5	(17)	9	(11)	6	(9)	4.9
Control eating	1	(2)	4	(13)	1	(1)	0	(0)	-
Nothing	4	(8)	2	(7)	10	(12)	11	(16)	2.7
Everything	4	(8)	3	(10)	0	(0)	0	(0)	-

Table 11.1.8 reveals the areas or activities in which subjects said they would like to be successful. The most frequent response for all groups was work or studies - 54 percent of all subjects mentioned this as an area in which they would like to succeed. Recovery from eating disorder and/or control over eating was mentioned more often by bulimics than anorexics, but overall surprisingly few patients mentioned this goal. Bulimics mentioned weight related goals more often than other subjects, but once again very few people in total mentioned these goals.

Table 11.1.8 Number (and percentage frequency) of responses to question: What would you like to be successful at?²

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Work/school	26	(52)	13	(43)	43	(53)	43	(62)	3.4
Sport	2	(4)	1	(3)	5	(6)	13	(19)	10.7
Recover from ED	2	(4)	5	(17)	-	-	-	-	-
Weight/slimness	2	(4)	4	(13)	0	(0)	0	(0)	-

2. For those responses which could only be given by eating disorder subjects, the columns for controls are marked with a dash. Chi-squares for these responses were calculated using only the two eating disorder groups.

Table 11.1.9 shows that there were significant differences between the groups in the frequency with which subjects stated that their feelings about themselves were influenced by eating and body image. Almost all eating disorder patients reported being affected, over 70 percent of control females did so, and just over half of males.

Table 11.1.9 Number (and percentage frequency) of responses to question: **Very generally, do you think that these issues (eating patterns, exercise or feelings about your body) affect the way you feel about yourself?**

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	48	(96)	29	(97)	58	(72)	35	(51)	46.2
No	2	(4)	1	(3)	23	(28)	34	(49)	

Table 11.1.10 outlines the type of effects reported by those subjects who felt that eating, exercise and body image did influence their feelings about themselves. Overwhelmingly the most common effect reported was on self esteem, with an average of 82 percent of all subjects mentioning that their body image had effects on their self esteem. Eating and body image also affected subjects' moods, but this was reported far more frequently by females (an average of 38 percent) than males.

Table 11.1.10 Number (and percentage frequency) of responses to question: **How are your feelings about yourself affected by your eating patterns, exercise or feelings about your body?**

	Anorexic n=48		Bulimic n=29		Female Control n=58		Male Control n=35		χ^2
Self esteem	39	(81)	27	(93)	44	(76)	30	(86)	4.1
Moods affected	14	(29)	15	(52)	22	(38)	4	(11)	15.8
Positive effect	0	(0)	0	(0)	0	(0)	4	(11)	-

Table 11.1.11 shows a striking difference between groups in response to the question "Do you compare your body with other women's [men's] bodies?". Patients were significantly more likely than female controls to state that they compared their bodies with those of same sex others, and in turn, female controls were significantly more likely than males to compare their bodies.

Table 11.1.11 Number (and percentage frequency) of responses to question: Do you compare your body with other women's [men's] bodies?

	Anorexic n=50		Bulimic n=30		Female Control n=77		Male Control n=68		χ^2
Yes	46	(92)	29	(97)	59	(77)	30	(44)	49.3
No	4	(8)	1	(3)	18	(23)	38	(56)	

Table 11.1.12 presents the percentages of subjects who stated that seeing a person in the media with a "good" figure had some effect on them. Once again patients were significantly more likely than female controls to report being affected, and female controls were significantly more likely than males to give this response.

Table 11.1.12 Number (and percentage frequency) of responses to question: When you see a woman [man] on television or in a magazine that you think has a good figure, do you have any feelings about yourself?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Affected	41	(82)	26	(87)	50	(61)	31	(45)	26.4
Not Affected	9	(18)	4	(13)	32	(39)	38	(55)	

The first section of Table 11.1.13 summarises the reported feelings of subjects who stated that they were affected by an "ideal" body image shown in the media. Bulimics were significantly more likely than the other groups to report feeling depressed or "bad" about themselves as a result of seeing an ideal. This was the most common response given by the bulimics. The most common response given by the anorexics and

controls was wishing to "look the same" or similar to the depicted person. Feeling depressed and wishing to look like the depicted ideal are both reactions which implicitly involve a comparison of the subjects' self with the person pictured. A further 13 percent of all subjects merely said that they compared themselves with the depicted person, but did not specify the type of subjective impact this comparison had on them.

Table 11.1.13 Number (and percentage frequency) of responses to question: How do you feel when you see a woman/man on television or in a magazine who has what you would consider to be a good figure?

	Anorexic n=41		Bulimic n=26		Female Control n=50		Male Control n=31		χ^2
Affected:									
Feel depressed	15	(37)	20	(77)	13	(26)	8	(26)	21.7
Compare self	8	(20)	2	(8)	5	(10)	4	(13)	2.5
Want to be same	24	(59)	7	(27)	34	(68)	15	(48)	12.6

Table 11.1.14 summarises responses to the question "Do you have any feelings or thoughts about the woman pictured?". Bulimics, but not anorexics, were significantly more likely than female controls to state that they had some kind of thoughts or feelings about the depicted "ideal". Males, in turn, were significantly less likely than the female controls to give this response.

Table 11.1.14 Number (and percentage frequency) of responses to question: Do you have any feelings or thoughts about the woman pictured?

	Anorexic n=50		Bulimic n=29		Female Control n=82		Male Control n=69		χ^2
Yes	26	(52)	22	(76)	43	(52)	17	(25)	26.2
No	24	(48)	7	(24)	39	(48)	52	(75)	

Table 11.1.15 reveals that there were no significant differences among groups concerning the type of feelings and thoughts experienced by subjects about the depicted ideal. The most common responses were wondering how the depicted person achieved her/his figure (stated by an average of 27 percent of all subjects) and feelings of envy or jealousy (26 percent).

Table 11.1.15 Number (and percentage frequency) of responses to question: What feelings or thoughts do you have about the woman pictured?

	Anorexic n=26		Bulimic n=22		Female Control n=43		Male Control n=17		χ^2
Envy/jealousy	8	(31)	7	(32)	6	(14)	7	(41)	5.7
Wonder how s/he achieved figure	12	(46)	6	(27)	7	(16)	4	(23)	6.7
S/he is lucky	3	(12)	3	(14)	9	(21)	2	(12)	1.7
S/he looks good	3	(12)	4	(18)	12	(28)	4	(23)	3.1

11.1.2 Results from Questionnaires

a) Results From the Self Description Adjective Inventory

Table 11.1.16 sets out the results of analysis of the self description adjective inventory which subjects completed during the interview. The inventory contained 20 body image related adjectives and 35 personality related adjectives. Other results from this inventory have already been presented in Chapter 9.

Several analyses were undertaken to determine the salience or prominence of body related adjectives in subjects' descriptions of themselves. Planned contrasts were performed as described in Chapter 8.

Tables (ii) and (iii) show that there were no significant differences between groups in the absolute number of body image related words they used to describe themselves, nor in the ratio of this number to the total number of adjectives used. Table (i) shows that anorexics used significantly fewer words in total (including body and non-body related adjectives) to describe themselves than the other groups. Tables (iv) and (v) also reveal

some group differences. The ratio of negative body adjectives to total number of adjectives selected was significantly higher for both the anorexics and bulimics than for female controls. Conversely, the ratio of positive body adjectives to total number of adjectives selected was significantly lower for both the anorexic and bulimic groups than for female controls.

Table 11.1.16 Average number of adjectives in total, and number of body image related adjectives used by groups to describe self

	Anorexic n=50	Bulimic n=30	Female Control n=82	Male Control n=69	s Value	F
i) Total number of words used to describe self						
Mean	15.46	19.03	19.43	21.22	7.444	5.89
Approximate LSD	4.02					
ii) Total no. of body image related words used to describe self						
Mean	4.12	5.0	4.35	5.17	2.376	2.58
Approximate LSD	1.28					
iii) Ratio of no. body adjectives to total no. adjectives used to describe actual self^a						
Mean	30.81	29.92	27.45	29.43	7.01	2.69
Approximate LSD	3.78					
iv) Ratio of no. negative body adjectives to total adjectives used to describe actual self						
Mean	16.47	19.11	6.80	4.36	10.29	23.94
Approximate LSD	5.55					
v) Ratio of no. positive body adjectives to total adjectives used to describe actual self						
Mean	19.01	16.35	24.11	26.63	9.16	12.39
Approximate LSD	4.94					

3. Ratios for each subject were converted to percentages and an angular transformation of this percentage was performed.

The formula for this transformation was as follows: $(\frac{180}{\pi}) \arcsin(\sqrt{\frac{y}{100}})$ where y was the percentage.

This transformation of the data was required in order to normalise them, and hence meet the requirements for ANOVA (Kirk, 1968). Adjectives categorised as "positive" were: attractive, healthy, self-controlled, slim, fashionable, well toned, well groomed, fit, athletic, average weight and muscular. Adjectives classified as negative were: dowdy, fat, unhealthy, flabby, unattractive, overweight and unfit. The classification of words as positive or negative were based on the percentages of subjects who included these adjectives in their ideal-self descriptions.

All the ratios in Tables (iii), (iv) and (v) were calculated separately for each subject and then averaged for each group. The ratios were converted to percentages and then angular transformations were undertaken.

11.1.3 Summary of Results from Interview

The interview questions assessing the salience of weight and body shape in self evaluation produced varied results but a general picture emerged which supports the hypothesized group differences. As predicted, body image and related issues were more salient in the self evaluation of patients than female controls, and were more salient for female controls' self evaluation than males.

Female controls resembled males more closely than patients with regard to evaluation of their daily behaviour, as well as in their perceptions of the features which other people first notice about them. Patients were more likely than controls to mention weight and body shape related criteria in relation to these issues.

Another factor which distinguished female controls from patients was the fact that a significant minority of patients exhibited very low self esteem in response to questions about liked and disliked aspects of themselves and activities they performed.

On several other dimensions there were significant differences between female controls and patients, and between female controls and males. These dimensions were whether or not weight had any effect on subjects' self image, whether or not subjects compared their body with those of the same sex and whether or not seeing an "ideal" figure affected their feelings about themselves.

For other issues a difference emerged between female and male controls, but patients and female controls had similar patterns of responses. These issues were disliked aspects of self (males were less likely to mention weight), activities at which subjects perceived they succeeded (males were more likely to mention sport), the effect of weight on self image (males were less likely to report that their mood was affected), and

whether or not subjects experienced any thoughts or feelings about a depicted person with an "ideal" figure (males were less likely to report such feelings). Furthermore, males were more likely than all of the female groups to mention personality as a factor in their self evaluation, and were more likely than females to express

with their personalities and indeed with every aspect of themselves. The results thus suggest that personality is a more salient dimension for males' self evaluation than body related features, and that body related features are possibly less salient for males' than for females' self evaluation.

Some differences also emerged between anorexics and bulimics. Bulimics were slightly more likely than anorexics to evaluate a successful day in weight related terms, nominate recovery from their eating disorder as an area in which they would like to succeed and feel depressed after seeing an "ideal" figure. Anorexics were more likely than bulimics to report that they were good at sport and that the effect of seeing an ideal figure was to make them want to look like the ideal. Apart from these differences the anorexic and bulimic groups fairly closely resembled each other with respect to the importance of body image in their self evaluation.

Interestingly, very few subjects at all mentioned weight or shape in relation to liked aspects of self. Similarly, very few people nominated weight control in response to the questions asking them to nominate activities in which they performed well and those in which they performed badly. Furthermore, very few subjects named weight control as an area in which they would like to succeed.

It is important to note that for **all** of the issues examined the pattern of results was in the hypothesised direction, with weight and body shape being most salient in the self evaluation of patients, followed by female controls, and lastly males.

11.1.4 Summary of Results from Questionnaires

The results from the self description adjective inventory provide limited support for the hypothesis. The strongest support for the hypothesis was provided by the significantly greater percentage of negative body image related adjectives (and significantly lower percentage of positive adjectives) in the self descriptions of patients compared with female controls. These results suggest that **negative** evaluations of body image were most salient for patients', followed by female controls' and were least salient for males' self evaluation.

11.2 Responses to Interview Questions Assessing Salience of Weight and Body Shape in Evaluation of Other People

Hypothesis 5: Patients will be more likely than female controls to evaluate other people in terms of weight or body shape. In turn, female controls will be more likely than male controls to evaluate other people in terms of weight or body shape.

11.2.1 Responses to Interview Questions

Table 11.2.1 presents the most frequent responses to the question "What do you notice first about women?". General appearance was the feature mentioned most frequently across all groups - 29 percent of subjects gave this response. Significantly more patients than both male and female controls stated that they noticed women's weight first - 38 percent of patients mentioned weight compared to 13 percent of controls.

Table 11.2.1 Number (and percentage frequency) of responses to question: What do you notice first about women?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Appearance	13	(26)	7	(23)	23	(28)	23	(33)	1.3
Weight/figure	16	(32)	14	(47)	7	(9)	12	(17)	23.0
Face	8	(16)	1	(3)	10	(12)	7	(10)	3.7
Hair, eyes etc	0	(0)	0	(0)	13	(16)	8	(12)	19.5
Clothes	6	(12)	2	(7)	28	(34)	8	(12)	18.8
Personality	5	(10)	3	(10)	7	(9)	8	(12)	0.4

Table 11.2.2 lists the features which subjects reported that they noticed first about men. Overall, an average of 11 percent of subjects reported that they noticed men's weight or figures first, and there was not a significant difference between groups in the frequency with which this was reported.

Table 11.2.2 Number (and percentage frequency) of responses to question: What do you notice first about men?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Appearance	18	(36)	14	(47)	35	(43)	9	(13)	20.5
Weight/figure	4	(8)	5	(17)	7	(9)	9	(13)	2.2
Face	9	(18)	3	(10)	11	(13)	2	(3)	9.0
Clothes/groom	3	(6)	3	(10)	17	(21)	6	(9)	7.9
Personality	6	(12)	2	(7)	6	(7)	14	(20)	6.7
Don't know	5	(10)	3	(10)	2	(2)	12	(16)	9.4

Table 11.2.3 presents the qualities which subjects reported that they admired in women. Seventy one percent of males mentioned one or more personality traits, compared to an average of 43 percent of all of the females. Fourteen percent of males specifically remarked that they admired "femininity" in women, but this quality was not mentioned by any females. Bulimics mentioned women's weight or figures more frequently than other subjects. Bulimics were also more likely than other subjects to state that they admired women who were successfully able to combine several roles; for example, to have a successful career, relationships and to be good parents. Anorexics and bulimics were more likely than controls to state that they admired women who were happy with themselves or happy with life - almost one quarter of patients mentioned these characteristics compared to only seven percent of female controls and no male controls.

Table 11.2.3 Number (and percentage frequency) of responses to question: In general, what sort of qualities do you admire in women?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Appearance	13	(26)	9	(30)	19	(23)	12	(17)	2.3
Weight/figure	6	(12)	10	(33)	5	(6)	2	(3)	19.0
Clothes/groom	5	(10)	3	(10)	14	(17)	4	(6)	5.2
Being good at all roles	2	(4)	7	(23)	7	(9)	0	(0)	19.1
Being happy re self, life, etc	10	(20)	9	(30)	6	(7)	0	(0)	28.7
Femininity	0	(0)	0	(0)	0	(0)	10	(14)	25.2
Specific traits	25	(50)	12	(40)	32	(40)	49	(71)	17.2

The qualities which subjects stated that they disliked in women are presented in Table 11.2.4. There was no difference in the frequency with which subjects reported disliking overweight women - only four percent of all subjects mentioned this feature. Females were more likely than males to state that they disliked "bitchy" or "catty" women, while males were more likely than females to assert that they disliked "feminist" women.

Table 11.2.4 Number (and percentage frequency) of responses to question: In general, what qualities do you dislike in women?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Being overweight	5	(10)	2	(7)	1	(1)	3	(4)	5.6
Feminist traits	2	(4)	1	(3)	0	(0)	10	(14)	17.2
"Bitchiness"	19	(38)	7	(23)	30	(38)	9	(13)	14.9

Table 11.2.5 lists the qualities which subjects admired in men. An average of only seven percent of all subjects commented that they admired men for general appearance, and only three percent mentioned weight or figure. Males were more likely than females in all groups to comment that they admired men who had achieved highly in some endeavour. Females, on the other hand, were more likely than males to consider "gentlemanly" qualities admirable.

Table 11.2.5 Number (and percentage frequency) of responses to question: In general, what sort of qualities do you admire in men?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Appearance	6	(12)	1	(3)	8	(10)	1	(1)	8.0
Weight/figure	2	(4)	3	(10)	1	(1)	1	(1)	-
Achievement	2	(4)	0	(0)	1	(1)	10	(14)	15.3
Gentlemanly	5	(10)	3	(10)	13	(16)	0	(0)	17.2
Specific traits	32	(64)	20	(67)	44	(54)	48	(70)	4.0

Table 11.2.6 reveals that a total of only four subjects mentioned being overweight as an undesirable characteristic for males. Nine subjects (all female) mentioned that they disliked men who made derogatory remarks about women's figures or weight. Another sex difference emerged with respect to "chauvinist" qualities: 24 percent of females but only three percent of males reported that they disliked these qualities in males.

Table 11.2.6 Number (and percentage frequency) of responses to question: In general, what qualities do you dislike in men?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Being overweight	1	(2)	2	(7)	1	(1)	1	(1)	-
Chauvinism	10	(20)	8	(27)	21	(26)	2	(3)	20.0
Arrogance/ego	14	(28)	8	(27)	26	(32)	24	(35)	1.0
Other traits	18	(36)	11	(37)	32	(40)	41	(59)	9.2
Critical of females' bodies	3	(6)	4	(13)	2	(2)	0	(0)	11.0

Table 11.2.7 reveals that only two significant group differences were found in subjects' perceptions of what constitutes attractiveness in women. Bulimics were more likely than the other groups to refer to specific personality traits such as patience, kindness and so on, while bulimics and female controls referred to good grooming as a component of attractiveness more frequently than the other groups. The most frequently mentioned component of attractiveness, reported by 36 percent of all subjects, was a "good personality". Having "a good figure" and slimness were mentioned by 26 and 17 percent of all subjects respectively.

Table 11.2.7 Number (and percentage frequency) of responses to question: What do you think constitutes being attractive in women; if you were to call a woman attractive, what would she be like?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Good figure	16	(32)	11	(37)	18	(22)	14	(20)	4.5
Good looking	14	(28)	5	(17)	21	(26)	24	(35)	3.9
Slim	13	(26)	5	(17)	13	(16)	7	(10)	5.2
Nice face	16	(32)	6	(20)	23	(28)	14	(20)	2.9
Well groomed	12	(24)	12	(40)	31	(38)	14	(20)	7.9
Attractive hair, eyes etc	15	(30)	8	(27)	24	(29)	9	(13)	7.4
Specific person- ality traits	10	(20)	10	(33)	7	(9)	10	(14)	10.1
A "good personality"	15	(30)	10	(33)	27	(33)	31	(45)	3.6

Table 11.2.8 lists the most frequently mentioned components of attractiveness for men. There were no significant differences in the frequency with which groups mentioned weight or figure related criteria for male attractiveness. A "good figure" was mentioned by an average of 21 percent of all subjects, and a "toned" or muscular body by 22 percent. Thirty four percent of females mentioned "good looks" as a factor in attractiveness, a significantly higher proportion than the 13 percent of males who gave this response. Having a "good personality" was listed as a component of attractiveness by approximately equal proportions of all groups (28 percent of all subjects).

Table 11.2.8 Number (and percentage frequency) of responses to question: What do you think constitutes being attractive in men; if you were to call a man attractive, what would he be like?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Good figure	15	(30)	5	(17)	18	(22)	10	(14)	4.6
Good looking	14	(28)	9	(30)	32	(39)	9	(13)	13.6
Slim	1	(2)	0	(0)	7	(9)	2	(3)	6.6
Toned/muscular	12	(24)	8	(27)	11	(13)	20	(29)	6.3
Good height	8	(16)	4	(13)	17	(21)	12	(17)	1.0
Well groomed	12	(24)	10	(33)	17	(21)	19	(28)	2.1
Attractive hair, eyes etc	6	(12)	5	(17)	22	(27)	10	(14)	5.8
Specific person- ality traits	11	(22)	13	(43)	8	(10)	8	(12)	17.2
A "good personality"	13	(26)	7	(23)	30	(37)	14	(20)	5.4

Approximately equal percentages of subjects in each group reported that they noticed their partners' weight. Overall, 82 percent of subjects did so.

Table 11.2.9 Number (and percentage frequency) of responses to question: Do you notice your partner's weight?

	Anorexic n=16		Bulimic n=20		Female Control n=53		Male Control n=36		χ^2
Yes	14	(88)	14	(70)	44	(83)	30	(83)	2.1
No	2	(13)	6	(30)	9	(17)	6	(17)	

Table 11.2.10 shows that patients were less likely than both female and male controls to comment on their partners' weight.

Table 11.2.10 Number (and percentage frequency) of responses to question: Do you comment on it to him or her?

	Anorexic n=16		Bulimic n=20		Female Control n=53		Male Control n=36		χ^2
Yes	4	(25)	8	(40)	32	(60)	22	(61)	8.7
No	12	(75)	12	(60)	21	(40)	14	(39)	

Ninety one percent of patients and 77 percent of controls reported that they noticed women's weight, as shown in Table 11.2.11. A further nine percent of controls qualified this statement by saying that they noticed only extremes in size. The differences shown in Table 11.2.11 approached significance.

Table 11.2.11 Number (and percentage frequency) of responses to question: Do you notice women's weight?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	45	(90)	28	(93)	61	(75)	54	(78)	14.0
Extremes only	0	(0)	1	(3)	7	(9)	7	(10)	
No	5	(10)	1	(3)	13	(16)	8	(12)	

Table 11.2.12 presents the percentages of subjects who reported that they comment to women on their weight, and reveals that there were no significant group differences regarding this behaviour. Overall, 37 percent of subjects stated that they did comment to women about their weight, some of these subjects saying that they would only comment to friends and family about their weight.

Table 11.2.12 Number (and percentage frequency) of responses to question: Do you comment to women on their weight?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	13	(26)	7	(23)	21	(26)	17	(25)	7.8
Friends/fam only	3	(6)	2	(7)	16	(20)	7	(10)	
No	34	(68)	21	(70)	44	(54)	45	(65)	

As shown in Table 11.2.13 there was not a significant difference between groups in the frequency with which subjects stated that they noticed men's weight.

Table 11.2.13 Number (and percentage frequency) of responses to question: Do you notice men's weight?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	25	(50)	16	(53)	38	(47)	35	(51)	7.8
Extremes only	3	(6)	4	(13)	18	(22)	11	(16)	
No	22	(44)	10	(33)	25	(31)	23	(33)	

Table 11.2.14 presents the percentages of subjects who comment to men on their weight. While over 30 percent of control subjects stated that they did comment to men about their weight, only 13 percent of patients did so.

Table 11.2.14 Number (and percentage frequency) of responses to question: Do you comment to men on their weight?

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	3	(6)	2	(7)	8	(10)	16	(23)	16.0
Friends/fam only	4	(8)	1	(3)	12	(15)	10	(14)	
No	43	(86)	27	(90)	61	(75)	43	(62)	

11.2.2. Summary of Results from Interview

The results from the interview provide limited support for the hypothesis that eating disorder patients would be more likely than female controls to evaluate other people in terms of weight or body shape. There was, however, little evidence to support the hypothesis that female controls would be more likely than males to use these dimensions in evaluating other people.

Certainly, eating disorder patients were far more likely than both male and female controls to report that the first feature that they noticed about other women was their weight or figure. (On the other hand, female

controls were more likely than patients to state that they noticed women's clothes first.) Patients were also more likely to answer in the affirmative to the more general question "Do you notice women's weight?". (Interestingly, they were no more likely than controls to state that they noticed men's weight.) Bulimics, and to a lesser extent anorexics, were also more likely than controls to state that one of the aspects they found admirable about other women was a "good" figure or being at what the patients perceived to be a desirable weight. Finally, patients were slightly more likely to mention being overweight as a feature which they disliked in other women.

However for the remaining dimensions which were assessed, patients responses were fairly similar to those of female controls. Patients mentioned various personality traits in response to questions about admirable and disliked features of other people (chauvinism, arrogance, gentlemanly qualities, cattiness and so on) with similar frequency to female controls. They also appeared to evaluate attractiveness in both males and females in fairly similar general terms to those used by female controls. Interestingly, bulimics included specific personality traits in their descriptions of attractive men and women more often than the other groups.)

Two interesting differences did emerge between patients and female controls concerning admired characteristics of females. Patients were more likely than female controls to state that they admired women who were happy with themselves or their lives, and bulimics were more likely than either female controls or anorexics to comment that they admired women who competently performed several social roles.

Male and female controls gave fairly similar responses in general, but there were a few interesting differences which do not directly relate to the hypothesis. Males were less likely than female controls to state that they first noticed women's clothes, and less likely than all female groups to report that they noticed men's appearance. They were also less likely than all of the female groups to mention the traits of "bitchiness" in

women, and arrogance and "gentlemanliness" in men. They were also less likely to report that being good looking was part of their definition of an attractive man.

Bulimics and anorexics had similar patterns of responses, but bulimics were slightly more likely than anorexics to evaluate other people along weight and body shape dimensions for several of the dimensions assessed.

A final observation is worth making about these results. Although there were some differences between groups in their criteria for evaluation of other people, there was also a great deal of agreement about what constitute admirable, disliked and attractive qualities in men and women.

11.3 Responses to Interview Questions Assessing Salience of Body Image in Lifestyle and Every Day Thoughts

Hypothesis 6: Weight and body shape related issues will be more salient in the general lifestyle (that is, have a greater effect on other areas of functioning) and everyday thoughts of patients than female controls. In turn, weight and shape will be more salient in the lifestyle and everyday thoughts of female controls than will be the case for male controls.

11.3.1 Responses to Interview Questions

The questions relating to this hypothesis investigated the effect of subjects' eating, exercising and feelings about their bodies on different aspects of their lifestyle and their every day thoughts. Very few people reported that exercising had any effect on their lifestyle or thoughts, and the following analysis focuses on the effects of eating and body image only.

Table 11.3.1 reveals that 82 percent of patients considered that their working lives were affected by eating and/or body image compared to an average of only 29 percent of controls. However, these results should be

considered with those presented in Table 11.3.2 which show that female controls differ quite markedly from males in some of the effects which they reported.

Table 11.3.1 Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your working life (or schooling) at all?

	Anorexic n=49		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	39	(80)	26	(87)	25	(31)	19	(28)	62.5
No	10	(20)	4	(13)	56	(69)	50	(72)	

The most common response given by males was that the type and amount of food eaten during the day affected their subsequent work performance, but this effect was presented as physiological rather than related to any body image concerns. While a high percentage of female controls also reported this effect, an equally high number commented that negative feelings about their bodies caused them to be "moody" at work. A further 20 percent of female controls reported that poor or negative body image had a direct effect on their work performance. Patients were far more likely than both female and male controls to report that their preoccupation with food affected their performance at work or school. This was by far the most common response from patients -an average of 75 percent of those patients reporting any effects reported this preoccupation. Anorexics complained of fatigue at work (related to inadequate food intake) more frequently than the other groups, while the bulimics were more likely than the anorexics to report that poor body image affected their work performance.

Table 11.3.2 Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your working life?

	Anorexic n=39		Bulimic n=26		Female Control n=25		Male Control n=19		χ^2
Preoc with food -poor work	28	(72)	21	(81)	1	(4)	0	(0)	70.1
Fatigue	18	(46)	5	(19)	0	(0)	3	(16)	23.9
Poor body image -poor work	2	(5)	7	(27)	5	(20)	1	(5)	8.4
Preoc with food -moodiness	2	(5)	7	(27)	0	(0)	1	(5)	12.9
Poor body image -moodiness	5	(13)	2	(8)	10	(40)	0	(0)	16.8
Food has affect on performance	1	(3)	0	(0)	10	(40)	13	(68)	48.3

Table 11.3.3 shows that significantly more patients than female controls reported that eating/body image had an effect on their social lives, and that female controls were significantly more likely than males to report such effects.

Table 11.3.3 Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your social life at all?

	Anorexic n=49		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	42	(86)	25	(83)	31	(38)	10	(14)	84.6
No	7	(14)	5	(17)	50	(62)	59	(86)	

Table 11.3.4 lists the most common reported effects of food and body image. Patients were far more likely than control females to state that they avoided social situations because of the food they may have had to eat. Patients also reported that they avoided social occasions because of negative feelings about their weight or shape more frequently than control females. However, female controls were more likely than patients

to report that, although poor body image did not prevent them going out, it certainly resulted in negative feelings about themselves when socialising.

Table 11.3.4 Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your social life?

	Anorexic n=42		Bulimic n=25		Female Control n=31		Male Control n=10		χ^2
Avoid going out because of food	32	(76)	15	(60)	2	(6)	0	(0)	54.2
Avoid going out negative body image	18	(43)	15	(60)	8	(26)	1	(10)	11.4
Feel bad out because of food	10	(24)	10	(40)	3	(10)	1	(10)	8.4
Feel bad out - negative body image	6	(14)	8	(32)	17	(55)	2	(20)	14.5
Avoid going out binge instead	4	(10)	7	(28)	0	(0)	0	(0)	15.0
Fatigue	3	(7)	0	(0)	1	(3)	2	(20)	-

Subjects' perceptions of the effects of eating and/or body image on their romantic or sexual relationships are presented in Tables 5 and 6. Seventy one percent of the combined patient group believed that their romantic lives were influenced by these factors, a significantly higher proportion than the corresponding 20 percent of female controls.

Table 11.3.5 Number and (percentage frequency) of responses to question: Do you think that your eating or exercise patterns or feelings about your body affect your romantic or sex life at all?

	Anorexic n=46		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	30	(65)	24	(80)	16	(20)	5	(7)	81.4
No	16	(35)	6	(20)	65	(80)	64	(93)	

Table 11.3.6 presents the effects of body image and related issues reported by subjects. Because of the small number of males who reported any effects, they were excluded from the chi-squared analysis. The chi-squared figures shown are based on the female groups only.

An average of 41 percent of patients reporting an effect said that they had no interest in sexual or romantic relationships as they were preoccupied solely with food, and 13 percent reported a loss of libido. Thirteen percent of anorexics and 29 percent of bulimics commented that "moodiness" or altered moods related to their eating patterns had a detrimental effect on their relationships. None of the female controls reported any of these effects. However, all of the female groups (an average of 39 percent) reported with similar frequency that one effect of their poor body image was to make them feel unattractive to the opposite sex. An average of 21 percent of all females also reported that their poor body image led them to avoid physical contact with their partners or members of the opposite sex.

Table 11.3.6 Number (and percentage frequency) of responses to question: In what way(s) do your eating or exercise patterns or feelings about your body affect your romantic life?

	Anorexic n=30		Bulimic n=24		Female Control n=16		Male Control n=5		χ^2
Avoid physical contact	4	(13)	7	(29)	4	(25)	0	(0)	2.2
Feel unattractive	10	(33)	9	(38)	8	(50)	2	(40)	1.2
No interest-preoc with food	13	(43)	9	(38)	0	(0)	0	(0)	14.3
Altered moods affect relationship	4	(13)	7	(29)	0	(0)	0	(0)	-
Loss of libido	5	(17)	2	(8)	0	(0)	0	(0)	-

Responses to the question "How often do you think about your weight and/or dieting?" are outlined in Table 11.3.7. The groups differed markedly in their patterns of response. Eighty three percent of bulimics stated that they "usually" or "always" thought about weight/dieting as did 63 percent of anorexics. Sixteen percent of male and female controls

stated that they always or usually thought about these issues. However, over twenty percent of female controls reported that they thought about weight/dieting "often", compared to only nine percent of males.

Table 11.3.7 Number (and percentage frequency) of responses to question: How often do you think about your weight and/or dieting?

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Always	21	(43)	21	(70)	7	(9)	6	(9)	115
Usually	10	(20)	4	(13)	6	(7)	5	(7)	
Often	13	(27)	4	(13)	18	(22)	6	(9)	
Sometimes	4	(8)	1	(3)	32	(39)	28	(41)	
Rarely	1	(2)	0	(0)	12	(15)	14	(20)	
Never	0	(0)	0	(0)	7	(9)	10	(14)	

Table 11.3.8 presents the frequency with which subjects reported talking about weight and/or dieting. Overall, all groups appeared to spend less time talking about these issues than they spent thinking about them. Bulimics reported talking about weight most frequently and males least frequently: 30 percent of bulimics indicated that they "always" or "usually" talked about these topics, compared to 12 percent of anorexics, seven percent of control females, and six percent of males.

Table 11.3.8 Number (and percentage frequency) of responses to question: How often do you talk about your weight and/or dieting?

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Always	3	(6)	5	(17)	2	(2)	2	(3)	36.9
Usually	3	(6)	4	(13)	4	(5)	2	(3)	
Often	10	(20)	1	(3)	9	(11)	2	(3)	
Sometimes	17	(35)	11	(37)	34	(41)	16	(23)	
Rarely	11	(22)	7	(23)	24	(29)	32	(46)	
Never	5	(10)	2	(7)	9	(11)	15	(22)	

A highly significant difference across groups emerged in response to the question concerning time spent thinking about weight or dieting. Table 11.3.9 shows that just over 50 percent of males reported that they thought about weight or dieting at some times more than others. The

percentages for the female controls were significantly higher, and in turn, anorexics and bulimics were more likely than the female controls to give this response.

Table 11.3.9 Number (and percentage frequency) of responses to question: Do you find that you are thinking about your weight and/or dieting at some times of the day more than other times, or do you find that you are thinking about your weight and/or dieting in certain situations more than others?

	Anorexic n=50		Bulimic n=30		Female Control n=78		Male Control n=69		χ^2
Yes	44	(88)	29	(97)	54	(69)	35	(51)	34.5
No	6	(12)	1	(3)	24	(31)	34	(49)	

Table 11.3.10 outlines the times and situations in which subjects stated they were most likely to be thinking about their weight and/or dieting. The most common responses for each group were as follows: anorexics most frequently reported thinking about their weight when they were upset or depressed and after/during eating; the most common response for bulimics was "constantly"; for female controls it was "when trying on clothes"; and for males it was "during exercise".

Table 11.3.10 Number (and percentage frequency) of responses to question: When are you most likely to be thinking about your weight and/or dieting?

	Anorexic n=44		Bulimic n=29		Female Control n=54		Male Control n=35		χ^2
When:									
Upset/depressed	11	(25)	4	(14)	2	(4)	0	(0)	18.6
Bored/alone	6	(14)	4	(14)	2	(4)	0	(0)	9.9
Feeling fat	3	(7)	1	(3)	8	(15)	2	(6)	4.2
Near good bodies	2	(5)	3	(10)	4	(7)	2	(6)	1.0
Summer/beach	0	(0)	0	(0)	5	(9)	2	(6)	9.2
Donning clothes	2	(5)	3	(10)	12	(22)	5	(14)	7.5
I have eaten	12	(27)	4	(14)	9	(17)	5	(14)	2.9
Around food	3	(7)	4	(14)	6	(11)	3	(9)	1.1
Exercising	1	(2)	0	(0)	1	(2)	7	(20)	15.3
Other	9	(20)	3	(10)	3	(6)	5	(14)	5.2
Constantly	3	(7)	6	(21)	0	(0)	0	(0)	17.8
In front mirror	1	(2)	1	(3)	1	(2)	3	(9)	2.7
Weigh more	2	(5)	1	(3)	7	(13)	5	(14)	4.8
Socialising	0	(0)	4	(14)	5	(9)	0	(0)	12.9

The issue of perceived over-concern with dieting and body shape sharply divided the groups, as revealed in Table 11.3.11. Ninety percent of bulimics acknowledged that they were too concerned with body image. About 70 percent of anorexics acknowledged over-concern, but almost one quarter of anorexics denied that they were over-concerned. In contrast, only 17 percent of female controls and nine percent of males considered that they were over-concerned.

Table 11.3.11 Number (and percentage frequency) of responses to question: Do you think that you are too concerned with dieting, body shape and so on?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	36	(72)	27	(90)	14	(17)	6	(9)	125
Sometimes	2	(4)	2	(7)	6	(7)	0	(0)	
No	12	(24)	1	(3)	62	(76)	63	(91)	

11.3.2 Results from Questionnaires

a) Results From the Beck Depression Inventory

The Beck Depression Inventory (BDI) provides a "quantitative assessment of the intensity of depression" (Beck et al., 1961, p.569). It was used in order to see whether the groups differed in their level of depression.

The mean BDI scores for the four groups are presented in Table 11.3.12, with two of the items omitted from the total. Items R and S on the BDI concern loss of appetite and weight loss. Clearly, these are two areas in which the eating disorder groups may be expected to differ from controls, but which are not necessarily indicative of depression. A log transformation of the scores was required in order to satisfy the assumptions for ANOVA.

The planned contrasts performed indicated that the average BDI score for female controls was significantly higher than the average BDI score for the males. The average BDI scores for both the anorexic and bulimic groups were in turn significantly higher than the average for female controls. There was not a significant difference between the average scores for anorexics and bulimics.

Table 11.3.12 Comparison of Mean EAT Scores (and Log Transformations of BDI Scores) for Groups

	Anorexic n=49	Bulimic n=28	Female Control n=78	Male Control n=67	F
Log (BDI Score)	1.326	1.301	0.648	0.518	70
BDI Score	24.1	23.4	5.1	3.8	
df	219				
SE	0.361				
Approx LSD	0.161				
P	0.0001				

These results reveal the depression experienced by eating disorder patients. Of course, it cannot necessarily be assumed that patients are more depressed because of the greater salience (and negative effect) of weight and shape in their self evaluation, daily lives and thoughts. Nevertheless, it is probable that the negative effects of weight and shape in patients' lives do contribute to their depression. A post-hoc analysis was conducted in order to see whether scores on the BDI for each of the groups were associated, or correlated with, scores on measures of body shape concern - the Body Shape Questionnaire (BSQ), Body Dissatisfaction scale of the Eating Disorders Inventory and the Eating Attitudes Test (EAT). An interesting finding emerged, which is shown in Table 11.3.13. For all of the female groups scores on the BDI were highly correlated with scores on each of the three measures of weight and shape concern. For males there were no significant correlations between scores on the BDI and these three measures. Thus it would appear that for females there is a significant and close association between depression and concern with weight and shape, but that no such relationship exists for males.

Table 11.3.13 Comparison of Correlation between modified Beck Depression Inventory scores and measures of weight and body shape concern.

	Anorexic n=49	Bulimic n=28	Female Control n=78	Male Control n=67
Correlation between BDI and:				
EAT	.609*	.672*	.527*	.096
BSQ	.603*	.805*	.639*	.166
Body dissatisfaction subscale - EDI	.525*	.632*	.537*	.046

*P<0.01

11.3.3 Summary of Results from Interview

The data presented in Tables 1 to 6 provide strong support for the hypothesis regarding salience of body image related issues in lifestyle.

Patients were far more likely than controls to report that eating and body image had an effect on their working lives. However, although female and male controls were equally likely to report that their working lives were affected, when the nature of these concerns is examined it is clear that the effects on males were mostly unrelated to body image. While female controls did not share patients' preoccupation with **food** and its effects, nor the fatigue resulting from lack of food reported by anorexics, they did report similar **body image** related concerns.

For social and romantic functioning a continuum emerged, with patients being most likely to report being affected by food or body image, followed by female controls and lastly males, for whom reported effects were almost negligible. While a much higher percentage of patients than female controls reported effects on their social and romantic lives, and patients reported more extreme consequences of their eating habits and body image, patients shared some qualitatively similar concerns with female controls.

A similar result was found for the times at which subjects thought about their weight or dieting. Patients were significantly more likely than female controls, who were in turn more likely than males, to think about these issues at some times more than other times.

On three other dimensions there were very large differences between patients and female controls, but also a smaller and still significant difference between female controls and males. These variables were reported over-concern with weight and/or dieting and amount of time spent thinking and talking about these issues.

In summary, female controls were more likely than males to report body image related effects on their lifestyles. In turn, a higher percentage of patients than female controls reported that their lives were affected by body image related issues, and some of the effects experienced by patients were more extreme. Nevertheless, patients and female controls appeared to share many qualitatively similar concerns.

11.3.4 Summary of Results from Questionnaires

Patients scored far more highly on a measure of depression (the BDI) than female controls, and there was a much smaller but still significant difference between female and male controls. There was a strong relationship between depression and measures of weight and body shape concern for females in all groups, but this relationship was not found for males.

11.4 Responses to Interview Questions Assessing the Salience of Weight and Body Shape in Subjects' Understanding of Other Attributes or Concepts, and Subjects' Understanding of Weight and Body Shape Adjectives.

Hypothesis 7 (a): Patients will be more likely than female controls to associate weight or body shape with other attributes or concepts such as attractiveness, health, nutrition, exercise, fitness and personality. In turn, female controls will be more likely than male controls to associate weight or body shape with these concepts.

11.4.1 Responses to Interview Questions

Table 11.4.1 presents subjects' responses to the question "What do you understand by the term 'healthy'?". The most common response to this question involved some reference to healthy eating habits, good nutrition and so on. An average of 39 percent of all subjects offered this definition. Patients were more likely than controls to mention a weight related criterion but this difference was only significant at the 0.05 level.

Table 11.4.1 Number (and percentage frequency) of responses to question: What do you understand by the term "healthy" or good health?

	Anorexic n=49		Bulimic n=30		Female Control n=75		Male Control n=69		χ^2
Not being ill	6	(12)	8	(27)	25	(33)	23	(33)	9.1
Being fit	13	(27)	7	(23)	20	(27)	19	(28)	0.2
Eating well	18	(37)	11	(37)	36	(48)	21	(30)	4.9
Exercising well	11	(22)	10	(33)	22	(29)	18	(26)	1.3
Wt related-e.g. being slim	8	(16)	6	(20)	3	(4)	7	(10)	8.2
Functioning well	9	(18)	0	(0)	0	(0)	7	(10)	23.1

The images which subjects associated with the term "healthy" are listed in Table 11.4.2. There was no significant difference in the frequency with which the groups referred to a weight related criterion, usually slimness. Across all subjects 10 percent referred to this image. Males were more likely than females to refer to a toned or muscular person. Female controls were more likely than other groups to refer to a type of food, usually a fruit or vegetable.

Table 11.4.2 Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "healthy"?

	Anorexic n=39		Bulimic n=29		Female Control n=64		Male Control n=59		χ^2
Type of food	7	(18)	7	(24)	27	(42)	13	(22)	9.3
Rosy cheeks etc	14	(36)	8	(28)	10	(16)	6	(10)	11.2
Toned musc pers	5	(13)	3	(10)	9	(14)	21	(36)	12.6
Slim person	7	(18)	4	(14)	8	(13)	11	(19)	1.1

Subjects' ideas about what types of food are healthy are set out in Table 11.4.3. By far the most common types reported were fruit and vegetables, with 75 percent of all subjects referring to these. Once again female controls were more likely than the other groups to refer to fruit and vegetables. Very few subjects specifically mentioned low calorie foods - a total of only eight subjects did so.

Table 11.4.3 Number (and percentage frequency) of responses to question: What sort of food do you think is healthy or good for you?

	Anorexic n=45		Bulimic n=26		Female Control n=75		Male Control n=59		χ^2
Fruit and veges	32	(71)	20	(77)	64	(85)	38	(64)	8.5
Low calorie	1	(2)	4	(15)	2	(3)	1	(2)	7.1

The question of why subjects considered certain foods to be healthy elicited interesting results, shown in Table 11.4.4. The most frequent responses were that the foods were natural or unprocessed or that they contained a specific component (e.g. vitamins, minerals) which the subject considered to be healthy. Bulimics mentioned the criterion of being low in calories more frequently than other groups (42 percent of bulimics mentioned calorie value), but this response was surprisingly common amongst all groups (almost one quarter of female controls mentioned calories, as did over ten percent of the anorexic and male groups).

Table 11.4.4 Number (and percentage frequency) of responses to question: Why do you think those types of food are healthy?

	Anorexic n=45		Bulimic n=26		Female Control n=75		Male Control n=59		χ^2
Low calorie	6	(13)	11	(42)	18	(24)	7	(12)	11.5
Natural or unprocessed	13	(29)	9	(35)	15	(20)	12	(20)	2.9
Have specific healthy component	10	(22)	8	(31)	27	(36)	18	(31)	2.7

Table 11.4.5 displays the frequency with which subjects named various food types as being unhealthy. The types of foods which subjects named most frequently as being unhealthy were those which are "greasy" or "oily" - 42 percent of all subjects named these types of foods. Also frequently mentioned were "junk food" and foods which have a high sugar content.

Table 11.4.5 Number (and percentage frequency) of responses to question: What sort of food do you think is unhealthy or bad for you?

	Anorexic n=45		Bulimic n=27		Female Control n=69		Male Control n=56		χ^2
Greasy/oily	18	(40)	13	(48)	27	(39)	24	(43)	0.7
High in sugar	7	(16)	6	(22)	9	(13)	6	(11)	2.0
Cake/choc/sweets	18	(40)	13	(48)	25	(36)	8	(14)	14.2
"Junk food"	12	(27)	4	(15)	24	(35)	16	(29)	4.2

Table 11.4.6 reveals that a common reason given by subjects for their belief that some types of food are unhealthy was that the foods contained some kind of "unhealthy" component, e.g. fat, salt or sugar. Females of all groups were again significantly more likely than males to mention the high calorie value of food as a reason for considering it unhealthy.

Table 11.4.6 Number (and percentage frequency) of responses to question: Why do you think those types of food are unhealthy?

	Anorexic n=45		Bulimic n=27		Female Control n=69		Male Control n=56		χ^2
High calorie	14	(31)	14	(52)	25	(36)	7	(13)	16.4
Contains -ve/ bad component	16	(36)	11	(41)	31	(45)	20	(36)	1.1

Table 11.4.7 shows that there was not a significant difference in the frequency with which the four groups gave a weight related reason for considering exercise to be healthy. An average of 24 percent of all subjects offered a weight related reason, such as "exercise helps to keep you slim."

Table 11.4.7 Number (and percentage frequency) of responses to question: How is exercise related to health?

	Anorexic n=49		Bulimic n=30		Female Control n=75		Male Control n=67		χ^2
Weight-related response	7	(14)	6	(20)	22	(29)	19	(28)	4.9
Other response	42	(86)	24	(80)	53	(71)	48	(72)	

Table 11.4.8 reveals that the most common definition for "fitness" given by subjects was the capacity to exercise without becoming out of breath. Relatively few subjects (eight percent overall) described fitness in terms of weight.

Table 11.4.8 Number (and percentage frequency) of responses to question: What do you understand by the term "fit"?

	Anorexic n=50		Bulimic n=29		Female Control n=75		Male Control n=68		χ^2
Weight related e.g. slim	3	(6)	5	(17)	6	(8)	4	(6)	3.3
Able to exercise without puffing	16	(32)	6	(21)	27	(36)	20	(29)	2.5
Cardiovascular	6	(12)	6	(21)	1	(1)	9	(13)	13.4

The most common images which subjects associated with the word "fit" are listed in Table 11.4.9. Over half of all subjects reported that they associated images of athletes or people doing exercise of various kinds with the term "fit." Patients were more likely than controls to mention a slimness related image, but this difference was only significant at the 0.05 level.

Table 11.4.9 Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "fit"?

	Anorexic n=36		Bulimic n=28		Female Control n=63		Male Control n=52		χ^2
An athlete	12	(33)	15	(54)	31	(49)	33	(63)	7.9
Exercising	16	(44)	7	(25)	29	(46)	12	(23)	9.7
A slim person	8	(22)	9	(32)	7	(11)	5	(10)	8.4

Table 11.4.10 shows that approximately equal percentages of each group (69 percent overall) considered that there are differences between fat and slim people apart from differences in weight.

Table 11.4.10 Number (and percentage frequency) of responses to question: Do you think that there are any differences between fat and slim people apart from their weight?⁴

	Anorexic n=48		Bulimic n=27		Female Control n=61		Male Control n=69		χ^2
Yes	31	(65)	19	(70)	50	(62)	42	(61)	0.9
No	17	(35)	8	(30)	31	(38)	27	(39)	

Table 11.4.11 lists the differences which subjects believed to exist between fat and slim people. There was a great diversity of responses ranging from physical characteristics to psychological factors and there was no single difference which was reported by a large percentage of subjects. (Hence few chi-squared statistics could be calculated.) Female controls and bulimics were more likely than males and anorexics to believe that fat people have low self esteem. Both anorexics and bulimics were more likely than the control groups to state that while fat people may seem happy, they are in fact depressed), and males were more likely to report that fat people have "a complex about their weight" Other responses offered with roughly equal frequency by all groups included, fat people: are happier or more jolly than slim people (offered by an average of 24 percent of all subjects); have no self confidence (12 percent); do not do any exercise (12 percent) and are more unhealthy than slim people (11 percent).

4. 6 subjects (2 anorexics, 3 bulimics and 1 female control) responded 'do not know'. Percentages and χ^2 are based on the remaining number of subjects.

Table 11.4.11 Number (and percentage frequency) of responses to question: What are the differences between fat and slim people?

	Anorexic n=31		Bulimic n=19		Female Control n=50		Male Control n=42		χ^2
Fat people:									
go out less	1	(3)	1	(5)	2	(4)	4	(10)	1.7
do no exercise	4	(13)	2	(11)	4	(8)	7	(17)	1.6
are happy, jovial	11	(35)	6	(32)	12	(24)	5	(12)	6.2
are less vain	0	(0)	1	(5)	3	(6)	1	(2)	-
are kinder, nicer	0	(0)	0	(0)	3	(6)	3	(7)	-
are actually very depressed	5	(16)	5	(26)	2	(4)	3	(7)	8.1
do not care about themselves	1	(3)	2	(11)	2	(4)	1	(2)	-
have no or low self esteem	1	(3)	5	(26)	7	(14)	1	(2)	11.0
have no self control	0	(0)	1	(5)	1	(2)	0	(0)	-
have no control over food	5	(16)	2	(11)	6	(12)	1	(2)	5.0
are more self conscious	2	(6)	2	(11)	5	(10)	2	(5)	1.3
have no self confidence	1	(3)	3	(16)	6	(12)	5	(12)	3.2
other difference	6	(19)	3	(16)	5	(10)	6	(14)	1.2
are unhealthy	4	(13)	0	(0)	6	(12)	7	(17)	5.7
have a "complex" re their weight	2	(6)	0	(0)	4	(8)	8	(19)	7.9
Other negative stereotype	1	(3)	2	(11)	1	(2)	4	(10)	3.7

As shown in Table 11.4.12, the groups did not differ significantly in the frequency with which they stated that anyone could be slim. Overall, 53 percent of subjects overall considered that anybody could be slim if they wanted to be.

Table 11.4.12 Number (and percentage frequency) of responses to question: Do you think that anybody can be slim if they want to be?⁵

	Anorexic n=49		Bulimic n=30		Female Control n=79		Male Control n=67		χ^2
Yes	28	(57)	21	(70)	40	(51)	31	(46)	5.3
No	21	(43)	9	(30)	39	(49)	36	(54)	

The reasons the remaining 47 percent of subjects gave to justify their belief that not everybody could be slim are listed in Table 11.4.13. There were no significant group differences in the frequency with which various reasons were offered. The most common responses included explanations involving metabolism, genetic factors, body build and frame size, and a lack of willpower. Over one third of subjects simply restated that some people "just could not" lose weight.

Table 11.4.13 Number (and percentage frequency) of responses to question: If not, why not?

	Anorexic n=21		Bulimic n=9		Female Control n=39		Male Control n=36		χ^2
Metabolism	5	(24)	1	(11)	6	(15)	5	(14)	1.1
Body type	6	(29)	1	(11)	8	(20)	14	(39)	4.6
Genetic reasons	3	(14)	2	(22)	7	(18)	6	(17)	0.3
Lack willpower	3	(14)	3	(33)	3	(8)	4	(11)	3.7
"Just cannot"	4	(19)	2	(22)	20	(51)	11	(31)	7.9

5. 4 subjects (1 AN, 1 female control and 1 male control) responded 'do not know'. Percentages and χ^2 are based on the remaining number of subjects.

Table 11.4.14 reveals that there was a significant difference in the percentage of patients and controls who considered that people should control their eating. About seventy percent of patients believed that people should control their eating, compared to 89 percent of controls. However, this difference needs to be considered in the light of results presented in Table 11.4.15.

Table 11.4.14 Number (and percentage frequency) of responses to question: Do you think that people should try to control their eating in any way (that is, watch what they eat)⁶?

	Anorexic n=48		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Yes	35	(73)	21	(70)	74	(91)	60	(87)	11.6
No	13	(27)	9	(30)	7	(9)	9	(13)	

Table 11.4.15 shows that 45 percent of patients and 25 percent of female controls believed that people should control their eating for the sole reason of improving their appearance. Males were the least likely of all groups to refer only to appearance related reasons (13 percent) and the most likely to refer to only to health related reasons.

Table 11.4.15 Number (and percentage frequency) of responses to question: Why do you think that people should try to control their eating (that is, watch what they eat)?

	Anorexic n=32		Bulimic n=19		Female Control n=64		Male Control n=48		χ^2
For health	12	(38)	9	(47)	36	(56)	36	(75)	17.8
For appearance	14	(44)	9	(47)	16	(25)	6	(13)	
For both appear- ance and health	6	(19)	1	(5)	12	(19)	6	(13)	
No specific reason given*	3	(9)	2	(10)	10	(14)	12	(20)	

* Not included in chi-square analysis

6. 1 subject (anorexic) responded 'do not know'. Percentages and χ^2 are based on the remaining number of subjects.

Hypothesis 7 (b): Patients will hold different definitions of weight and body shape adjectives to those of female controls. Specifically, they will be more likely than female controls to report that adjectives such as "fat" are negative or undesirable, and to report that adjectives such as "thin" are positive or desirable. In turn, female controls will be more likely than male controls to report that adjectives such as "fat" are negative or undesirable and to report that adjectives such as "thin" are positive or desirable.

11.4.2 Responses to Interview Questions

Tables 16 to 34 present the definitions which subjects offered for various body shape and weight related adjectives, and the connotations which subjects placed on these terms.

Patients were more likely than female controls to consider that being slim meant having a nice or good figure. In turn, female controls gave this response more frequently than males.

Table 11.4.16 Number (and percentage frequency) of responses to question: What do you understand by the word "slim"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Average weight	4	(8)	1	(3)	9	(13)	10	(15)	4.2
Not fat or thin	9	(18)	5	(17)	16	(24)	14	(21)	0.9
Slightly under ideal weight	6	(12)	7	(23)	9	(13)	10	(15)	2.0
Lean/no fat	11	(22)	6	(20)	18	(26)	21	(31)	2.0
A good figure	18	(36)	9	(30)	12	(18)	6	(9)	14.8
Well toned/fit	6	(12)	7	(23)	3	(4)	3	(4)	10.1
Thin	9	(18)	3	(10)	5	(7)	8	(12)	3.2
Skinny	0	(0)	0	(0)	6	(9)	10	(15)	16.9

The most common image which subjects associated with slimness was simply the definition of slimness which they had previously outlined, as shown in Table 11.4.17. All female groups were more likely than males to associate a picture of someone with a good figure with the word "slim".

Table 11.4.17 Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "slim"?

	Anorexic n=39		Bulimic n=25		Female Control n=50		Male Control n=53		χ^2
Person as described earlier	13	(33)	11	(44)	27	(55)	31	(58)	6.3
Person with a good figure	17	(44)	11	(44)	13	(26)	5	(9)	18.9

Table 11.4.18 reveals that while almost all females (an average of 95 percent) of considered slimness to be a positive or desirable quality, significantly fewer males did so. Nevertheless over three quarters of males did regard slimness as a positive attribute.

Table 11.4.18 Percentage frequency with which "slim" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "slim")⁷.

	Anorexic n=49		Bulimic n=30		Female Control n=67		Male Control n=63		χ^2
Positive	47	(96)	29	(97)	62	(93)	49	(78)	12.9
Neutral	2	(4)	1	(3)	5	(7)	14	(22)	

Subjects' definitions for the word "thin" are presented in Table 11.4.19. There were no significant differences across groups in the way in which thinness was described.

Table 11.4.19 Number (and percentage frequency) of responses to question: What do you understand by the word "thin"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Slim	21	(42)	9	(30)	13	(19)	16	(24)	8.0
Thinner than slim	22	(44)	17	(57)	39	(57)	43	(64)	4.8
Too slim/underwt	8	(16)	11	(37)	22	(32)	15	(22)	6.4
Bony	9	(18)	4	(13)	16	(24)	6	(9)	5.7

7. 1 anorexic, 1 female control and 3 male controls considered slim to be a negative word. Percentages and χ^2 are calculated on positive and neutral categories only (df=3).

Table 11.4.20 reveals that the groups varied significantly in the way in which they evaluated thinness. Bulimics and anorexics were quite similar in their perceptions of thinness, with over half of the combined patient group regarding thinness as a positive attribute. Female controls were less likely than patients to consider thinness to be a desirable attribute (over 20 percent of female controls did consider thinness desirable, however), and were more likely to label it an undesirable quality. The majority of males (55 percent) considered thinness to be a neutral quality.

Table 11.4.20 Percentage frequency with which "thin" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "thin").

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=66		χ^2
Positive	28	(56)	13	(43)	14	(21)	8	(12)	42.3
Neutral	7	(14)	6	(20)	20	(29)	36	(55)	
Negative	15	(30)	11	(37)	34	(50)	22	(33)	

Subjects' definitions of the term "skinny" are presented in Table 11.4.21. The most frequent meaning of "skinny" given by all groups was "thinner than thin" - 45 percent of all subjects gave this definition. Females of all groups described skinny as being "bony" more frequently than males. Bulimics were more likely than other groups to equate being skinny with being physically ill.

Table 11.4.21 Number (and percentage frequency) of responses to question: What do you understand by the word "skinny"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Thin	10	(20)	8	(27)	27	(40)	25	(37)	6.6
Thinner than thin	25	(50)	12	(40)	32	(47)	28	(42)	1.2
Bony	8	(16)	7	(23)	13	(19)	2	(3)	12.9
Ill or sick	4	(8)	5	(17)	0	(0)	4	(6)	12.9

Table 11.4.22 presents subjects' evaluation of the term "skinny". Over one third of patients regarded "skinniness" as a desirable attribute, compared to only ten percent of controls.

Table 11.4.22 Percentage frequency with which "skinny" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "skinny").

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=66		χ^2
Positive	17	(34)	10	(33)	8	(12)	6	(9)	28.5
Neutral	15	(30)	6	(20)	13	(19)	29	(44)	
Negative	18	(36)	14	(47)	47	(69)	31	(47)	

The major definitions which subjects offered for the adjective "slender" are presented in Table 11.4.23. The most frequent definition from each of the groups was slim, while a few subjects stated that slender referred to someone who was both tall and slim.

Table 11.4.23 Number (and percentage frequency) of responses to question: What do you understand by the word "slender"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Slim	40	(80)	23	(77)	48	(71)	37	(55)	9.6
Slim and tall	3	(6)	4	(13)	7	(10)	5	(7)	1.6

Table 11.4.24 reveals that males were significantly less likely than females in all groups to regard slenderness as a desirable quality - 86 percent of females considered slenderness to be a positive quality compared to 63 percent of males.

Table 11.4.24 Percentage frequency with which "slender" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "slender")⁸.

	Anorexic n=50		Bulimic n=28		Female Control n=66		Male Control n=64		χ^2 ¹
Positive	41	(82)	27	(96)	56	(85)	40	(63)	18.1
Neutral	9	(18)	1	(4)	10	(15)	24	(37)	

Table 11.4.25 presents the definitions which subjects offered for the word "fat". The most frequent meaning given by all groups was overweight, with 44 percent of subjects overall offering this definition.

Table 11.4.25 Number (and percentage frequency) of responses to question: What do you understand by the word "fat"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Overweight	23	(46)	9	(30)	34	(50)	29	(43)	3.6
Extremely overwt	6	(12)	6	(20)	11	(16)	11	(16)	1.0
Huge or big	7	(14)	3	(10)	15	(22)	15	(22)	3.6
Ugly/revolting	8	(16)	8	(27)	4	(6)	3	(4)	12.6
Bulging, flabby	11	(22)	7	(23)	7	(10)	4	(6)	9.4

Table 11.4.26 reveals that most subjects in all groups associated a picture or image with the term fat. All of the bulimics reported that the term "fat" conjured up an image or picture, as did at least 80 percent of subjects in each of the other groups.

Table 11.4.26 Number (and percentage frequency) of responses to question: Do any pictures or images come to your mind from the word "fat"?

	Anorexic n=49		Bulimic n=28		Female Control n=67		Male Control n=67		χ^2
Yes	39	(80)	28	(100)	59	(88)	57	(85)	10.1
No	10	(20)	0	(0)	8	(12)	10	(15)	

8. 1 bulimic, 2 female controls and 1 male control considered slender to be a negative word. Percentages and χ^2 are calculated on positive and neutral categories only (df=3).

There were several images associated with the word fat, as shown in Table 11.4.27. Females of all groups were slightly more likely than males to associate themselves with the word fat (indeed, none of the males associated an image of themselves with the term "fat") and were also more likely to specify that their image of "fat" was of a fat woman.

Table 11.4.27 Number (and percentage frequency) of responses to question: What pictures or images come to mind from the word "fat"?

	Anorexic n=39		Bulimic n=28		Female Control n=59		Male Control n=57		χ^2
Person as described earlier	15	(38)	9	(32)	25	(42)	22	(39)	0.9
Role of fat	11	(28)	8	(29)	4	(7)	14	(25)	11.7
Self	3	(8)	4	(14)	4	(7)	0	(0)	9.7
Specific person	5	(13)	3	(11)	15	(25)	11	(19)	4.0
Very fat person	5	(13)	4	(14)	9	(15)	11	(19)	0.9
A fat female	4	(10)	4	(14)	6	(10)	0	(0)	11.2

While the great majority of all subjects considered fatness a negative attribute there was a significant difference between patients and controls. Almost all patients (98 percent) considered fatness to be an undesirable quality, compared to 84 percent of controls. However, none of the subjects considered fat to be a positive or desirable term.

Table 11.4.28 Percentage frequency with which "fat" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "fat")⁹.

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Neutral	1	(2)	1	(3)	14	(21)	8	(12)	13.7
Negative	49	(98)	29	(97)	54	(79)	59	(88)	

9. No subjects considered fat to be a positive word. Percentages and χ^2 are calculated on neutral and negative categories only (df=3).

The most frequently given definitions of "chubby" are presented in Table 11.4.29. Over one quarter of all subjects equated chubby with the term fat and/or considered that it meant being just a little overweight.

Table 11.4.29 Number (and percentage frequency) of responses to question: What do you understand by the word "chubby"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Fat	17	(34)	7	(23)	15	(22)	16	(24)	2.4
Thinner than fat	20	(40)	15	(50)	13	(19)	26	(39)	12.1
Just a bit overwt	8	(16)	10	(33)	18	(26)	19	(28)	3.9

Very few people in any group considered chubbiness to be a positive quality, as shown in Table 11.4.30. While only 34 percent of the combined control group regarded chubbiness as a negative quality 68 percent of patients did so.

Table 11.4.30 Percentage frequency with which "chubby" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "chubby").

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=66		χ^2
Positive	0	(0)	1	(3)	7	(10)	1	(2)	30.7
Neutral	15	(30)	10	(33)	40	(59)	39	(59)	
Negative	35	(70)	19	(63)	21	(31)	26	(39)	

As shown in Table 11.4.31 there were no significant differences between groups in the usage of the term "plump". The most frequently offered definitions "chubby" (offered by an average of 37 percent of all subjects) and fat (27 percent of all subjects).

Table 11.4.31 Number (and percentage frequency) of responses to question: What do you understand by the word "plump"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Fat	19	(38)	8	(27)	14	(21)	17	(25)	4.5
Chubby	18	(36)	15	(50)	26	(38)	20	(30)	3.7
Between chubby and fat	4	(8)	1	(3)	14	(21)	13	(19)	9.2

Table 11.4.32 reveals that female controls regarded "plumpness" less negatively than any other group. Only 29 percent of female controls regarded plumpness negatively, compared with 50 percent of males and over three quarters of patients.

Table 11.4.32 Percentage frequency with which "plump" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "plump")¹⁰.

	Anorexic n=50		Bulimic n=30		Female Control n=67		Male Control n=66		χ^2
Neutral	10	(20)	9	(30)	47	(69)	33	(50)	34.4
Negative	40	(80)	21	(70)	20	(29)	33	(50)	

Table 11.4.33 reveals that there were very few differences between groups in their usage of the word "obese". For all groups the most common meaning given to obese was "bigger" or "fatter than fat" 39 percent of all subjects gave this response. Other frequently given definitions were very or extremely overweight (offered by an average of 23 percent of subjects); fat (20 percent); huge or big (20 percent) and ugly (17 percent).

Table 11.4.33 Number (and percentage frequency) of responses to question: What do you understand by the word "obese"?

	Anorexic n=50		Bulimic n=30		Female Control n=68		Male Control n=67		χ^2
Fat	9	(18)	5	(17)	12	(18)	17	(25)	1.7
Bigger than fat	23	(46)	15	(50)	23	(34)	22	(33)	4.4
Huge/ ext. big	13	(26)	8	(27)	14	(21)	9	(13)	3.8
Very overweight	11	(22)	6	(20)	19	(28)	13	(19)	1.6
Ugly, revolting	8	(16)	5	(17)	3	(4)	10	(15)	6.5
Don't know	0	(0)	0	(0)	5	(7)	8	(12)	13.4
Lazy, indulgent	5	(10)	0	(0)	0	(0)	0	(0)	

10. 1 female control considered plump to be a positive word. She was not included in the analysis. Percentages and χ^2 are calculated on negative and neutral categories only (df=3).

No subjects considered obese to be a positive label, as shown in Table 11.4.34, and most subjects viewed obesity as a negative characteristic. Controls were more likely than patients however to consider obese to be a neutral term: while 19 percent of controls felt that obesity was a neutral quality, no patients did so.

Table 11.4.34 Percentage frequency with which "obese" is used by subjects to denote a positive, neutral or negative quality (i.e. the connotation placed on "obese")¹¹.

	Anorexic n=50		Bulimic n=30		Female Control n=66		Male Control n=62		χ^2
Neutral	0	(0)	0	(0)	14	(21)	10	(16)	25.8
Negative	50	(100)	30	(100)	52	(79)	52	(84)	

11.4.3 Summary of Results from Interview

The results from the interview provide only weak support for the hypothesis that weight and body shape would be most salient in patients' understanding of other concepts, followed by female controls and males. Patients were significantly more likely than female controls to mention weight and body shape for only three attributes or concepts, but female controls and males did not differ on these questions. Patients were more likely than female controls to report that the term "fit" conjured up images of a slim person and to define "healthy" in weight related terms. Bulimics were more likely than other groups to nominate foods which are low in calories as being healthy. Patients and female controls were more likely than males to consider that particular foods are unhealthy because of their relatively high calorie content. One other difference emerged between the groups: patients were more likely than female controls to believe that people should control their eating for the sole reason of improving their appearance and female controls were, in turn, more likely than male controls to offer this as the sole rationale also. Males were the most likely of all groups to refer only to health related reasons for dietary control. For the remaining concepts the groups were very similar.

11. No subjects considered obese to be a positive word. Percentages and χ^2 are calculated on neutral and negative categories only (df=3).

The evaluation of body image related adjectives revealed some clear differences between patients and controls, and provide partial support for the second hypothesis. Patients were more likely than both female and male controls to consider "thin" and "skinny" positive terms, and conversely were more likely to consider "chubby", "plump" and "obese" to be negative adjectives. Patients were also more likely than controls to define "obese" as meaning ugly or revolting. However, apart from this one difference in definition, in general the content (as opposed to the connotation) of patients' definitions of body related adjectives was similar to that of female (and male) controls. In other words, while the desirability of the various adjectives was clearly different for patients and controls, their definition or meaning appeared to be fairly similar.

Males were less likely than female controls to consider the terms "slim", "slender", "thin" and "skinny" to be positive ones, and to equate the word "slim" with a nice or a good figure. Interestingly, however, males were equally as likely as females (for some words even more so) to consider the terms "fat", "chubby", "plump" and "obese" to be negative.

In conclusion, patients appeared to share similar definitions of adjectives concerning weight and body shape to controls, but these definitions held different connotations for the patients. Weight and body shape did not appear to be significantly more salient in patients' understanding of most other attributes or concepts.

CHAPTER 12

RESPONSES TO INTERVIEW QUESTIONS AND QUESTIONNAIRES ASSESSING THE NATURE OR TYPE OF SUBJECTS' WEIGHT AND BODY SHAPE CONCERNS

Hypothesis 3: Males' attitudes regarding weight and body shape will be qualitatively different to those of females. Females will conceive of their bodies in terms of appearance while males will place more emphasis on physical effectiveness. Males will be more likely than females to desire to be bigger or weigh more, while females will be more likely than males to desire to be slimmer or weigh less than they do currently.

12.1 Responses to Interview Questions and Results from Questionnaires

Chapters 9 to 11 have revealed that, on average, males were more satisfied with their weight and body shape than females, and were also less likely to engage in behaviours directed at influencing weight and body shape. These issues appeared to be less salient in the self evaluation of males than females and also less salient in males' lifestyles. In this chapter the evidence for the assertion that the nature of males' body shape and weight concerns is different to those of females will be considered, by drawing together findings from previous chapters. Relevant sections of tables from those chapters are re-presented here and new data on the "ideal self" descriptions of subjects are presented.

First, males were more likely than females to refer to the physical effectiveness of their bodies, specifically to fitness, exercise and health, in their evaluation of their **own** weight and shape and when discussing these issues in **general** terms.

As shown in Table 12.1, males were more likely than females to report that fitness was a factor in their positive evaluation of their body shape and weight.

Table 12.1 Number (and percentage frequency) of responses to question: Why are you happy with your present shape?¹

	Anorexic n=12		Bulimic n=4		Female Control n=32		Male Control n=40		χ^2
Reasons for satisfaction:									
Am fit	0	(0)	0	(0)	1	(3)	11	(28)	-

Males' greater concern with exercise was also revealed by the type of activity during which males and females stated they were more likely to be thinking about their weight. Table 12.2 shows that males were more likely than all females to think about their weight while exercising or while playing sport, and this was the most common response given by the male group.

Table 12.2 Number (and percentage frequency) of responses to question: When are you more likely to be thinking about your weight and/or dieting?

	Anorexic n=44		Bulimic n=29		Female Control n=54		Male Control n=35		χ^2
When exercising or playing sport	1	(2)	0	(0)	1	(2)	7	(20)	15.3

As well as being more likely to report a concern with their own fitness, males were also more likely than females to express concern about their own health, and about health in general, while females were more likely to focus on weight per se and appearance. Table 12.3 reveals that the reasons for dissatisfaction with eating habits most frequently given by male controls were health and regularity of meals. For female controls the most common reason was that they considered that they ate too much and consequently weighed more than they would like to. Fifty nine percent of female controls offered this reason but only one male did so.

1. 88 of the 106 subjects who were happy with their shape gave a specific reason for their satisfaction. The remaining 18 simply repeated that they were happy with it and were not more specific. The percentages for this section of the table are based on total n=88.

Table 12.3 Number (and percentage frequency) of responses to question: Why are you, or why are you not satisfied with your present eating patterns or habits?

	Anorexic n=32		Bulimic n=24		Female Control n=29		Male Control n=1		χ^2
Reasons for dissatisfaction:									
Eat too much-wt	5	(16)	2	(8)	17	(59)	1	(6)	25.1
They are unhealthy	2	(6)	0	(0)	10	(34)	10	(59)	31.0
Meals irregular	0	(0)	3	(13)	3	(10)	5	(29)	11.8

Table 12.4 provides further evidence of males' relatively greater reported concern with health, and females' concern with appearance. It shows that 45 percent of those patients who believed that people should control their eating reported that they should do so for the sole reason of improving their appearance and 25 percent of female controls offered this as the sole rationale also. Males were the least likely of all groups to refer only to appearance related reasons (13 percent) and the most likely to refer only health related reasons.

Table 12.4 Number (and percentage frequency) of responses to question: Why do you think that people should try to control their eating (that is, watch what they eat)?

	Anorexic n=32		Bulimic n=19		Female Control n=64		Male Control n=48		χ^2
For health	12	(38)	9	(47)	36	(56)	36	(75)	17.8
For appearance	14	(44)	9	(47)	16	(25)	6	(13)	
For both appearance and health	6	(19)	1	(5)	12	(19)	6	(13)	

Secondly, female controls evaluated the healthiness of food using different criteria to males. Tables 5 and 6 display the frequency with which subjects named various food types as being unhealthy and their reasons for thinking so. Taken together the results in these tables suggest that females were more likely than males to evaluate the healthiness of a food in terms of its calorie value, or how "fattening" it is.

Table 12.5 Number (and percentage frequency) of responses to question: What sort of food do you think is unhealthy or bad for you?

	Anorexic n=45		Bulimic n=27		Female Control n=69		Male Control n=56		χ^2
Cake/choc/sweets	18	(40)	13	(48)	25	(36)	8	(14)	14.2

Table 12.6 Number (and percentage frequency) of responses to question: Why do you think those types of food are unhealthy?

	Anorexic n=45		Bulimic n=27		Female Control n=69		Male Control n=56		χ^2
High calorie	14	(31)	14	(52)	25	(36)	7	(13)	16.4
Contains -ve/ bad component	16	(36)	11	(41)	31	(45)	20	(36)	1.1

Thirdly, Table 12.7 shows that males were more likely than all of the female groups to refer to a toned or muscular person when describing the images they associated with the term "healthy". Over one third of the males mentioned this image, compared with an average of 13 percent of the females.

Table 12.7 Number (and percentage frequency) of responses to question: What images or pictures come to mind from the word "healthy"?

	Anorexic n=39		Bulimic n=29		Female Control n=64		Male Control n=59		χ^2
Toned/ muscular person	5	(13)	3	(10)	9	(14)	21	(36)	12.6

Fourthly, as well as a greater reported concern with health and fitness than females, males reported other differences in weight and body shape ideals. Firstly, males and females appeared to focus on different body parts when evaluating their body shape. Table 12.8 shows that while about twenty percent of females expressed a particular liking for their face, hair or eyes, none of the males commented on these features.

Females were also more likely than the males to comment on their lower legs - "from the knees down" - as a source of satisfaction, men were more likely to simply refer to their "legs".

Table 12.8 Number (and percentage frequency) of responses to question: Which parts of your body are you happier with?

	Anorexic n=17		Bulimic n=11		Female Control n=32		Male Control n=21		χ^2
Lower legs(fem) legs (males)	4	(24)	5	(45)	12	(38)	14	(67)	8.0
"Waist up"	3	(18)	2	(18)	10	(31)	1	(5)	6.4
Face/hair/eyes	4	(24)	2	(18)	6	(19)	0	(0)	8.1

Table 12.9 shows that males also reported different disliked body parts to females. Females were significantly more likely than males to state that they particularly disliked their thighs and "bottoms". Males and patients stated more frequently than female controls that they disliked their stomachs.

Table 12.9 Number (and percentage frequency) of responses to question: Which parts of your body do you dislike?

	Anorexic n=44		Bulimic n=29		Female Control n=72		Male Control n=38		χ^2
Thighs	12	(27)	13	(45)	31	(43)	0	(0)	36.5
"Bottom"	7	(16)	7	(24)	28	(39)	2	(5)	20.0
Stomach	16	(36)	11	(38)	12	(17)	19	(50)	14.5

Males were also more likely than females to desire to weigh more, and were less likely than females to consider themselves overweight. Table 12.10 shows that when accounting for dissatisfaction with body shape, males and anorexics were significantly more likely than the other two groups to consider that they were "too thin", while females in all groups were more likely than males to state that they were "too fat".

Table 12.10 Number (and percentage frequency) of responses to question: Why are you unhappy with your present shape?

	Anorexic n=37		Bulimic n=26		Female Control n=43		Male Control n=19		χ^2
Reasons for dissatisfaction:									
Too fat	16	(43)	13	(50)	22	(51)	5	(26)	3.8
Too thin	8	(22)	0	(0)	2	(5)	6	(32)	17.1

The reasons which subjects gave for being unhappy with their weight are outlined in Table 12.11. (It should be noted here that males were less likely than females to report any dissatisfaction with their weight and body shape.) Most female controls, bulimics and anorexics who were dissatisfied with their current weight wanted to lose weight, and the great majority of these subjects wished to lose more than a few pounds. Only one female control wished to gain weight. Only 44 percent of males who were unhappy with their weight wished to lose weight and over half of the males who were unhappy with their weight wished to gain weight.

Table 12.11 Number (and percentage frequency) of responses to question: Why are you unhappy with your weight?

	Anorexic n=32		Bulimic n=23		Female Control n=46		Male Control n=25		χ^2
Would like to:									
lose weight-more than a few lbs	20	(63)	18	(78)	30	(65)	6	(24)	46.3
lose "a few lbs"	3	(10)	5	(22)	15	(33)	5	(20)	
gain weight	9	(28)	0	(0)	1	(2)	14	(56)	

Table 12.12 provides more specific data on desired weights, recorded on the EDI. Section (i) shows that the male group reported a significantly higher average ideal BMI than the female groups. Sections (ii) and (iii) reveal that as a group, males were far more satisfied with their current weight than the bulimics and female controls, who on average desired to weigh over five kilograms less than they did currently.

Table 12.12 Comparison of Mean Ideal BMI, Ideal BMI/Actual BMI, and Actual Weight minus Ideal Weight.

	Anorexic	Bulimic	Female Control	Male Control	Residual Mean SQ-S2	F Value
(i) Ideal BMI	n=44	n=29	n=74	n=60		
Mean	17.4	19.5	19.8	23.4	1.73	109
df	203					
Approx LSD	0.96					
(ii) Ideal BMI/Actual BMI	n=43	n=29	n=74	n=60		
Mean	1.06	0.92	0.92	1.00	0.084	33.7
df	202					
Approx LSD	0.046					
(iii) Actual Weight - Ideal Weight(kg)	n=43	n=29	n=74	n=60		
Mean	-2.24	5.34	5.37	-0.3	5.43	25.4
df	202					
Approx LSD	3.01					

The words which subjects used to describe their figures also reveal that males were less likely than females to consider themselves overweight. Table 12.13 parallels the results from Table 12.10 with males being significantly less likely than any of the female groups to consider themselves overweight or fat and considerably more likely to report that they were underweight.

Table 12.13 Number (and percentage frequency) of subjects who used various adjectives to describe themselves

	Anorexic		Bulimic		Female Control		Male Control		χ^2
	n=50		n=30		n=82		n=69		
Underweight	9	(18)	1	(3)	0	(0)	10	(14)	23.1
Fat	9	(18)	12	(40)	13	(16)	2	(3)	22.6
Overweight	11	(22)	11	(37)	16	(20)	4	(6)	15.4

Table 12.14 presents the results from the ideal-self description inventory. These provide further information about the nature of the weight and body shape ideals to which the males and females aspired.

Some adjectives were not seen as desirable by any subjects. The words dowdy, fat, unhealthy, flabby, unattractive and unfit were not included by any subjects in their ideal self description. The term overweight was chosen by only one (male) subject. These terms have been excluded from the table.

Most subjects (an average of 87 percent) indicated that they would like to be healthy and similarly, 82 percent of subjects indicated that they would like to be fit. About two thirds of all subjects wished to be athletic, and 73 percent of all subjects desired to be well groomed. There were no significant differences across groups in the frequency with which these words were used. The great majority of bulimics, anorexics and males desired to be self controlled, but a significantly lower percentage of female controls selected this term.

Few subjects desired to be underweight, and there was not a significant difference in usage across groups. Overall, four percent of subjects selected this word. However, a significant difference did emerge in group preferences regarding thinness. Fifteen percent of control females indicated they would like to be thin and the percentages for eating disorder patients were even higher. In clear contrast, only one male indicated that he wished to be thin.

A large difference emerged between the male controls and all of the female groups in selection of the term "muscular". Over half of males indicated that they would like to be muscular. Only nine percent of female controls marked this term and 20 percent of patients did so. A different pattern emerged for "well toned" however. The majority of females (64 percent overall) wished to be well toned, and females were more likely than males (45 percent) to indicate that they would like to be well toned.

Table 12.14 Number (and percentage frequency) of subjects who used various adjectives to describe their ideal selves

	Anorexic n=50		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2
Self-controlled	43	(86)	27	(90)	55	(68)	61	(88)	13.4
Healthy	44	(88)	27	(90)	69	(85)	61	(88)	0.6
Underweight	4	(8)	2	(7)	3	(4)	3	(4)	1.3
Fit	47	(94)	24	(80)	62	(77)	57	(83)	7.8
Attractive	45	(90)	20	(67)	64	(79)	35	(51)	26.2
Slim	39	(78)	20	(67)	50	(62)	12	(17)	55.8
Fashionable	33	(66)	18	(60)	63	(78)	29	(42)	20.9
Average Weight	16	(32)	11	(37)	35	(43)	33	(48)	3.4
Thin	13	(26)	11	(37)	12	(15)	1	(1)	27.8
Athletic	30	(60)	20	(67)	51	(63)	53	(77)	4.9
Well groomed	39	(78)	24	(80)	57	(70)	48	(70)	2.1
Muscular	8	(16)	8	(27)	7	(9)	36	(52)	40.0
Well toned	36	(72)	19	(63)	50	(62)	31	(45)	9.7

Fifthly, the reported behaviours in which males and females engaged and the rationale for their behaviour also reflected the different nature of their body image concerns. Table 12.15 reveals that the groups varied considerably in the type of exercise in which they participated. Aerobics was mentioned with approximately equal frequency by all female groups, but these activities were significantly less popular with males. Aerobics is an activity which is associated in popular culture with weight loss or weight control (Gordon, 1990). Over 20 percent of males undertook weight training but only one female (a control subject) participated in this type of exercise. Weight training is generally aimed at increasing musculature.

Table 12.15 Number (and percentage frequency) of responses to question: What sort of exercise do you do?

	Anorexic n=34		Bulimic n=20		Female Control n=61		Male Control n=62		χ^2
Aerobics	10	(29)	6	(30)	14	(23)	2	(3)	18.3
Weights	0	(0)	0	(0)	1	(1)	13	(21)	24.0

Table 12.16 lists subjects' reasons for exercising. The reason most frequently given by males for exercising was to achieve fitness - 58 percent of males offered this reason, a significantly greater percentage than the average for the three female groups (28 percent).

Table 12.16 Number (and percentage frequency) of responses to question: Why do you exercise?

	Anorexic n=34		Bulimic n=20		Female Control n=61		Male Control n=62		χ^2
To lose weight	18	(53)	12	(60)	8	(13)	1	(2)	55.1
To become fit	9	(26)	3	(15)	20	(33)	36	(58)	18.1

Table 12.17 presents the ways in which subjects attempted to control their eating. Almost all females in all groups (an average of 94 percent overall) stated that they attempted to restrict their intake in order to lose weight or to control their weight. (This response category included restriction of quantity or type of food for the purposes of weight control.) Far fewer males (less than half) stated that they controlled their eating for the purposes of weight control. Instead, health was the major concern for males. Over half of the males asserted that they attempted to control the "healthiness" of their diets, compared to only 12 percent of female controls, seven percent of bulimics and none of the anorexics.

Table 12.17 Number (and percentage frequency) of responses to question: How do you control yourself regarding food and dieting?

	Anorexic n=47		Bulimic n=29		Female Control n=67		Male Control n=33		χ^2
Try to eat less (for wt control)	45	(96)	28	(96)	62	(92)	16	(48)	37.3
Try to eat more (to gain weight)	3	(6)	0	(0)	0	(0)	1	(3)	-
Try to eat healthy foods	0	(0)	2	(7)	8	(12)	19	(58)	47.4

Table 12.18 shows that all patients reported that they had at one time been on a diet to lose weight. A more striking finding is that eighty percent of female controls also reported that they had at some time been on a diet to lose weight. In sharp contrast, less than one third of males said they had ever been on a diet.

Table 12.18 Number (and percentage frequency) of responses to question: have you ever been on a diet to lose weight?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2
Yes	50	(100)	30	(100)	66	(80)	22	(32)	103
No	0	(0)	0	(0)	16	(20)	47	(68)	

12.2 Summary of Results from Interview and Questionnaires

Overall the results from the interview support the hypothesis that males' attitudes regarding weight and body shape are qualitatively different to those of females. Males were more likely than the females to wish to weigh more than currently, while females were more likely to wish to weigh less than they did currently. Males were more likely to report concern with the physical effectiveness of their bodies (specifically with the healthiness and fitness of their bodies), while females expressed more concern with weight per se and appearance.

Several of the questions concerning **satisfaction** with weight and body shape revealed qualitative differences between males and females in their body image related concerns. One of the most striking differences, outlined earlier, was the relatively high percentage of men who wished to gain weight. In accordance with this finding, a relatively high percentage of males considered their current body shape "too thin" while relatively few females did so. Striking differences also emerged with regard to body parts which were particularly disliked. Females were much more likely than males to nominate their "bottom" and thighs as disliked parts, while males were more likely to refer to their stomachs. However, it should be

noted here that while these differences were found, as a group the males were significantly more satisfied with their weight and body shape than the females.

The reasons given by males for satisfaction or dissatisfaction with their own eating habits also indicated a different focus of concern as hypothesised. While the most frequently given responses from all of the female groups concerned weight, males most frequently expressed a health related reason.

For several definitions of concepts female controls and patients had a different pattern of responses to those of the males. Females in all groups were more likely than males to list cakes, sweets and chocolates as "unhealthy" foods, refer to high calorie content as a justification for considering a food to be "unhealthy", and mention improving appearance as a rationale for weight control. Males were more likely than females to give a health related reason for considering that people should control their weight.

The results from the ideal-self adjective inventory confirm the picture drawn from the aforementioned findings. Females were more likely than males to desire to be thin or slim, and males more likely to desire to be muscular. Females were also significantly more likely than males to select "attractive" and "fashionable" in their ideal self descriptions, possibly indicating their greater concern with appearance in general.

A pattern of behaviour differences also emerged which supports the hypothesis that males have qualitatively different concerns to females. Males were less likely than female controls and patients to engage in dieting behaviours and their rationales for body-related behaviours focused on fitness and health to a greater extent than was the case for females.

CHAPTER 13

RESPONSES TO INTERVIEW QUESTIONS ASSESSING AWARENESS, INFLUENCE, AND CRITICISM OF CURRENT CULTURAL IDEALS CONCERNING WEIGHT AND BODY SHAPE

13.1 Responses to Interview Questions Assessing Awareness of Current Cultural Ideals Concerning Weight and Body Shape

Hypothesis 8: Patients will be more likely than female controls to report that society has weight and body shape ideals. No hypothesis is put forward with regard to male controls.

13.1.1 Responses to Interview Questions

Table 13.1.1 reveals that at least 90 percent of subjects in all groups stated that they thought society has an "ideal" body shape for women. There were no significant differences between groups in response to this question.

Table 13.1.1 Number (and percentage frequency) of responses to question: Do you think that society or people in general have an "ideal" or perfect body shape for women?¹

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	44	(90)	29	(97)	78	(95)	62	(90)	1.9	1.5
No	5	(10)	1	(3)	4	(5)	7	(10)		

Table 13.1.2 sets out the descriptions of the ideal figure given by those subjects who reported that there is a social ideal for female figures. "Slim" was the most frequently offered description from each of the female groups and it accounted for the majority of all responses offered. Anorexics were less likely than the other female subjects to describe the social ideal in very specific terms, while bulimics were more likely than other female subjects to describe society's ideal figure as being muscular

1. The first χ^2 (Fem) is for the comparison between the three female groups. The second χ^2 (FCvMC) is for the comparison between the female and male controls.

or fit. Female controls were significantly more likely than the males to report that the ideal figure was "thin", and to report that the social ideal was "too thin" ($p < .025$).

Table 13.1.2 Number (and percentage frequency) of responses to question: What is this ideal?

	Anorexic n=44		Bulimic n=29		Female Control n=78		Male Control n=62		χ^2 Fem	χ^2 FCvMC
Slim	21	(48)	21	(72)	50	(64)	48	(77)	5.2	3.0
Thin	18	(41)	7	(24)	24	(31)	10	(16)	2.4	4.1
Too thin	6	(14)	4	(14)	11	(14)	1	(2)	0.0	8.2
Toned	8	(18)	3	(10)	7	(9)	4	(6)	2.2	0.3
"Average" body	1	(2)	0	(0)	4	(5)	2	(3)	-	-
Specific body described	0	(0)	3	(10)	16	(21)	10	(16)	15.8	0.4
Tall	7	(16)	7	(24)	15	(19)	6	(10)	0.8	2.5
Muscular/fit	3	(7)	5	(17)	1	(1)	3	(5)	8.9	-
Healthy	2	(5)	0	(0)	2	(3)	1	(2)	-	-
Shapely	4	(9)	3	(10)	16	(21)	19	(31)	3.6	1.9
Anorexic	2	(5)	1	(3)	3	(4)	0	(0)	0.8	-

Table 13.1.3 shows that the great majority of subjects in all groups reported that some types of female figures are considered unacceptable by society. There was not a significant difference in the frequency with which this response was given across groups.

Table 13.1.3 Number (and percentage frequency) of responses to question: Do you think that any types of female figures are considered unacceptable by society in general?²

	Anorexic n=50		Bulimic n=30		Female Control n=73		Male Control n=67		χ^2 Fem	χ^2 FCvMC
Yes	44	(88)	28	(93)	62	(85)	52	(78)	1.5	1.2
No	6	(12)	2	(7)	11	(15)	15	(22)		

2. 3 female controls and 1 male control responded "don't know" to this question. They were excluded from the analysis.

As shown in Table 13.1.4 there were no significant differences between groups in the frequency with which they reported various female figure types as being unacceptable in society. The most frequently reported "socially unacceptable" female figure types were "overweight" (reported by an average of 46 percent of subjects who stated that some figure types were unacceptable) and "very overweight" (47 percent). Overall, 10 percent of subjects stated that underweight figures were not socially acceptable.

Table 13.1.4 Number (and percentage frequency) of responses to question: Which types of figures do you think are considered unacceptable?

	Anorexic n=44		Bulimic n=28		Female Control n=62		Male Control n=52		χ^2 Fem	χ^2 FCvMC
Anything < ideal	1	(2)	4	(14)	2	(3)	2	(4)	4.8	-
Overweight	19	(43)	16	(57)	28	(45)	22	(42)	1.4	0.1
Very overweight	22	(50)	9	(32)	32	(52)	25	(48)	3.4	0.1
Underweight	8	(18)	3	(11)	4	(6)	3	(6)	3.7	0.0

Table 13.1.5 shows that subjects reported a range of methods which they believed were used by women to obtain a "good" figure, and there was considerable agreement between groups in response to this question. By far the most commonly reported methods were exercising (reported by 59 percent of subjects overall) and dieting (40 percent). Sixteen percent of subjects said that having a good figure was just a question of luck, or that some females "naturally" had good figures or were "born that way". The female controls were more likely than the males to state that females achieved good figures by starving themselves or enduring some "torturous" regime.

Table 13.1.5 Number (and percentage frequency) of responses to question: What do you think a woman does to have what you/society call a good figure - how does she obtain or achieve her figure?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Exercising	24	(48)	18	(60)	52	(63)	41	(60)	3.1	0.2
Dieting	23	(46)	9	(30)	30	(37)	31	(46)	2.2	1.2
Sensible eating	10	(20)	6	(20)	18	(22)	9	(13)	0.1	1.9
Starving/torture	6	(12)	7	(23)	19	(23)	5	(7)	2.9	7.4
Luck or born with it	6	(12)	4	(13)	11	(13)	15	(22)	0.1	1.7
"Watching what they eat"	5	(10)	4	(13)	13	(16)	10	(15)	0.9	0.4
Eating disorder	1	(2)	2	(7)	2	(2)	0	(0)	1.3	-
"Working at it"	4	(8)	4	(13)	3	(4)	9	(13)	3.2	4.7
Sport	0	(0)	0	(0)	0	(0)	1	(1)	-	-
Gym/weights	3	(6)	2	(7)	1	(1)	1	(1)	3.1	-
0 in particular	1	(2)	2	(7)	0	(0)	1	(1)	-	-
Self control	2	(4)	1	(3)	4	(5)	0	(0)	0.1	-

Overall, an average of 72 percent of subjects reported that society has an ideal body shape for men. Table 13.1.6 reveals that there were no significant differences between groups in the frequency with which this response was given.

Table 13.1.6 Number (and percentage frequency) of responses to question: Do you think that society or people in general have an "ideal" or perfect body shape for men?³

	Anorexic n=48		Bulimic n=29		Female Control n=78		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Yes	34	(71)	22	(76)	51	(65)	53	(78)	1.2	2.8
No	14	(29)	7	(24)	27	(35)	15	(22)		

3. 2 anorexics, 1 bulimic, 4 female controls and 1 male control responded "don't know" to this question. They were excluded from the analysis.

Table 13.1.7 sets out the descriptions of the social ideal male figure offered by those subjects who reported that society does have an ideal figure for males. There was considerable agreement between groups in the frequency with which various descriptions were offered. By far the most frequently offered description by all of the groups was "muscular" or "fit".

Table 13.1.7 Number (and percentage frequency) of responses to question: What is this ideal?

	Anorexic n=34		Bulimic n=22		Female Control n=51		Male Control n=53		χ^2 Fem	χ^2 FCvMC
Slim	2	(6)	1	(5)	5	(10)	4	(8)	0.8	0.2
Thin	0	(0)	0	(0)	0	(0)	0	(0)	-	-
Too thin	0	(0)	0	(0)	0	(0)	0	(0)	-	-
Toned	4	(12)	1	(5)	4	(8)	2	(4)	1.0	0.8
"Average" body	1	(3)	3	(14)	2	(4)	5	(9)	2.8	1.3
Specific body described	0	(0)	0	(0)	2	(4)	2	(4)	-	0.0
Tall	12	(35)	4	(18)	8	(16)	8	(15)	4.6	0.0
Muscular/fit	31	(91)	15	(67)	38	(75)	30	(57)	5.7	3.7
Healthy	2	(6)	0	(0)	0	(0)	2	(4)	-	-
Broad shoulders/ slim waist	4	(12)	2	(9)	9	(18)	11	(21)	1.1	0.2
Body builder	2	(6)	1	(5)	3	(6)	2	(4)	0.1	0.3
Solid/well built	1	(3)	7	(32)	6	(12)	5	(9)	9.5	0.1

Table 13.1.8 reveals that there were no significant differences between the groups in the frequency with which subjects stated that they thought that some types of male figures were considered unacceptable in society. An average of 76 percent of all subjects offered this response.

Table 13.1.8 Number (and percentage frequency) of responses to question: Do you think that any types of male figures are considered unacceptable by society in general?⁴

	Anorexic n=50		Bulimic n=30		Female Control n=75		Male Control n=67		χ^2 Fem	χ^2 FCvMC
Yes	39	(78)	24	(80)	57	(76)	48	(72)	0.2	0.3
No	11	(22)	6	(20)	18	(24)	19	(28)		

4. 1 female and 1 male control responded "don't know" to this question. They were excluded from the analysis.

Table 13.1.9 sets out the types of male figures which subjects considered to be "socially unacceptable". There was only one significant difference between the female groups. Anorexics were more likely than the other groups to report that males with "beer guts" had socially unacceptable figures. Overall, 49 percent of subjects said that "very overweight" figures were unacceptable and this was the most frequently given response. Underweight or "puny" figures were mentioned by over a quarter of subjects (27 percent overall) and overweight figures were mentioned by an average of 23 percent of subjects.

Table 13.1.9 Number (and percentage frequency) of responses to question: Which types of figures do you think are considered unacceptable?

	Anorexic n=39		Bulimic n=24		Female Control n=57		Male Control n=48		χ^2 Fem	χ^2 FCvMC
Anything < ideal	0	(0)	0	(0)	0	(0)	0	(0)	-	-
Overweight	7	(18)	5	(21)	15	(26)	12	(25)	1.1	0.0
Very overweight	19	(49)	13	(54)	28	(49)	23	(48)	0.3	0.2
Underwt/puny	13	(33)	8	(33)	15	(26)	9	(19)	0.6	0.9
Body builder	1	(3)	2	(8)	1	(2)	2	(4)	-	-
"Beer gut"	20	(51)	7	(29)	13	(23)	14	(29)	8.5	0.6

Table 13.1.10 lists the methods used by males to achieve a "good figure" which subjects reported. By far the most common response was exercising, reported by an average of 58 percent of all subjects. Other frequently reported methods for which there were no significant differences across groups were "working out" at a gymnasium or with weights (30 percent) playing sport (19 percent), and "eating sensibly" (16 percent). Bulimics were more likely than the other female groups to report that males with "good" figures did not have to do anything in particular to achieve them.

Table 13.1.10 Number (and percentage frequency) of responses to question: What do you think a man does to have what you/society call a good figure - how does he obtain or achieve his figure?

	Anorexic n=47		Bulimic n=26		Female Control n=79		Male Control n=67		χ^2 Fem	χ^2 FCvMC
Dieting	1	(2)	1	(4)	1	(1)	3	(4)	-	-
Exercising	21	(45)	15	(58)	49	(62)	42	(63)	3.6	0.0
Sensible eating	6	(13)	3	(12)	13	(16)	14	(21)	0.5	0.5
Starving/torture	0	(0)	0	(0)	0	(0)	0	(0)	-	-
Eating disorder	0	(0)	0	(0)	0	(0)	0	(0)	-	-
"Working at it"	1	(2)	2	(8)	0	(0)	8	(12)	-	-
Sport	10	(21)	4	(15)	18	(23)	9	(13)	0.7	2.3
Gym/weights	18	(38)	6	(23)	25	(32)	17	(25)	1.8	0.7
At work	0	(0)	1	(4)	1	(1)	2	(3)	-	-
0 in particular	3	(6)	8	(31)	6	(8)	0	(0)	9.6	7.5
Luck or born with it	2	(4)	0	(0)	4	(5)	3	(4)	2.3	-
Self control	0	(0)	0	(0)	0	(0)	0	(0)	-	-
"Watching what they eat"	2	(4)	0	(0)	3	(4)	4	(6)	-	-
Reducing alcohol consumption	1	(2)	2	(8)	3	(4)	3	(4)	1.3	-

Table 13.1.11 reveals that almost all subjects (95 percent overall) reported that there is a particular image of women that is presented in the media, and this response was offered with approximately equal frequency by all groups.

Table 13.1.11 Number (and percentage frequency) of responses to question: Do you think there is a certain image of women presented in the media?⁵

	Anorexic n=48		Bulimic n=30		Female Control n=80		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	44	(92)	30	(100)	76	(95)	66	(96)	4.0	0.0
No	4	(8)	0	(0)	4	(5)	3	(4)		

The media images of women which subjects described are presented in Table 13.1.12. The most frequently reported description from the female groups was of women who are slim or who have a "good figure". Another

5. 1 anorexic and 1 female control responded "don't know" to this question. They were excluded from the analysis.

frequently offered response was the description of the media's image of women as attractive or "good looking". Males were significantly more likely than the female controls to offer this description. The latter two descriptions made up the great majority of all responses. Other descriptions reported were "superwomen" (women who successfully combined wife, mother and career roles and achieved highly in all of them - this image was reported by 10 percent of subjects overall), women who are tall (nine percent) anorexic (seven percent), or fit (five percent).

Table 13.1.12 Number (and percentage frequency) of responses to question: What is the image of women presented in the media?

	Anorexic n=44		Bulimic n=30		Female Control n=76		Male Control n=66		χ^2 Fem	χ^2 FCvMC
Slim/good figure	38	(86)	20	(67)	59	(78)	43	(65)	4.0	2.7
Attractive	21	(48)	11	(37)	40	(53)	47	(71)	2.2	5.2
"Superwoman"	5	(11)	5	(17)	7	(9)	4	(6)	1.1	0.5
Several images	0	(0)	1	(3)	2	(3)	4	(6)	-	-
Anorexic	3	(7)	5	(17)	4	(5)	2	(3)	3.4	-
Other image	2	(5)	3	(10)	7	(9)	7	(11)	1.1	0.1
Glamorous/sophis	0	(0)	2	(7)	7	(9)	4	(6)	6.7	-
Achiever, successful	1	(2)	1	(3)	1	(1)	2	(3)	-	-
Fit	3	(7)	2	(7)	3	(4)	3	(5)	0.6	-
Tall	3	(7)	4	(13)	7	(9)	6	(9)	0.9	0.0

As shown in Table 13.1.13 an average of 72 percent of subjects overall reported that they thought that there is a particular image of men presented in the media. There were no significant differences between the groups in the frequency with which this response was given.

Table 13.1.13 Number (and percentage frequency) of responses to question: Do you think there is a certain image of men presented in the media?⁶

	Anorexic n=47		Bulimic n=28		Female Control n=79		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	32	(68)	22	(79)	56	(71)	50	(72)	1.0	0.5
No	15	(32)	6	(21)	23	(29)	19	(28)		

6. 1 anorexic, 2 bulimics, and 1 female control subject responded "don't know" to this question. They were excluded from the analysis.

Table 13.1.14 sets out the images of men in the media which subjects reported. There were no significant differences between the female groups in the frequencies with which various images were reported. Over half of those females who reported that there is a typical image in the media reported that the image is of a slim male or one with a "good figure".

Table 13.1.14 Number (and percentage frequency) of responses to question: What is the image of men presented in the media?

	Anorexic n=32		Bulimic n=22		Female Control n=56		Male Control n=50		χ^2 Fem	χ^2 FCvMC
Slim/good figure	19	(59)	13	(59)	29	(52)	18	(36)	0.6	2.7
Attractive	12	(28)	7	(32)	23	(41)	16	(32)	0.6	0.9
Macho	10	(31)	3	(14)	11	(20)	8	(16)	2.7	0.2
Several images	5	(17)	3	(14)	5	(9)	12	(24)	1.0	4.5
Other image	3	(9)	4	(18)	6	(11)	5	(10)	1.0	0.0
Glamorous/sophis	0	(0)	1	(5)	3	(5)	6	(12)	-	-
Achiever, successful	2	(6)	3	(14)	2	(4)	4	(8)	2.4	-
Fit	3	(9)	5	(23)	5	(9)	8	(16)	2.7	1.2
Tall	3	(9)	1	(5)	5	(9)	4	(8)	0.6	-

Table 13.1.15 shows that an average of 68 percent of subjects considered that women in general are "too concerned with their weight". There was not a significant difference between groups in the frequency of this response to this question.

Table 13.1.15 Number (and percentage frequency) of responses to question: Do you think that women in general are too concerned about their weight, dieting and so on?⁷

	Anorexic n=48		Bulimic n=30		Female Control n=82		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Yes	30	(63)	21	(70)	51	(62)	53	(78)	0.8	7.6
Some women	13	(27)	6	(20)	21	(26)	6	(9)		
No	5	(10)	3	(10)	10	(12)	9	(13)		

7. 2 anorexics and 1 male control subject responded "don't know" to this question. They were excluded from the analysis.

Table 13.1.16 shows that there was not a significant difference between groups in the frequency with which they reported that men in general were "too concerned with their own weight". An average of 12 percent of all subjects gave this response.

Table 13.1.16 Number (and percentage frequency) of responses to question: Do you think that men in general are too concerned about their weight, dieting and so on?⁸

	Anorexic n=49		Bulimic n=29		Female Control n=78		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Yes	6	(12)	7	(24)	7	(9)	5	(7)	9.0	0.2
Some men	9	(18)	4	(14)	5	(6)	5	(7)		
No	34	(69)	18	(62)	66	(84)	58	(85)		

An average of 92 percent of subjects reported that there is more pressure on women than on men to conform to a particular body shape, and there was no significant differences between groups in response to this question.

Table 13.1.17 Number (and percentage frequency) of responses to question: Do you think there is more pressure on women than men to conform to a particular body shape?⁹

	Anorexic n=50		Bulimic n=30		Female Control n=80		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Yes	44	(88)	27	(90)	76	(95)	63	(93)	2.2	0.4
No	6	(12)	3	(10)	4	(5)	5	(7)		

8. 1 anorexic, 1 bulimic, 4 female controls and 1 male control subject responded "don't know" to this question. They were excluded from the analysis.
9. 1 male and 1 female control responded "don't know" to this question. They were excluded from the analysis.

Table 13.1.18 reveals that almost all (99 percent) of subjects considered that women are judged to a great extent on their appearance. There were no significant differences between the groups in the frequency with which this response was given.

Table 13.1.18 Number (and percentage frequency) of responses to question: Do you think that women are judged to a great extent on their appearance?¹⁰

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	48	(98)	29	(97)	82	(100)	68	(99)	-	-
No	1	(2)	1	(3)	0	(0)	1	(1)		

As shown in Table 13.1.19, 65 percent of subjects overall reported that males are judged to a great extent on their appearance. Once again, there was not a significant difference between the groups in the frequency with which this response was given.

Table 13.1.19 Number (and percentage frequency) of responses to question: Do you think that men are judged to a great extent on their appearance?¹¹

	Anorexic n=49		Bulimic n=30		Female Control n=82		Male Control n=65		χ^2 Fem	χ^2 FCvMC
Yes	32	(65)	15	(50)	54	(66)	47	(72)	0.8	0.7
No	17	(35)	15	(50)	28	(34)	18	(28)		

10. 1 anorexic responded "don't know" to this question. She was excluded from the analysis.

11. 1 anorexic subject and 4 male controls responded "don't know" to this question. They were excluded from the analysis.

13.1.2 Summary of Results from Interview

The responses from the interview provide little support for the hypothesis that patients would be more likely than female controls to report that society has ideals regarding weight and body shape. The bulimics were more likely than the other female groups to report that society's ideal figure for women is muscular or fit, and were also more likely to state that the ideal figure for men is "solid" or "well built." Perhaps consistent with the latter finding, the bulimics were also more likely than the other female groups to consider that men "do not have to do anything" in order to achieve a good figure. The anorexics were more likely than the other females to report that men with "beer guts" have socially unacceptable figures. However, these few positive findings are very specific and difficult to interpret. They certainly do not provide any basis from which to draw more general conclusions concerning differences between patients and female controls. In fact the weight of the evidence points against the hypothesis and suggests that the female controls and patients held basically similar views regarding both the nature and pervasiveness of society's weight and body shape ideals.

No hypothesis was put forward regarding males, however some interesting differences emerged between the males and the female controls. The females were more likely than males to describe society's ideal body shape for women as "thin" or "too thin" and were also more likely than the males to report that women achieved an ideal figure by starving themselves or by some "torturous" means.

Apart from the differences discussed above, the groups (including the males) were very similar in their pattern of responses. The great majority of subjects in each group reported that society does have an ideal body shape for women, and that some types of female figures are considered "unacceptable". There was considerable agreement about both the ideal (slim or thin) and about unacceptable figures (very overweight or overweight). There was also agreement about the methods by which an ideal female figure is attained, the majority of subjects in all groups referring to dieting and/or exercising. The groups also shared a similar

pattern of responses concerning society's ideals for male figures. Most subjects in each group reported that society does have an ideal for men's figures, the majority of subjects in each group describing the ideal as muscular or fit and/or tall. The majority of subjects also reported that some types of male figures are socially unacceptable, and there was also considerable agreement between the groups concerning the type of body shapes which are unacceptable. (Very overweight and underweight figures were mentioned most frequently.) Further, the great majority of subjects in each group reported that men achieve a "good" figure by exercising in some way.

Approximately equal percentages of subjects stated that the media does portray particular images of women and men, with most describing the media's ideals as "slim" or having a "good" figure and/or "attractive." Similar percentages in all of the groups considered that women in general are "too concerned" with weight and dieting (over 60 percent), that women are judged to a great extent on their appearance (over 95 percent) and that women are subject to more pressure to conform to an ideal body shape (about 90 percent).

Thus, while there were minor differences between groups, overall they were similar in their reported beliefs concerning society's weight and body shape ideals.

13.2 Responses to Interview Questions Assessing Influence of Social Pressures Concerning Weight and Body Shape

Hypothesis 9: Patients will be more likely than female controls to report that "cultural pressures" of various kinds influence their own weight and body shape related attitudes and behaviours. In turn, female controls will be more likely than male controls to report that such cultural factors have an effect on their attitudes and behaviours.

13.2.1 Responses to Interview Questions

Table 13.2.1 lists the magazines and newspapers which subjects reported that they regularly read. There was a significant difference between the female groups in the frequency with which they claimed to regularly read the "tabloid" papers. Female controls were most likely to report that they read these papers, followed by bulimics and lastly, anorexics. This finding could reflect the fact that a large percentage of the patients (anorexics in particular) were inpatients at the time of interviewing and therefore may have had little access to newspapers for the period of their hospitalisation. It may also reflect the fact that patients were less interested in current affairs as a result of their involvement with their eating problems. Anorexics were significantly more likely than the other two female groups to report that they regularly read "Dolly" - almost forty percent of the anorexics said that they regularly read this magazine. Both anorexics and bulimics were more likely than female controls to state that they regularly read "Cleo" or "Cosmopolitan", but this difference was not statistically significant. The female controls were significantly more likely than the males to report that they regularly read "New Idea", "Women's Weekly" and "Woman's Day", "Cleo" or "Cosmopolitan", "Dolly" and fashion magazines. Clearly then, all of the female groups had greater exposure than the males to the types of magazines reputed to create social pressures regarding weight and body shape (Silverstein et al., 1986).

Table 13.2.1 Number (and percentage frequency) of responses to question: What magazines and newspapers do you read regularly?

	Anorexic n=44		Bulimic n=26		Female Control n=73		Male Control n=61		χ^2 Fem	χ^2 FCvMC
Tabloids	6	(14)	7	(27)	35	(48)	39	(64)	16.1	3.5
Herald/Austral'n	11	(25)	8	(31)	18	(25)	17	(28)	0.4	0.2
Financial papers	1	(2)	1	(4)	1	(1)	4	(7)	-	-
Sunday papers	5	(11)	2	(8)	4	(5)	4	(7)	1.3	0.1
TV Week	0	(0)	1	(4)	10	(14)	0	(0)	10.8	12.8
New Idea	7	(16)	3	(12)	13	(18)	1	(2)	0.6	17.0
Women's Weekly	8	(18)	8	(31)	14	(19)	2	(3)	1.7	9.0
Woman's Day	7	(16)	5	(19)	13	(18)	0	(0)	0.1	17.0
Cleo/Cosmo	18	(41)	11	(42)	19	(26)	1	(2)	3.8	25.7
Dolly	17	(39)	2	(8)	14	(19)	1	(2)	10.3	12.4
Fashion mags	6	(14)	4	(15)	6	(8)	0	(0)	1.4	7.5
Slimming mags	0	(0)	2	(8)	0	(0)	0	(0)	-	-
Health mags	2	(5)	0	(0)	0	(0)	0	(0)	-	-
Home mags	1	(2)	2	(8)	4	(5)	1	(2)	1.2	-
Special interest mags	6	(14)	7	(27)	9	(12)	27	(44)	2.9	17.7

Table 13.2.2 shows that approximately equal percentages of subjects in each of the female groups (an average of 60 percent) said that they read the diet or exercise related articles in magazines and newspapers. Males were significantly less likely than the female subjects to report that they read these sort of articles.

Table 13.2.2 Number (and percentage frequency) of responses to question: Do you read the diet or exercise related articles in magazines and newspapers?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	32	(64)	20	(67)	46	(56)	14	(20)	1.4	20.9
No	18	(36)	10	(33)	36	(44)	55	(80)		

Table 13.2.3 presents the mean number of hours of television watched by each group on "an average day". The planned contrasts revealed that there were no significant differences between the groups in the amount of television watched.

Table 13.2.3 Responses to question: How much television do you watch on an average day? - Mean number of hours reported for each group

	Anorexic n=50	Bulimic n=30	Female Control n=82	Male Control n=69	F
Mean no. of hours of TV	1.528	1.677	2.055	1.875	1.852
df	227				
SE	1.3104				
Approx LSD	0.707				
P	non-significant				

Table 13.2.4 sets out the mean number of hours of radio to which each group listened on "an average day". The planned contrasts revealed that there was not a significant difference between the male and female control groups in the amount of radio to which they listened. Both the bulimic and anorexic groups listened to a significantly greater amount of radio than the female controls. There was not a significant difference between the two patient groups. Many of the patients commented when answering the questions about television and radio that since the onset of their eating disorder they could no longer "concentrate" on television programmes. Perhaps the patients' relatively longer radio listening times reflects the fact the radio is a form of media which requires little concentration.

Table 13.2.4 Responses to question: How much radio do you listen to on an average day? - Mean number of hours reported for each group

	Anorexic n=50	Bulimic n=30	Female Control n=82	Male Control n=69	F
Mean no. of hours of radio	2.27	3.02	1.42	1.35	8.995
df	227				
SE	1.734				
Approx LSD	.9307				
P	0.001				

Table 13.2.5 shows that patients were significantly more likely than female controls to report that magazines and newspapers had some effect on their attitudes or behaviour. In turn, males were significantly less likely than female controls to report that the print media had any effect on them.

Table 13.2.5 Number (and percentage frequency) of responses to question: Do you think that magazines or newspapers have any influence on your eating habits, exercise or the way you feel about your body?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	36	(72)	25	(83)	41	(50)	20	(29)	13.6	6.97
No	14	(28)	5	(17)	41	(50)	49	(71)		

The ways in which magazines and newspapers affected subjects are listed in Table 13.2.6. The chi-squared analyses for the comparisons between the female groups revealed only one significant difference. The most common response given by each of the female groups (over seventy percent) was that the ideals portrayed in magazines and newspapers had the effect of making the subjects want to look like the ideal, but this response was offered more frequently by patients (especially bulimics) than female controls. A very clear difference emerged between the male and female controls. Only 20 percent of males reporting any effect gave this response. Female controls were also more likely than males to report that they followed the diets given in magazines and newspapers. Males, on the other hand, were more likely than the female controls to report that the print media had the effect of heightening their awareness and knowledge of health related issues.

Table 13.2.6 Number (and percentage frequency) of responses to question: What effect do magazines and newspapers have on your eating habits, exercise or feelings about your body?

	Anorexic n=36		Bulimic n=25		Female Control n=41		Male Control n=20		χ^2 Fem	χ^2 FCvMC
Want to look like ideal shown	30	(83)	24	(96)	30	(73)	4	(20)	6.5	16.1
Follow diets shown	15	(42)	5	(20)	11	(27)	1	(5)	3.7	4.9
Want to buy diet products shown	3	(8)	2	(8)	2	(5)	1	(5)	0.4	-
Creates awareness of health	8	(22)	2	(8)	11	(27)	14	(70)	4.0	10.5
Want to eat food shown (non-wt related)	0	(0)	0	(0)	0	(0)	2	(10)	-	-

Very few subjects in any of the groups reported that the radio had an effect on their attitudes or behaviour. Table 13.2.7 reveals that overall only 10 subjects reported any effect. This result indicates that the greater amount of radio listened to by patients is probably not a significant factor in explaining differential effects of the media.

Table 13.2.7 Number (and percentage frequency) of responses to question: Do you think that radio has any influence on your eating habits, exercise or the way you feel about your body?

	Anorexic n=33		Bulimic n=21		Female Control n=70		Male Control n=65		χ^2 Fem	χ^2 FCvMC
Yes	0	(0)	3	(14)	3	(4)	4	(6)	6.1	0.2
No	33	(100)	18	(86)	67	(96)	61	(94)		

Table 13.2.8 presents the number and percentages of subjects who reported that television affected their weight and shape related attitudes or behaviour. There was not a significant difference between the female groups in the frequency of reported effects. An average of 67 percent of all of the females reported that television affected them. A significantly lower percentage of males than female controls reported that they were influenced by television.

Table 13.2.8 Number (and percentage frequency) of responses to question: Do you think that television programmes and advertisements have any influence on your eating habits, exercise or the way you feel about your body?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	38	(76)	22	(73)	49	(60)	21	(30)	4.4	13.2
No	12	(24)	8	(27)	33	(40)	48	(70)		

The effects of television which subjects reported are shown in Table 13.2.9. The overall pattern of responses was similar to those concerning magazines and newspapers. The effect most frequently reported by each of the female groups (over two thirds) was that the body image ideals portrayed by the media resulted in the desire to look like the ideal. However there was a significant difference between the female groups in the frequency with which this response was offered, with bulimics being most likely to give this response, followed by anorexics and female controls. In contrast to the female controls, only 43 percent of the males reporting some effect stated that television had the effect of making them want to achieve the body shape ideals portrayed. However, males were significantly more likely than the female controls to report that television programmes and advertisements heightened their awareness of health related issues, and were also more likely to report that advertisements for food had the effect of making them want to eat the food shown.

Table 13.2.9 Number (and percentage frequency) of responses to question: What effect do television programmes and advertisements have on your eating habits, exercise or feelings about your body?

	Anorexic n=38		Bulimic n=22		Female Control n=44		Male Control n=21		χ^2 Fem	χ^2 FCvMC
Want to look like ideal shown	31	(82)	22	(100)	30	(68)	9	(43)	13.3	3.8
Follow diets shown	7	(18)	0	(0)	1	(2)	0	(0)	10.6	-
Want to buy diet products shown	5	(13)	1	(5)	5	(11)	1	(5)	1.3	-
Creates awareness of health	6	(16)	2	(9)	10	(23)	10	(48)	2.1	4.0
Want to eat food shown (non-wt related)	1	(3)	1	(5)	6	(14)	5	(24)	4.0	-

Table 13.2.10 shows that there was no significant differences between groups in the percentage of subjects reporting that members of the opposite sex affected them. Overall an average of 48 percent of all subjects did so.

Table 13.2.10 Number (and percentage frequency) of responses to question: Do you think that members of the opposite sex have any influence on your eating habits, exercise or the way you feel about your body?¹²

	Anorexic n=48		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	25	(48)	19	(63)	42	(51)	25	(36)	1.4	3.43
No	23	(52)	11	(37)	40	(49)	44	(64)		

Table 13.2.11 sets out the nature of the effects reported by those subjects who stated that members of the opposite sex influenced them. There were not any significant differences between the female groups in the frequency with which various responses were given. The most frequently reported responses from females were that criticism of their figures made them feel negative about their body shape or weight (reported by an average of 53 percent of female subjects who reported any effect) and that

12. 2 anorexics responded "don't know" to this question. They were excluded from the analysis.

they attempted to look as attractive as possible to members of the opposite sex (31 percent). Males were less likely than female controls to mention criticism as an influential factor.

Table 13.2.11 Number (and percentage frequency) of responses to question: How do members of the opposite sex affect you in relation to your eating habits exercise, or feelings about your body?

	Anorexic n=25		Bulimic n=19		Female Control n=36		Male Control n=23		χ^2 Fem	χ^2 FCvMC
Criticism of body	14	(56)	8	(42)	21	(58)	6	(26)	1.4	6.1
Wish to look attractive to them	8	(32)	7	(37)	10	(28)	12	(52)	0.5	3.6
Opp sex not interested unless one is slim	3	(12)	4	(21)	3	(8)	3	(13)	1.7	-
Compliments re body	1	(4)	1	(5)	5	(14)	5	(22)	2.2	-
Via comments on other figures	3	(12)	3	(16)	3	(8)	1	(4)	0.7	0.4
Via comments on own eating	0	(0)	2	(11)	5	(14)	1	(4)	5.7	-

Table 13.2.12 shows that patients were more likely than female controls to report that members of the same sex influenced them. Half of the female controls reported being affected by members of the opposite sex, compared with almost three quarters of the patients. Males were significantly less likely than female controls to report that members of the same sex influenced them.

Table 13.2.12 Number (and percentage frequency) of responses to question: Do you think that members of the same sex have any influence on your eating habits, exercise or the way you feel about your body?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	38	(76)	21	(70)	41	(50)	23	(33)	10.2	4.3
No	12	(24)	9	(30)	41	(50)	46	(67)		

The ways in which members of the same sex influenced subjects are listed in Table 13.2.13. There were few differences between groups. The most frequently reported effect from subjects in each of the groups was that they compared their own body with those of others of the same sex. Criticism of their bodies was mentioned by an average of 22 percent of all subjects and complimentary remarks were mentioned by 11 percent. Overall, 21 percent of subjects reported that amongst their peers there was pressure to undertake diets. Almost one fifth of anorexics but none of the other female subjects reported that female friends and acquaintances of encourage or "pressured" them to eat. Males were slightly more likely than female controls to report that they compared their bodies with those of others.

Table 13.2.13 Number (and percentage frequency) of responses to question: How do same sex others influence you in regard to your eating habits, exercise or feelings about your body?

	Anorexic n=38		Bulimic n=21		Female Control n=41		Male Control n=23		χ^2 Fem	χ^2 FCvMC
Compare body with others'	13	(34)	13	(62)	18	(44)	16	(70)	4.2	4.0
Criticism of body	8	(21)	5	(24)	11	(27)	3	(13)	0.4	1.7
Peer pressure to diet	13	(34)	5	(24)	6	(15)	2	(9)	4.2	0.5
Compliments re body	3	(8)	2	(10)	8	(20)	1	(4)	2.6	-
Competition amongst same sex re figures	5	(13)	2	(10)	3	(7)	3	(13)	0.8	-
Peer pressure to eat	7	(18)	0	(0)	0	(0)	0	(0)	14.4	-

Table 13.2.14 lists the reported sources of subjects' ideas about "good" figures and reveals that there were no significant differences between the female groups. The most frequent response from each of female groups was the media. This source was reported by an average of 54 percent of the females but males were significantly less likely than the female controls to mention this source.

Table 13.2.14 Number (and percentage frequency) of responses to question: Where do you think you obtained your ideas about good figures for men and women?

	Anorexic n=48		Bulimic n=30		Female Control n=75		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Media	23	(48)	18	(60)	42	(56)	18	(26)	1.3	13.0
From looking around at people	9	(19)	8	(27)	23	(31)	24	(35)	2.2	0.3
Nowhere-they are my own ideas	7	(15)	5	(17)	11	(15)	8	(12)	0.1	0.3
Friends	6	(13)	4	(13)	6	(8)	9	(13)	1.0	1.0
Family	2	(4)	5	(17)	4	(5)	8	(12)	4.2	1.9
Don't know	6	(13)	1	(3)	4	(5)	6	(9)	2.9	0.7
Society	2	(4)	0	(0)	6	(8)	2	(3)	4.3	-
Born with them	1	(2)	0	(0)	0	(0)	4	(6)	-	-

13.2.2 Summary of Results from Interview

The responses to the interview questions provide strong support for the hypothesis that patients would be more likely than female controls to report that cultural pressures influence them. The results clearly indicated that males were less likely to report being influenced by social pressures than the female controls.

There were no major differences between the female groups in their reported exposure to potentially influential mass media. The female groups were equally likely to report that they read most magazines and newspapers, and were also equally likely to report that they read the diet and exercise related articles in these publications. There was not a significant difference between the female groups in the reported amount of television that they watched. Although the patients listened to the radio for a significantly longer average time per day than the female

controls, very few subjects reported being affected by the radio, so this difference would not appear to be an important one. Obviously these measures of exposure to the media do not allow any conclusions to be drawn regarding the specific nature of the programmes and articles to which subjects attended, or about the level and focus of attention paid to these items. Nevertheless, the broad conclusion can be drawn that the female groups did not differ greatly in their exposure to sociocultural ideals and stereotypes.

Males were significantly less likely than the female subjects to report that they read those types of publications in which body image ideals are most frequently presented (Silverstein et al., 1986), and that they read diet and exercise related articles in the print media. Thus males' exposure to information about weight and body shape ideals from magazines and newspapers may have been significantly less than the females'. Of course there is also the more important point that most media items are directed towards ideals for women's bodies anyway (Silverstein et al., 1986). Consistent with these conclusions, the female groups were significantly more likely than the males to state that they obtained their ideas about "good" figures from the media.

Anorexics and bulimics were significantly more likely than the female controls to report that magazines and newspapers influenced their weight and shape related attitudes and behaviours, and were also more likely than female controls to state that other people of the same sex influenced them. Although the direction of the findings was as hypothesised, patients were not significantly more likely than female controls to report the influence of television programmes and advertisements. Males were significantly less likely than the female controls to report that all of these sources of "social pressure" affected them. There were not any significant differences between the groups in the frequency with which they reported that members of the opposite sex influenced them.

The types or nature of the effects subjects reported revealed many interesting differences between groups. When discussing the ways in which they were influenced by magazines and newspapers, patients

(especially bulimics) were more likely than the female controls to state that they wished to look like the ideal figures presented. Apart from this difference the pattern of responses of the patients closely resembled that for the female controls. The great majority of subjects in all female groups who reported being influenced by magazines and newspapers said that their effect was to make them want to look like the body shape ideals presented, and a significant percentage in all female groups said that they attempted to follow the weight loss diets presented in these publications. However, the type of effects reported by the males were very different to those of the female controls. The great majority of the males who acknowledged being influenced by the print media stated that newspapers and magazines increased their knowledge or awareness of health issues. Only a few males mentioned that the ideal body shape images or diets presented in publications affected them.

The results concerning the types of effects of television were very similar to those for newspapers and magazines. Patients were once again significantly more likely than female controls to state that they were affected by ideal images, but for all female groups this was by far the most common effect reported. Males were far more likely than female controls to state that health related information affected them and this was the most common response for males. (However a greater percentage of males acknowledged that television's ideal body images influenced them than was the case for newspapers and magazines.)

Subjects reported a number of ways in which people of the opposite sex affected their weight and shape related attitudes and behaviours. The various effects were reported with approximately equal frequency by all groups. A large percentage of subjects in all groups said that their desire to look attractive to members of the opposite sex influenced them, as did critical remarks about their bodies from people of the opposite sex. The major effects on attitudes and behaviours of people of the same sex reported by subjects were also similar across all groups, with a large percentage of subjects in all groups reporting that they compared their bodies with those of others of the same sex.

13.3 Responses to Interview Questions Assessing Criticism of Current Cultural Ideals Concerning Weight and Body Shape

Hypothesis 10: Patients will be more likely than female controls to uncritically endorse prevailing cultural ideals and stereotypes regarding weight and body shape. No hypothesis is put forward regarding the degree of criticism evidenced by male controls.

13.3.1 Responses to Interview Questions

Table 13.3.1 shows the percentages of subjects in each group who reported that they have in their mind an "ideal" body shape for women. There was a trend in the hypothesised direction with female controls being less likely than the patients (especially bulimics) to report that they have an ideal. There was not a significant difference between the male and female controls.

Table 13.3.1 Number (and percentage frequency) of responses to question: In your own mind, do you have an ideal body shape (or ideas about what a "good figure" is) for women?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	46	(92)	30	(100)	70	(85)	58	(84)	8.3	0.1
No	4	(8)	0	(0)	12	(15)	11	(16)		

Subjects' descriptions of their ideal figures for women are presented in Table 13.3.2. There were two significant differences between the female groups. The description most frequently given by all of the groups was "slim". However, patients (especially bulimics) were more likely than the female controls to offer this response. Female controls were also significantly more likely than the patient groups to describe their ideal as being "normal" or "average".

Table 13.3.2 Number (and percentage frequency) of responses to question: What does this ideal figure look like?

	Anorexic		Bulimic		Female Control		Male Control		χ^2 Fem	χ^2 FCvMC
	n=46		n=30		n=70		n=58			
Slim	28	(61)	22	(73)	30	(43)	27	(47)	9.1	0.2
Tall	12	(26)	6	(20)	12	(17)	9	(16)	1.3	0.1
Normal, average	5	(11)	0	(0)	18	(26)	13	(22)	15.8	0.2
Shapely	4	(9)	7	(23)	10	(14)	14	(24)	3.1	2.0
Not too thin	5	(11)	3	(10)	16	(23)	10	(17)	4.1	0.6
Long legs	7	(15)	4	(13)	13	(19)	8	(14)	0.5	0.5
Toned	9	(20)	8	(27)	7	(10)	5	(9)	4.7	0.1
In proportion	9	(20)	4	(13)	7	(10)	6	(10)	2.1	0.0
Thin	7	(15)	5	(17)	6	(9)	5	(9)	1.8	0.0
Very specific description	2	(4)	4	(13)	13	(19)	4	(7)	5.7	4.0
Not overweight / fat	0	(0)	1	(3)	3	(4)	18	(31)	-	17.7
Other body parts mentioned	7	(15)	4	(13)	6	(9)	4	(7)	1.3	0.1
Fit	2	(4)	2	(7)	1	(1)	1	(2)	1.9	-

Table 13.3.3 presents subjects' responses to the question "Do you think that women should try to look like society's body shape ideal?". Once again, the results were in the hypothesised direction, with a significantly higher percentage of patients than female controls reporting that women should try to look like the "ideal". There was not a significant difference between the male and female controls.

Table 13.3.3 Number (and percentage frequency) of responses to question: Do you think that women should try to look like society's body shape ideal?

	Anorexic		Bulimic		Female Control		Male Control		χ^2 Fem	χ^2 FCvMC
	n=46		n=30		n=78		n=65			
Yes	16	(35)	13	(43)	12	(15)	18	(28)	11.0	3.2
No	30	(65)	17	(57)	66	(85)	47	(72)		

Subjects' rationales for considering that women should or should not attempt to look like society's ideal body shape are given in Table 13.3.4. There were very few significant differences between groups in the frequency with which various rationales were offered. Of those subjects who answered in the affirmative, some merely qualified their affirmative answer by stating that although women should strive to attain an ideal figure they should not "go overboard", that they should attempt to attain an ideal figure "as far as possible", or that they should only attempt to attain an ideal figure "if they want to." Other subjects justified their affirmative answer by stating that "women should try to look attractive" (offered by an average of 30 percent of subjects across groups), the ideal body shape is "healthy" (23 percent) or women should try to look attractive to men (11 percent). Over one quarter of the patients who answered in the affirmative said that the ideal figure "looked good", but none of the female controls offered this rationale.

Subjects' rationales for disagreeing with the notion that women should try to look like the ideal were similar across groups. Many subjects qualified their answers by stating that if women "did not want to" try to have an ideal figure or if they "are happy with the way they are" then they should not necessarily attempt to attain a "good" figure. Many others justified their answers by pointing out (in various ways) that people have varying beliefs and preferences and should follow these, rather than someone else's ideal. Twenty one percent of subjects overall commented that either the social ideal is impossible for some women to achieve or that it is an absolutely impossible goal.

Table 13.3.4 Number (and percentage frequency) of responses to question: Why or why not?

	Anorexic		Bulimic		Female Control		Male Control		χ^2 Fem	χ^2 FCvMC
	n=15		n=12		n=12		n=18			
Should try: But should not "go overboard"	3	(20)	2	(17)	0	(0)	5	(28)	4.0	-
As far as possible	3	(20)	1	(8)	3	(25)	3	(17)	1.3	-
If they want to Should try to be attractive	2	(13)	4	(33)	2	(17)	3	(17)	1.7	-
It is healthy	3	(20)	2	(17)	4	(33)	4	(22)	1.0	-
It looks good	4	(27)	3	(25)	0	(0)	2	(11)	5.8	-
To be liked by men	2	(13)	2	(17)	1	(8)	1	(6)	0.4	-
	n=30		n=17		n=61		n=47			
Should not try: If they do not want to	6	(20)	0	(0)	13	(21)	8	(17)	7.2	0.3
If happy the way they are	0	(0)	2	(12)	9	(15)	3	(6)	7.7	-
Should just be the way they are - each person is different	4	(13)	2	(12)	15	(25)	13	(28)	2.5	0.1
Should look how they wish to	6	(20)	1	(6)	14	(23)	6	(13)	3.1	1.9
Should not be pressured by others' ideal	3	(10)	4	(23)	7	(11)	2	(4)	1.8	-
It is an impos- sible ideal	2	(7)	1	(6)	2	(3)	2	(4)	-	-
Impossible for some to achieve	5	(17)	2	(12)	8	(13)	11	(23)	0.3	-
It causes misery	3	(10)	5	(29)	4	(7)	2	(4)	5.7	-
It is inner per- son that matters	4	(13)	1	(6)	4	(7)	3	(6)	1.3	-
It is unhealthy	1	(3)	0	(0)	4	(7)	3	(6)	-	-
Not all men like that body type	1	(3)	0	(0)	1	(2)	6	(13)	-	-
It causes anorexia	1	(3)	2	(11)	1	(5)	1	(5)	-	-

There were no significant differences between groups in the frequency with which subjects reported that they held a notion of an "ideal" body shape for men. Overall, an average of 84 percent of all subjects gave this response.

Table 13.3.5 Number (and percentage frequency) of responses to question: In your own mind, do you have an ideal body shape (or ideas about what a "good figure" is) for men?

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Yes	39	(78)	28	(93)	68	(83)	58	(84)	3.6	0.0
No	11	(22)	2	(7)	14	(17)	11	(16)		

Subjects' descriptions of their "ideal" figure for men are set out in Table 13.3.6. The most frequently offered description from each of the groups was "muscular", but anorexics were significantly more likely than the other groups to give this description. The bulimic group was more likely than the other female groups to specify that the ideal figure should not be "too thin", and anorexics and bulimics were more likely than the female controls to describe their ideal male figure as "fit".

Table 13.3.6 Number (and percentage frequency) of responses to question: What does this ideal figure look like?

	Anorexic n=39		Bulimic n=28		Female Control n=68		Male Control n=58		χ^2 Fem	χ^2 FCvMC
Slim	3	(8)	2	(7)	7	(10)	6	(10)	0.3	0.0
Tall	15	(38)	6	(21)	18	(26)	9	(16)	2.6	2.3
Normal, average	11	(28)	5	(18)	13	(19)	5	(9)	1.4	2.9
Not too thin	3	(8)	8	(29)	3	(3)	2	(3)	10.7	-
Broad shoulders	8	(21)	4	(14)	8	(12)	9	(16)	1.5	0.4
Muscular	27	(69)	11	(39)	21	(31)	20	(34)	15.3	0.2
In proportion	1	(3)	2	(7)	3	(4)	5	(9)	0.8	-
Thin	0	(0)	0	(0)	0	(0)	0	(0)	-	-
Very specific description	0	(0)	0	(0)	4	(6)	2	(3)	-	-
Not overwt / fat	1	(3)	5	(18)	9	(13)	11	(19)	5.5	0.8
Broad shoulders, slim waist	3	(8)	2	(7)	12	(18)	13	(22)	3.3	0.4
Other body parts mentioned	2	(5)	2	(7)	7	(10)	10	(17)	1.0	1.3
Fit	8	(21)	9	(32)	5	(7)	9	(16)	9.6	2.1
Solid/well built	3	(8)	7	(25)	7	(10)	8	(14)	4.5	0.4

Table 13.3.7 presents the percentage of subjects in each group who reported that they thought that men should attempt to look like society's body shape ideal. Bulimics were slightly more likely than the other female groups to answer in the affirmative to this question, but this difference did not reach significance.

Table 13.3.7 Number (and percentage frequency) of responses to question: Do you think that men should try to look like society's body shape ideal?

	Anorexic n=38		Bulimic n=24		Female Control n=58		Male Control n=58		χ^2 Fem	χ^2 FCvMC
Yes	12	(32)	12	(50)	13	(22)	19	(33)	5.9	1.6
No	26	(68)	12	(50)	45	(78)	39	(67)		

Subjects' rationales for their answer to the question "Do you think men should try to look like the ideal?" are presented in Table 13.3.8. The type of responses were similar to those given in response to the corresponding question about women. An interesting difference emerged between the males and the female groups. The most popular rationale given by the anorexics and bulimics for stating that men should try to look like the ideal was that "it looks good" and for the female controls it was that men should "try to look as attractive as possible". In contrast the most popular response from the males was that the ideal shape is "healthy", and the males were more likely than the female controls to offer this rationale.

Table 13.3.8 Number (and percentage frequency) of responses to question: Why or why not?

	Anorexic		Bulimic		Female Control		Male Control		χ^2 Fem	χ^2 FCvMC
	n=12		n=12		n=13		n=19			
Should try: But should not "go overboard"	1	(8)	1	(8)	0	(0)	3	(16)	-	-
As far as possible	3	(25)	1	(8)	1	(8)	6	(32)	1.9	-
If they want to Should try to be attractive	1	(8)	2	(17)	1	(8)	0	(0)	0.6	-
It is healthy	2	(17)	2	(17)	4	(31)	2	(11)	1.0	-
It looks good	1	(8)	3	(25)	2	(15)	11	(58)	1.3	-
In order to be liked by women	6	(50)	4	(33)	3	(23)	4	(21)	2.0	-
	2	(17)	2	(17)	2	(15)	0	(0)	0.0	-
	n=23		n=12		n=39		n=37			
Should not try: If they do not want to	4	(17)	0	(0)	13	(33)	10	(27)	8.9	-
If happy the way they are	4	(17)	3	(25)	5	(13)	3	(8)	1.0	-
Should just be the way they are	2	(9)	1	(8)	5	(13)	10	(27)	0.4	2.5
Should look how they wish to	0	(0)	1	(8)	7	(18)	4	(11)	7.1	-
Should not be pressured by others' ideal	2	(9)	2	(17)	1	(3)	0	(0)	-	-
It is an impos- sible ideal	2	(9)	0	(0)	1	(3)	3	(8)	-	-
Impossible for some to achieve	5	(22)	2	(17)	6	(15)	5	(14)	0.4	0.1
It causes misery	0	(0)	0	(0)	1	(3)	1	(3)	-	-
It is inner per- son that matters	3	(13)	0	(0)	4	(10)	5	(14)	2.7	-
It is unhealthy	0	(0)	0	(0)	0	(0)	1	(3)	-	-
Not all women like that figure	0	(0)	1	(8)	4	(10)	0	(0)	-	-
It causes anorexia	1	(4)	1	(8)	0	(0)	0	(0)	-	-

Table 13.3.9 shows that while there were some slight differences between groups there were no significant differences in response to the question "How do you feel about the pressures on women to conform to a

particular shape?". The majority of subjects in each group commented that they thought the pressures were "bad", but patients were most likely to do so, followed by female controls and lastly, males.

Table 13.3.9 Number (and percentage frequency) of responses to question: How do you feel about the pressures on women to conform to a particular shape?¹³

	Anorexic n=43		Bulimic n=27		Female Control n=42		Male Control n=53		χ^2 Fem	χ^2 FCvMC
They are good	4	(9)	1	(4)	3	(7)	11	(21)	4.0	3.6
Don't care either way	8	(19)	5	(19)	14	(33)	14	(26)		
They are bad	31	(72)	21	(78)	25	(60)	28	(53)		

In line with the findings from Table 13.3.9, the majority of female subjects reported that there were negative aspects, as far as women were concerned, about the current fashion for slimness. There was not a significant difference between the female groups. However, males were less likely than the female controls to report that there were negative aspects to the fashion for slimness.

Table 13.3.10 Number (and percentage frequency) of subjects who responded that they thought there are negative aspects for women about the current interest in dieting, slimness and so on?¹⁴

	Anorexic n=48		Bulimic n=30		Female Control n=81		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Negative aspects	33	(69)	24	(80)	56	(69)	36	(52)	1.5	4.5
None mentioned	15	(31)	6	(20)	25	(31)	33	(48)		

The positive and negative outcomes of the current fashion for women's slimness, dieting and so on which subjects reported are listed in Table 13.3.11. There were no significant differences between the groups in the

13. 1 anorexic and 2 female control subjects responded "don't know" to this question. They were excluded from the analysis.

14. 2 anorexics and 1 female control subjects responded "don't know" to this question. They were excluded from the analysis.

frequency with which various outcomes were reported. The most frequently mentioned negative aspects related to eating disorders and related problems. An average of 30 percent of those subjects who perceived the fashion to be negative stated that they thought it led to the incidence of eating disorders and a further 27 percent commented that it led to dieting and related behaviours being "taken to extremes". Overall, 13 percent of subjects commented that the current fashion for slimness led to weight preoccupation and obsession with weight, and 28 percent stated that it caused misery for women. An average of 17 percent of subjects said that the current body shape ideal for women was "unhealthy" and an average of nine percent remarked that it creates unreasonable expectations of women's bodies.

Many subjects were not able to justify their response that the current fashion for slimness was positive or desirable. Of those that did give a reason, 43 percent said it was a desirable fashion as long as women responded with "moderation" to it. One quarter of subjects overall stated that the current female body shape ideal is a "healthy" one, and 13 percent said that it "looked good".

Table 13.3.11 Number (and percentage frequency) of responses to question: **What do you see as good (or bad) about the fashion for slimness for women?**

	Anorexic	Bulimic	Female Control	Male Control	χ^2 Fem	χ^2 FCvMC
Reasons against:	n=33	n=24	n=56	n=36		
Leads to ED	12 (36)	5 (21)	17 (30)	11 (31)	1.6	0.0
Can be taken to extremes	6 (18)	5 (21)	13 (23)	16 (44)	0.3	4.5
Causes wt preocc and obsession	4 (12)	7 (29)	4 (7)	5 (14)	6.3	1.1
Causes misery	6 (18)	8 (33)	20 (36)	7 (19)	3.4	2.9
It is unhealthy	5 (15)	3 (13)	10 (18)	7 (19)	0.4	0.0
Creates expectations of women's bodies	2 (6)	4 (17)	5 (9)	2 (6)	1.7	0.4
Reasons for:	n=14	n=6	n=24	n=31		
OK in moderation	3 (21)	1 (17)	13 (54)	15 (48)	5.6	0.2
Slim is healthy	2 (14)	2 (33)	6 (25)	9 (29)	1.1	0.1
Slim looks good	3 (21)	1 (17)	2 (8)	4 (13)	-	0.3
No reason given	6 (43)	1 (17)	5 (21)	6 (19)	2.5	0.0

Table 13.3.12 lists the changes which subjects said they would like to make to society regarding any of the issues that were raised throughout the interview. The full range of responses has been tabulated. There was only one significant difference between the female groups: female controls were more likely than patients to report that they would like to see the amount of "unhealthy" food available reduced. However, a consistent sex difference in responses was evident. Females were more concerned than males with changing the prevailing body shape ideals, or de-emphasising them. The desired change most frequently mentioned by each of the female groups was a shift in emphasis from judgements of people on the basis of their appearance (especially their figures) to judgements based on personality. Female controls were significantly more likely than males to report that they would like this to happen - while 29 percent of all of the females mentioned this change, only nine percent of males did so. Twenty four percent of females on average stated that they would like the media to place less emphasis on slimness as a goal, and 22 percent of females stated more generally that they would like "less pressure" placed upon women to conform to an "ideal" body shape. The corresponding percentages for males were only nine and ten percent, respectively. While the differences between male and female controls for these responses did not reach significance on their own they are indicative of a more general trend. Female controls were significantly more likely than males to state that they would like to see women with "normal" figures featured in advertisements. Moreover, there were a number of similar changes mentioned **only** by females - adoption of a "normal" figure as the ideal body shape, greater acceptance of fat people, and people who are not slim nevertheless being regarded as attractive.

Males, with the exception of the response mentioned earlier, were more likely than females to desire health related changes. They were also far more likely than the female controls to state that they would like to see more people becoming physically fit. One quarter of the males mentioned this change, while only three female controls (and none of the patients) did so. Males were also significantly more likely than the female controls to report improved health education as a desired change.

Table 13.3.12 Number (and percentage frequency) of responses to question: what would you change in society concerning any of the issues we have been talking about?

	Anorexic n=50		Bulimic n=30		Female Control n=76		Male Control n=68		χ^2 Fem	χ^2 FCvMC
Concern with person not body	17	(34)	9	(30)	22	(29)	6	(9)	0.4	9.8
Less media emphasis on slimness	12	(24)	9	(30)	16	(21)	7	(10)	0.9	3.2
Less pressure to be ideal shape	7	(14)	8	(27)	14	(18)	5	(7)	1.9	4.0
Better health education	2	(4)	1	(3)	10	(13)	16	(24)	4.7	2.6
Acceptance of all body types	6	(12)	6	(20)	9	(12)	6	(9)	1.3	0.4
No unhealthy food available	0	(0)	1	(3)	13	(17)	13	(19)	15.9	1.0
Normals on ads	6	(12)	5	(17)	11	(14)	1	(1)	0.4	9.3
People fitter	0	(0)	0	(0)	3	(4)	17	(25)	-	14.3
Normal as ideal	2	(4)	3	(10)	7	(9)	0	(0)	1.6	9.3
No fad diets	5	(10)	3	(10)	2	(3)	1	(1)	3.8	-
Emphasise health not looks	4	(8)	1	(3)	2	(3)	4	(6)	2.0	1.0
All people slim	0	(0)	0	(0)	4	(5)	5	(7)	-	0.3
Stop people worrying re weight	1	(2)	1	(3)	1	(1)	4	(6)	-	-
Greater acceptance of fat	2	(4)	2	(7)	1	(1)	0	(0)	-	-
Clearer health advice in media	1	(2)	0	(0)	1	(1)	3	(4)	-	-
All same shape	0	(0)	0	(0)	2	(3)	1	(1)	-	-
No high-cal food	0	(0)	1	(3)	2	(3)	0	(0)	-	-
No AN or BN	2	(4)	0	(0)	1	(1)	0	(0)	-	-
Non-slim thought attractive	0	(0)	1	(3)	2	(3)	0	(0)	-	-
"Pill" for food	1	(2)	1	(3)	0	(0)	0	(0)	-	-
Nothing	10	(20)	2	(7)	6	(8)	13	(19)	4.9	4.0

13.3.2 Results from Analysis of Three Level Criticism Score

Table 13.3.13 shows that there were significant differences between the groups in the percentages who were rated as "critical", "partially critical" or "uncritical" on the three level criticism scale which was used to rate each subject on completion of the interview. The construction of this scale and a detailed description of each of the three levels are given in Chapter 8. The major difference between the female groups was the significantly higher percentage of female controls who were "partially critical" of prevailing cultural ideals. Over half of the female controls reported this degree of criticism, almost double the corresponding percentages in the patient groups. The patients were more likely to be rated as either "critical" (particularly the bulimics) or "uncritical" (particularly the anorexics) of cultural ideals. Those subjects who were classified as being "critical" of current ideals were opposed to the existence of any body shape ideals at all (and in most cases also expressed specific opposition to current cultural body shape ideals) and argued that people should not be evaluated according to such criteria in any form. The "uncritical" subjects believed that current body shape ideals are desirable, and did not express criticism of either the current ideals or of the notion of body shape ideals. The males were significantly more likely than the female controls to express "uncritical" views, while the female controls were more likely than the males to report "partially critical" opinions.

Table 13.3.13 Number (and percentages) of subjects in each group classified as "critical", "partially critical" or "uncritical" of society's ideals concerning weight and body shape.

	Anorexic n=50		Bulimic n=30		Female Control n=82		Male Control n=69		χ^2 Fem	χ^2 FCvMC
Critical	12	(24)	10	(33)	12	(15)	14	(20)	20.8	12.2
Partly-critical	14	(28)	9	(30)	48	(59)	21	(30)		
Uncritical	24	(48)	11	(37)	22	(27)	34	(49)		

13.3.3 Summary of Results from Interview

The results from the interview provide support for the hypothesis, especially from those questions assessing attitudes towards ideal body shapes for women. While the majority of females in all groups reported that they hold ideas about what constitutes an "ideal" shape for women, patients (especially bulimics) were more likely than female controls to do so. Patients were also more likely than controls to report that their ideal female figure was "slim", while female controls were more likely than patients to describe their ideal female figure as "average". A significantly greater percentage of patients than female controls said that they thought women should try to achieve society's "ideal" figure. Although the differences were not large, bulimics were more likely than anorexics to state that they had a notion of what are ideal body shapes for men and women, and that men and women should try to look like society's ideal. Anorexics were more likely than the other female groups to describe their ideal male figure as "muscular", and both anorexics and bulimics were more likely to describe their male ideal as "fit".

For the remaining issues addressed by the interview questions, there were not any significant differences between the female groups. All of the female groups reported with approximately equal frequency that they had an ideal figure for men, and that men should attempt to look like society's body shape ideal. The reasons which subjects used to justify their belief that women and men should, or should not, try to attain society's ideal figure were given with fairly similar frequencies across groups, but males emphasised health related reasons for men, while females emphasised appearance related reasons for men.

The results from the criticism scale revealed an interesting difference between the patients and female controls. The female controls were significantly more likely than the patients to express partially critical views about current social body shape ideals, while patients were more likely than controls to be either absolutely critical of these ideals or not at all critical.

Some interesting differences also emerged between the male and female controls. First, a significantly greater percentage of males than females specified that in order to have a good figure a woman must not be overweight or "fat". Males were also less likely than the females to report that the current fashion for slimness was negative in any way.

Males also differed in the rationales they offered for their belief that men should try to attain society's version of the ideal male figure - males were far more likely than the females to state that this ideal was "healthy". Consistent with the latter result, males emphasised health related issues (such as improving the population's fitness and increasing their knowledge about health issues) when discussing the changes they would like to make to society. Females in all groups responded mainly in terms of changing the ideal shape for women, making the criteria for a "good" female figure less stringent, or de-emphasising its importance in evaluations of women. All of these findings provide further incidental support for Hypothesis 7.

It is also important to note that although significant differences were found between groups, there was also considerable agreement on several issues. Most subjects said that they had ideas about what constitutes an ideal body shape for women, and most described this ideal as slim (or "not overweight"). Most subjects also had a notion of an ideal body shape for men (although fewer than those who had ideals for female figures) and the most common description for this ideal was muscular. (Once again this description was not offered as frequently as "slim" was for the ideal female figure.) Most subjects, especially females, thought the pressures on women to be slim were negative or "bad", and many females (patients and controls alike) expressed a desire that these pressures and the emphasis on appearance would decrease or cease. As a final point it is worthwhile reiterating that throughout all of the questions about the pressures on women concerning body shape it appeared that males were far more likely than the female controls to be either indifferent, or indeed supportive, towards these pressures.

CHAPTER 14

RESPONSES TO QUESTIONNAIRES ASSESSING SEX ROLE PERSONALITY CHARACTERISTICS AND ATTITUDES TOWARDS WOMEN IN SOCIETY

14.1 Responses to Questionnaires Assessing Sex Role Personality Characteristics

Hypothesis 11: Patients will be more likely than female controls to be either "feminine" or "undifferentiated" in sex role personality characteristics. Female controls will be more likely than patients to be either "masculine" or "androgynous" in sex role orientation. No hypothesis is put forward with regard to male controls.

14.1.1 Responses to Questionnaires

The mean "masculinity" scale scores of the BSRI for each group are set out in Table 14.1.1. The planned contrasts performed revealed that the female controls had a significantly higher "masculinity" score than both the anorexics and bulimics. The difference between the anorexic and bulimic groups approached significance. There was not a significant difference between the male and female controls' mean scores.

Table 14.1.1 Comparison of Mean Bem Sex Role Inventory "Masculinity" Scores for Groups

	Anorexic n=47	Bulimic n=29	Female Control n=80	Male Control n=64	F
BSRI Masculinity Score	3.470	3.914	4.496	4.759	17.9
df	219				
SE	0.994				
Approx LSD	0.545				

The average "femininity" scores of the BSRI are presented in Table 14.1.2. The planned contrasts revealed that there was not a significant difference between the mean scores of the anorexics and bulimics, nor between the scores for the male versus female controls (although the latter difference approached significance). However, there was a significant difference

between the average scores of the anorexic and female control groups, and the difference between the bulimic and female control groups also approached significance.

Table 14.1.2 Comparison of Mean Bem Sex Role Inventory "Femininity" Scores for Groups

	Anorexic n=47	Bulimic n=29	Female Control n=80	Male Control n=64	F
BSRI Femininity Score	4.985	5.010	5.510	5.172	3.54
df	219				
SE	1.003				
Approx LSD	0.550				

The absolute scores for each of the groups (presented above) provide the background information against which to view the results from the next analysis. Bem (1981) recommends a "median split" classification of subjects as the optimal method of analysing the BSRI, and the results from this analysis directly address the hypothesis. Bem suggests that the sample of subjects is divided at the median on both the Femininity and Masculinity scales, yielding a fourfold classification system with subjects designated as feminine, masculine, androgynous or undifferentiated (1981, p.9). This analysis was conducted on the scores for the female groups only and accordingly the medians were calculated from the scores for the combined female sample. Table 14.1.3 shows the way in which the "median split" classification is performed.

Table 14.1.3 Median Split Method of Analysis of Bem Sex Role Inventory

		Masculinity Score	
		Below Median	Above Median
Femininity Score	Below Median	Undifferentiated (low-low)	Masculine (low fem-high masc)
	Above Median	Feminine (high fem-low masc)	Androgynous (high-high)

Table 14.1.4 reveals that there were significant differences between the groups in the way in which they were classified. Equal percentages of subjects in each group were classified as "feminine" (21 percent), and equal percentages of the bulimics and female controls (28 percent) were classified as masculine. A lower percentage of anorexics was classified as masculine (13 percent). The most significant differences between the groups were in the percentages of subjects who were classified as either androgynous or undifferentiated. Over half of the anorexics were classified as undifferentiated, as were over 30 percent of the bulimics, but only 13 percent of the controls were given this classification. Conversely, while 15 percent of the anorexics and 21 percent of bulimics were classed as androgynous, 39 percent of the female controls received this designation.

Table 14.1.4 Bem Sex Role Inventory Median Split Classification of Subjects - Number (and percentage) of subjects in each category

	Anorexic n=47		Bulimic n=29		Female Control n=80		χ^2
Undifferentiated	24	(51)	9	(31)	10	(13)	25.9
Feminine	10	(21)	6	(21)	17	(21)	
Masculine	6	(13)	8	(28)	22	(28)	
Androgynous	7	(15)	6	(21)	31	(39)	

14.1.2 Summary of Results from Questionnaires

The anorexics and bulimics were significantly less "masculine" in sex role orientation on average, and the anorexics were significantly less "feminine" than the female controls. Although the difference did not quite reach statistical significance, bulimics also had a lower femininity score than the female controls. Bulimics had a higher mean masculinity score than the anorexics and this difference also approached significance.

The results from the median-split classification provide partial support for the hypothesis. The results from the anorexics conformed to the hypothesis to a greater extent than those from the bulimics. There was no support for the proposition that patients would be more likely than controls to be "feminine" in their sex role orientation. However, while equal percentages of the groups were classified as feminine, a smaller percentage of anorexics than the other two groups was classified as masculine. There was strong support for the proposition that patients would be more likely than controls to be undifferentiated, and less likely to be androgynous in their sex role orientation.

14.2 Responses to Questionnaires Assessing Attitudes Towards Women in Society

Hypothesis 12: Patients and female controls will hold equally "feminist" views concerning the role of women in society. No hypothesis is put forward with regard to male controls.

14.2.1 Results from Questionnaires

Table 14.2.1 sets out the average Attitudes Towards Women scores for the groups. Higher scores indicate more liberal or "feminist" attitudes, with the highest possible score being 75 and the lowest 25. The planned contrasts revealed that there were no significant differences between the female groups. The mean score for the males was significantly lower than for the female controls.

Table 14.2.1 Comparison of Mean Attitudes Toward Women Questionnaire Scores for Groups

	Anorexic n=49	Bulimic n=29	Female Control n=81	Male Control n=67	F
Attitudes Toward Women Score	58.9	58.4	58.4	53.1	5.46
df	222				
SE	9.24				
Approx LSD	5.1				

A subsample of female subjects was administered the Women in Society Questionnaire (WSQ). Higher scores indicate more liberal or "feminist" attitudes, with the highest possible score being 132 and the lowest 22. The patient groups were combined for the statistical analysis as only six bulimics completed the questionnaire. A t-test for groups with unequal standard deviations was performed, and revealed that there was not a significant difference between the patient group and the female controls.

Table 14.2.2 Comparison of Mean Women in Society Questionnaire Scores for Groups

	Eating Disorders n=17	Female Control n=25	T (df=23)
Women in Society Score	94.8	99.0	0.81
SD	19.7	11.6	

14.2.2 Summary of Results from Questionnaires

The results from both the Attitudes Towards Women and the Women in Society Questionnaires do not provide any support for the hypothesis that patients would hold less strongly feminist views than controls regarding the role of women in society. There were no significant differences between the mean scores of the groups on either of these questionnaires.

14.3 Post-hoc Analyses - Relationship Between Subjects' Age and Chronicity of Illness and: Reported Awareness, Influence and Criticism of Current Cultural Ideals, Sex Role Personality Orientation and Attitudes Towards Women

After the planned analyses of the data were conducted, further post-hoc analyses were performed to investigate the possible relationship between female subjects' age, and in the case of patients, the chronicity of their illness, and subjects' attitudes towards current cultural ideals regarding body shape, sex role personality characteristics and attitudes towards the role of women in society. These analyses were performed because it was considered that age may have an influence on these socioculturally related attitudes. For patients, it was also thought that as illness lengthened, such attitudes may change.

A single score was obtained for each subject for each set of interview questions pertaining to awareness and influence of current cultural ideals. This was achieved by summing subjects' recoded responses to each question in the set (see Section 8.3 for a discussion of this technique). Thus each subject was given a single score measuring the extent to which they were aware of current cultural ideals and another score which measured the extent to which they reported being influenced by such ideals. Subjects' scores on the Attitudes Towards Women Scale and the masculinity and femininity scales of the Bem Sex Role Inventory were also analysed. Standard multiple regression analyses were performed to determine the relationships between age and chronicity (taken singly and in combination with each other) and each of these measures. No significant relationships were found between any of the measures and age for either patients or female controls. No significant relationships were found between any of the measures and chronicity for patients.

Subjects' criticism of current cultural ideals was classified using a three level score. (The response variable was thus categorical in nature, rather than continuous.) In order to assess the relationship between this score and subjects' age (and for patients the chronicity of their illness) a log

linear analysis for contingency tables was used. There was not a significant relationship between age and critical ability for the patients or female controls. However a significant relationship was found between the chronicity of patients' illness and their critical ability. Table 14.3.1 shows this relationship. Patients who had had their eating disorder for more than 24 months were more likely than patients who had not had an eating disorder for such a long period to be critical of current cultural ideals. Conversely, less chronic patients were more likely than chronic patients to be classified as uncritical. Female controls were more likely than both sets of patients to be classified as partially critical.

Table 14.3.1 Percentage of female controls and patients classified as critical, partially critical or uncritical (Patients further classified according to the chronicity of their eating disorder)

	Critical	Partially Critical	Not Critical	χ^2 * (4 df)
Patients:				28.2
Chronicity of ED				
≤ 24 months (n=41)	15	21	64	
> 24 months (n=39)	49	31	20	
Controls (n=82)	15	59	25	

* P < 0.001

X
- 4 NOV 1991

UNIVERSITY OF SYDNEY LIBRARY



0000000600374737