FAR FROM IDEAL: TALKING ABOUT WEIGHT WITH MOTHERS AND DAUGHTERS FROM WINNIPEG, SOUTHERN MANITOBA AND A FIRST NATIONS COMMUNITY

BY

GAIL D. M. MARCHESSAULT

A Thesis
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Department of Community Health Sciences
Faculty of Medicine
University of Manitoba
Winnipeg, Manitoba
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A Thesis/Practicum submitted to the Faculty of Graduate Studies of The University of Manitoba in partial fulfillment of the requirements of the degree

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I dedicate this thesis to Morley and Lexi

who encouraged me to begin it

and

encouraged me to finish it.

ABSTRACT

This research compared body weight perceptions of Aboriginal and non-Aboriginal girls and their mothers. Three interview formats were used: in-depth qualitative interviews; a structured questionnaire analysed with cultural consensus theory; and three standardized questionnaires. Families were randomly selected based on the class lists of Grade 8 students from two urban and two rural schools. The sample consisted of 80 mother-daughter pairs, interviewed separately. The response rate was 71.3%. The non-Aboriginal women almost unanimously discussed strong societal pressures that made weight more important to women than to men. Most of the Aboriginal women, especially in the First Nations community (FNC), emphasized physiology and health, speaking in a way that suggested weight was *not* central to female identity. Despite this, some Aboriginal women related a history of risky eating behaviours. Analysis of the 24 weight-related values statements indicated consensus, except in the FNC women. Both agreement and disagreement were highlighted. Across locations, approximately half of the girls accurately repeated their mothers' advice to them regarding weight. There were no significant associations between mother-daughter pairs in the analysis of the consensus statements, reports of dieting, general advice to others, the Restraint Scale, the Eating Attitudes Test (EAT-26), or body dissatisfaction as measured by the Body Shape Drawings Questionnaire. A post-hoc analysis of 21 participants who most supported accepting one's body size was the only mother-daughter association that achieved statistical significance (kappa =0.51). Body dissatisfaction was higher in Aboriginal than non-Aboriginal women (83% and 62%) and girls (66% and 36%). Responses on the

Restraint Scale suggested more dieting in the FNC. More Aboriginal (17.5%) than non-Aboriginal (2.5%) girls had EAT-26 scores suggestive of risk for an eating disorder. These results suggest that (a) girls are not necessarily emulating their mothers' weight concerns but may learn to challenge weight obsession from them; (b) both weight and weight preoccupation need to be considered in health messages to Aboriginal girls and women living in or close to an urban centre.

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CHAPTER ONE

Introduction

> "When we talk among ourselves, all we get back are echoes. But when we talk with others of a different mind, we are made to think. And it is in thinking that we learn, and in learning that we grow" (Governor General Romeo LeBlanc c.f. Greaves, 1997, p. D10).

Statement of the Problem

Weight and weight control are compelling concerns for numerous middle-class girls and women in Canada (Dairy Bureau of Canada, 1993; Health Canada, 2000; Walters, Lenton, & Mckeary, 1995). It is not known to what extent these concerns are shared by Aboriginal girls and women. And although it is often assumed that girls learn to fear fat and value thinness from their mothers, there is little investigation of the similarity of weight-related views of teen-aged girls and their mothers. This study addresses these two gaps in our knowledge by comparing Aboriginal and non-Aboriginal girls' and their mothers' perceptions about body weight.

There is little published research examining how Aboriginal people perceive weight issues. Do Aboriginal girls and women share the well-documented middle-class perspectives on weight? Is weight as important to Aboriginal girls and women? And if it is, is it important in the same ways? The health hazards of obesity, especially the increased prevalence of diabetes amongst Aboriginal people, and the competing pressures and health hazards of weight preoccupation make these questions critical for understanding appropriate health education approaches.

Education with Aboriginal people to prevent diabetes is often predicated on the assumption that there is a need to increase the motivation for weight control. This approach stems from research that focusses on documenting the prevalence of obesity in Canadian and American Aboriginal people and exploring its association with chronic diseases (Harrison & Ritenbaugh, 1992; Story, Strauss, Zephier, & Broussard, 1998; Waldram, Herring, & Young, 1995; Welty, 1991; Young & Sevenhuysen, 1989).

A number of studies in the United States have focussed on weight-related behaviours. Along with the higher weight norms, Native American girls and young women have been reported to use potentially hazardous weight control methods (Crago, Shisslak, & Estes, 1996; Neumark-Sztainer, Jeffery, & French, 1997; Rosen et al., 1988a; Smith & Krejci, 1991; Snow & Harris, 1989; Story, French, Resnick, & Blum, 1995; Story et al., 1994). This research, which is exclusively survey-based, suggests the need for more information about the way Aboriginal people perceive their weight. Additionally, because all of these studies were American, there is a need to document if similar behaviours are present in Canadian Aboriginal girls and women. Consequently, the first research question focuses on a comparison of Aboriginal and non-Aboriginal perspectives about weight.

The second major comparison of this research concerns the transmission of perceptions and concern about weight to girls. It is frequently assumed that mothers pass on their own desire for thinness and stigmatization of fat to their daughters (Brigman, 1994; Johnson, 1995; Parker et al., 1995; Rabinor, 1994; Waterhouse, 1997). Current research raises questions regarding this assumption (Attie & Brooks-Gunn, 1989; Byely,

Archibald, Graber, & Brooks-Gunn, 2000; Keel, Heatherton, Harnden, & Hornig, 1997; Ogden & Steward, 2000; Pike & Rodin, 1991). Studying weight perceptions of mothers and daughters in diverse situations offered potential to clarify the similarities and differences between generations and within pairs of mothers and daughters. This, too, could provide useful data in support of educational approaches to help girls cope with contradictory cultural pressures concerning weight.

Rural communities are another under-studied segment of our society (Leichner, Arnett, Rallo, Srikameswaran, & Vulcano, 1986; Reeder et al., 1997). I am aware of only one study that examines the distribution of body weight of urban and rural Canadian women (Reeder et al., 1997). This study reported no significant differences in mean Body Mass Index (BMI) or prevalence of obesity between urban and rural women in the national sample. Western Canadian rural women, however, were more likely than their urban counterparts to be heavier and more often reported trying to lose weight. An earlier study also found that rural youth in Manitoba were heavier. This study did not measure dieting, but reported fewer rural youth were at risk of an eating disorder (Leichner et al., 1986). Studying the perspectives of rural girls and women is therefore of interest. Studying a rural community alongside a rural First Nations community is also of theoretical interest in delineating *small town* effects. Impression management, and therefore appearance and weight, may be more important where precise evaluation of individual achievement is difficult. (Featherstone, 1982). This may be more relevant to large, anonymous cities than to small, rural communities. If so, then First Nations communities may have more relaxed attitudes to weight because they know much more

about each other than city dwellers do. If this is the case, then a similar sized rural community should also have more relaxed attitudes to physical appearance.

In contrast to the paucity of research in the above areas, there is a large volume of research on North American females' attitudes to weight, most of it using survey methodology. This research has established that weight and weight control are important concerns for a majority of girls and women in Canada (Dairy Bureau of Canada, 1993; Health Canada, 2000; Walters et al., 1995). This research has largely focussed on White, middle-class students.

There is a growing body of interview-based qualitative research. However, participants in these studies were selected for specific weight problems, such as eating disorders, weight control or obesity (Allon, 1979; Brown, 1987; Bruch, 1978; Honeycutt, 1999; Millman, 1980; Spitzack, 1990). Several of these studies have focussed on working class women (Allan, 1989), Black women (Thompson, 1992) or older men and women (Colvin & Olson, 1983; Joanisse & Synnott, 1999).

Recently, qualitative researchers have explored a fuller range of attitudes to weight by interviewing adult volunteers from the general population (Chapman, 1999; Grogan, 1999; Hesse-Biber, 1996; Wakewich, 2000). There are surprisingly few qualitative studies with adolescents that focus on weight (Chapman & Maclean, 1993; Marchessault, 1993a; Nichter, 2000; Parker et al., 1995; Robertson, 1991). To my knowledge, other than the work for my master's research, this is the first qualitative study that compares what mothers and daughters say about weight. In my master's research, I also interviewed Grade 8 girls and their mothers, but the families lived in the inner city.

Objectives and Research Questions

The primary objective of this research was to examine the extent to which Canadian mothers and daughters of diverse backgrounds share understandings about weight. The main question addressed was: What are the participants' concerns and perceptions about body weight? This was addressed in Aboriginal and non-Aboriginal participants, Grade 8 girls and their mothers, and urban and rural participants. Families were recruited through four schools, two located in Winnipeg (a suburb and the inner city), and two in southern Manitoba (a rural community and a First Nations community).

Consistency and variation in participants' understandings about weight were explored within the mother-daughter pairs; between the two generations; between Aboriginal and non-Aboriginal families; between urban and rural families; and between the four locations studied.

Participants' understandings were explored using different interview formats to develop a more comprehensive understanding of how people perceive weight than is possible using a single approach. Ethnographic interview approaches emphasize the exploration of participant perspectives, a fundamental aspect of this research. I used two ethnographic interview formats: an open-ended, semi-structured interview and a more structured fixed-response interview based on statements made by mothers and daughters who participated in the previous study. I also used three standardized and widely administered questionnaires to document and compare weight concerns.

Rationale for Group Identification

All of the families interviewed in this study were of either Aboriginal or European ancestry. When asked about their ethnicity, participants of European heritage usually named their country of origin, or said *"Canadian."* The Aboriginal participants named their Nation, or said *"Native," "Aboriginal,"* or *"Metis,"* or in the case of the girls, *"Indian" or occasionally "treaty" or "status."*[1]

Both *Native* and *Aboriginal* seemed acceptable as inclusive names to the people I interviewed. I chose to use Aboriginal throughout this report except when citing a reference that uses other terminology. Aboriginal political leaders currently favour this term, as demonstrated by its use by the Aboriginal Justice Inquiry of Manitoba (Hamilton & Sinclair, 1991), and the Royal Commission on Aboriginal Peoples (1996). The Royal Commission used Aboriginal to refer to Metis and First Nations people (and Inuit as well, but there were no Inuit people in this study). Metis people are defined as those who self-identify as having mixed Aboriginal-European ancestry. The Commission proposed *First Nations* to replace *Indian* and *Native American*. First Nations has been highlighted as the only non-racist attribution (Monture, 1993). However, no one in my study referred to their heritage this way. People more often used First Nations to refer to reserves, the land set aside for band members' use. I use *First Nations community* to refer to the reserve that was the site of one of the four schools where I did the research.

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[1]"Status" or "treaty" Indians are Aboriginal people registered as Indian under the terms of the Indian Act. In the early 1990's, there were an estimated 750,000 Aboriginal people with "treaty" status, 250,000 without "treaty" status, 160,000 to 250,000 Metis people and 36,000 Inuit people living in Canada (Tookenay, 1996).

When comparisons were based on ethnicity, I refer to the sample with European heritage as *non-Aboriginal*, largely for convenience. *Caucasian, Euro-Canadian* and *of European Ancestry* were also considered, but they are rarely used and therefore seemed awkward. *White* is used more often but implied a uniformity that did not exist.

Self-identified ethnicity is used here to draw the Aboriginal and non-Aboriginal comparisons. There is a diverse array of experience inherent within each group. Continuity and context are important considerations in the interpretation of identity. Some participants portrayed their ethnicity as an integral part of their identity dating to childhood. Others suggested that ethnicity had become relevant to them only recently. The Aboriginal women in particular related a large variety of circumstances from growing up in a non-Aboriginal family, to having always lived in a First Nations community. And yet, the personal relevance of identity was difficult to predict based on such facts. This was demonstrated by one set of interviews with two sisters. Both described their heritage with great pride. One described herself as Metis; the other as French Canadian. Their daughters followed suit, suggesting that their mothers were consistent in the different meaning they drew from growing up in similar circumstances.

Daughters did not always share the their mothers' connection to their ethnic heritage. The daughters of some Urban-Aboriginal women living in the suburbs might have been the only Aboriginal girl in their class. Other Urban Aboriginal families had moved from the suburbs to the inner city specifically to live in an Aboriginal neighbourhood.

The *Urban Aboriginal* sample resulted from the addition of a snowball sample to

complete that drawn from the inner city school, and the group name for these families refers to location plus *self-identified ethnicity*, the dimensions by which they were selected.

I use *Suburban* to refer to the older, well-established city neighbourhood that is the site of one of the Winnipeg schools. This neighbourhood is situated between the inner city and the perimeter of the city and does not meet the dictionary definition of suburban as "an outlying district of a city" (Davis & Webster, 1998, p. 830). According to the three urban experts with whom I spoke there is no word for this type of neighbourhood. Dr. Andy Lockery, the Coordinator of Environmental Studies and Urban Studies at the University of Winnipeg, explained that Winnipeg's development as a transportation centre in the 1920s prompted these neighbourhoods to be built as "suburban systems" prior to suburban trends elsewhere. As the city grew, the old suburbs were ringed by new ones, but "once a suburb, always a suburb" (personal communication, February 25, 1999).[2]

I refer to the girls and women at the four locations as if they were coherent groups, or "natural communities," as Emily Martin (1987) phrased it. However, people do not often define themselves this way, and there is much diversity within these *groups* as well as between them.

A person's body size is a relevant factor in understanding their weight-related concerns, but the words we use to describe body weight are also unsatisfactory,

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[2]Dr. Chris Leo, Professor of Political Science, specializing in urban politics, and Dr. Tom Carter, Professor of Geography, both at the University of Winnipeg, also referred to these neighbourhoods as older suburbs (personal communication, February 26, 1999).

particularly at the heavier end of the scale (Berg, 1998; Pittaway, 1998; Robison, 1998). People often use *overweight* interchangeably with *obesity*, but these words have different meanings (National Institutes of Health National Heart Lung and Blood Institute, 1998; World Health Organization, 1998). Technically *overweight* refers to an excess amount of total body weight inclusive of all body tissues, while *obesity* refers to excessive body fat relative to lean body mass (Dalton, 1997, p. 2). It is possible, by these definitions, to be overweight without having excessive body fat (for example, body builders), or to be obese or overfat without being overweight (for example, sedentary graduate students). Terms such as *under*weight and *over*weight suggest there is an ideal weight that people should aim for, implying a value judgement that is irrelevant in the context of this project.

Weight preoccupation is used throughout this thesis to mean an intense concern or obsession with weight issues, usually expressed as a desire to achieve or maintain weight loss, slenderness or a lean and muscular body. People with eating disorders are, by definition, weight preoccupied.[3] As shown in the literature, weight preoccupation is the norm for Canadian girls and women, and often leads to an unhealthy relationship with

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[3]The major eating disorders are anorexia nervosa and bulimia nervosa. Anorexia is diagnosed when there is a significant and unexplained loss of body weight to less than 85% of expected, a disturbed body image, an intense fear of becoming fat despite being severely underweight, and amenorrhea. Most individuals with bulimia are within a normal weight range, but their self-evaluation hinges on their body shape and weight. Bulimia is characterized by binge-eating (the consumption of large amounts of food in a short time) accompanied by a sense of lack of control over eating and inappropriate methods to prevent weight gain, such as fasting, self-induced vomiting, excessive exercise, or the misuse of diuretics, laxatives or other medications. Bulimia is diagnosed after these behaviours have occurred at least twice weekly for three months. The category "Eating Disorders Not Otherwise Specified" includes individuals who exhibit some, but not all of the behaviours specified for anorexia or bulimia (American Psychiatric Association, 1994).

food. This relationship has been called *disordered* or *dysfunctional* eating. It has been defined as "eating in irregular and chaotic ways" and includes dieting, fasting, bingeing, skipping meals, eating by rigid rules, or eating for inappropriate reasons, such as anxiety, stress or boredom (Berg, 2001, p. 51-55). Disordered eating often results in eating more or less than is needed in a way that fails to satisfy hunger or nourish the body appropriately.

The focus in this dissertation is on the way people talk about weight, and therefore authors' (or speakers') terminology is accepted as given. I generally use the euphemistic categories of *thin* and *heavy*. These concepts are not parallel, but people do not speak of *light* women, and although *fat* is politically preferred within the fat acceptance movement, it remains unacceptable to most people.

Reflections on the Evolution of the Research

My interest in Aboriginal participants and mother-daughter pairs, the two major dimensions of this research, grew out of findings from my master's research with a sample of 20 primarily lower income families living in Winnipeg's inner city (Marchessault, 1993a). The rural focus developed as a result of the way the research evolved.

In my first study, the two generations had almost identical mean scores on the Eating Attitudes Test (EAT-40), a scale that measures risk for an eating disorder. The mothers' mean score was 16.05 (standard deviation [*SD*] of 10.34). The daughters' mean score was 16.55 (*SD* of 14.34). Despite this, there was no significant association between

a girl's score and her mother's (Spearman's r = .2, N.S.). This was also the case for a sub-scale that measured dieting and the desire for thinness. (Mean for the mothers was 4.65, *SD* of 5.98; mean for the daughters was 4.85, *SD* of 6.43, $r = -.01$.)

The interviews suggested that almost all the women had moderate concerns about their weight, while concerns in the girls were more variable, ranging from very little concern to clear distress and alarming food-related behaviours consistent with risk for an eating disorder. Several of the most concerned girls had mothers who had grown up in countries that did not share our culture's focus on weight, and these mothers expressed little concern about their own weight. There were no families where both mother and daughter showed high levels of concern about weight. This raised questions about the frequently expressed ***like-mother, like-daughter*** explanation of how girls learn their attitudes to weight. However, the results that I obtained could have been an artifact of small sample size and the measure used, selected for its ability to assess risk for an eating disorder. Consequently, one of the objectives of this research was to examine the similarity of mothers' and daughters' concern about weight with a larger and more demographically diverse sample using a greater variety of measures.

A subsequent analysis of the same data, prepared for the Third International Conference on Diabetes and Indigenous Peoples held in Winnipeg in May, 1995, found that the nine Aboriginal women in the sample scored significantly higher on the EAT-40 than the non-Aboriginal women (means of 21.4 and 11.3, respectively). This was consistent with the greater concern about weight expressed by the Aboriginal women in the open-ended portion of the interviews. The mean scores of the Aboriginal girls were

not significantly different from those of the non-Aboriginal girls (20.3 and 14.2, respectively). Girls in both groups used potentially damaging weight loss behaviours (Marchessault, 1998). The current research was designed to explore perspectives on weight of a larger urban Aboriginal sample, and to determine if Aboriginal women and girls living in a First Nations community were similarly concerned.

The master's research study documented fairly high levels of concern about weight in lower income families, but it was not known how these concerns compared to more middle-class participants. Therefore, this research was designed to include a higher income sample as well. The plan was to conduct interviews with families drawn from schools in a higher income neighbourhood and a rural First Nations community. The inner city neighbourhood school was selected to yield both lower income Aboriginal and non-Aboriginal samples. There were two inner city schools with an enrollment meeting the criteria, and the principals of both agreed to participate. The method used to contact parents, however, resulted in an insufficient response rate to proceed. The research plan was altered to do the interviews at an inner-city school serving the Aboriginal community and a school in a rural community chosen to match the First Nations community as closely as possible. The study was implemented at the Suburban and First Nations community schools as planned.

The change in research plan allowed a comparison of a First Nations community with a similar-sized Rural community. This allows an assessment of the impact of a small town environment on the importance of weight in people's daily inter-actions and assists in interpreting the findings in the First Nations community. Exploration of weight

perceptions with rural girls and women is also of interest because, as already noted, there is virtually no information about rural people's weight perceptions.

There were fewer eligible families than anticipated in the Urban Aboriginal school, and a non-random snowball sample was added. This was obtained by asking the interviewees and others to recommend Aboriginal families that I could contact. The snowball sample resulted in an Urban Aboriginal sample with a greater variety of income levels than the random sample. The wide range of income levels in the urban setting and the First Nations community provide additional information that adds to the understanding of Aboriginal perspectives.

In this thesis, I wish to examine how girls learn their attitudes to fatness and thinness with specific attention to the mothers' alleged influence on their daughters. I am interested in exploring these dynamics in Aboriginal and non-Aboriginal families living in different settings. Like the proverbial Gordian knot, the strands of influence may be so tightly interwoven they cannot be untangled. But unlike Alexander the Great, we cannot slash through this riddle with a sharp sword. Picking a strand or two to examine the subtleties more closely can offer partial answers.

These partial answers highlight the complexity of weight problems for Canadian families. The results of this analysis do not lend themselves to a simple summary statement that non-Aboriginal participants think one way, and Aboriginal participants think another way, that mothers will do just fine if they follow some identified script on weight. The results are more complex and also more interesting. The results suggest the importance of broadening the scope for examining weight problems and potential ways of

handling them.

This is particularly clear in examining the mother's dilemma in sorting through the competing pressures on her daughter. We live in a society that promotes promiscuous eating and contrives ever-more ingenious labour-saving devices and enforced or tempting sedentary activities. People often equate the provision of food, especially treats, with love. We expect families to withstand these day-to-day pressures. We expect mothers to counter the culture in other ways as well. Mothers must not only prevent overweight and obesity in their children, they must help their daughters stay thin without becoming weight pre-occupied.

Multiple pressures push the thin ideal in our society, affecting girls and women alike. Given the results of my master's research, I couldn't help but wonder if mothers were being unfairly blamed for our culture's creation of and focus on weight problems. Although I believe that parents have an influence on their children, I am less sanguine about what that influence is, and how it is transmitted. I wanted to know more about how mothers were coping with all these competing pressures, and how their daughters reacted.

I enjoyed these interviews. Both the girls and their mothers intuitively broadened the topic beyond weight issues to discuss weight in the context of their lives, and this was always absorbing. Weight, and the issues involved with it, intertwine with other needs and values. It was obvious that mothers loved and cared for their daughters and wanted to help them successfully navigate the teen years to grow into healthy, effective and happy young women. They considered more than their daughters' physical needs, and sometimes supported their daughters even when they disagreed with their goals. The

girls' energy, youth and potential were captivating, and their honesty and directness were helpful and much appreciated.

My views on weight have changed since I first began to study weight issues. My initial plan was to interview people who had lost weight and successfully maintained that loss for several years. My goal was to share their successful approaches with others. Fortunately, other researchers had already investigated the topic. My views now lean more toward the Vitality approach. Canada's Vitality program suggests we focus on people's behaviours (active living and healthy eating), and increasing self-acceptance. This approach seems sensible in preventing and treating both overweight and weight preoccupation problems and is least likely to cause harm to people. It lends itself to promoting *joie de vivre* and quality of life for families.

After my interviews with First Nations community women, I turned to the writings of First Nations women and this increased the complexity of my feminist interpretation of weight issues. A qualitative approach is sufficiently flexible to allow this type of learning to occur. I have made an effort to represent participants' orientations and the reasons for their actions as fairly as I could. As is true of all research, my interests naturally influence my choice of research question, methods, themes to analyse and interprétation of results.

Title and Outline of the Thesis

The *Far from Ideal* in the title of this thesis refers to problems with weight on multiple levels and implies at least one solution. It is meant to refer to: (a) departures from healthy weights which may signal lifestyle-related health risks; (b) the widely acknowledged cultural imperative of extreme, emaciated thinness as the ideal body shape for women; and (c) girls' and women's consequent widespread dissatisfaction with their bodies and the actions they take to resolve that dissatisfaction. These situations, which permeated participants' discussions, are far from ideal.

More positively, this title is meant to convey the struggle of some girls and women to accept their own bodies, bodies that are uniquely desirable and worthy of respect and care, regardless of some externally defined uniform standard of beauty. Their struggle implies that being far from the ideal is acceptable because weight preoccupation is not. This theme did not permeate the interviews, but, surprisingly, was one of the few areas where mothers' influence on their daughters was apparent.

Finally, *Far from Ideal* is *not* meant to refer to the mother-daughter relationship, but rather to the dilemma culture creates for mothers. To focus on the mother-daughter relationship is fraught with danger, hardly fended off by a declaration that my intent is not to blame mothers for their daughters' concern about weight. I wish to re-emphasize that I began this exploration in reaction to the widespread, and seemingly common-sense, assumption that mothers were the major influence on their daughters. In particular, would the well-established similarities between groups of women and girls play out within individual pairs of mothers and daughters?

The next chapter presents a review of the relevant literature. The literature review is divided into three parts. The first part presents a brief overview of general weight issues for women in the North American context. This overview sketches a picture of simultaneously increasing rates of obesity and weight preoccupation and outlines the impact on girls and women. The second part of the literature review looks at weight status and concerns of Aboriginal girls and women. I end by discussing a conceptual framework for the potential influences on girls' and women's perceptions of weight issues. Within this framework, I discuss the studies that focus on the influence of families, concentrating especially on those that examine mothers' influence on their daughters.

In Chapter 3, I describe the research design and analysis and explain the rationale for using interview techniques drawn from ethnographic and survey methodology, a somewhat unorthodox combination of methods. I also describe how the research was implemented and present selected characteristics of the research participants.

Chapters 4 and 5 focus on the comparison of the Aboriginal and non-Aboriginal perspectives. In one of my first questions about weight, I asked each participant if weight was more important to women than to men. Aboriginal and non-Aboriginal women responded differently. The non-Aboriginal women spoke in a way that endorsed weight as a central construct of female identity. The Aboriginal participants, especially those in the First Nations community, did not. Despite this difference, the Aboriginal participants seemed at least as concerned about their weight, and this is explored in Chapter 5.

Chapter 6 extends this comparison to the four locations with an analysis of the responses to a set of statements on weight-related values. These statements were derived

from comments made by participants during the 1993 interviews and are intended to reflect the participants' framework for understanding weight. The overall results suggested both sharing and differences across generations and across the four locations. The results highlighted the First Nations community women and, to a lesser extent, the girls as somewhat different than the other women.

Chapters 7 and 8 focus on the mother-daughter relationship and the advice they give to each other and other people. Chapter 7 structures the discussion by girls' BMI, rather than by location or self-identified ethnicity, as this seemed to be more relevant. Chapter 8 is structured by the content of the advice given, either to promote weight control or body acceptance. Both these chapters examine similarities and differences within the mother-daughter pairs. As in Chapters 4 and 5, these chapters are based largely on what participants said in response to the open-ended interview questions.

The last results chapter presents the analysis of three commonly used questionnaires about weight. The questionnaires reflect the interests of practitioners and researchers, and are aimed at quantifying the participants' level of concern about weight. Comparisons are made between locations, generations, Aboriginal/non-Aboriginal participants, urban-rural regions and mother-daughter pairs.

I conclude by summarizing and integrating these results and discussing the policy implications for health professionals, school personnel, parents, and women and girls themselves.

CHAPTER TWO

Far from Ideal

> "The prevalence of overweight among boys increased from 15% in 1981 to 28.8% in 1996 and among girls from 15% to 23.6%. The prevalence of obesity in children more than doubled over that period, from 5% to 13.5% for boys and 11.8% for girls" (Tremblay & Willms, 2000, p. 1429).

> "Fifty percent of females between the ages of 11 and 13 see themselves as overweight, and by the age of 13, 80% have attempted to lose weight, with 10% reporting the use of self-induced vomiting" (Costin, 1997, p. 1).

As we begin the twenty-first century, weight issues continue to be problematic for girls and women. The quotes cited above juxtapose weight and weight preoccupation as widespread problems. Both aspects of this juxtaposition are explored in the first part of this chapter for girls and women generally, followed by specific attention to studies of Aboriginal girls and women. A sociocultural model for influences affecting weight is presented next. This framework sets the stage for examining studies of family influences on girls' weight-related attitudes and behaviours, focussing particularly on the similarities between mothers and their daughters.

The recently declared "global epidemic" of obesity is the most visible weight problem (World Health Organization, 1998). In Canada, approximately half of adults and one-quarter of children are now considered to be overweight (Canadian Task Force on the Periodic Health Examination, 1994; Health and Welfare Canada, 1988a; Limbert, Crawford, & McCargar, 1994; Macdonald, Reeder, Chen, Despres, & The Canadian Heart Health Surveys Research Group, 1997; Statistics Canada, 1995a; Tremblay &

Willms, 2000).[4] Similar results have recently been reported for Manitoba (Brownell, Kozyrskyj, Fergusson, Lerfald, 2001).[5] Annual health care costs directly associated with obesity have been estimated at $1.8 billion in Canada, and, including indirect costs, at $99 billion in the United States (Birmingham, Muller, Palepu, Spinelli, & Anis, 1999; Wolf & Colditz, 1998). The public's concern is reflected in estimated expenditures of $30 billion annually on over 17,000 diet plans, products and programs in the United States alone (Hesse-Biber, 1996, p. 39).

While the average weight of women under age 30 has been increasing, it seems that the *ideal woman* has become increasingly slender. David Garner and his colleagues' classic study (1980) documented decreasing weights of Playboy centerfold models and Miss America Pageant contestants from 1959 to 1978. This decline in weight continued until 1992, when the majority's body measurements were consistent with a diagnosis of anorexia nervosa (Wiseman, Gray, Mosimann, & Ahrens, 1992). The average model is now 5'10" and weighs 110 pounds (Hesse-Biber, 1996). Images of the thin ideal, so pervasive in visual media that they cannot be avoided, portray the dominant paradigm for what is considered central to femininity and critical to success for women (Bordo, 1993;

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[4]Rates vary depending on the methodology and criteria used to specify problems. Common cutoffs are based on BMIs of 25, 27 and 30, yielding prevalence rates of overweight or obesity of 57%, 35% and 13% for men, and 48%, 27% and 14% for women (Macdonald et al., 1997). Estimates for children vary from 5% to 43% (Canadian Task Force on the Periodic Health Examination, 1994; Health and Welfare Canada, 1988a; Limbert et al., 1994).

[5]Almost 29% of Manitoba children (aged 6 to 19) were assessed as obese or at-risk for obesity based on self-reported data collected for the 1996 National Population Health Survey. Risk was defined as having a BMI at or above the 85th percentile of the National Health and Nutrition Examination Survey I.

Brumberg, 1989; Fallon, Katzman, & Wooley, 1994; Stice, 1994). Even though unrealistic and unachievable for all but a minuscule few, these images create the context by which females in Western civilization are judged. Bodies that depart from the ideal are constructed as flawed and in need of remedy (Darling-Wolf, 2000).

Girls and women continue to see their own bodies as far from the depicted ideal, as indicated by the high rates of body dissatisfaction reported for females of all ages. For example, 55% of elementary school girls in one survey said they wanted to be thinner (Edmunds & Hill, 1999). In another, 61% of teens reported having tried to lose weight within the last year (Nichter, 2000). Sixty-seven percent of women over the age of 30 say they are unhappy with their weight. Although the importance of weight may lessen with age (Garner, 1997), dissatisfaction with weight continues to be reported by women in their 60s and 70s (Lafrance, Zivian, & Myers, 2000; Pliner, Chaiken, & Flett, 1990). The association of weight gain with aging (into the 50s) is well documented (Evers, 1987; Health and Welfare Canada, 1988a; Macdonald et al., 1997; Moore, Stunkard, & Srole, 1962) and may partially account for the continued high levels of dissatisfaction. Body dissatisfaction is reportedly on the rise for men, but remains lower and split between desires to be larger as well as smaller (Andersen, Cohn, & Holbrook., 2000; Garner, 1997; Grogan, 1999).

The degree of weight dissatisfaction can be glimpsed in the results of a *Psychology Today* survey (Garner, 1997). A quarter of the almost 3,500 women who responded said they would sacrifice three years of their lives to be at their desired weight. This wishful thinking illustrates that weight continues to be an issue for girls and women

as we enter the new millennium. It is still rare for a girl or woman to even grudgingly acknowledge that her body is acceptable, while discussion of flaws or self-improvement plans are ubiquitous.

All this body dissatisfaction is not benign. Forty percent of women and 27% of girls aged 12 to 14 reported trying to lose weight in 1994-95 (Health Canada, 2000). Many do not need to, as indicated by results of surveys finding 30-40% of healthy weight and 10% of underweight Canadian women trying to lose weight (Green et al., 1997; Health Canada, 2000).[6]

Dieting efforts are implicated in teen-aged girls' and women's increased risk of deficient intakes of multiple nutrients (American Dietetic Association & Dietitians of Canada, 2000a; Berg, 1997; Lambert-Lagace, 1989; Neumark-Sztainer, Story, Resnick, & Blum, 1998). Risks of dieting include retardation of physical growth, irritability, poor concentration, chronic fatigue, hypertension, heart irregularities, anaemia, hair loss, gallstones, diarrhea and depression (Ashley & Kannel, 1974; Health and Welfare Canada, 1988a; 1988b; Lifshitz & Moses, 1988; McCargar & Yeung, 1991; Polivy & Herman, 1986; Story et al., 1994).

Widespread efforts to control or change weight and/or shape are often misguided and more likely than not to be unsuccessful (Canadian Task Force on the Periodic Health Examination, 1994; Douketis, Feightner, Attia, Feldman, & Canadian Task Force on Preventive Health Care, 1999). Dieting has been associated with bingeing or compulsive

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[6]Although mean weights are increasing among youth (Limbert et al., 1994), young women remain twice as likely to be classified as "underweight" as "overweight" (Statistics Canada, 1995a).

eating and depressed metabolic rates that ironically may lead to weight gain when normal eating is resumed (Garner & Wooley, 1991; McCargar & Yeung, 1991; Rothblum, 1990). Subclinical eating problems are the best predictors of the subsequent development of eating disorders (Graber, Archibald, & Brooks-Gunn, 1999). While obesity carries lifetime health risks, eating disorders can be fatal to young people in a relatively short period of time (Berg, 2000).[7] Disordered eating does not usually lead to an eating disorder, but our culture's fascination with slenderness and horror of fatness is the backdrop against which eating disorders occur.

Because of the way weight is framed in our culture, with image designed to communicate identity, feelings about the body can be seen as a proxy for feelings about the self (Friedman, 1997). Consequently, undermining girls' confidence in their bodies increases their vulnerabilities, not just to food and health-related problems, but spills over to problems linked with low self-esteem. The frequent failure to lose weight can cause psychological distress (Health and Welfare Canada, 1991a). Girls stress how they feel unattractive and undesirable even when the topic is teen pregnancy, violence, school achievement or the place of feminism in their lives (Artz, 1998; Brumberg, 1997; Glickman, 1993; Orenstein, 1994; Pipher, 1995; Robertson, 1991).

This focus on weight and appearance is not vanity but a logical reaction to cultural imperatives for women. Consistent messages implying that thinness is equivalent to

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[7]The fatality rate for anorexia is over 10% (American Psychiatric Association, 1994). The prevalence of anorexia and bulimia in Canadian adolescents is estimated at 1-2%, and 2-3%, respectively (Health Canada, 2000, p. 24). Similar rates of anorexia (1%) and slightly higher rates of bulimia (6.6%) have been estimated for Manitoba youth based on body weight and a scale measuring risk for eating disorders (Leichner et al., 1986).

happiness, health and success, and that fatness signifies disease, premature death, failure and certain misery, have created a cultural preoccupation with weight (Marchessault, 1993b). There is evidence that these cultural messages have had an effect on Aboriginal people as well. This will be addressed next, starting with a consideration of Aboriginal people's weight status.

Aboriginal People's Weight Status, Perceptions and Behaviours[8]

Aboriginal people's lives and lifestyles have changed drastically in living memory. These historical changes have affected health status, as reflected in a shift from infectious to chronic diseases, sometimes referred to as the "epidemiologic transition" (Young, 1994). The major health burden has shifted to diseases such as cancer, ischemic heart disease, hypertension, stroke and diabetes. Weight is associated with many of these diseases, and it is this association that has led to researchers' interest in the weight status of Aboriginal people. Genetic susceptibility and lifestyle changes in activity and dietary patterns, food availability, social welfare, and stress, among other factors, are important topics related to the cause of weight problems. The focus here is on how people talk about their weight concerns. Therefore, this review concentrates on the weight-related attitudes and self-reported behaviours that reveal concern about weight. Weight norms provide essential background for these concerns.

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[8]Portions of this section of the literature review have been adapted from Marchessault, G. (1999). Weight perceptions and practices in Native youth. *Healthy Weight Journal, 13*(5), 71-73, 79.

The heavier weight norms of Aboriginal people are a relatively recent phenomenon (Harrison & Ritenbaugh, 1992; Mohs, Leonard, & Watson, 1988; Story et al., 1998; Waldram et al., 1995; Young, 1994). Prior to the 1940s, starvation was the major problem (Moore, Kruse, Tisdall, & Corrigan, 1946; Vivian et al., 1948). Reports of a higher prevalence of obesity began to appear in the mid-1970s (Health and Welfare Canada, 1975; West, 1974). Available comparative data indicates that BMI or other measures of adiposity have increased for Aboriginal children and adults, just as they have for non-Aboriginal populations (Berg, 2000; 2001; Garner et al., 1980; Hall, Hickey, & Young, 1993; Harrison & Ritenbaugh, 1992; Limbert et al., 1994; Mohs et al., 1988; Mokdad et al., 1999; 2000; Sugarman, White, & Gilbert, 1990; Tremblay & Willms, 2000; Will, Denny, Serdula, & Muneta, 1999). The Aboriginal increases in weight are much greater, given that mean weights were once below population means, and now they are consistently found to be higher.

Despite using variable measures, most researchers find 30-40% of Aboriginal girls are overweight (Story et al., 1999). The prevalence of reported overweight and obesity varies from 25% to 78%, and from 6.1% to 51.8%, respectively (Broussard et al., 1991; Davis, Gomez, Lambert, & Skipper, 1993; Jackson, 1993; Story, Tompkins, Bass, & Wakefield, 1986; Sugarman et al., 1990). The prevalence is higher for Aboriginal women (Broussard et al., 1991; Harnack et al., 1999; Story et al., 1999; Terry & Bass, 1984).

Research in Canadian First Nations communities is more limited, but findings are similar (Bernard, Lavallee, Gray-Donald, & Delisle, 1995; Hanley et al., 2000; Katzmarzyk & Malina, 1998; McIntyre & Shah, 1986; Potvin et al., 1999). The Nutrition

Canada Survey of 1970, while dated, is the only nation-wide study that reports body weight for Aboriginal Canadians.[9] It found they generally had higher weight-for-age than other Canadians (Health and Welfare Canada, 1975). Over 60% of youth aged 4 to 19 in a remote Ojibwa-Cree community in northern Manitoba had a BMI that exceeded the 85th percentile of the American National Center for Health Statistics, and 40% of girls had BMIs over the 95th percentile (Young, Dean, Flett, & Wood-Steiman, 2000). Young and Sevenhuysen (1989) classified close to 90% of Cree and Ojibway women (aged 45 to 54) from northern Ontario and Manitoba as at risk for health problems due to excessive weight, defined as a BMI at or above 26. Gittelsohn and his colleagues (1996) reported that approximately 30% of those aged 10-19, 50% of those aged 20-29, and 70-80% of those over age 30 had a BMI over 27. The consistent pattern of strikingly high prevalence rates of obesity, in combination with the emergence of chronic diseases associated with obesity (Waldram et al., 1995; Welty, 1991; Young, 1994), has led to concern about weight control. Some researchers recommend prevention programs start in elementary school (Delisle, Mavrikakis, & Strychar, 1995; Macaulay et al., 1996; Perez, 1995; Story et al., 1999; Wilson, Graham, Booth, & Gohdes, 1993). Undertaking these interventions requires a clear understanding of the views and practices of Aboriginal people regarding weight. This topic has been studied much less extensively.

Several investigators focussing on middle-aged and older Aboriginal people with chronic health problems such as diabetes have reported varying perceptions of weight

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[9]Self-reported height and weight was collected for a national sample in the Aboriginal Peoples Survey of 1991, but these data have not been analysed.

(Garro, 1995; 1996; Joe, 1993; Lang, 1989). Some Aboriginal people have indicated a preference for heaviness as a sign of health and as the ideal of attractiveness (Garro & Lang, 1993; Hickey & Carter, 1993). Spielmann (1993) titled his article *"You're So Fat,"* using his wife's hurt reaction to an elder's intended compliment as a prototypical example of the vast cultural differences between Aboriginal and White ways of looking at the world. In their study of Ojibway-Cree people living in northern Ontario, Gittelsohn and his colleagues (1996) concluded that the personally desired shapes of participants (aged 10 and up) were larger than those reported in the literature (usually American college students, which they recognized as a problematic comparison). In a national survey of American Indian high school students, one-third of the girls with a BMI in the heaviest quartile perceived themselves as "normal" weight (Story et al., 1994). That "normal" does not mean "acceptable" was apparent given high rates of weight dissatisfaction (25%), long-term dieting (31%) and vomiting for weight loss (43.5%) in the girls who rated themselves as normal weight. Whether Aboriginal girls and women have different ideals for attractive and healthy body shapes remains unclear.

Native American girls and women have consistently been found to be at least as concerned about their weight as other North Americans. Table 2.1 summarizes this work. Most of these are small studies in the rural United States (Davis et al., 1993; Harnack et al., 1999; Rosen et al., 1988a; Smith & Krejci, 1991; Snow & Harris, 1989; Stevens et al., 1999; Story et al., 1986; 1995; Terry & Bass, 1984). There is also one national survey in the United States (Neumark-Sztainer et al., 1997; Story et al., 1994) and one Canadian study (Gittelsohn et al., 1996).

Table 2.1 Studies of Body Dissatisfaction and Weight Control Practices of Aboriginal People

Author, year	Tribe, location	Subjects: Age/grade	Subjects: *n*	Subjects: Sex	Reported feeling: OW %	Reported feeling: UW[a] %	Tried to lose %	Self-induced vomiting %	Used a laxative %	Used a diuretic %	Fasting, extreme dieting[b] %
Stevens et al., 1999	Arizona, New Mexico, South Dakota	Grade 4	164	F	48	22	38				
			140	M	34	15	38				
				M+F							31
Davis et al., 1993	Navajo, Pueblo, New Mexico	Grade 5	1,543	M+F	34	15	59				
Story et al., 1994	National U.S.		13,454								
		Grade 7-9		F	34		42	28	0.6	1.2	6
				M	20		30	11	1.4	0.9	3
		Grade 10-12		F	50		56	26	0.7	1.2	8
				M	23		31	13	0.8	0.5	4
Story et al., 1995	Minnesota	Grade 7-12	291	F	51	8		19	2.1	2.7	11
			269	M	27	12		10	0.7	0.7	2
Story et al., 1986	Cherokee, North Carolina	Grade 8-10	138	F	73						
			139	M	36						

Continued next page

Table 2.1 continued Studies of Body Dissatisfaction and Weight Control Practices of Aboriginal People

Author, year	Tribe, location	Subjects: Age/grade	Subjects: *n*	Subjects: Sex	Reported feeling: OW %	Reported feeling: UW[a] %	Tried to lose %	Self-induced vomiting %	Used a laxative %	Used a diuretic %	Fasting, extreme dieting[b] %
Smith and Krejci, 1991	Southwest U.S.	High school	129	M+F				11		5.8[c]	41
Snow and Harris, 1989	Pueblo, Southwest U.S.	High school	51	F	82			20[d]			43
Gittelsohn et al., 1996	Ojibway-Cree, Ontario	Age 10 - 60+	729	M+F	61	22[e]					
Rosen et al., 1988	Chippewaya, Michigan	Age 12-55	85	F			74	12	6.0	6.0	33
Harnack et al., 1999	Lakota, South Dakota	Age 19-47	127	F	65	3	40[f]				
			92	M	29	11	24				
				M+F				7.5	1.9	5.6	54
Terry and Bass, 1984	Cherokee, North Carolina	Age 18-87	105	F	72	5	75				4

[a]OW; UW = Feeling overweight or underweight, and includes reports of wishing to weigh less or more; desiring to be slimmer or heavier. [b]Variously defined as missing more than three meals in a row, not eating all day, or dieting more than 10 times in the past year. [c] In this study, proportion using laxatives and diuretics were combined. [d]In this study, vomiting and laxative/diuretic use was combined. [e]Estimates were reported only for the entire sample, although there were significant differences by age and gender. Fewer 10-19 year old children and more 30-49 year old adults would like to be slimmer. Only a small proportion of 30-49 year old adults indicated a desire for a fuller body shape. [f]Current effort only.

The studies cited in Table 2.1 demonstrate a pattern of concern about weight in girls and women. Wherever measured, at least a third of Aboriginal females thought they were overweight or wanted to weigh less. As many as 59% of Grade 4 and 5 girls, and up to 82% of older Aboriginal girls, reported feeling overweight. Lower proportions of boys reported dissatisfaction, with the discontent split more evenly between feeling overweight and feeling underweight. (This is important to consider when findings are combined). The few studies of Aboriginal adults' perceptions of their weight suggest even higher levels of dissatisfaction.

Given the high levels of discontent, it is not surprising that many Aboriginal people have tried, or are currently trying to lose weight. Rates as high as 74% and 75% have been reported for girls and women (Rosen et al., 1988a; Story et al., 1986; Terry & Bass, 1984). Surveys of Grades 4 and 5 students demonstrate that the concept of dieting is well-known even to young children (Davis et al., 1993; Stevens et al., 1999). Children, adolescents and adults suggest exercising, eating smaller portions and eating more healthfully as weight-loss strategies they used or recommended (Davis et al., 1993; Harnack et al., 1999; Rosen et al., 1988a; Stevens et al., 1999). However, some Aboriginal people have reported using potentially health damaging weight-loss techniques.

In a 1988-90 survey of 13,454 American Indian-Native Alaska youth, Story and her colleagues (1994) found that unhealthy weight-control practices were common among Grade 7 to 12 students living on or near reservations throughout the United States. Almost half of the girls (48%) reported they had dieted in the past year, and 7% reported

they dieted more than 10 times a year. Twenty-seven percent of the girls reported inducing vomiting, more than double the rate reported by other rural youth. Eleven percent said they used diet pills, and a small proportion used laxatives and diuretics (0.6% and 1.5%, respectively). Twelve percent of boys reported vomiting to lose weight, indicating the importance of this problem for boys as well.

In an exploration of ethnic differences in dieting behaviours of Grade 7 to 12 students in Minnesota, Story and her colleagues (1995) found American Indian students had the lowest prevalence of weight satisfaction compared to White, Black, Hispanic and Asian youth. They also had among the highest rates of deliberate vomiting. Other weight-related behaviours were comparable. Lower estimates of self-induced vomiting have been reported elsewhere, but these occur when findings are aggregated for both sexes (Smith & Krejci, 1991), or for youth and adults (Rosen et al., 1988a). Women have also reported using undesirable weight-loss methods, as shown by a study of Lakota women from two communities in South Dakota. They reported not eating for a day (54%), increasing their smoking (16%), taking diet pills (14%), vomiting (7.5%) and taking diuretics (5.6%) or laxatives (1.9%) to control their weight (Harnack et al., 1999).

Based on self-reported height and weight, Neumark-Sztainer and colleagues (1997) classified 25% of close to 1,200 adolescents from the above-noted American Indian-Native Alaska survey as overweight. Even the youth who were not classified as overweight were dissatisfied with their bodies (60%). The overweight youth reported slightly lower rates of health-promoting behaviours, such as regularly eating fruits and vegetables and being active. Lower rates of healthy behaviours in heavier children were

also reported in two Cree communities in Quebec (Bernard et al., 1995). Rates of frequent dieting, binge eating, diet pill use and vomiting increased with increasing BMI, as was the case in earlier studies (Rosen et al., 1988a; Snow & Harris, 1989).

These large studies confirm earlier, smaller studies of eating disturbances and unhealthy weight-reducing methods among Aboriginal youth. Snow and Harris (1989) found 11% of 51 Pueblo Indian girls reported eating habits consistent with a diagnosis of bulimia. Smith and Krejci (1991) found the Native American students consistently scored higher than White and Hispanic students on all disordered eating items on the Eating Disorder Inventory and the Bulimia Test, with similar proportions of each group meeting strict criteria for binge eating. The prevalence of eating disorders in Aboriginal girls is not known, but these reports suggest risk might be high.

With the possible exception of Terry and Bass (1984), who asked Cherokee women for their primary reasons for wanting to change their weight, all of the studies noted above used survey methodology to collect data on perceptions and practices. There is a need for research to combine surveys with other methods in exploring Aboriginal and other ethnic groups' ideas about weight. Parker and her colleagues (1995) found African-American girls' responses on a survey to be inconsistent with their responses in ethnographic interviews. Individual interviews and focus groups suggested that African-American high school girls had flexible and individualized concepts of beauty more related to style and expressiveness than to physical appearance. This was contrasted with the White students' stereotypical "Barbie" doll images of beauty. Despite this, more African-American girls reported trying to lose weight (54%) than Caucasian girls (44%).

Responses were different when a culturally sensitive survey based on ethnographic interviews and administered by an African-American researcher was used.

There are few reports about weight based on open-ended interviews with Aboriginal people. It is possible that the above surveys misrepresent Aboriginal people's concerns about weight. The in-depth interviews that I conducted for my first study were consistent with the general findings reported above, but they were conducted in an urban setting with only eight Native families (Marchessault, 1998). I am aware of only one other published qualitative study of Aboriginal peoples' views of the body. This study, with Yurok women in northern California, widened the context to their attribution of problems associated with the body to community and personal histories of violence, brutality and exploitation (Ferreira, 1998).

Despite great diversity in the lives of Canadian and American Aboriginal peoples, the consistency of these findings suggests potential relevance for many communities, and therefore the necessity of a better understanding of these concerns.

Body Image

The previous discussion of weight perceptions, dissatisfaction with body weight and weight-related behaviours suggests a need to define *body image*. The concept of body image grew out of studies in the early 1900s of distorted body perceptions related to brain damage (Grogan, 1999). Discussions of body image retain this connotation of distortion, and books on body image are frequently illustrated with a thin young woman looking in a mirror, "seeing" a much heavier image (for an example, see Cash, 1997). Paul Schilder,

the first to study perceptions and experiences of the body more broadly in the 1920s, defined body image as the mental picture we have of our own bodies, a definition still in use, and the one that I prefer (Gingras, 1998; Grogan, 1999; Health Canada, 2000). Body image has been defined as "a person's perceptions, thoughts and feelings about his or her body" (Grogan, 1999, p. 1). Cash (1999), who has written prolifically on body image, also includes related behaviours. This global definition is used often. However, the individual components of the construct are not always congruent, and it is sometimes useful to examine them separately.

As documented above, body dissatisfaction, defined as a negative evaluation of the appearance of one's body, or some aspect of it, is common. The implication is that if dissatisfied, a person will feel unhappy and will attempt to change the body. However, this is not the only possibility. One can objectively evaluate one's body as falling short of one's ideal but still be accepting of it. If the appearance of the body is relatively unimportant, then a negative self-evaluation will not lead to more global dissatisfaction or unhappiness. People can also consciously work towards changing their attitude to their body rather than trying to change the body itself, the usual objective of workbooks on body image (Cash, 1997). I refer to this aspect of body image as *body acceptance* to differentiate it from body satisfaction.

People can be both dissatisfied with and accepting of or striving to accept their body, but they cannot be accepting of the body and trying to change it at the same time. For example, as women get older, they typically become heavier and more dissatisfied with their body shape, but they may also view being thin as less important or less

achievable, and adjust their expectations accordingly. They may more realistically focus on improving lifestyle habits and trying to accept the body shape that results than on trying to achieve a specific weight. To take another example, a girl may be dissatisfied with her body, but assess her desire to weigh 110 pounds as unrealistic for her 5'10" frame. Acceptance of her body frame may come easily, with a struggle, or, far too often, not at all. However, if unrealistic desires are seen as such, accepted and viewed as relatively unimportant, then body acceptance or striving for body acceptance can co-exist with some degree of dissatisfaction. This distinction between satisfaction and acceptance has implications for the actions individuals take with regards to resolving negative body image, as will be seen in Chapters 7 and 8 when mothers' and daughters' advice about weight is examined.

Sociocultural Context for Perceptions of Weight

Many individual and societal factors can affect susceptibility to weight pressures. Some factors that have been investigated include body weight (Attie & Brooks-Gunn, 1989; Birch & Fisher, 2000; Stice, 1994), the timing of physical maturation (Attie & Brooks-Gunn, 1989; Graber et al., 1999), self esteem (Grilo, Wilfley, Brownell, & Rodin, 1994; Hill & Pallin, 1998; Stice, 1994), the normal stresses of adolescence (Levine & Smolak, 1998), coping skills and social support (Stice, 1994), family relationships or functioning (Haudek, Rorty, & Henker, 1999; Ogden & Steward, 2000), and trauma, including poverty and racism (Health Canada, 2000; Thompson, 1996). The consistently strong association of weight and socioeconomic status suggests it has an often-overlooked

but integral role in the evolution of weight concerns (Evers, 1987; Garn, 1981; Goldblatt, Moore, & Stunkard, 1965; Leichner et al., 1986; Sobal, 1991; Sobal & Stunkard, 1989).

The media, peers and family are often discussed as major influences on how girls cope with weight issues (Hill, In press; Stice, 1994; Striegel-Moore, Silberstein, & Rodin, 1986; Tucker, 2000). Published reviews of the literature provide modest support for an association between each of these factors and weight-related attitudes. However, the relative contribution of each to causation, maintenance and exacerbation of concerns remains unclear (Berndt & Hestenes, 1996; Galuska, Serdula, Parmuk, Siegel, & Byers, 1996; Hesse-Biber, 1996; Levine & Smolak, 1998; Thompson & Heinberg, 1999). In one study, 44% of respondents said teasing by others shaped their body image when they were young (Garner, 1997, p. 36). This was followed by their mother's and father's attitudes to their body (31% and 23%, respectively), and movie and TV celebrities (22%) or fashion and magazine models (23%). However, a study of Grade 10 girls in Australia suggested the reverse order (Paxton, Schutz, Wertheim, & Muir, 1999).

Eric Stice (1994), after a comprehensive review of the literature, hypothesized a sociocultural model for factors promoting bulimia nervosa in girls. He included family, peers and the media as carriers of the key sociocultural pressures--the thin ideal, the importance of appearance for success, and the centrality of appearance to females. Stice further proposed that body dissatisfaction, restrained eating and negative affect might account for the relationship between sociocultural pressures and bulimia. He also suggested that self-esteem, identity confusion, weight, coping skills, impulsivity and family, peer and media modelling of attitudes, behaviours and ideals moderated the

direction and strength of the impact of these pressures.

In adapting Stice's model to apply to girls' and women's normative weight concerns (see Figure 2.1), I drew on my master's interviews and research addressing more general weight concerns. I added the stigmatization of fat as an additional sociocultural pressure because 20 of 20 girls and 19 of 21 women spontaneously raised weight-related harassment or "teasing" to explain why weight was an issue to girls and women. This has been addressed in the literature as well (Allon, 1973; Dalton, 1997; Joanisse & Synnott, 1999). The participants also talked about the media and peers as influences, although girls tended to emphasize "friends and boyfriends," while women spoke more about the media. In contrast to the emphasis in the research literature, participants seldom raised family influences. This discrepancy is of major interest. Although the girls raised health issues, it was usually discussed in only a cursory fashion. The women raised health and fitness concerns repeatedly, and so this was added to the model as a fourth influence carrier. Others have also reported that middle-aged women suggest health concerns or a physician's advice as partial motivation for dieting or watching their weight (Galuska et al., 1996; Green et al., 1997; Hesse-Biber, 1996; Koslow, 1988; Terry & Bass, 1984), although some have concluded the underlying motivation remains weight or shape-related (Chapman, 1999; Colvin & Olson, 1983). Women's discussion of weight and health may serve to normalize and legitimize weight concerns in daily life.

Stice (1994) emphasized modelling of attitudes and behaviours in his model. The literature and my own research suggested two additional mechanisms for transmitting weight concerns: (a) social approval expressed through compliments, positive attention,

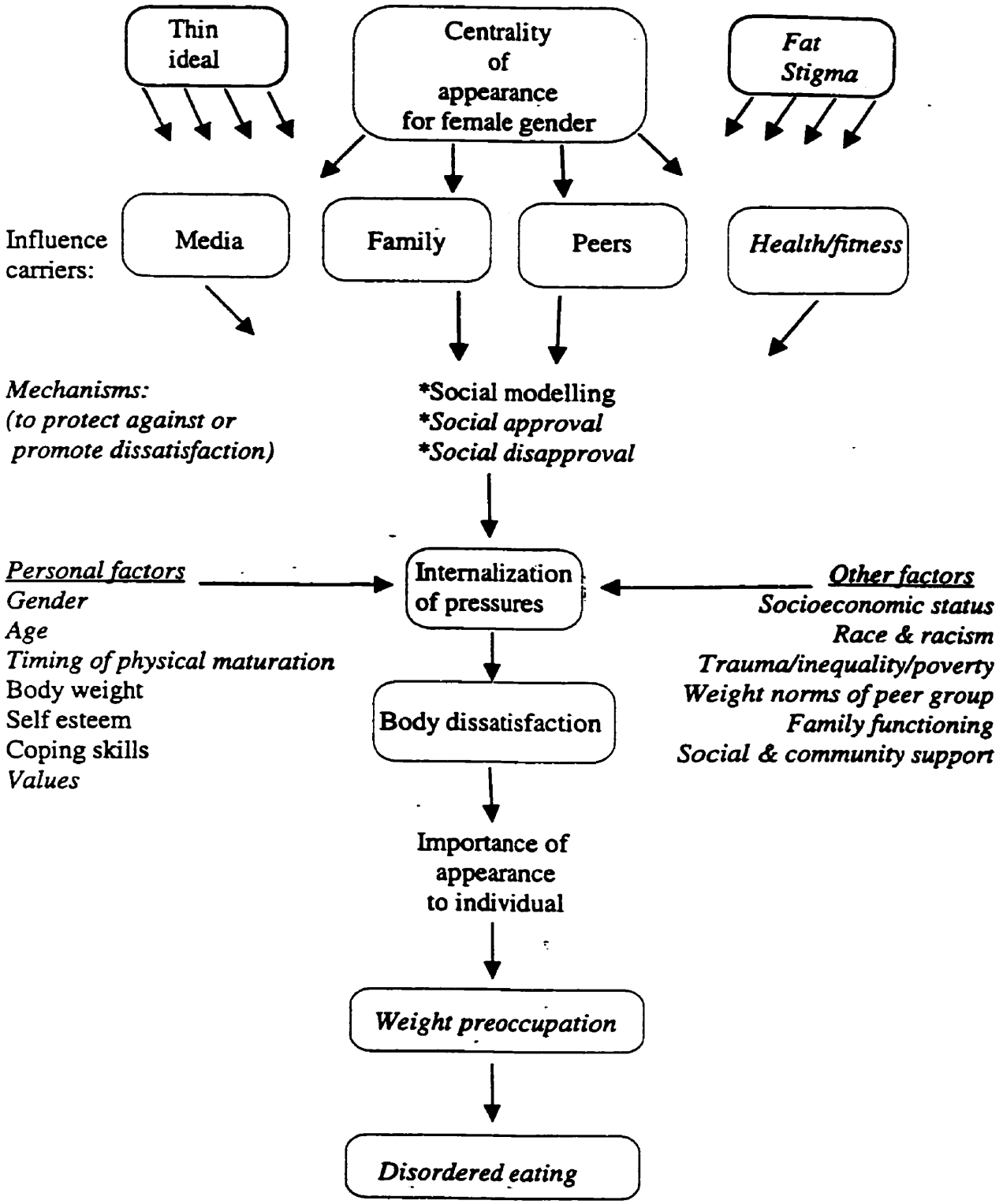

Figure 2.1. Influences on body dissatisfaction, weight preoccupation and disordered eating. (Adapted from Stice, 1994, p. 646. Additions are italicized.)

friendships, dating; and (b) social disapproval expressed as discrimination, teasing or harassment, or, less blatantly, weight control advice (Health Canada, 2000; Pike & Rodin, 1991; Stice, 1994). Each of these three mechanisms cut across the four major carriers of influence. Although usually perceived to heighten concern about weight, participants indicated they can alleviate weight concerns as well (Marchessault, 1993a). The personal and other factors, discussed above, are shown affecting the internalization of the pressures at the point where they may produce body dissatisfaction. I have positioned the importance of appearance to the individual after body dissatisfaction to indicate it is key in the subsequent development of weight preoccupation and disordered eating.

This framework demonstrates that the acquisition of weight concerns involves an immense complexity. The role of mothers is but one of many influences, including historical and cultural factors, as well as more individual biological and psychological factors. This review will focus on family influences next and then examine the studies that compare mothers and daughters.

Family

Certainly, in retrospective accounts people with poor body image remember various family members criticising their weight or making hurtful comments (Hesse-Biber, 1996; Joanisse & Synnott, 1999; Schwartz, Phares, Tantleff-Dunn, & Thompson, 1999). Almost one-third of the girls in a qualitative study said that a parent had advised them to lose weight (Nichter, 2000). Based on her interviews with women, Carole Spitzack (1988, p. 83) summed up her interviewees' recollections of childhood

interactions with their parents over appearance with the heading, "mother criticizes, father compliments." She concluded that both serve as powerful influences in making weight a salient issue.

Parents themselves, both mothers and fathers, report helping their children, boys as well as girls, lose weight. However, overall, they report being content with their children's appearance, with a predilection to praise girls about their appearance more than boys. Only a minority reported criticising their children, although they were most likely to criticize and least likely to praise adolescents (Striegel-Moore & Kearney-Cooke, 1994). Contrary to Spitzack's conclusion, mothers in this study, reported complimenting their children more often than fathers, with no difference in their reporting of critical comments. Parents reported making such comments more often than girls reported their parents making them (Thelen & Cormier, 1995). The association between parental comment and girls' attitudes was reported as stronger for parental self-reports in one study (Thelen & Cormier, 1995), but stronger for girls' reports of parental behaviour in another (Keel et al., 1997).

Examining reports of association between parental commentary and various indices of concern about weight produces mixed evidence (Keel et al., 1997; Smolak & Levine, 1996; Thelen & Cormier, 1995). Thelen and Cormier (1995), after controlling for body weight, found that only the *fathers'* reported encouragement for weight control correlated with dieting. Smolak and Levine (1996) found that only the *mothers'* comments about daughters' weight were significantly correlated with weight concern and weight loss attempts. When *both parents* commented, children made more attempts to

lose weight, but the lack of control for body weight is problematic in this comparison. Keel and her colleagues (1997) found the mothers' comments more closely related to daughters' dieting (restraint scores), while the fathers' comments were related to daughters' weight dissatisfaction.

There are few studies that examine the effect of the fathers' role modelling of concern and behaviour. One such study found a daughter's weight dissatisfaction was associated with her father's dissatisfaction, but weight was not controlled (Keel et al., 1997). Other studies have reported no association of father variables with daughters' dieting tendencies (Smolak, Levine & Schermer, 1999; Steiger, Stotland, Trottier, & Ghadirian, 1996).

Although sibling teasing is mentioned frequently, it does not appear to have been systematically examined. In one study, girls with restrictive attitudes towards eating were twice as likely to have brothers (Hill & Franklin, 1998). Siblings' non-weight-related values such as competitiveness and the valuation of non-traditional roles for women have been associated with weight concerns (Ogden & Chanana, 1998).

Other aspects of family relationships are repeatedly found to be important (Attie & Brooks-Gunn, 1989; Bruch, 1978; Haudek et al., 1999; Hill & Franklin, 1998; Ogden & Steward, 2000; Pike & Rodin, 1991; Silverstein & Perlick, 1995; Striegel-Moore et al., 1986; Thompson, 1996). Swarr and Richards (1996) found that young adolescents' reports of more time spent with parents correlated with healthier eating habits two years later and offset some of the negative effects of early puberty. Graber, Archibald and Brooks-Gunn (1999) suggest the ability to handle conflict while maintaining warm

relationships may be critical. Nichter (2000) also pointed out that the quality of the relationship made a difference to teen-aged girls' reactions to their mothers' weight-related advice. If given sensitively within an overall positive relationship, the advice seemed to be appreciated. In conflicted relationships, girls sometimes resisted the advice as a way of establishing their autonomy.

Family functioning itself must be contextualized within the structures that support or fail to support families. Social and living conditions such as poverty, personal safety, inequality and racism have direct and indirect impact on parents' abilities to care for their children (Health Canada, 2000; Thompson, 1996).

Mothers and Daughters

It is perhaps not surprising that the research focus within the family context is on the mother-daughter relationship. Weight continues to be viewed as a woman's issue, although this may be changing (Andersen, Cohn, & Holbrook, 2000; Grogan, 1999). Mothers typically remain most involved with child rearing; they spend more time nurturing and socializing their children than fathers. There is the added aspect of shared gender between mothers and daughters with rich possibilities for role modelling and/or rebellion. The notion that mothers have a major influence on their daughters' weight concerns is widespread both in the popular press and in academic writing (Brigman, 1994; Johnson, 1995; Parker et al., 1995; Striegel-Moore et al., 1986; Waterhouse, 1997). Rabinor (1994) has documented numerous examples of research articles that assume an association between mothers' and daughters' concern with weight.

Debra Waterhouse (1997) acknowledges these assumptions in the title of her recent book, *Like Mother, Like Daughter: How Women are Influenced by Their Mothers' Relationship with Food--and How to Break the Pattern.* Waterhouse, a dietitian with 15 years experience counselling eating disordered women, opens her book with the statement:

> Weight-loss behaviours are so firmly integrated into our daily lives that mothers diet without thinking about it and pass along their weight preoccupations to their daughters without realizing it. By modelling these behaviours and setting the standard for female identity: A mother's dieting history becomes her daughter's dieting future; a mother's eating habits are passed on to her daughter; a mother's poor body image is mirrored by her daughter. (p. xv)

Waterhouse notes that daughters learn to fear weight gain and how to diet from many sources, but she clearly views mothers as the most important influence. She writes, "Daughters learn them [dieting behaviours] from other women, peers, mentors, and the media--*but especially from their mothers*" (Emphasis in original, p. 2). She provides the following evidence:

- 88% of all mothers have dieted, and 80% of their adolescent daughters have already embarked on their first diet.
- 75% of all mothers "feel" too fat, and 81% of their teenage daughters suffer from this same feeling of weight preoccupation.
- An estimated 60% of all mothers have practised severe weight-loss attempts through repeated dieting, skipping meals, fasting, laxatives, diuretics, vomiting, and/or excessive exercise. And 80% of their daughters are following in their unhealthy footsteps. (p. xvi)

However, these results are drawn from separate studies of unrelated women and adolescents. They provide evidence that weight is an issue to the majority of females of all ages in North America. They do *not* provide evidence that mothers influence their daughters. This is, of course, possible. It is equally plausible that something else could be

influencing both girls and women.

Waterhouse's book is well-referenced (and provides good advice). At the time she wrote it, few studies in nonclinical settings had examined how mothers' own body image and eating behaviours influenced their daughters. These studies reported conflicting results (Attie & Brooks-Gunn, 1989; Hill, Weaver, & Blundell, 1990; Pike & Rodin, 1991; Steiger et al., 1996). Since then, additional studies imply less similarity and greater complexity than the above "facts" suggest. Table 2.2 lists studies that have surveyed both mothers and daughters to test for association between their attitudes to weight and dieting behaviours (Attie & Brooks-Gunn, 1989; Byely et al., 2000; Hill & Franklin, 1998; Hill et al., 1990; Keel et al., 1997; Marchessault, 1993a; Ogden & Chanana, 1998; Ogden & Elder, 1998; Pike & Rodin, 1991; Ruther & Richman, 1993; Smolak et al., 1999; Thelen & Cormier, 1995).[10] Further details about these and several other mother-daughter studies addressing related questions are given in Appendix A-1 and A-2. As stated earlier, I am not aware of any qualitative studies that interview both a girl and her mother about weight other than my own preliminary work in this area.

Do dieting mothers have dieting daughters? When assessed with a direct question about dieting or a questionnaire designed to measure dietary restraint, positive associations were found in four of eleven studies (see Table 2.2, Hill et al., 1990; Pike & Rodin, 1991; Ruther & Richman, 1993; Smolak et al., 1999). With one exception, the positive findings were in elementary school-aged children (Pike & Rodin, 1991). When

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[10]This list excluded studies that surveyed just children, just parents, and one study that surveyed both, but did not match pairs in the analysis (Rozin & Fallon, 1988).

Table 2.2 Mother-Daughter Studies of Weight-Related Attitudes and Self-Reported Behaviours

Author, year	Description of sample	Measures used	Body image	Diet	Dietary restraint
Hill, et al., 1990	20 pairs; mean age 10.1 y[a]; Inner-city, Leeds.	Restraint Scale; EAT; Eating Patterns Questionnaire.			Yes - R No - EAT
Ruther & Richman 1993	44 pairs (26 girls; 18 boys); grade 4; high socio-economic status.	Restraint Scale; understanding of dieting; desire to lose or gain weight.			Yes - R
Thelen & Cormier, 1995[b]	70 pairs (35 girls; 35 boys); grade 4; aged 9-10.5 y; mostly Caucasian.	Desire to be thinner; diet frequency; EAT-26 or ch(EAT); BMI.	No	No	No - EAT
Smolak, et al., 1999	131 pairs (boys; girls); grade 4-5; White, working- middle class; rural.	Frequency of dieting or weight loss attempts; Body Esteem Scale; weight concerns.	Yes	Yes	
Hill & Franklin, 1998	40 pairs; mean age 11.75 y; mostly Caucasian; lower middle class; urban.	Dietary Restraint Scale of DEBQ; body shapes; body esteem; dieting history and self-perception; BMI.		No	No - R
Byely et al., 2000[b]	77 pairs; grade 6-7, mean age = 12.2 y at Time 1; 55 pairs at Time 2; White, urban, middle-to upper-middle class, well educated.	Body image scale from SIQYA; EAT; M & D assessment of girls' relative weight; dieting history and encouragement; BMI.	No		No - EAT subscale
Marches-sault 1993	20 pairs; grade 8; aged 13-14 years; low income; ethnically diverse; urban.	EAT-40; frequency of dieting; weight satisfaction; qualitative interview; BMI.			No - EAT
Attie & Brooks-Gunn, 1989	193 pairs; grade 7 - 10 & mean age = 13.9 y at Time 1; 16.1 y at Time 2; White; middle-class.	EAT-26; Body Image Scale from SIQYA; Eating Disorders Inventory; daughter's height & weight.	No		No - EAT
Keel, et al., 1997	51 pairs; mean age 14.8 y (12-18); Caucasian; middle-class; suburban.	Restraint Scale; disordered eating behaviours; weight perception and satisfaction; dieting history; BMI.	No	No	No - R
Pike & Rodin, 1991	77 pairs; grade 9 to 12; mean age =16 y; White; middle-class; urban & suburban.	Eating Disorders Inventory; weight; ideal weight; dieting history; ratings of attractiveness; BMI.			Yes - EDI
Ogden & Steward, 2000	30 pairs; mean age 17.1 y (16-19); majority White & upper class.	Restrained eating section of DEBQ; Body Shape Questionnaire; BMI.	No		No - R
Ogden & Elder, 1998	50 pairs (25 Asian; 25 White); medical school; mean age 20 y (18-26).	Restrained eating section of DEBQ; Body Shape Questionnaire; BMI.	No		No - R

Note. Studies of youngest girls are listed first. See Appendix A-1 and A-2 for descriptions of questionnaires and details of these and other studies. [a]y = years; EAT = Eating Attitudes Test; ch(EAT) = children's EAT; R = Restraint; BMI = Body Mass Index; DEBQ = Dutch Eating Behaviour Questionnaire; SIQYA = Self-Image Questionnaire for Young Adolescents; M = Mother; D = Daughter. [b]Body weight was controlled in these studies.

the basis for comparison was concern about weight or a desire to be thinner, five of six studies found no significant association between mothers' and daughters' responses (Attie & Brooks-Gunn, 1989; Keel et al., 1997; Ogden & Elder, 1998; Ogden & Steward, 2000; Thelen & Cormier, 1995). Again, the positive results were found in elementary school-aged girls (Smolak et al., 1999).

In the studies examining adolescents in middle school and beyond, only Pike and Rodin (1991) found a significant association in mother-daughter dieting tendencies. In this early and influential study, the investigators used the Eating Disorders Inventory to screen 350 White, middle-class, Grade 9 to 12 girls for high and low degrees of disordered eating. They found that the mothers of girls who were having problems with disordered eating wanted their daughters to be considerably thinner (daughters' weight was controlled for in this comparison); had started dieting at a younger age themselves; rated their daughters as less attractive than the daughters rated themselves; were more critical of their daughters than they were of themselves; and were more eating disordered themselves. There were no significant differences between the two groups of mothers in terms of proportion who were dieting, their current body weight, the amount they wished to lose, or the largest amount of weight they had ever lost by dieting. Pike and Rodin (p. 203) concluded that "some of the mother's own dieting and eating behaviours, and especially her concerns about her daughter's weight and appearance, pose a significant risk that a daughter will be disordered in her eating." They suggested this might operate through modelling these types of behaviours for their daughters as well as placing pressure on them to be thinner.

In a similar study with 12-year-old British girls using the Restraint Scale, Hill and Franklin (1998) found no significant differences between the mothers of high- and low-scoring girls in current BMI, current dieting, age of first diet, maximum amount of weight lost by dieting or restraint scores. Both groups of mothers saw themselves as slightly overweight and viewed their daughters' current weight as "just right." Both groups of mothers thought their daughters were slightly more attractive than other girls of the same age, although the mothers of the high-restraint girls rated their daughters' attractiveness lower. These mothers also showed some minor differences in eating style--they snacked more, and a slightly higher proportion had fasted. They also reported a greater range of past weights and more dissatisfaction with some aspects of family functioning. The mean weight of the high-restraint girls was heavier, although the investigators did not control for weight other than to note that there were heavy and light girls in both groups.

In one of the few longitudinal studies of girls' eating attitudes to also survey mothers, Attie and Brooks-Gunn (1989) concluded that mothers' body image and degree of compulsive eating did not contribute significantly to the prediction of compulsive eating in their daughters. Nearly 200 White, middle-class girls in Grades 7-10 (initially) and their mothers filled out the EAT-26. The relationship between the girls' and the mothers' scores was not significant. Physique was the most important factor in early adolescence, and body image was the strongest predictor of compulsive eating two years later. Mothers' (but not the daughters') reports of family functioning were also related to problem eating at the second testing. The EAT-26 is a measure of relatively severe eating disturbances, but three other studies found no association between mothers' and

daughters' dieting or dieting tendencies as measured by restraint scales (Keel et al., 1997; Ogden & Elder, 1998; Ogden & Steward, 2000). Neither were there any significant associations between mothers' and daughters' body image in these four studies. In one study, there was a strong association between mothers and their two daughters' eating concerns (Steiger et al., 1996). This seems noteworthy, especially considering that there was no association between fathers' and daughters' scores. However, scales measuring eating concerns, dietary restraint and body image were combined, and body weight was not controlled, making results difficult to interpret. (See Appendix A-2 for details).

While most of the direct comparisons of dieting and body image measures for older girls are non-significant, three of the four studies of elementary school children report positive associations between mothers and daughters--two of two for restraint scores (Hill et al., 1990; Ruther & Richman, 1993), one of two for dieting (Smolak et al., 1999), and one of two for weight dissatisfaction (Smolak et al., 1999). Thelen and Cormier (1995), the only one of these four studies to control for body weight, reported non-significant results in their comparisons of mothers' and daughters' self-reported diet frequency, desire to be thinner (measured by body silhouettes), and EAT scores. This suggests that a girl's body shape, or factors associated with it, is more influential in shaping her attitudes and dieting behaviours than her mothers' weight-related concerns.

There is also evidence of maternal influences on weight-related behaviours and body weight in children under five years of age (see Appendix A-2). In several studies, mothers who scored high on dietary restraint, restricted their preschoolers' eating (Birch & Fisher, 2000; Cutting, Fisher, Grimm-Thomas, & Birch, 1999). This was associated

with the children's lessened ability to self-regulate their food intake, demonstrated by greater consumption of palatable snack foods in the absence of hunger. These children were also heavier. In a British study of 12-year-olds, those with higher restraint scores reported greater parental control of their eating. Although they were heavier, their dieting status was linked more closely to parental control (Edmunds & Hill, 1999). Longitudinal studies are required to determine the direction of the effects in these studies. Did parental intervention intended to avoid eating problems cause them, or were parents reacting to existing differences in their child?

In summary, the evidence for the mothers' role in modelling weight-related attitudes and behaviours appears to be stronger in elementary school-aged children than in older girls. What mothers and fathers say to their teen-aged daughters may be more influential than role modelling attitudes and behaviours, although the lack of control for weight is a problem in interpreting positive associations. The findings are inconsistent, and there are more negative findings than positive within most studies, even the larger ones (see Table 2.2 and Appendix A-2). The associations, with a few exceptions, are found for attitudes rather than behaviours, are generally weak, and sometimes disappear in the occasional study that controls for body weight. This very variability suggests the need for a more exploratory approach combining methods in order to understand the issue in greater depth.

CHAPTER THREE

The Research Process

> "National surveys are like satellite photos, giving a broad overview of public opinion. Anthropological research corresponds to exploration on the ground, charting details of the features glimpsed by the national surveys" (Kempton, Boster, & Hartley, 1995, p. 18).

Research Design and Analysis

Ethnographic methods were developed to study *foreign* cultures, although their use in one's own culture is becoming more common (Kempton et al., 1995). The use of these methods is based on the assumption that participants have learned some common ways of perceiving the world. Garro (1988) suggests that while people make statements based on individual knowledge, much of this knowledge can be accounted for by cultural sharing. She refers to this shared knowledge as *cultural understandings*. Discovering people's cultural understandings within a given domain can provide a sense of what people attend to and how they might interpret it. The pattern of agreement and disagreement in understanding may vary across different social groups and can be measured through the use of specific methods such as cultural consensus analysis (Garro, 1995; 1996; Hubert & Schultz, 1976; Kempton et al., 1995; Weller, Pachter, Trotter II, & Baer, 1993).

This research is a cross-sectional descriptive study, using three formats in face-to-face interviews to develop a more comprehensive understanding of how people perceive weight than would be possible through the use of only one approach. The interview

formats were: an open-ended, semi-structured interview; a more structured fixed-response interview; and the administration of three standardized research instruments.

The first two interview formats are ethnographic interview methods used in cognitive anthropology. They are appropriate methods for attempting to understand the meaning of weight to the people being interviewed, a major goal of this research. The strength of the semi-structured in-depth interview is its potential for facilitating insight and deepening understanding of issues (Bernard, 1994/1988; Kempton et al., 1995; Silverman, 1993). Adding the fixed-response interview and using cultural consensus analysis allow statistically valid conclusions to be made regarding the extent of cultural sharing within and between the populations sampled (Garro, 1996). These fixed-response statements were constructed in a way intended to preserve the focus on the participants' understandings of the topic.

Survey methods are used to address issues as identified by experts in the field (Kempton et al., 1995). The questionnaires provide standardized data on key issues of interest to health professionals and health researchers. The use of the questionnaires provides easy comparability to other research using the same instruments, and thus provides additional context for situating the participants' perspectives.

For each part of the interview, I provide an overview of the method and analytic strategy used, and the advantages and limitations of the method as used in this study. I then describe the standard procedure for interviews, how the project was implemented, and the characteristics of the research participants. (See Appendix B for the interview protocol and questions, worded slightly differently for mothers and daughters.)

Semi-Structured Interviews

Qualitative in-depth interviews were used because a major goal was to understand the meaning of weight to mothers and daughters, and how this meaning varied within the context of people's experience. Semi-structured interviews use an interview guide to encourage participants to share their views on the topic and to elaborate what they feel is relevant. It is standard procedure to use probes and additional questions as needed to ensure responses are interpreted as fully and as correctly as possible.

Each participant was asked open-ended questions to elicit their understandings of weight. The open-ended interviews focussed on participants' perceptions of 1) the causes and consequences of people's weight problems and concern about weight, 2) appropriate ways to deal with weight issues, and 3) the role of weight issues in their own lives. The analysis focuses on the latter two issues because consensus was not confirmed for most samples for the statements addressing causes and consequences. Most of the questions were drawn from the previously mentioned research (Marchessault, 1993a; Catlin, 1988; Havens, 1971 - 1996; Nichter & Vuckovic, 1994).

The analysis of the interviews consisted of reading and reflecting on the interview transcripts to generate insight into the meaning of the issue to the participants. Chapman and Maclean (1990, p. 133) refer to this as essentially an "intuitive and creative process." This process is stimulated by organizing the data through systematic coding to generate categories, themes and patterns. Connections are clarified through writing notes about this coding, sometimes referred to as memos, returning to the data to check the accuracy of the observations, to test emerging hypotheses, and to search for alternative explanations,

and in this way, writing the report (Marshall & Rossman, 1989). In addition to post-interview review and reflection for each interview, relevant portions of transcripts were reviewed three times: first, to determine themes and code broadly, then to code more finely, and third to check that coding was correct and complete. This was accomplished using a program from Qualitative Solutions and Research (1997) titled Non-numerical Unstructured Data Indexing Searching and Theorizing (NUD*IST). The unstructured interview data was explored in conjunction with the structured demographic and other quantitative data, which was imported into NUD*IST. Case studies and data summaries are used to illustrate important findings regarding shared and divergent understandings.

Credibility and transferablility have been well-received as quality criteria for qualitative research (Chapman & Maclean, 1990; Guba & Lincoln, 1994; Hall & Stevens, 1991; Krefting, 1990; Marshall & Rossman, 1989). The goal of credibility is to ensure the accurate identification and description of the subject of the inquiry (Marshall & Rossman, 1989). If achieved, credibility is generally regarded as the major advantage of this interview method (Krefting, 1990; Marshall & Rossman, 1989). Transferability refers to the ability to generalize findings from the sample to the population from which it was drawn and to other contexts. The burden of judgment regarding generalization of findings to other contexts falls to the person wishing to do the generalizing. The researcher's responsibility is to present sufficient information about the research so that there is a basis for these judgments to be made. The in-depth interview allows exploration of what is important to participants. It is sufficiently flexible that unanticipated aspects of the topic can be accommodated.

Fixed-Response Interviews

After the open-ended interview questions, each participant was asked to agree or disagree to a series of statements intended to reflect understandings from the participants' perspective. Asking participants to respond to fixed-response statements gives them the opportunity to discuss items they know about but may not have raised in the open-ended interviews (Garro, 1996). The consensus statements followed the open-ended questions, to avoid influencing responses, and were read to each participant.

The fixed form questionnaire was constructed from comments participants made during semi-structured interviews on the same topic from my master's research (Marchessault, 1993a). As discussed, this sample consisted of 40 participants, similar in age to the current sample. Almost half of the families were Aboriginal, and all lived in the inner city of Winnipeg. Transcripts of mothers and daughters were reviewed for key ideas, paying particular attention to frequently or strongly stressed themes and contradictions within or between transcripts. Quotes were paraphrased into questions, preserving as much of the original wording, context and bias as possible. Questions were formulated to reflect the diversity of opinions in participant perspectives. For example, many participants in this study said that weight would help them to achieve other goals that they found desirable, such as attracting friends, boys and getting a job. The following quotes are examples of these opinions:

> *Girl: I think so many girls have become obsessed with looking good mostly because of boys, around my age. Because like those in my school won't go out with anybody who's noticeably fat.*
> *Girl: Because girls, they won't like you [if you're fat]. I mean people won't like you.*

Woman: Women have to be nice-looking to get jobs.
Woman: Whereas women always get their image that if they're nice and slim, you know, they're going to be rewarded by being loved. Or by being accepted.

The following statement was built from these quotes: "A woman should worry about her weight because other people will be more likely to like her, she will have an easier time attracting a boyfriend, and it will help her to get a job. Basically, all other things being equal, she will do better in life if she is slim." As noted by Kempton, Boster and Hartley (1995), this type of statement does not reflect standard survey procedure. It may test several things at once and does not aim for neutrality. The intent is to see if people subscribe to the whole argument and to determine the range of agreement. (The statements are itemized in the Interview Guide, Appendix B, and are listed in Chapter 6.)

The analysis was modelled on Garro's work (1988; 1996), and that of Kempton, Boster and Hartley (1995). Both the open-ended interviews and the consensus analysis demonstrate the extent to which cultural understandings were shared within the samples of mothers and daughters at each location and between the locations. Consensus analysis indicates if it is appropriate to aggregate and compare responses. The analysis highlights consensus on particular statements, and participants' comments elaborate meaning and provide broader context for understanding the statements. Cultural consensus analysis gives reliable results with very few respondents if consensus exists (Romney, Weller, & Batchelder, 1986).

Cultural consensus analysis (Romney et al., 1986) and the quadratic assignment program (Hubert & Schultz, 1976) were used to analyse the responses to the statements on values. ANTHROPAC 4.0 (Borgatti, 1996) was used to carry out the analysis. The

consensus analysis was performed in two main steps. In the first step, agreement and disagreement on the content of the consensus responses was analysed. The focus in the second stage was on the patterns in participants' responses to the consensus questions. Consensus analysis is relatively new, and so the theory and method is elaborated in Chapter 6.

Questionnaires

In the last part of the interview, participants were asked to respond to three standardized questionnaires. This was intended to understand the participants' concern about weight relative to the existing research on girls' and women's attitudes to weight, to test specific hypotheses and to screen for serious problems. Although each scale has been used with an Aboriginal sample, combining their use with the open-ended portion of this study provides an opportunity to consider their appropriateness with this population. Each questionnaire assessed a different aspect of weight. The Restraint scale measures tendency to diet (Herman & Polivy, 1980). The Eating Attitudes Test (EAT) measures risk for an eating disorder (Garner, Olmsted, Bohr, & Garfinkel, 1982). And, the Body Shape Drawings Questionnaire (BSDQ) was based on Stunkard, Sorensen, and Schulsinger 's (1980) silhouettes, which have been used to assess people's perceptions, preferences and satisfaction with their body shape. The questionnaires were administered at the end of the interview, again to protect the integrity of the open-ended portion of the interview by avoiding suggesting responses to the participants. (See the interview guide in Appendix B.) A brief description of each scale, and its use in this study follows.

Restraint Scale. The Restraint Scale was originally developed by Herman and Mack (1975) to identify the relative effect of chronic dieting compared to body weight on eating behaviours. Herman and Polivy (1975) made significant changes to the scale to acknowledge the common pattern of alternating restraint and lapses of restraint in the average dieter. The 10-item Restraint Scale (Herman & Polivy, 1980) was selected for this project because it was designed to measure the intent to restrict food intake for the purpose of weight control or loss, regardless of success. Other popular scales, (such as the Three-Factor Eating Questionnaire, Stunkard & Messick, 1985, or the Dutch Eating Behavior Questionnaire, Van Strien, Frijters, Bergers, & Defares, 1985) measure restrained eating, disinhibition and hunger as distinct eating styles.

The Restraint Scale has adequate internal consistency for normal weight samples, with reported alphas of .75 and .86 (Herman & Polivy, 1975; Ruderman, 1986). Validity is based on its relationship to theoretical models of restraint and disinhibition, and its predictive power (Heatherton, Herman, Polivy, King, & McGree, 1988; Ruderman, 1986). Each question on the Restraint Scale is scored from 0 to 3 or 4 for a maximum of 35 points. Means of 11 and 12 have been reported for 12 to 18-year-old girls and their mothers, respectively (Keel et al., 1997) Scores above 16 have been used to distinguish groups of dieters from nondieters (Ciliska, 1990; Herman & Polivy, 1980).

Ruderman (1986) has noted low internal consistency (alpha of .51) and systematic overestimation of restraint when the scale is administered to heavier people. Four items on the Restraint Scale assess weight fluctuation (Heatherton et al., 1988). Heavier people may score higher on these questions, regardless of intent to diet. Two factors (weight

fluctuation and concern with dieting) were identified when the scale was introduced and have repeatedly emerged in subsequent factor analyses (Heatherton et al., 1988; Herman & Polivy, 1975). Heatherton and colleagues point out that each factor has successfully predicted behaviour. They recommend using the entire scale because it is not known which factor is more important.

The full Restraint Scale was administered in this study, and the analysis was performed and is given for both the Restraint Scale and a modified version. (Without the four questions, the maximum score is 19.) Because several of the groups in this research (women and girls, Aboriginal and non-Aboriginal participants) had different mean weights, and different slopes precluded controlling for body weight, the results focus on the Modified Restraint Scale. This name was chosen, rather than the subscale moniker, to emphasize its association with the original scale.

Eating Attitudes Test. The EAT was developed by Garner and Garfinkel (1979). A short version, the EAT-26, was used in this project to identify participants at risk for an eating disorder for referral as well as for analytical purposes. Garner, Olmsted, Bohr and Garfinkel (1982) have demonstrated that the EAT-26 was a reliable and valid, yet economic, instrument for assessing eating disorder symptoms. The EAT-26 had a reliability coefficient of .90 and .83 for anorexic patients and female controls, respectively, and its use correctly predicted 83.6% of cases. It has 26 items compared to 40 items in the original EAT (Garner & Garfinkel, 1979) and 64 items in the Eating Disorder Inventory (designed by Garner, Olmsted, & Polivy, 1983, to measure personality characteristics of eating disordered patients). The EAT-26 correlated highly with the

original EAT ($r = .98$; Garner et al., 1982). Both scales correlated similarly with other clinical and psychometric variables (Berland, Thompson & Linton, 1986; Garner et al., 1982).

The EAT-26 questions measure preoccupation with thinness and food, pathological avoidance of "fattening" foods, bulimic behaviours such as binging and vomiting, self control around food and perceived social pressure to gain weight. The scale is a forced-choice six-point Likert scale. The most extreme response to each question is scored three points; adjacent alternatives are scored two points and one point, respectively; and remaining responses are scored zero, for a maximum of 78 points (Garner & Garfinkel, 1979; Garner et al., 1982). Scores above 20 suggest risk for an eating disorder and further assessment is advised. This cutoff eliminated false negatives but gave a false positive for risk of an eating disorder approximately 13% of the time (Garner & Garfinkel, 1979).

The EAT has been widely used to describe food preoccupation and body image concerns in nonclinical samples (Aronson, Fredman, & Gabriel, 1990; Smead & Richert, 1990; Wood, Waller, Miller, & Slade, 1992). Norms have been established for the EAT-26 (Rosen, Silberg, & Gross, 1988b) with a reported mean of 11.9 (*SD* of 10.8) for Grade 9 to 12 students. They reported no significant variation by socio-economic status or race (primarily White and Black). Others have reported no differences by age for teen-aged girls (Gralen, Levine, Smolak, & Murnen, 1990; Leichner et al., 1986; Rosen et al., 1988b). Close to one-quarter of teens in Manitoba (23.7% of those aged 13 to 15) scored above the cutoff for risk of an eating disorder (Leichner et al., 1986), slightly more than

double the rates reported for similar aged girls in the United Kingdom (Wood et al., 1992), and undergraduate students in the United States (Smead & Richert, 1990). The EAT has been used cross-culturally with African-American, Hispanic, Asian and Aboriginal youth (Crago et al., 1996; Marchessault, 1998; McCourt & Waller, 1995; Rosen et al, 1988b). Although some of the reported studies were small, high EAT scores have been noted in each sample.

Body Shape Drawings Questionnaire. Stunkard, Sorenson and Schulsinger (1980) created a series of nine drawings of male and female figures as an ingenious strategy for their respondents to estimate the weight of their aging or deceased parents in the Danish Adoption study of obesity and thinness. Validity was tested in a 20-year health study in Tecumseh, Michigan, where the weights of the aging parents were known, and was reported as "surprisingly accurate." Correlations between ratings of Mexican-American adults' body mass and silhouettes ranged from .65 to .84 (Mueller, Joos, & Schull, 1985). Cohn and colleagues (1987) reported a significant correlation of .71 with body weight and .75 with BMI for Grades 6 to 8 girls of mixed ethnicity.

The silhouettes were used in this study, anticipating that some participants would not know their weight. In addition to providing a visual demonstration of body shape assessment, the Body Shape Drawings (BSDs) or similar drawings have been used to indicate body shape preference and dissatisfaction (Cohn et al., 1987; Fallon & Rozin, 1985; Furnham & Alibhai, 1983; Gralen et al., 1990; Rozin & Fallon, 1988; Silberstein, Striegel-Moore, Timko, & Rodin, 1988; Wright, 1994). Questions were adapted from these sources to create the Body Shape Drawings Questionnaire (BSDQ). The figures

were presented from thin to heavy as an ordinal scale. Participants were asked to select the drawing that looked most like their body shape (*perceived*) and the drawing that they would most like to look like (*desired*). They were then asked to select the shape they thought was *most attractive for women*, *most attractive for girls*, *healthiest for women*, and *healthiest for girls*. A seventh question concerned the shape they thought guys would find most attractive (*guys prefer*). Body dissatisfaction was measured by the discrepancy between *desired* and *perceived* shapes.

A large number of researchers have used the silhouettes, testimony to their face validity. Cohn and colleagues, in the study mentioned above, found that 94% of boys and girls who selected a current shape larger than their ideal shape also responded that they wished to be thinner. However, the body shapes are not valid as an estimate of the proportion of children desiring to be larger. Only 54% of the children selecting larger shapes as their ideal said they wanted to be heavier.

The figures have been used with children as young as eight (Hill & Palin, 1998), with Aboriginal people (Gittelsohn et al., 1996), and with White, Black, Asian and Hispanic people (Cohn et al., 1987). Similar figures have been used with Kenyans living in Asia and Britain (Furnham & Alibhai, 1983) and adaptations have been used with fourth grade Aboriginal children (Stevens et al., 1999). A varying proportion of females reported a desire to be smaller in these studies, ranging from 26% of Grade 4 Aboriginal girls to 75% of Yale undergraduates (Silberstein et al., 1988; Stevens et al., 1999).

Gittelsohn et al. (1996) pretested Stunkard, Sorensen, and Schulsinger's (1980) figures with Ojibway-Cree people in northern Ontario, reporting that no one found them

inappropriate. They suggested caution in interpreting their findings for the 10-to-19-year-olds. The original figures were used in this study because the children's shapes were inappropriate for use with teens, and the adult figures have worked well in a variety of settings with different ethnic and age groups. This permitted comparability with previous research and for the different age and ethnic groups within the study.

Analysis of Questionnaires. All three questionnaires were used to test for differences in responses between generations, Aboriginal and non-Aboriginal participants, urban and rural participants, and between the participants at the four locations. They were also used to test for association between mothers' and daughters' responses. As in the study by Hill, Weaver and Blundell (1990), the girls with the 10 highest and 10 lowest Restraint scores were identified, and tests were run to see if the mothers of the high-scoring girls scored higher on the Restraint Scale and the EAT-26 than mothers of the low-scoring girls. Association between the girls' and their mothers' scores in these 20 families was also tested.

Data were analysed using the Number Cruncher Statistical Systems for Windows (abbreviated NCSS, Hintze, 1997). Descriptive statistics were used to characterize the sample and to allow comparisons with the psychological literature. Analysis of Variance (ANOVA), *t*-tests, and their non-parametric equivalents were used to test for differences between generations, ethnicity, regions and locations. Paired tests, such as the split unit ANOVA and the Wilcoxon Signed Rank Sum test, were used to test the significance of the mother-daughter relationship, and correlation coefficients were calculated for test scores of mothers and daughters. Logistic regression and chi squares were used to test

follow-up questions. Sample size was driven by the qualitative portion of the study. There was reasonable power for the comparisons of larger groups, but non-significant results in comparisons between locations may not be meaningful. Further details of analysis, including an assessment of power, are given in Chapter 9.

Background Information

Standard background information was requested of mothers. Information was collected on occupation, income, education, religion, ethnicity and the personal importance of ethnicity, all of which have been identified as potentially relevant for predicting health concepts, attitudes and concerns (Harwood, 1981; Schneider, 1986). These data have been used to describe the samples, and in the case studies as markers of identity. NCSS was used to compare the samples on the basis of mothers' age, daughters' age, number of children, women's marital status, level of education, employment status, and the number of wage earners in the household. Income is reported and discussed. Normally distributed interval data were tested with multi-way ANOVA with region and ethnicity entered as factors. A Kruskal-Wallis test was used to test ordinal data for differences between the locations.

Weight status. Height and weight were not measured for fear of conveying inappropriate messages about the purpose of the study. Weighing girls might have seemed to contradict the explanation that sample selection was independent of their weight. Participants were asked to provide their current height and weight on the BSDQ. BMI was calculated by dividing weight in kilograms by height in metres squared (Health

and Welfare Canada, 1988a). The BMI was proposed as a method to assess health risks associated with adiposity for adults between the ages of 20 and 65. It is used here, along with the self-assessed visual representation on the BSDQ, for descriptive and comparative purposes and to provide context for people's weight concerns.

The Canadian guidelines cite a BMI between 20 and 25 as a healthy weight for most people; between 25 and 27 as a cautionary zone; over 27 as associated with increasing risk of developing health problems due to overweight; and a BMI of less than 20 as associated with health problems due to underweight.[11]

There are no generally accepted weight standards for children.[12] Since the purpose of using the BMI is to permit comparisons, the same cutoffs were used as for the mothers. BMI norms of 18.21 and 19.3 have been reported for 13- and 14-year-olds, respectively (Beumont, Al-Alami, & Touyz, 1988). Rolland-Cachera et al. (1982) reported that the BMI was a valid indicator of adiposity among children, despite some imprecision due to the different stages of growth at any given age. A low or high BMI does not automatically signal risk of health problems. For adults, and especially children, long-term weight patterns are needed to assess health risk against constitution (Lifshitz &

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[11]The World Health Organization (1998, p. 9) and the National Institutes of Health (1998) classify BMIs below 18.5 as "underweight," between 18.5 and 24.9 as within the "normal range," and over 25 as "overweight." BMIs of 25 to 29.9 are noted as "pre-obese."

[12]The 85th and 95th percentiles of the United States National Center for Health Statistics growth charts are commonly used. New standards have recently been published (Centers for Disease Control and Prevention, 2000). Age- and sex-specific cutoffs that pass through the adult BMIs of 25 and 30 have recently been determined (Cole, Bellizzi, Flegal, & Dietz, 2000). The values for 13 year-old girls are 22.6 and and 27.8, respectively; for 14 year-old girls, they are 23.3 and 28.6.

Moses, 1988).

On average, women, including people with less education, adolescents, and very heavy people, have been found to underestimate their weight by 3.1 pounds (Stewart, 1982; Stunkard & Albaum, 1981). The BMIs are based on self-reported data and should be considered approximations.

Triangulating Methods

Research questions should determine the methods used in any research project (Denzin & Lincoln, 1994; Mechanic, 1989). The major purpose of this investigation was to explore and compare the participants' perceptions of weight issues. Participants' concerns were also documented in a way that would be comparable to other research reports. Therefore, this study used semi-structured in-depth interviews, fixed structure interviews and standardized questionnaires to collect data. As already mentioned, Garro (1988, 1996) and Kempton, Boster and Hartley (1995) have combined in-depth interviews and fixed-response questionnaires. Morse (1994) discusses the appropriate use of standardized data within a qualitative-driven project. Using different methods, or triangulating data gathering techniques, can balance the strengths and weaknesses of individual methods (Denzin & Lincoln, 1994; Mechanic, 1989).

The in-depth interview allows the researcher to take context and meaning into account. It facilitates an understanding of which issues are most salient to participants. It is flexible, with potential for unanticipated aspects of the research issue to emerge and be incorporated into the analysis. This becomes more important as participant and researcher

perspectives vary. It is difficult to make direct comparisons, a difficulty that is magnified when research is carried out by different researchers in different locations with different samples.

Generalizeability is one of the strengths of questionnaires, although the data gathered are determined a priori and therefore are more limited. The fixed-form interview complements the in-depth interview by taking statements made by some participants and asking other participants if they agree or disagree. This method preserves the focus on participants' perspectives while permitting direct comparisons within and between various groups (if the conditions of consensus are met). However, the contextual understanding provided by in-depth interviews is essential to ensure the statements are interpreted appropriately. The two methods together address issues of generalizeability, replicability and the importance of context (Garro, 1996).

The three standardized scales were used to document participants' concerns about weight with reliable and valid instruments with established norms. These tools were used to assess the level of dietary restraint, body dissatisfaction and risk for an eating disorder in this sample compared to other samples. Additionally, questionnaires sometimes provide an opportunity for participants to disclose sensitive personal data that they may be uncomfortable raising in an interview, and not insignificantly, facilitated accessing appropriate care.

Although there was a specific rationale behind the use of each method, using the three methods together was intended to increase confidence in the validity of the findings. If results are congruent, this suggests validity. If they are not, then further probing is

required to understand the disjuncture. Looking at what people say from several perspectives is not working at cross purposes but rather working towards a deeper understanding of the issue in a way that can be understood and used by a variety of people--from mothers to health professionals to researchers.

Ethical Considerations

This study was approved by the Faculty Committee on the Use of Human Subjects at the University of Manitoba, the Winnipeg School Division's Research Advisory Committee, the school boards in the First Nations community and the Rural community, and the Chief and Council's delegate in the First Nations community. Additionally, permission was obtained from the principal of each school, and informed consent was obtained from all participants prior to their own interview. Girls were approached only after written parental consent was received, requested from the mother at the end of her interview. (See Appendix C for copies of all but the community-level approvals. See Appendices D and E for parental and participant consent forms and the written explanation of the study given to each participant.)

There was a risk that answering weight-related questions might bring up personal problems for participants. Each participant was told they did not have to answer any questions they did not wish to, and that they could stop the interview at any point. Girls were told that if their interview indicated a potentially serious risk to their health, as assessed by their score on the EAT, this would be discussed with them, and then with their mother or a counsellor. Other than this, and the release of transcripts to participants

who requested a copy of their own interview, no one was given access to the individual data. No names have been or will be used in this or any report. Potentially identifying features of individual participants have been altered to protect confidentiality.

A summary of preliminary findings was sent to each participating family, the school, the school divisions and the Chief and Council in the First Nations community. (See Appendix F). Additionally, a copy of the final report will be sent to the schools, the school divisions and the First Nations community.

The Research Sites

I was interested in interviewing Aboriginal and non-Aboriginal middle-aged women and their teen-aged daughters living in an urban setting or nearby rural communities. The urban centre was Winnipeg, which has a population somewhat over 600,000 (Statistics Canada, 1994). Winnipeg is the major city and capital of Manitoba, a prairie province in the geographic centre of Canada.

The samples were obtained by randomly selecting female Grade 8 students from four schools, and extrapolating the generated list to include the mothers. Grade 8 was selected because it was assumed that body awareness would be heightened around puberty. Randomization was used primarily to assure girls that their weight was *not* the basis for their inclusion in the sample.

The four research sites were selected based on ethnicity and income data collected for the 1991 Census (Statistics Canada, 1994; 1995b; Winnipeg School Division No. 1, 1996). Only schools with more than 25 female Grade 8 students on their roster were

considered.

The median income for families with children in the catchment area of the Aboriginal heritage school was $16,000 with an 80.4% incidence of low-income families (Winnipeg School Division No. 1, 1996).[13] The median income for families with children in the catchment area for the Suburban Winnipeg school was $78,700 with a 2.8% incidence of low-income families. The most common ethnic origins for this neighbourhood were British, Jewish and German, with Aboriginal presence described as "negligible" (Winnipeg School Division No. 1, 1996).

A rural Manitoba First Nations community within 200 kilometres of Winnipeg, and where English is commonly spoken, was selected. This community of approximately 3,000 people is considered Ojibway. The rural non-Aboriginal community was selected to match the data already collected for the First Nations community as closely as possible, using the then-current Statistics Canada report (1994) to estimate population size and household income data for rural communities.[14] Communities with a singular ethnicity and those affected by Manitoba's 1997 flood were not considered. The selected town's population was approximately 2,700 and was about 60 kilometres from Winnipeg. Although between 1/8 and 1/16th of the adult residents work in Winnipeg, the town is considered rural (Local Business Development Corporation, personal communication, November 25, 1997). The median income for families in this community in the 1991

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[13]This is higher than the median income of $10,837 reported for Manitoba Aboriginal families with incomes living off-reserves (Statistics Canada, 1995b).

[14]The median income for the First Nations community was $17,500. The median income reported for those living on-reserves was $5,916 (Statistics Canada, 1995b).

Census was $36,244, with a 12.5% incidence of low-income families. Residents were primarily Ukrainian, French and Scandinavian. Students are drawn from several small towns in the surrounding area.

To summarize, the research sites and the samples they yielded are as follows:

- Non-Aboriginal mothers and daughters
  1. Suburban Winnipeg school
  2. Rural Manitoba school

- Aboriginal mothers and daughters
  3. Urban Aboriginal school in Winnipeg (supplemented with snowball sample)
  4. Rural Manitoba First Nations community school.

Implementation

The approval process and the timing involved in the various requests are detailed in Table 3.1. Following receipt of pertinent consents, the data were collected from January, 1997 to December, 1998, with all interviews done by the investigator. The interviews were staggered as follows:

- From January 7, 1997 until October 21, 1997 in the First Nations community.
- From February 17, 1997 until May 29, 1997 at the Suburban location.
- From January 19, 1998 until December 9, 1998 with Urban Aboriginal families.
- From February 9, 1998 until May 3, 1998 in the Rural community.

Because the interview was similar to one used in a previous study, pre-testing focussed on the added components. The consensus, restraint and body shape questionnaires were pre-tested with 10 individuals, and the entire interview was piloted with one mother-daughter pair in the First Nations community. No substantive changes were made to the interview, and the two pilot interviews were included in the study.

Table 3.1 Time-line for the Approval Process

Agency/School	Requested	Received
Faculty Committee on the Use of Human Subjects, University of Manitoba	June 7/96	June 24/96
Chief and Council, First Nations community	Sep 6/96	Jan 27/97
School boards:		
Research Advisory Committee Winnipeg School Division No. 1	Sep 26/96	Nov 19/96
1st revision	May30/97	June 10/97
2nd revision	Oct 6/97	Oct 8/97
First Nations community	Sep 6/96	Sep 19/96
Rural community	Nov 27/97	Dec 10/97
Principals and introductory letter to parents requesting release of address:		
Suburban school: Initial approach	Nov 18/96	
Meeting with teacher	Jan 21/97	
Letter to parents	Jan 22/97	
First Nations community school: Initial approach	Sep 6/96	
Letter to parents	Apr 10 & 29/97	
Inner city school		
School #1: Initial approach	Sep 3 & Nov 19/96	
Meeting with Grade 8 students	Dec 3/96	
Letter to parents - Insufficient response	Dec 3/96	
School #2: Initial approaches	June 26 & Sep 8/97	
Letter to parents - Insufficient response	Sep 18/97	
School #3: Initial approach	Oct 16/97	
Letter to parents	Nov 4/97	
Rural school: Initial approach	Sep 27/97	
Letter to parents	Jan 12/98	
Mothers - consent for themselves, and after their own interviews, for their daughters. Daughters -informed consent for themselves.		

In each school, the research project started with the principal arranging for information describing the project to be mailed home to all of the parents of Grade 8 girls. (See Appendix G for letter.) This mailing included information about the project and a request for mothers to call the principal if they did not want their name provided to the investigator. It was stressed that this did not constitute agreement to participate, but was only for contact purposes. Families who declined at this point were considered as refusals. A random sample of 25 girls was generated at the Suburban and Rural schools. Five additional families (selected at the time of randomization) were added to the Suburban sample. A population sample was used in the Aboriginal schools because class size was small. The Urban Aboriginal sample was supplemented with a snowball sample, as stated earlier, by requesting participants, employees of Winnipeg Aboriginal organizations and personal contacts to recommend Aboriginal mothers living with a daughter between the ages of 12 and 15 who might be willing to be interviewed.

Next, mothers were contacted and, if willing, interviewed. They were asked for signed consent for their own participation prior to their interview. Permission to approach their daughters was requested at the end of their interview. Signed parental consent was obtained prior to contacting students. No mother objected to her daughter being approached for an interview, although two girls chose not to participate. Informed consent was also obtained from students prior to their interview. The written explanation of the study and the consent forms were explained to each participant and a copy was left with them. (See Appendices D and E.) The entire interview was tape-recorded, including comments made while participants were completing the questionnaires. There were six

exceptions. Three girls and one woman asked not to be taped. Their responses to the interview questions were written down as fully as possible at the time and additional notes were added immediately after the interview. Equipment malfunction led to another four interviews not being taped, initially. In two cases, the open-ended portion of the interview was subsequently taped in a repeat interview. Compared to notes from the earlier interview, both girls gave similar responses in the second, even with a five-month delay between interviews in one case. A typist transcribed the interview tapes into computer files. Consensus responses and test scores were also entered.

The interviews with mothers consisted of a request for background information, the oral interview and the administration of the questionnaires. The interview procedure for the daughters was similar, except background information was not requested.

The majority of the participants were interviewed in their homes (73.9%). Interviews also were conducted at school (13%, including 1 woman). This included most of the First Nations community girls (66.7%). Less frequently, interviews occurred at the woman's place of work (8.1%, including two girls), a restaurant (2.5%, 2 women, 2 girls) and at my or my host's residence (2.5%, 3 women, 1 girl). The girls' interviews took from 45 to 110 minutes, averaging 63 minutes. The women's interviews took from 50 to 240 minutes, with the non-Aboriginal women's interviews about 30 minutes longer than the Aboriginal women's (114 and 84 minutes, respectively). Although these interviews were long, participants did not seem to fatigue. A more serious problem was shyness in some of the girls.

It took approximately 1,200 efforts to contact families to conduct these interviews.

About one-quarter (314) of these were home visits. Approximately equal numbers of phone calls were made to each of the four samples. With the exception of the snowball sample, home visits to Aboriginal mothers were disproportionately higher. I made four times as many home visits in the Aboriginal samples compared to the non-Aboriginal samples (190 vs. 50, respectively). Often these contacts were unannounced home visits because there was no phone in the home or the phone number was unlisted. For the randomized Urban Aboriginal sample, I had only the girls' names, which sometimes varied from the mothers' names. *Dropping by* was the method used by the schools, and seemed preferred by most participants. Appointments were arranged if suggested by the participant and this worked well when used.

Contact with the girls was achieved with about a third of the calls on the mothers except in the snowball sample. There, my calls were to intermediaries, who arranged the interviews with the mothers. This was a much easier process, although it then took more effort to contact the daughters. This sample took the longest to achieve. As anticipated, it was very difficult to find Aboriginal mothers with young teen-aged daughters who were both amenable to participating in the interview.

Working through the school encouraged trust and was likely the reason some families participated. Starting early in the school year would have been preferable, but was not feasible given the circumstances. Although interviewing people at home means less control over noise levels, distractions and interruptions, it is more comfortable for some women, and this is critical in a study that relies on people talking.

Sample Selection

The goal was to have a sample size of 20 mothers and 20 daughters at each of the four locations. A sample size of 20 in each subgroup is sufficient to demonstrate diversity and consensus on common themes (Romney et al., 1986), and was considered feasible logistically in terms of fieldwork.

Details regarding sample selection are summarized in Table 3.2. The sampling frame consisted of all female students enrolled in Grade 8 at the selected schools in the academic year sampled. Exclusions were made due to a recent death in the family, severe illness in the mother, developmental limitations, being a 2nd twin, or if the mother and

Table 3.2 Sample Selection Process and Response Rates by Location

Stage of sample process	Suburban	Rural	Urban Aboriginal	First Nations community	*N*
Sampling frame[a]	46	52	28	35	161
Name not released[b]	5	5	--	--	10
Exclusions[c]	4	0	17	10	31
Random sample	28	25	11	25	89
Refusals -by mother	7	4	1	6	18
-by daughter	1	1	0	0	2
Families in sample	20	20	10	19	69
Response rate - pairs, %	60.5	70.4	90.9	76.0	71.3

[a]The sampling frame consists of the girls on the Grade 8 class list at each school.
[b]Pre-randomization refusal rates were 10.9%, 9.6% and 6.2% for the Suburban, Rural and Total samples, respectively. They were calculated using the sampling frame as a denominator, and these refusals have been considered in the response rates.
[c]One girl was excluded after being interviewed.

daughter were not living together. Three step-mothers and one grandmother were included in the sample. When the student no longer attended the sampled school, the family was excluded only if they had moved without leaving a forwarding address. Some exclusions were made prior to randomizing the sampling frame, but most conditions became known only after attempting to contact the family. The eventual sample derived from the Urban Aboriginal school consisted of only 11 families. This sample was supplemented with 11 additional families obtained by the snowball method of sampling.

Overall, 71.3% of mother-daughter pairs from the random sample participated. The final sample consisted of 163 interviews: 80 mother-daughter pairs and three mothers. Response rates were 90.9% and 76.0% for the Urban Aboriginal and First Nations community samples; 60.5% and 70.4% for the Suburban and Rural samples. Three women were included in the sample without their daughters (from the Suburban, Rural and Urban Aboriginal locations). In two cases, the girls declined the interview. The third girl was excluded because she seemed to have difficulty understanding the majority of the questions.

The Research Participants

Demographic Characteristics

Selected demographic characteristics of the participants at the four locations are summarized in Table 3.3. The mean age for the girls was 13.5 years. There were no statistically significant differences in the girls' age. The Aboriginal women were younger (ANOVA; $F = 9.39$, $df = 1, 79$, $p = .003$) than the non-Aboriginal women. They had a

Table 3.3 Characteristics of the Research Participants by Location

Characteristic	Suburban	Rural	Urban Aboriginal	First Nations community
Mothers, *n*	21	21	22	19
Daughters' mean age	13.3	13.4	13.5	13.9
Range	13-14	12-14	11-15	13-15
Mothers' mean age	42.1_a	41.3_a	36.7_b	39.4_b
Range[a]	34-56	34-47	29-47	29-52
Living with partner, %	71.4_a	85.7_a	27.3_b	84.2_a
Mean no. children	2.9	2.3_a	3.4_b	3.8_b
Range	2-5	1-4	1-7	1-7
Mothers' education[b]				
< High school, %	14.3	14.3	31.8	57.9
Finished high school, %	14.3	28.6	9.1	5.3
Some post-secondary, %	71.4	57.1	59.1	36.8

Note. Cells with different subscript letters were found to be different at $p \leq .05$. [a]One grandmother is not included in the age range to protect confidentiality. [b]Educational level of Suburban and Rural women differed from that of the First Nations community women. This data was tested using Statistics Canada's categories (1993), but categories are collapsed here. Post-secondary programs include certificate, diploma and university degree programs and do not necessarily require high school graduation.

greater number of children than the Rural women (Kruskal Wallis $H = 11.03$, $df = 3$, $p = .01$). There were also significant differences between marital status at the four locations ($\chi^2 = 21.5$, $df = 3$, $p = .00008$).[15] As can be seen from Table 3.3, the Urban Aboriginal

[15]Living alone or with a partner was tested with a chi square. In testing individual pairs of locations to locate the differences, only the comparisons between the Urban Aboriginal women and the other women were significant (with the Suburban women, $\chi^2 = 8.38$, $df = 1$, $p = .004$, Fisher's Exact Test $p = .006$; with the Rural women, $\chi^2 = 14.9$, $df = 1$, p

women were less likely to be living with a partner. The First Nations community women had fewer years of formal schooling than the non-Aboriginal women (Kruskal Wallis $H = 10.5$, $df = 3$, $p = .02$), although there were university-educated women at each location.

Most participants gave multiple responses when asked to identify their ethnicity or ancestry. The non-Aboriginal participants were all of European ancestry. Sixteen women said they were Canadian (7) or French Canadian (9). The other 26 women gave multiple origins stemming from the European continent. Most frequently mentioned were British (43), followed by Slavic (18), central European (15), and Scandinavian (5) countries, Russia (2), and Greece (1). Two said they were Mennonite and several said they were multi-cultural. The girls identified themselves similarly, although several were born in the United States. Four women had been born outside of Canada but all had lived in Canada for over 20 years.

Aboriginal participants said they were Cree (14), Ojibway/Saulteaux (9), "Native" (10), "Aboriginal" (8) or "Metis" (8). Girls also used "Indian" (9) or "treaty Indian" (1) or "status" (1). One woman said she was "Anishinaabe." No one said they were First Nations. Despite being known as an Ojibway community, only one of 19 women identified solely as Ojibway. Two women said they were Ojibway and Cree and nine said they were Cree. They gave similar responses for their husbands' ancestry. Aboriginal participants identified European backgrounds as well, including British (8), French (7),

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= .0001, Fisher's Exact Test $p = .0002$; and with the First Nation community women, $\chi^2 = 13.3$, $df = 1$, $p = .0003$, Fisher's Exact Test $p = .0004$).

Germany (3) and Russia (1). Girls answered similarly, adding Slavic countries, Jewish and White.

Three mothers in the Rural community identified themselves, but not their daughters, as partially Native. The girls did not self-identify as Aboriginal either. One woman in the First Nations community was not Aboriginal. She had lived on the reserve all her adult life and she described her daughter as Native. There was also one girl in the Suburban sample who identified herself as Native, whose mother was not. These five families were excluded when running analyses for comparisons of Aboriginal and non-Aboriginal families.[16] There were three other girls in the non-Aboriginal samples who reported a degree of Aboriginal ancestry ("1/8 Native" or "some Native blood six generations back"). While the girls' identification has personal meaning, it did not seem relevant to this discussion. Language is sometimes used as a marker of ethnicity. There were 10 women who spoke an Aboriginal language, usually Saulteau (Ojibway) or Cree. Eight were in the Urban Aboriginal sample. The two women in the First Nations community who spoke an Aboriginal language had both grown up elsewhere.

Table 3.4 gives employment characteristics of the women. There were no significant differences between locations in whether women were working or not (χ^2 = 4.94, $df = 3$, $p = .18$, $N = 83$, N.S.), or whether there were one or two wage earners in the household ($\chi^2 = 7.40$, $df = 3$, p = .06, $N = 70$, N.S.). Almost three-quarters of the women were employed, either full-time or part-time. Another 14.5% were homemakers and

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[16]Running the analyses with and without these participants did not materially alter results.

Table 3.4 Employment Characteristics of the Research Participants

Characteristic	Suburban $n = 21$	Rural $n = 21$	Urban Aboriginal $n = 22$	First Nations community $n = 19$
Number of wage earners in household, %				
Two	52.4	61.9	13.6	52.6
One	42.9	33.3	50.0	31.6
None	4.8	4.8	36.4	15.8
Women's Employment Status, %				
Full-time	66.7	42.9	54.6	47.4
Part-time	9.5	38.1	13.6	10.5
Homemaker	9.5	14.3	13.6	21.1
Unemployed or student	14.3	4.7	18.2	21.0

14.5% were unemployed or students. Including part-time employment, there were two wage earners in 44.6% of the households, one wage earner in 39.8% and no wage earners in 15.7% of households. In the First Nations community, there may have been more employment opportunity than usual due to flood-related projects. However, most of the employment was unrelated to the flood.

The mean household income was requested in increments of $5,000 up to a cut-off of $75,000. This under-estimated income for some families at three of the four locations. There are a number of other ways that income was likely under-estimated. In identifying the source of their income, few families mentioned the Child Tax Benefit (qualifying families received up to $1,500 and $1,800 per year for each child under 7 and 18, respectively). Aboriginal people living on-reserve do not pay income tax, GST or

PST, and housing is provided at no cost to Band members. Urban-rural differences in purchasing power further limit the comparability of incomes. For these reasons, the proportion of low-income families was not calculated, nor were the locations tested for differences in income level. The range and median income at each location were:[17]

- $12,500 to ≥ $75000 ($60,000) for the Suburban families.
- $27,500 to ≥ $75000 ($52,500) for the Rural families.
- $7,500 to ≥ $75000 ($22,599) for the Urban Aboriginal families.
- $7,500 to $57,500 ($17,500) for the First Nations community families.

Six women reported receiving social assistance, one in the First Nations community and five in the random portion of the Urban Aboriginal sample. Reported income was lower in the random than the snowball portion of the Aboriginal sample, ranging from $7,500 to $22,698 (median $17,500) and $17,500 to over $75,000 (median $52,500) respectively. The snowball sample reported higher educational levels and more two wage-earner households than the random Urban Aboriginal sample.

Anticipating there might be some difficulty obtaining and interpreting income data, women were asked how well their income met their needs (see Table 3.5). There were significant differences in how participants rated the adequacy of their income (Kruskal Wallis test; $H = 10.3$, $df = 3$, $p = .02$). Urban Aboriginal women rated their incomes as least adequate; Rural women rated theirs as most adequate.

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[17]All but two women from the First Nations community, and one each from the Suburban and Rural communities provided income data ($N = 79$). The midpoint of the range, or the stated amount when given, was used to calculate the median. Median incomes are lower for the Suburban location and higher for the other three locations than medians based on data collected for the 1991 Census (Statistics Canada, 1994; 1995b; Winnipeg School Division No. 1, 1996).

Table 3.5 Participants' Rating of Adequacy of Income, by Location

Location	*n*	Mean[a]	1. Very well %	2.Adequate %	3. Some difficulty %	4 & 5. Not well%
Suburban	21	2.6	14.3	38.1	28.6	19.0
Rural	21	1.9	23.8	61.9	14.3	0.0
Urban Aboriginal	22	2.8	4.5	31.8	54.5	9.1
First Nations	19	2.5	21.1	26.3	36.8	15.8

Note. Close-ended responses from 1 to 5 were: *very well, adequately, with some difficulty, not very well* and *inadequately.* These last two responses were combined.
[a]Median ratings were 2 for the Suburban and Rural communities; 3 for the Urban Aboriginal and First Nations communities.

I also asked about home ownership as a rough estimate of family resources. Almost everyone in the First Nations community (94.7%) and the Rural community (95.2%) said they owned their own homes; 66.7% of the Suburban families and 22.7% of the Urban Aboriginal reported home ownership. Car ownership might have been a useful indicator, especially in the First Nations community, where housing was provided, distances were greater and public transportation limited.

Weight Status

There was a significant association between mother's and daughter's BMIs (Pearson's correlation = .46, $p < .0001$).

Figure 3.1 shows the distribution of BMI for girls and women by location. A multi-way ANOVA pinpointed significant differences by generation ($F = 40.07$, $df = 1$,

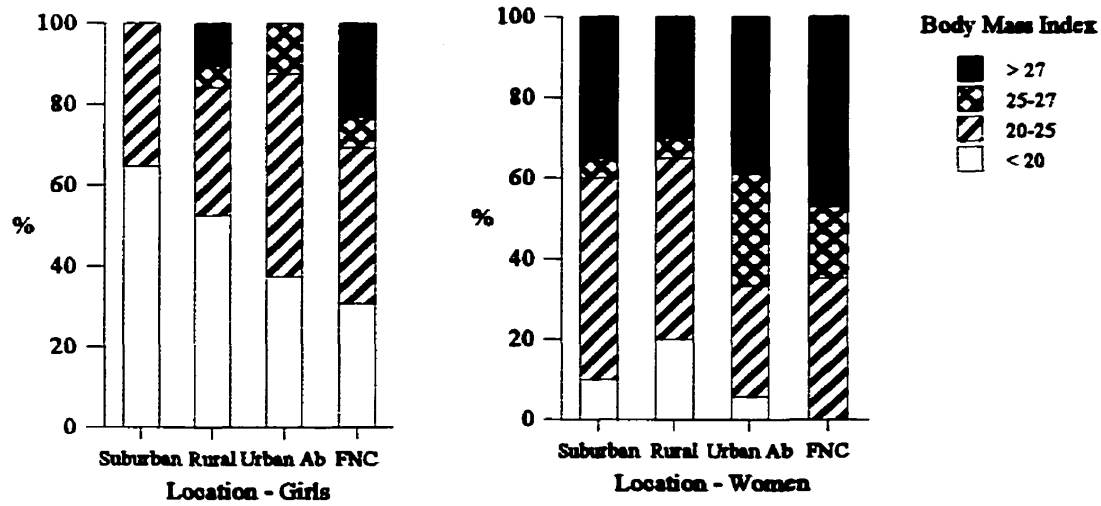

Figure 3.1. Distribution of Body Mass Index (BMI) by location for girls and women. BMI was calculated from self-reported height and weight (weight in kilograms divided by height in metres squared). BMIs were based on sample sizes of 17, 19, 16 and 13 for the Suburban, Rural, Urban Aboriginal (Urban Ab) and First Nations community (FNC), respectively for the girls and 21, 21, 20 and 18 for the women.

137, $p < .000000$) and ethnicity ($F = 7.49$, $df = 1, 137$, $p = .007$).[18]

The mean BMI for Aboriginal girls was 21.8 ± 0.87 SE. The mean BMI for non-Aboriginal girls was 20.2 ± 0.83 SE. The majority of girls at all locations had BMIs under 25, with many under 20. There were girls with BMIs above 25 with the exception of the

[18]There were no significant differences by Region ($F = 1.07$, $df = 1, 137$, $p = .30$), or for any of the interactions. This data was incomplete for 10.3% of participants (with more missing data for girls and for Aboriginal participants). Of the girls with missing data, there were four Urban Aboriginal girls, two First Nations community girls and one Suburban and Rural girl who selected a Body Shape Drawing (BSD) one shape above the median for their location. Two First Nations community girls selected a BSD one shape below the median and the remaining girls with missing data chose the median shape. Heavy BMIs in the Urban Aboriginal girls were likely under-represented. The two Urban Aboriginal and one First Nations community women with missing data selected a BSD that was one shape heavier than the median for their location. Testing the BSDQ responses yielded similar conclusions (see Chapter 9).

Suburban location. The mean BMI for Aboriginal women was 27.5 ± 0.77 SE. A majority of Aboriginal women had BMIs of 25 or more. For the non-Aboriginal women, the mean BMI was 24.8 ± 0.77 SE. A majority of the non-Aboriginal women had BMIs below 25, although there were 30% with BMIs over 27.

These results are similar to other studies in finding that a higher proportion of Aboriginal girls and women had high BMIs. The main purpose for using the BMI in this project was to provide context for participants' weight-related comments.

Representativeness

The sample consisted of Aboriginal and non-Aboriginal middle-aged women with 12- and 13-year-old daughters, living in Winnipeg or a nearby rural community. The mean age of the girls was 13.5 years. The Aboriginal women at both locations were younger, had more children and lower income and education levels than the non-Aboriginal women. The Urban Aboriginal sample also included a higher proportion of single women. There was considerable diversity within each sample. For example, besides the diversity in education mentioned earlier, there was at least $50,000 between the highest and lowest reported incomes at each location.

The samples at three of the four locations were random samples with a good response rate. The Urban Aboriginal sample consisted of a random sample from an inner city school and a non-random snowball sample of higher income Urban Aboriginal families. Although it cannot be assumed that this sample is representative of either population, there is a large urban Aboriginal sample in Winnipeg that includes lower,

middle and higher-income households. The majority of Aboriginal people now live in urban centres and rural communities, including 40% of "treaty" Indians (Tookenay, 1996). It remains an important population to attempt to understand.

The First Nations community from which this sample was drawn was relatively accessible to Winnipeg, and this has influenced its history. The majority of the women interviewed spoke only English. The levels of education, employment and income were higher than reported for other communities in Manitoba (Statistics Canada, 1995b). As in other southern Manitoba First Nations communities, this community had in-door plumbing, electricity and year-round road access to urban centres. Residents had reasonable access to grocery stores, restaurants and infra-structure support for activity. The enormous diversity amongst Canada's First Nations is frequently referred to by First Nations peoples. Even communities adjacent to each other may have very different social and cultural support for health behaviours, as reported by Martens (1999, p. 78) in a study of factors affecting breastfeeding. As Martens cautioned, a large random sample may mask diversity, making individual community studies sometimes more appropriate. Rather than generalizing, results may suggest concerns be investigated elsewhere.

The response rate was lower in the non-Aboriginal families, but more important, five women in the non-Aboriginal samples gave weight-related reasons for their decision not to participate in the research. Concerns about weight may be under-estimated in the non-Aboriginal families. No Aboriginal participant mentioned weight in her decision not to participate. The majority of participants gave no reason for declining the interview or said that life was too busy or too difficult at the time, or their daughter did not want to

participate. One First Nations community woman cited a desire for privacy.

As anticipated, ethnicity is confounded with a number of variables, including income, education, age, marital status, parity and weight. Because the intent of the research was to explore how women and girls in different situations perceived weight, not to untangle the influences of race, income or socio-economic status on those perceptions, this confounding was not considered a critical limitation. It is essential, however, to address in interpreting results.

Identifying Participants

In the case studies, I have used a pseudonym, but in discussions of themes, I refer to participants using the following coding system:

- The first letter refers to the participant's location (*S* for *Suburban*, *R* for *Rural*, *U* for *Urban Aboriginal*, and *F* for *First Nations community*.
- The second letter is either *M* for *mother* or *D* for *daughter*.
- The number that follows identifies each participant uniquely at each location.

So *SD19* would be the Suburban daughter from the 19th interview set at that location. *UM19S* would be the mother from the 19th Urban Aboriginal family interviewed. The final *S* indicates that this family is part of the snowball sample. This system allows the source of quotes to be easily identified. I tried to select quotes from both generations at the four locations to represent the frequency and intensity of the issues as presented.

In order to improve readability, I have deleted repetitive words, false starts, and *ums* and *uhs* from quotes unless they provide emotive context. Identifying features of participants have been altered to protect confidentiality.

CHAPTER FOUR

On Women, Weight and Identity

> We know that every woman wants to be thin. Our images of womanhood are almost synonymous with thinness (Orbach, 1981, p. 69).

> The strength that Aboriginal people gain today from their traditional teachings and their cultures comes from centuries of oral tradition and Aboriginal teachings, which emphasized the equality of man and woman and the balanced roles of both in the continuation of life. Such teachings hold promise for the future of the Aboriginal community as a whole (Hamilton & Sinclair, 1991, p. 476).

One of the initial weight questions, asked to get the interview started, was: "Is weight more important to women than to men [or to girls than to boys]?" Because I expected virtually everyone to say "yes," my real question came next: "Why is this? What are the influences that make weight so central in the lives of girls and women?"

The girls at all four locations answered as anticipated. The Suburban and Rural women answered as anticipated. There was no such consensus amongst the Aboriginal women, leading me to question the corollary assumptions that weight was a woman's issue, central also to the lives of Aboriginal women and girls. Was weight the same kind of issue for Aboriginal and non-Aboriginal women?

Weight was clearly important to the majority of Aboriginal participants that I interviewed. Whether the measure was prevalence of dieting, promotion of weight control, level of body dissatisfaction, restraint score, or risk for an eating disorder, Aboriginal participants, particularly those living in the First Nations community,

consistently demonstrated greater concern about their weight than non-Aboriginal participants, as will be detailed in subsequent chapters. Their weight concerns were also expressed in their interviews.

But there were competing impressions as well that suggested weight might be a different issue for the majority of Aboriginal participants. This came across immediately and strongly in the different responses to the opening question (see Table 4.1).

Table 4.1 "Is Weight More Important to Women than to Men?" Women's Responses by Location

Location	*n*	Yes %	No %	Other %
Suburban	20	95	0	5
Rural	20	95	5	0
Urban Aboriginal	20	60	30	10
First Nations community	18	50	50	0

On the Importance of Weight to Women

Non-Aboriginal Women's Responses

All but two Suburban and Rural woman said weight was more important to women than to men, although both implied some agreement with the statement. One said she would probably agree that weight was more important to women, but she thought the point of the question was *"fitness or bodily appearance, body image."* And so she disagreed, saying these were of concern to both, and sometimes of more concern to men. The other said, *"I think there's a higher percentage of women who are overweight, but I*

don't think the issue is any different if it's an overweight man, woman. No."

Generally speaking, the Suburban and Rural women answered this question easily. The answers came quickly, without any pause to ponder the question, and they were given with certainty. The responses consistently described strong societal pressures on women pushing them to be concerned with their appearance and weight.

Comments about media images of perfection were ubiquitous throughout the interviews. RM19, for example, said *"there's a perceived image out there of the perfect woman"* that comes from *"TV, magazines, everything."* Others discussed how women are judged. SM10 said: *"Women who are perceived as being overweight, receive more public scrutiny and criticism than men."* SM7 extended this to aging: *"A man, he almost grows old, distinguished looking. Where a woman's constantly worrying about wrinkles, and how her appearance is in front of the public, or friends, or whatever the case may be. Whereas men, 'you take me as I am.'"*

The consequences of not measuring up to appearance standards were perceived as more serious for women than for men:

> *RM1: It almost seems like [sigh] it's been, through society, told to us that we should be able to run a perfect house, look great for our husbands at all times. And that's just a general concept of what we're supposed to be. And if you don't meet that criteria, then obviously at some point you may have failed. And a lot of women I know, friends of mine, have a real problem with that. Like, "so and so isn't going to care for me because I've put on a few extra pounds."*

> *RM4: Yeah seems like a lot of women who objectively don't have to worry about it [laughs] do worry about it. ... I guess we do it to each other probably. A lot of talk and competition to be sort of slim and fit and all that. Yeah, there's kind of the peer pressure. I think there's an assumption of overweight being connected to laziness, slothfulness, not caring about one's appearance.*

These pressures were described in ways that indicated they were pervasive influences on many important aspects of a woman's life, consequently affecting her thinking, feeling, behaviours and even her identity.

> *SM13: Women seem to always want to have a boyfriend, or a relationship, or get married. And I think that a lot of women feel that to do that, they need to be thin and good looking, sort of all the time. And I don't think men feel that pressure quite as much as women do. They don't seem to have to deal with it as much as girls and women do. It doesn't seem to matter often what the man looks like.*
>
> *SM15: Again I think it's fashion. It's clothes. It's that we are always perceived as needing to be beautiful and attractive and it's almost like we need that to feel good about ourselves to attract, and I'm not talking about the opposite sex, just attract people, attract attention.*
>
> *SM16: A lot of men, maybe think that they've got a bit of a belly or something, but they never go on and on about it. I think more for men it's a health concern. Like "Will this affect my health?" as opposed to "Gee, do I look good in these jeans?" So to me, I would think that most men can tolerate a bit of extra weight. ... People will come up to them and say "Oh you're getting a little paunch." But they would never do that to a woman. She would be ... all uptight or crying or something [laughs] going "Oh my God. How could he say that to me?" Maybe we're supposed to think we're all supposed to look like the Baywatch girl.*

Women talked about weight as if it was a cultural imperative. Women needed to pay attention to this in order to feel good about themselves, to be attractive to other people, to be respected. It was part of a woman's responsibility, part of her job to look attractive. It was just part and parcel of being a woman. There were women who responded to this question, using language that intimated these concerns are incorporated into a woman's identity. SM11 put it clearly: *"He's not weight conscious. He's health conscious. Men see weight more as a tool.* ***For women, it's who they are.*** *"* This linking of external pressures to be slim and attractive, and the way women see themselves as women, also came up in the following comments:

SM19: It's just something that generations and generations have just, it's inbred in you that you have to be and look and do a certain way. Nothing that's overt, just general, the way advertising is, and the way we get up every morning and put make-up on. My kids see that you know. ***It's just the way we are.***

RM2: It's always been that way, I guess. That's always the way the women were looked at, I found. And I think that'll never change. It's just they're supposed to be sexy and thin and ***that's just the way it goes with what women are.***

These observations were often delivered with large sighs, or laughter serving to indicate disagreement with the way things were, and sometimes women stated outright that this was not right. RM1, the rural woman who spoke about being viewed as a failure if you don't run a perfect house, ended by saying *"I don't totally agree with the whole idea but talking with different other women, it's almost ingrained in us."* SM3 clarifies that it is not vanity but a reaction to the sum total of all these daily pressures: *"I don't think it's vanity. I think it's just perceptions and peer pressure and everything else they encounter day-in, day-out."*

Women were not necessarily describing the impact of weight on their own lives. They were describing the social context in which they live that makes weight more important to women than to men. There seemed to be close to unanimous agreement about these pressures and their impact: Weight is critical to women's personal identity and success in life. Consequently, it is something that girls and women cannot afford to ignore.

Aboriginal Women's Responses

In contrast to the Suburban and Rural women, half of the women in the First Nations community (9 of 18) did not agree that weight was more important to women than to men. They said it was equally important to both. Some seemed puzzled by the question and worked out their response as we talked. The women who agreed that it was more important to women gave different reasons for their conclusion. Half discussed how women gain weight more easily, seem to have a harder time losing it and they tied weight concerns to health concerns. There were only a few comments about the importance of looking good to attract a man, although this came up in other parts of the interviews.

About one-third (6 of 20) of the Urban Aboriginal women said weight issues were equally important to women and to men. These women did not discount the importance of weight. They just applied their reasoning to men as well as to women, enlarging the discussion of media, for example, to include boys. The majority of the 13 who said that it was of greater relevance to women answered similarly to the non-Aboriginal women, focussing on societal pressures to be thin or the social stigma of being heavy. There were two Urban Aboriginal women who discussed women's propensity to gain and greater difficulty in losing.

Because the Urban Aboriginal women's responses overlapped with both the First Nations community and the non-Aboriginal women's positions, this discussion will focus on how the First Nations community women answered this question. Most of the First Nations community participants who agreed that weight was more important to women gave different explanations than the non-Aboriginal women.

Although nine women in the First Nations community said that weight was more important to women than to men, only three discussed women's need to be attractive to men. One commented that women had to look good for men and added that women didn't look at men that way. FM8's choice of words was interesting. She said, *"Well, if they're single and they want to try to look for a man."* FM8 has the woman doing the looking, rather than being looked at, giving a more active role for women than most of the non-Aboriginal women's words. The third woman takes a different tack, as I probed in an effort to understand if heavier weights were seen as more attractive:

> *FM12: 'Cause men really don't care how they look. [G: Hmm.] Well, they don't.*
> *G: Why do you think that's the case?*
> *FM12: 'Cause they think they could get any woman they want in the world, if they wanted to. [Laughs]*
> *G: They can get women without having to look good?*
> *FM12: Yeah.*
> *G: Whereas women?*
> *FM12: Has to try to look good in order to try to get a man. [Laughs].*
> *G: Are there any other reasons that you think women might be more concerned about weight than men?*
> *FM12: Well, the married women will worry about their weight because their husband might leave them for another younger, attractive, skinnier girl. The married men, even boyfriends, end up cheating on their girlfriends. But I do hear a lot of men saying "The reason why I get fat women, this way they wouldn't leave me." I have a lot of men friends to talk to, and I ask them. Just because, so the women wouldn't leave them.*
> *G: That's interesting. If you're heavy, then it might be more attractive to a man who's looking for a wife?*
> *FM12: No, no, no. Because the man is so insecure they want to find somebody they make sure they don't leave him. But they could go out and do whatever, 'cause they think that woman's so big that nobody will want her.*

Although size standards for fat and attractive were not clarified, she links *"attractive"* and *"skinnier,"* and clearly denies that *"big,"* was ideal. She implies the opposite in her explanation that insecure men like big women because *"they want to find*

somebody they make sure they don't leave him. But they could go out and do whatever, 'cause they think that woman's so big that nobody will want her." This is different than the non-Aboriginal women's comments that some women feared that if they gained weight their partners would leave them. According to this quote, being fat would increase a woman's risk of being trapped in a bad relationship, and so weight was important not just to attract a man in the first place, but to avoid an abusive relationship.

FM10 brought up clothing and ease of exercising as the reasons why weight was more of an issue to women: *"I have some friends that are heavier, and they say when they go in to buy clothes, it's hard to find clothes that fit. And also it's hard for them to get into exercising."* She elaborated that *"when they don't lose weight right away, it bothers them. They'd like to lose it, fast you know."*

Five women giving affirmative responses pondered who was trying to lose weight, or who was heavy, counted more women than men, and therefore concluded it was of more importance to women:

> *G: Do you think weight is more of an issue for women than for men?*
> *FM13: Yes. All the time. It's easier to put on weight than for a man. It's not too bad with men. Men can be fat and jolly. It's not healthy for either men or women.*
>
> *FM19: I think so, yeah. There's not many men that I see that are overweight. And I see more women overweight than men. Even the men say ... "Oh, it's so unfair that women have to fight so hard and restrict themselves from so much foods and keep up their activity to lose the food they eat, like to burn off the fat." And the men, I think because they're so muscley, you know they have so much more muscle mass than women, that they can burn calories faster than women.*
>
> *FM1: I think so yeah, because the women that I'm with they always talk about losing weight. There was about eight of us, we were all going to pre-natal at the same time. That's all they talked about, was "I'm going to lose this weight once I have this baby." That was the furthest thing from my mind.*

There is a hint that the social context is different for men than women in FM13's comment that *"Men can be fat and jolly."* Yet the emphasis is on physiological and health circumstances: Women put on weight easier; it's not healthy for either.

FM5 commented on society's impossible images for women:

> *FM5: I think women are more prone to gain weight. It's more of a problem in it's harder for women to lose it I find because women store fat in different ways than men do. I read somewhere in an article that once a woman gains weight it's harder for her to lose it, because they have more fat storage places. I don't know. [laughs] Something like that.*
> *G: Do you think it's more of an issue to women?*
> *FM5: I think so. Well, if you go to most of the exercise clubs in the cities and see the health spas, the majority of people in there are women.*
> *G: Why do you think that is?*
> *FM5: Because society holds a stereotype against women. Not a stereotype, but an image. Like they set us up so; an image that women can't fit.*

FM5 was the only First Nations community woman to refer to an ideal image in her response, and, in contrast to many Suburban and Rural women, it was not her first impulse. Note how she drew her conclusion based on her city experience, rather than her knowledge of the women in her community.

Those who did not see weight as more important to women also reflected on who was trying to lose weight, but they concluded that it was equally important to both, or in FM16's case, equally unimportant:

> *FM16: I don't know. To be honest with you, I don't know because I've never met anyone that's worried about their weight. ... No. I have friends that are overweight but it's not a major problem to them. And I don't see them as overweight.*

> *FM7: I think no. My husband is the same way too. He watches what he eats and stuff. In fact, he lost more than me.*

> *FM11: Oh, I think about the same.*

G: What are the reasons they're concerned with weight?
FM11: Well, for me when I tried to lose weight after I had my kids a lot of people like insulted me and everything you know.
G: I was getting the impression that people were nicer to each other here in terms of weight.
FM11: There are just certain people on this reserve that they're feeling like this, but other people you can get along because there are a lot of big people on this reserve and we never say anything wrong to them.

When queried further about why people were concerned, women most frequently spoke of health, but appearances and clothing also came up. These reasons were given as concerns for both men and women:

FM11: Some that are too overweight are scared to you know have a heart attack now.

FM16: Health wise.

FM2: I used to see my dad, he was really an overweight man and he got diabetes. And I see being overweight you can't get rid of all the food that's in you, and it probably turns like to some kind of sickness. That's what I always said, like it's nowhere to go and it just kind of turns to something like sickness, like maybe cancer. Maybe that's where cancer starts or diabetes, or even stomach problems. And I'm quite positive that all these sickness that the food can be [from] fast food. It just poisons the body.

FM9: Their appearance, I guess, if they're overweight.
G: Why do you think they're thinking about that?
FM9: I don't know, but I think for myself if I was too overweight then I wouldn't look right at all. Then I'd feel uncomfortable for health reasons. You know different little things like that. I think for healthy eh. You gotta keep your weight down too, somewhat. You know, not become overweight.

FM7: You feel so uncomfortable right now, like get back to your normal weight. You'll feel more healthier and you can do things more. Run up and down the stairs more. [Laughs] Short-winded. And I still have my clothes stuck in the closet. [Laughs]

FM15: They can't fit certain clothes when they go shopping. They have a hard time to fit into something nice.

FM17: For appearance.

FM18: I think it's because it could be of their friends, or the style of clothing. Could be their job or just their health.

Aboriginal women mentioned health as a reason for concern about weight more frequently than the non-Aboriginal women. As can be seen from responses already given, the non-Aboriginal women were more likely to use health to draw a contrast between men and women's interest in weight. They pointed out that if men were interested in weight, it was likely because of their health, but this was not the major reason for women.

Health came up for both Aboriginal and non-Aboriginal women in other parts of the interview as well. Non-Aboriginal women raised heart problems more often than diabetes (70.0% vs 22.5%). Aboriginal women raised both equally often (47.4%).

Despite shorter interviews, a higher proportion of Aboriginal women raised diabetes as a concern. More interesting, when the First Nations community women discussed diabetes, they talked about how diabetes had touched their lives or the lives of their loved ones, whereas the non-Aboriginal women largely discussed diabetes abstractly. The Urban Aboriginal women again did both. Only one Rural and one Suburban woman talked about people whom they knew had diabetes. All but one of the First Nations women who raised diabetes discussed it in the context of family or friends. For example, FM2 commented, *"I used to see my dad, he was really an overweight man and he got diabetes."* Another woman said, *"And the thing that bothers me, on Joe's family's side, there was diabetes."* FM10 said, *"'Cause I find there's a lot of sugar diabetes going around, and I think it scares a lot of people. You know you see them, umm,*

die so fast." These conclusions were based on first-hand knowledge.

The non-Aboriginal women's responses usually drew on more general knowledge. For example, RM4 said, *"I guess it [being heavy] can [affect health]. Yeah. I don't think it has much to do with mine. I guess heart and lung problems can be associated. Diabetes."* Listing issues in this way was a typical response style. Others referred to the authority of science to explain the connection between weight and health. For example, RM11 said, *"It's more dangerous to be heavier when you're older. It's harder on your heart, your bod[y]. That's proven it's harder on your heart. And there's diabetes. You can get a lot more sicknesses from being overweight. It's not healthy. It's just not healthy to be overweight."*

Three of the Urban Aboriginal people discussed Aboriginal peoples' greater risk for diabetes. Take, for example, UM19S's comment:

> *Genetically, Aboriginal women are prone to carry their fat around their middle and to have skinny legs. I think that's one of the reasons why they are such a hearty race and why we were able to withstand what we withstood, like generations ago. 'Cause when they tried to knock us out, and there was always feast or famine, 'cause of the fact that the women carried the extra fat around their waist made them able to be reproductive. Which helped them, definitely was a bonus. But now everything's so easy, and we're not in that feast and famine stage any more. It is more or less a hindrance now. And there's things such as diabetes and this sort of thing.*

Drawing on a scientific discussion of weight and the risk of diabetes for Aboriginal people when you are Aboriginal brings it closer to home. It does not, perhaps, make it as real as having *"witnessed people suffering from or fixing those problems,"* as one participant phrased it.

To summarize, only a few of the reasons that First Nations community women

gave for the importance of weight were uniquely applied to women. Two women stated that women needed to stay slim in order to attract a man. One focussed on women's desire to find clothing that fit, a reason that others raised as important to both men and women. Most of the First Nations community women, however, talked about how women gained weight more easily than men and had more difficulty losing, and logically, it must be more important to women because more women were trying to lose weight. The remaining reasons were common to both women and men, and included staying healthy, meeting personal weight goals, wanting to look good or avoid *"insults."*

These reasons for the importance of weight to women or people are mainly instrumental functions. Only one person brought up media influences (and this was in the context of city living). No one stated or implied that weight was part of being a woman. There was no discussion of being judged as slothful or a failure, of not feeling good about oneself or not measuring up to society's standards. This may be a function of conversational style. However, there were several other aspects of the interviews that suggested that although weight is important to a majority of the First Nations community women, the concerns varied from those of the non-Aboriginal women.[19]

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[19]Most of the girls (83%) agreed that weight was more important to girls than to boys (72.2% of First Nations, 75% of Suburban, 84.2% of Urban Aboriginal and 100% of Rural girls). The main reasons discussed at all locations were: (a) Girls care more about how they look, (b) to get a boyfriend, and (c) so you won't be teased. The Suburban and Rural girls raised the impact of media, advertising and wanting to be or look like a model. Only one First Nations community girl mentioned this. Several girls commented that boys get praised for other things (e.g. sports and macho qualities) and that boys sometimes are rewarded for being large, but girls never are. Diabetes was raised by only two girls (one Suburban and one Urban Aboriginal).

Talking about Weight and Judgment

Non-Aboriginal women more frequently commented about feeling judged, or judging themselves than the Aboriginal women. The way the two groups of women used the words "judge" and "judgment" was also different.

Eleven non-Aboriginal women used "judge" or a derivative in the context of weight 30 times. All used it to describe judgment around weight issues as a fact of life. For example, RM8 said, *"We look at people's competency often through their looks. And sure it's a judgment call [laughs], but we still do that."* RM21 referred to *"The judgmental look that you get buying clothes, that kind of stuff."* SM9 commented, *"If you don't show them anything else, they judge you totally on your appearance."* RM10 said, *"'Cause I always think about society and how it looks at you. ... The majority do look at people, judge a book by its cover."* This was the tenor of these comments. Only one woman used "judge" differently. In addition to this type of comment, she added that her husband did not judge her. Another rural woman compared being insider/outsider in two rural communities. Her comment, that when you're the outsider you're discriminated against, but as an insider you don't get judged on superficial qualities such as appearances may have some relevance to the First Nations community.

Eight Aboriginal women used these words 13 times, and all but one (an Urban Aboriginal woman) used it to reject judgment. A First Nations community woman also used the analogy to reading a book. However, unlike the rural woman quoted above, she rejected appearance-based judgment, and then went on to reject the whole concept of judgment:

> *FM16: No matter how much I weigh, or how much weight I've put on, that's not gonna change what's inside of me. It's just like reading a book. You don't judge it by its cover. And you don't judge it by what you see inside because we are not here to judge one another. We are here to accept each other for what we are. I think what I want to see in a person is what's inside, not what's on the outside.*

UM21S suggested this as an explicit value. *"We talk about that, I mean about not judging people. That's a big thing with us in general. As a family we don't judge people, don't judge the way they look."* UM9 said, *"We're non-judgmental we accept everybody for what they are and we go from there."* FM10 explicitly stated that people did not judge you on the basis of your looks in response to a question about how underweight people are treated: *"I don't think, like around here I know that, people don't really judge you by the way you look."*

Again, the way these words were used throughout the interviews can be seen as a reflection of the fabric of people's lives. The absence of commentary about women being judged based on appearances, or seeing other people unfairly treated because of their appearance, implies that the Aboriginal women who spoke with me did not perceive this as a large problem. It may be that other larger issues dominate consciousness, so that weight becomes relatively minor by comparison. This is speculative as it did not come up in the interviews.

Weight in the Context of Women's Lives

"We don't talk about weight in this house." This was one Urban Aboriginal woman's booming response to me, when I explained the research to her and requested an interview. There was no mistaking her meaning. She said it loudly, laughingly, and she

said it twice. She did agree to be interviewed, and her interview was consistent with her initial statement that weight was a non-issue to her. She was a large woman, and it was unusual to hear weight discussed in such neutral, disinterested terms. Few women indicated that weight was not something they ever thought about. I wondered if she was pulling my leg. On reflection, I think not. This woman's interview certainly wasn't typical, but there were a small number of heavy Aboriginal women who explicitly expressed a lack of concern about weight. This was not a defiant attitude but more that weight was viewed as irrelevant to their lives. Arguably, this perspective could affect even those who want to lose weight, if it is obvious in daily living, by legitimizing an alternative point of view to the slim ideal. It did not, however, have this effect on this woman's daughter, who was tolerant and protective of her mother's size, but very concerned about her own.

For those who are dissatisfied with their weight, the level of distress will depend on how important weight is to the individual. Unfortunately, the few questions intended to elicit this interaction between satisfaction with and the importance of weight failed to differentiate anything but the extremes. Participants' open-ended responses to whether they were happy with their looks contradicted their close-ended responses. That is, people who sounded as if they were quite satisfied stated they were "somewhat unhappy" and people who initially responded "no" and explained why they weren't happy with their looks often ended up categorizing their reaction as "somewhat happy." Most participants responded between these moderate but uninterpretable categories.

When asked what they would like to change about themselves, weight was

mentioned by about one-third of the women, except in the First Nations community where three of 18 mentioned it. Weight seemed to be an important issue to most of the Aboriginal women interviewed but perhaps eclipsed by other issues.

The anecdotes that came up in (or after) the Aboriginal women's interviews also positioned weight in a less central role. For example, after completing an interview with a woman from the snowball sample, I went for coffee with her and her friends. The women joked about being of the wolf clan, which, they said, means you are quiet until backed into a corner, and then you rip your opponent apart. This came up because the woman I had just finished interviewing had been up until three in the morning helping a friend protect her family from an abusive ex-husband. All of the women drew on their own experience to empathize and reaffirm the woman's actions. Their stories made it obvious that although this trauma was not an everyday occurrence, neither was it extraordinary.

Some Aboriginal women at both locations discussed problems, such as overcoming addictions (drugs, alcohol, gambling), escaping physical abuse, horrendous residential school experiences, and early pregnancies that foreclosed their opportunity for improving their lives. For the women who lived in poverty with its attendant issues of not having enough to eat, finding decent housing in a safe neighbourhood, and creating more opportunity for their children, weight and even health, seemed comparatively minor issues. They were emphasized only if they were creating serious problems, as attention to more immediate concerns stressed their personal resources.

Of course, there were also Aboriginal women who did not discuss these types of problems. Non-Aboriginal women may be dealing with equally serious issues, but they

did not discuss them with me. If discussing crises is more common to Aboriginal women, then they would have greater awareness of their friends' and neighbours' life problems. This in itself could create a context for "seeing" people that eases judgments of self and others.

Summary and Discussion

Whether discussing body politics at the local level or the international level, a "one culture/one gender" analysis cannot adequately represent women, as Lock and Kaufert (1998, p. 3) have observed, reminding us that class, religion, language, and ethnicity necessarily cross-cut gender. The findings of this chapter demonstrate this yet again.

To summarize, non-Aboriginal women almost unanimously viewed weight as of greater importance to women than to men. Aboriginal women were as likely to respond that weight was equally important to both genders. The reasons for agreement were also different. The non-Aboriginal women focussed on societal influences which they viewed as making weight an issue for women. The First Nations community women focussed on physiological differences between men and women, differences that made women fatter, and therefore made weight into an issue for more women. Media, appearance standards, and pervasive influences of feeling judged were discussed most frequently by the non-Aboriginal women, less frequently by the Urban Aboriginal women, and hardly at all by the First Nations community women in their explanations of the importance of weight. Aboriginal women focussed more on health, although participants from all locations

raised all of these issues (with the exception of feeling judged) in other parts of their interview. Responses here relate specifically to the question of whether weight is framed as an issue of greater importance to women than to men.

The survival issues that some Aboriginal women discussed also served to downplay the centrality of weight for the group, without necessarily making it a non-issue for individuals. The interviews with Aboriginal women were shorter, perhaps reflecting less interest in discussing weight issues, greater demands on their time and more urgent priorities, or a disinterest in the research process rather than weight as a non-issue. Despite the impression that weight might be less important to Aboriginal women, as the next chapter will demonstrate, there were Aboriginal women and girls for whom weight was a serious, and even distressing, issue. Some of their experiences fit the theory that girls and women focus on weight issues to substitute for lack of control in other aspects of their lives (Mackenzie, 1985; Thompson, 1996). The presence of serious survival issues may draw out as well as diminish the role of weight in women's lives. The way participants handled their weight prevents a conclusion that weight was a non-issue, or simply a health issue for Aboriginal participants.

As mentioned, Aboriginal women raised similar issues as the non-Aboriginal women elsewhere in the interviews. However, they were not fit into a gendered analysis, and so did not come up in discussing the relevant importance of weight to men and women. In fact, when I asked about the impact of feminism on the way women viewed weight, the Aboriginal women's responses indicated this was an inappropriate question. As Patricia Monture, a Mohawk woman and professor of law, has commented, the

women's movement is irrelevant to First Nations women: "The socially constructed boundaries of the feminist movement and the lives of many First Nations women have never crossed" (Monture, 1993, p. 335).

My interviews did not probe this further. First Nations authors writing on racism and sexism generally have emphasized the common interests between men and women rather than an analytical framework based on gender. Despite the recognition of greater oppression of Aboriginal women, there is a frequently expressed resistance to claiming feminism as relevant (Lachapelle, 1982; 1989; Monture, 1993).

Lachapelle (p. 257) explains there is a fear of dividing the Aboriginal community when issues of survival of that community necessarily take precedence. Other Aboriginal women writers suggest they have much in common with Aboriginal men and little in common with non-Aboriginal women (Brundige, Fedorick, & Finn, 1993; Green, 1980; Osennontion & Skonoganleh:ra, 1989). The issues are well-known and include poverty, inadequate housing, inadequate access to food, substance abuse, alcoholism and gambling addictions, high rates of violence and suicide attempts, and other indicators of poor health and premature death. Jamieson (1981, p. 140), after examining health statistics concluded, "in life and death Indian women and Indian men are more like each other than they are like others."

For some, Aboriginal traditions offer women better goals (Anderson, 2000; LaFromboise, Heyle, & Ozer, 1990; Monture-Angus, 1995; Osennontion and Skonoganleh:ra, 1989). For example, Osennontion and Skonoganleh:ra (1989, p. 15) write that their goal is to revitalize the traditions where women "were treated as more

than equal--where man was helper and woman was the centre of that environment, that community." Similarly, LaFromboise (1990, p. 471) writes:

> It is important to recognize that retraditionalization efforts on the part of Indian women are often inconsistent with some goals of the current majority-culture women's movement. Non-Indian feminists emphasize middle-class themes of independence and androgyny whereas Indian women often see their work in the context of their families, their nations, and Sacred Mother Earth.

These comments go beyond survival issues and the fear of feminism as potentially divisive to a vision of a better way of living.

Some First Nations women writers locate women's greater oppression within the context of colonialism (Anderson, 2000; Stacey-Moore, 1993). Sinclaire (1997) does this when she uses an historical context to locate inner city Aboriginal women's difficulty in food procurement for their families. Tsosie (1988, p. 20) emphasizes that modern gender conflict "for many Indian groups has largely resulted from patterns learned from white colonial authorities whose policies destroyed traditional egalitarian systems among Indian people." Monture-Angus writes:

> The simple truth is feminism as an ideology remains colonial. ... The state's involvement in the historic oppression of Aboriginal women and the denial of our individual and collective rights has not been incidental or accidental. It at times may have been without intent but that does not excuse the devastating impact it has had on our communities. The state is fully implicated in the violence that exists in Indian communities today (Monture-Angus, 1995, p. 171, 178).

Within this framework, Aboriginal men are not seen as people with the power to oppress, but as victims of a broader, greater violence endorsed by the state and unquestionably accepted by feminist organizations. The negative impact of colonialization on Aboriginal men as well as women is emphasized.

What does this have to do with the way Aboriginal women perceived weight? Weight preoccupation is often based on a feminist analysis, and these influences can be seen in the interviews with non-Aboriginal women. In searching the literature for Aboriginal women's explanations of indisputable discrimination, I found this colonialization discourse contrasted against and largely displacing a feminist analysis. I am not claiming that the women I interviewed held these political perspectives because they didn't come up. I am speculating that it is possible that the lack of a broader feminist discourse among First Nations community women has influenced the way they perceive weight issues, and may partially explain why weight was not seen as more important to women than to men. Although the responses cited above were most frequently framed in a health context, some First Nations community women and girls dealt with their weight in definitely unhealthy ways. Their stories, to be discussed in the next chapter, preclude seeing weight entirely as a health issue. Given the way girls and women discussed weight in other parts of the interview, it seems that the pressures are similar but are not interpreted similarly. The difference seems to be the usage or non-usage of a gender-based analysis. The lack of discussion of weight as a central part of identity fits this interpretation.

In the socio-cultural model presented in Chapter 2, Stice placed the importance of appearance (and therefore weight) to women's success in our culture at the centre of the model (Stice, 1994). This seemed completely appropriate for the non-Aboriginal women, given the way they discussed weight. This did not seem to fit the experience of the Aboriginal women, and therefore may not be entirely appropriate for the girls in this

community either.

This has implications for educational work around weight issues. Programs aimed at preventing weight preoccupation in girls often take a gender-based approach (Brown & Jasper, 1993; Diamond, 1985; Fallon et al., 1994; Friedman, 1994; 1997; Katzman & Lee, 1997; Orbach, 1981; Piran, 1999). Although gender differences did come up elsewhere in the interviews, placing emphasis on these might be inappropriate. Anderson, in her book on Native identity, has a brief discussion of media that stresses the exclusion of images of Native people from media representations and the stereotyping of beauty as White. More exploratory work with Aboriginal people is needed to determine appropriate approaches for promoting healthy attitudes to weight as well as healthy weights. The overall health and survival of communities and the individuals within are important considerations. The Medicine Wheel has been suggested as ideologically compatible in the sense of borrowing each other's traditions, and may provide a basis for interventions (Anderson, 2000; Bartlett, 1995; Postl, 1995). Bruyere and Garro (2000) found that health professionals' recommendations about exercise and diet fit easily with Nehinaw (Cree) frameworks, increasing their acceptability. Most of the Nehinaw interviewed reported doing some exercise, and almost all said they had lost weight. Basing initiatives on community-specific history and understandings holds promise, not just for helping people with diabetes but also for preventing future cases. Given that teens may have a variety of perspectives on the role of tradition in their lives, it would be critical to involve them (and other community members) in developing this approach prior to implementing and evaluating it.

Without this discussion of weight as a women's issue, it might appear that the Aboriginal participants were more weight pre-occupied than the non-Aboriginal participants, but this would misrepresent the entirety of the interviews. As remarked upon by Kaufert and O'Neil (1993), the similarities in the northern and southern discussion can obscure qualitative differences unique to the northern setting. Although the circumstances are different, but their remarks are appropriate within this cultural setting as well. The findings of this chapter need to be considered in interpreting the concern about weight reported in the next and subsequent chapters. A comparison of participants' reports of their weight dissatisfaction and dieting efforts is discussed next, followed by a more in-depth look at the role of weight in the lives of some of the Aboriginal participants.

CHAPTER FIVE

Weight Dissatisfaction

> "If shame could cure obesity, there wouldn't be a fat woman in the world" Dr. Susan Wooley.

"If you are Aboriginal, you have to try 10 times harder than anybody else to be successful in life," according to one of the Urban Aboriginal woman I interviewed. She applied this to weight. Reflecting on her own teen-aged years, she said, *"I did everything from popping amphetamines to throwing up to starving myself. . . . I noticed if I drank alcohol that I never ate. And I'd get skinnier."*

This woman's experience was not typical, but neither was it unique. Such stories came up too frequently to be ignored in the 40 Aboriginal families that I interviewed. These stories indicate that the different emphasis that Aboriginal women put on weight as a woman's issue did not necessarily reflect less concern about weight. This chapter addresses participants' weight dissatisfaction and their reported dieting efforts. Because these results are discrepant, the meaning of the word *diet* to participants is explored in some detail. The chapter ends with a look at risk for an eating disorder and three Aboriginal participants' stories.

Low Rates of Dieting and High Rates of Weight Dissatisfaction

It has been over a decade since Judith Rodin, Lisa Silberstein and Ruth Striegel-Moore coined the phrase *normative discontent* to describe women's relationship with weight (1985). Studies continue to find high rates of dissatisfaction and dieting

(Berg, 2000; 2001; Garner, 1997; Grogan, 1999). Consequently, it was surprising to find that the majority of women and girls in this study said they did *not* diet.

At the end of the oral interview, participants answered a close-ended question on the Restraint Scale that asked how frequently they dieted. Approximately, three-quarters of the participants said they *never* or *rarely* diet. Only 24.3% of the girls and 33.7% of the women said they *sometimes, usually* or *always* diet. (See Figure 5.1 for a breakdown by location and generation.)

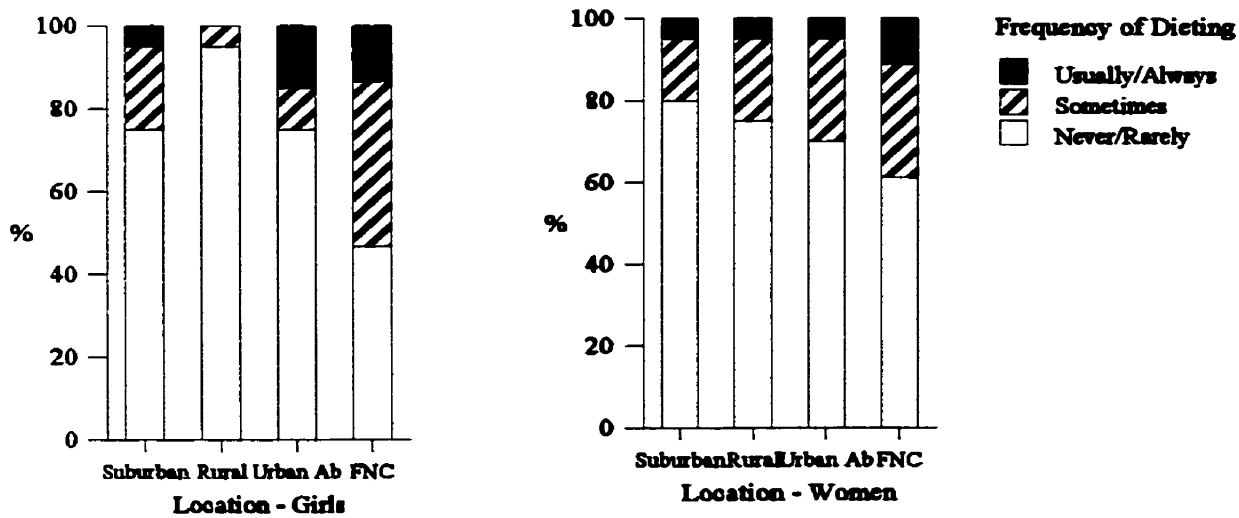

Figure 5.1. Reported frequency of dieting for girls and women by location. There were no significant differences in reports of dieting between locations, generations, regions or between Aboriginal and non-Aboriginal participants.[20]

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[20]Locations were tested with the Kruskal Wallis test, corrected for ties ($H = 1.29$, $df = 3$, $p = .73$, N.S. for women; $H = 6.59$, $df = 3$, $p = .09$, N.S. for girls). Generations were tested with a Mann-Whitney U-test ($z = 0.59$, $df = 161$, $p = .55$, N.S.). Generations were combined to test for urban and rural differences ($z = 0.18$, $df = 161$, $p = .86$, N.S.) and for Aboriginal and non-Aboriginal differences ($z = 1.91$, $df = 161$, $p = .06$, N.S.). Figure 5.1 shows combined categories, but tests were carried out on the full range of responses.

This finding of lower rates of dieting does not mean that participants were satisfied with their body shape and weight (see Table 5.1). More than three-quarters of participants indicated a disparity between their current weight and what they would like to weigh (81.8% of the girls; 92.4% of the women). The majority wanted to weigh less: 63.6% of the girls wanted to weigh an average of 18.9 pounds less (ranging from 1 to 100

Table 5.1 Desire for Weight Change by Generation and Location

Generation and location	*n*	Desiring loss %	Desiring gain %	Satisfied %
Women	**79**	**84.8**	**7.6**	**7.6**
Suburban	20	95.0	0.0	5.0
Rural community	20	70.0	10.0	20.0
Urban Aboriginal	20	90.0	5.0	5.0
First Nations community	19	84.2	15.8	0.0
Girls	**66**	**63.6**	**18.2**	**18.2**
Suburban	17	64.7	11.8	23.5
Rural community	18	50.0	27.8	22.2
Urban Aboriginal	14	85.7	14.3	0.0
First Nations community	17	58.8	17.7	23.5

Note. Desired weight change was calculated by subtracting desired weight from self-reported weight, using the midpoint if a range was given. There were significant differences between the generations, none for location, region or ethnicity.[21]

[21]Locations were tested with chi square tests ($\chi^2 = 5.44$, $df = 3$, $p = .14$, N.S. for women; $\chi^2 = 4.57$, $df = 3$, $p = .20$, N.S. for girls). Next, generations were tested ($\chi^2 = 8.64$, $df = 1$, $p = .003$, Fisher's Exact Test was significant at $p = .004$). This was the only significant test. Because it was significant, ethnic and regional differences were tested for each generation separately. The results for ethnicity were: $\chi^2 = .02$, $df = 1.0$, Fisher's Exact Test $p = 1.0$, N.S. for women; $\chi^2 = .26$, df = 1, Fisher's Exact Test $p = .80$, N.S. for girls. The results for Region were: $\chi^2 = 3.72$, df =1, Fisher's Exact Test $p = .07$, N.S. for women; $\chi^2 = 2.82$, df = 1, Fisher's Exact Test $p = .13$, N.S. for girls.

pounds); 84.8% of the women wanted to weigh an average of 26.5 pounds less (from 1.5 to 82 pounds). The mean desired weight loss for the First Nations community girls was more than double that of the other locations (34.9 pounds compared to 16.4, 15.8 and 9.8 pounds for the Rural, Urban Aboriginal and Suburban girls, respectively). There was less of a discrepancy between the women. The Urban Aboriginal and First Nations community women desired mean weight losses of 33.5 and 26.4 pounds compared to 22.7 and 23.0 pounds for the Suburban and Rural women, respectively.

The low rates of dieting and high rates of dissatisfaction with weight were found at every location for both girls and women, a finding that is explored in more detail in Chapter 9. We turn now to examine the way the participants defined *diet* in an effort to understand this discrepancy.

The Meaning of *Diet*

When asked what came to mind when they heard the word *"diet,"* participants' definitions spanned a continuum from *"What you usually eat"* to *"healthy eating"* to *"just watching"* to *"just exercising"* to *"losing weight"* to *"starving yourself."*

A minority of participants (7.3%) gave the general definition of what you eat on a day-to-day basis, although some added that this is not what most people really mean. Another 16% centred on healthy eating. Some of their responses focussed on a particular eating habit which seemed to be code for a *healthy diet*, such as eating more fruits and vegetables, or eating low-fat food, or not eating a lot of junk food.

Not surprisingly, however, the majority of participants (61.6%) either linked *diet*

with losing weight or implied this by giving methods or examples of ways to lose weight. Some participants referred to "*watching what you eat*" in the same breath as *"counting calories"* or some other indication that weight control was the primary purpose of the watching. Exercise was discussed less often than food. More girls (25%) than women (8.4%) mentioned exercise. Eight girls and one woman mentioned exercise first. Food was not even mentioned in several definitions, demonstrating the extent to which *diet* is synonymous with *weight loss.*

Some definitions suggest that *healthy eating* may also be code for *weight loss efforts*. For example, one woman said, *"It means eating healthy. Years back a doctor had said, 'If you're going to diet, don't cut out foods, because you need them. Just cut back.'"* This conflation seemed implied in other responses also, perhaps because for some, attempting weight loss entails a change to a healthier lifestyle. Several women explicitly rejected the concept of dieting for weight loss, and substituted the concept of healthy eating or healthy lifestyle. It was not always clear if the weight loss goal was dropped along with the terminology. One woman very clearly stated that she no longer dieted, but had changed her diet and exercise pattern in order to lose weight. Her words suggested that efforts to lose weight, involving food are no longer labelled *dieting*.

The word, *diet*, often had negative connotations. Forty-nine people (32.5%) responded, sometimes with more than one answer, saying that *diet* meant *"starving"* (7 women, 4 girls), *"fads"* (7 women, 6 girls), *"failure"* (2 women, 2 girls) or they made a disparaging comment (18 women, 8 girls) suggesting *diet* was *"ludicrous," "threatening," "evil"* or *"bad."* Some of the people who made these comments

emphasized lifestyle changes, as discussed above. (Elsewhere in their interviews, some participants were explicit that their attempts to improve their health did not include weight loss efforts. These comments are discussed in Chapter 8.)

Participants' contradictory reactions in defining *diet* suggest one possible explanation for the findings of low rates of dieting coupled with high rates of weight dissatisfaction. The positive responses suggest dieting is socially acceptable for many, at least given the opportunity to explain their focus on lifestyle and health, in addition to their weight loss goal. Strong negative reactions indicate that dieting is not an acceptable concept for about one-third of the participants. Some people described the same motivation and behaviour but rejected the label *diet*. Negative connotations and preference for alternatives to the word *diet* have been previously noted (Chapman, 1999; Marchessault, 1991; Nichter, Ritenbaugh, Nichter, Vuckovic, & Aickin, 1995; Spitzack, 1990; Wakewich, 2000).

There is a need to interpret simple questions about dieting cautiously. The dieting question captured only some of the participants who were trying to lose weight. Nor can it be assumed to predict actual lifestyle behaviours. Nichter and colleagues (1995) reported that although 63% of girls reported dieting, one-third of them reported a duration of less than a week, and only 14% of their food records reflected decreased food intakes (although nutrient intakes were compromised for these dieters).

Although the rates of dieting were low in this study, an admission of frequent dieting often fore-shadowed more serious problems in the Aboriginal girls. These are discussed in the next section which examines the responses to the EAT-26.

Risk for an Eating Disorder

There were nine EAT-26 scores above the cutoff for risk of an eating disorder. Eight were in the girls, a prevalence of 10.3% for the girls and 1.3% for the women. One of 40 of the non-Aboriginal girls (2.5%) had a high score (Suburban location). Seven of 40 Aboriginal girls (17.5%) had high scores (four in the First Nations community and three in the city). The one woman who scored above the cut-off lived in the First Nations community. There were an additional two girls and four women who did not score above the cut-off for risk, but indicated they *sometimes* or *very often* used vomiting as a method of weight control (see Table 5.2). Weight was not a predictor of a risk score or use of vomiting for weight control. The BMIs of the 10 girls noted above ranged from low to high. One was under 20, six were between 20 and 22, and two were 25 or higher. One was not known. Four of the five women had BMIs of 25 or more.

In follow-up interviews to assess the need for referral, these participants all

Table 5.2 Number of Participants with High Eating Attitudes Test-26 (EAT-26) Scores or Reporting Vomiting for Weight Control

	Girls			Women		
Location	*n*	High EAT-26	Reported Vomiting	*n*	High EAT-26	Reported Vomiting
Suburban	20	1	0	21	0	1
Rural	20	0	0	21	0	0
Urban Aboriginal	21	3	1	22	0	1
First Nations community	19	4	1	19	1	2
Overall	80	8	2	83	1	4

affirmed weight control intentions, discussing either severe food restriction or vomiting towards this end. These concerns appeared real, and I discussed them first with the participant, and then in the case of the girls, with their mothers, and/or arranged a meeting with an appropriate counsellor.

Some of the participants did not discuss vomiting for weight loss or indicate distress around weight issues in the oral interview, but they did check them off on the EAT-26 and confirmed them at our follow-up meeting. Although there was no confirmation of an eating disorder, the EAT-26 seemed to have good face validity for highlighting participants who were extremely concerned about their weight, especially if the questions concerning vomiting habits were examined as well as the aggregate score.

Examining just the EAT-26 questions about vomiting, about one-quarter of the girls living in the First Nations community said they had vomited for weight control. Another four girls indicated they sometimes had the impulse to vomit. This is difficult to interpret, but raises questions about normative attitudes if a majority of girls in this community have considered vomiting as a way of controlling their weight. Is there general acceptance of vomiting as a method of weight loss? Are girls aware of the risks involved in frequent vomiting? At what age does this become an issue? Are boys and older girls similarly concerned? These questions require further investigation.

The prevalence of at-risk scores in the Aboriginal girls seemed comparable to or higher than the rates of 9 to 24% reported by other researchers. (Leichner et al., 1986; Wood et al., 1992). As mentioned earlier, the low prevalence in the non-Aboriginal sample may be due to sampling bias. Five non-Aboriginal families declined interviews,

giving their own or their daughters' prior and painful weight experiences as the reason. It is possible that these issues came up at a younger age or were viewed more negatively in these families. Their omission from the sample leaves these questions unanswered.

Girls were not promised confidentiality if an eating disorder was suspected and this may have prevented some from disclosing problems. Serious eating problems may be under-estimated. Nevertheless, these results suggest that Aboriginal girls living in and within driving distance of an urban centre are vulnerable to weight pressures.

As mentioned earlier, Parker and her colleagues (1995) reported a discrepancy between survey and ethnographic results for African-American high school students. Unlike this study, the survey and interview data here were either consistent, or follow-up confirmed problems raised on the EAT-26. It seemed difficult for girls to volunteer that they were throwing up, but once raised, problems could be discussed. The mothers' concern about their daughters' behaviours provided additional information useful in interpreting the girls' interviews, and in some cases vice versa.

In the next section, I present excerpts from several participants' interviews to complement the above survey results. The details of people's lives are unique, but the gist of their stories seemed representative of concerns expressed by a significant minority of Aboriginal participants, both in the city and in the First Nations community.

Aboriginal Participants' Stories

I have selected excerpts from three interviews to convey the role weight has played in some Aboriginal participants' lives. There were other such stories in the First

Nations community and in the Urban Aboriginal sample (both the random and the snowball portions). The late Sir Austin Bradford Hill remarked that health statistics are people with the tears wiped off (c.f. White, n.d.). These case studies are presented as a way to communicate the importance of these experiences in the context of people's lives. They validate the need for a better understanding of the nuances of weight. They provide evidence that weight has been of great concern to some Aboriginal girls and women. I have changed details of all three stories to preserve confidentiality, although the core of the interview, the participant's description of her relationship with her weight, is unaltered. The women's stories were past tense and they are not included in the above statistics.

Sam, David and Laurie

It was a crisp fall morning as I walked up to Sam's house. I'd started this interview the previous May, when Sam said she wanted to tell me something, but couldn't talk right then because she was expecting her daughter home from school shortly. She said both her daughters had lost weight by throwing up, and that she had done the same thing when she was younger. She said she tried to use her own experience to help them stop. That was as far as we got.

It was hard to re-connect with Sam because opportunities for her to work came up unexpectedly and frequently, making appointments unpredictable. This particular morning, the interview had to be completed between the time her daughter left for school, and the time she left for work, less than one and a half hours. This was usually more than

adequate, but if Sam had a lot to say, as it seemed she might, I was afraid it would affect the telling.

Sam's husband, David, was also home and he joined us for the interview. He took care to keep refilling our coffee cups, while expressing incredulity that anyone would go to this much trouble to ask questions about weight. David also contributed information and opinions generously, both about weight and about the family's living circumstances. For example, near the end of the interview, when I asked about their level of income, David showed me their couch and dining room suite, commenting with pride that he'd got these for his wife last Christmas. Sam added, *"We're struggling, but we provide for our kids."*

When I asked Sam how she would describe herself, she replied *"I'm pretty open. I don't beat around the bush. I find it easy to socialize. I'm not shy."* When I asked what she would change about herself if she could, she replied *"My age."* She said she wished she could return to a time when she weighed less, adding *"I got married and I got fat."*

Sam started her story by recalling her mother's side of a phone call: *"I was 14 and I hit the scales at 175. I heard my mom say, 'No, she's not pregnant.' So I starved myself. I went down 10 pounds a week. I went down to 135. And people thought I went away and had a baby."* She used the word "bulimic" to describe herself. She said she kept the weight down until she married.

Then she noticed her older daughter was *"losing weight like crazy, while eating like crazy. I discovered she was making herself throw up."* She said she told her daughter about the acid eating away her teeth, and her daughter stopped. She thought this daughter,

now married, was doing okay. Sam said she advised her daughters that they could have three meals a day, as long as they didn't overdo it, meaning their weight would be fine if they followed her advice. *"I just try to control her eating. She eats and eats and eats. She can gain weight easily and loses weight easily too. I try to get her to control her eating. I say 'You can eat, but don't overdo it.' I always have snacks around."*

Sam mentioned other ways of trying to lose weight, ways that she had tried and one of her daughters had tried, too. *"Look at the time I went on SlimFast. My oldest went on it too--secretly. She was getting skinny, sickly--going to the washroom all the time. It did me good. I was losing weight. It was just like a laxative. Around three months after I quit, I gained it all back."*

When I asked how women should deal with their weight, she recommended exercise, focussing on walking, even though she was not seeing any results for herself. She said they walked a lot. *"I discovered all this walking we've been doing--we're not losing weight. Could be building muscles, though. We used to huff and puff. I used to hate walking."*

She rated herself as neither happy nor unhappy with her looks, and said she wasn't afraid of getting fat *"because I'm married."* She added that she has *"put on lots of weight in the last six months."* It seemed as if weight continued to be an issue for her, although not to the same extent as when she was younger. She rated her health as only fair, explaining *"because you don't feel good about your weight. Fat, I guess. You want to be skinny. You admire other women who are nice and skinny. And here you are--fat."* Despite her overall emphasis on the dangers of risky weight loss behaviours, her

explanation of her rating of her health went very quickly from health to admiration for women who were thin.

Sam and David highlighted different causes for underweight. Her husband answered first, explaining that people were underweight because there was nothing to eat in the fridge because the money had gone to *"the slots,"* a reference to the video display terminals easily accessible to gamblers throughout Manitoba. Sam's focus was on eating disorders: *"The really skinny ones are the people that have lots of problems. I had a friend who had anorexia. Thin to this day. Now she knows she's sick. She had so many problems."*

David closed the interview by telling me that his grandfather used to say that you've got to follow your heart, or you will get into trouble. We talked about how girls get into trouble trying to please other people, and what that meant for weight.

When I spoke with Laurie later that day at school, I met a confident, outgoing 13-year-old girl. Laurie had short black hair, plucked eyebrows and burgundy nails. She was wearing blue jeans and a buttoned-up black t-shirt with an unbuttoned grey plaid shirt overtop. She talked about enjoying sports, especially volleyball, and was proud of how she was doing at school. She said she's learning Cree from her granny. She liked *"goofing around"* with her friends, and they liked her because she made them laugh.

Weight came up immediately as the thing she would change if she could. Laurie saw herself as fat. She said, *"I just wish I was skinny, that's all. ... 'Cause I've been fat all my life just about."* She replied that she was afraid of getting fat *"because, I don't know, I just don't want to be fat."* She said she was "very unhappy" with her weight. She was

being teased about it and *"it feels awful."*

She said she talked about weight with her granny, her mother, her sister and her friends. The advice they gave her? *"They just tell me not to eat lots--like don't eat as much."* When she told her friends *"I was going to try to go on a diet this coming winter, ... they said okay and I bet you ten bucks. ... If I get skinny, they give me ten bucks, and if I don't I give them ten bucks."*

Laurie saw being heavy as potentially causing problems. Besides being teased *"a lot,"* she said a girl *"wouldn't get a boyfriend"* and *"if you get too fat you'll probably, umm, have a heart attack."* She said that being underweight would not affect a girl at all, noting that underweight girls *"don't get teased. They're popular."*

So, there was a great deal of pressure from family, friends and from Laurie herself to lose weight. She saw this as do-able. When Laurie replied that people can control their weight, I asked if this was always the case. She said, *"Probably, if they watch what they're eating."* This was what she would advise others. But she herself had not had much success. She explained her own efforts, *"I tried to go on a diet but--it didn't work. ... I just tried to watch what I was eating, but it didn't work. I just gained more weight."* Next, she said, *"I tried to starve myself [laughs]. Umm, I think that was a couple of weeks ago. ... It never worked either. When I'm in school here, I just don't eat lunch or anything, when I go home I just end up--pigging myself out. ... It's not helping either, 'cause I just get more hungry when I starve myself."* She said she usually skips breakfast and lunch, but eats a lot at night. She eats the lunch her mother made her when she gets home from school, and then her dad makes her eat supper. Her mother had also said that Laurie

usually rushes out of the house without breakfast, as she'd done that morning. When I offered to take the lunch to school, Sam said not to bother, Laurie wouldn't eat it anyway.

Laurie said she smokes, but did not relate this to her weight. She seemed hesitant to discuss smoking so I did not ask further direct questions. Nor did Laurie discuss throwing up in order to lose weight during the interview, but she indicated this was a problem afterwards.

Laurie was slightly heavier than the mean for Aboriginal girls. Her goal weight was 95 pounds (BMI of 16). Despite her determination to lose weight, Laurie said I could talk to her mother about her interview, and she thought she'd like to talk to a counsellor. She seemed ready to try a different approach.

Tansy and Lily

Tansy called me after I'd interviewed her mother. She said she spent a lot of time hanging around at her friend's house, and I was unlikely to catch her at home. Tansy was the only teen to call me to set up an interview, although some teens called to re-schedule. She, and her friend and classmate Lily were eager to be interviewed, a likely hint of their approach to life. I had already interviewed Tansy's mother. Lily's mother was also willing to participate. The focus here will be on the girls' interviews, although it may be helpful to know that both girls' mothers wanted to lose weight, although neither were currently trying. One said she had resumed smoking to deal with her undesired increasing weight.

The two girls were supporting and encouraging each other in what appeared to be extremely focussed efforts to lose weight. Each said she and her friend had lost 30 to 40

pounds in the last month. They were pleased with the weight loss but concerned with some of the unanticipated physical side effects (such as hair loss and feeling awful). I focus on Tansy, because she was enthusiastic about telling her story. Her friend had lost more weight, and seemed more vulnerable, perhaps because of her shyness.

Obviously, Tansy was not shy. She was a tall, strong and healthy-looking girl. She had her long, dark hair pulled back away from her face. She was wearing a sweatshirt and blue jeans on this cool spring evening and she looked like she was prepared to enjoy the interview. She sank into the couch and started to talk immediately and with confidence. She scooped up the youngest baby, and jigged him on her knee throughout the interview. There were other young children in the room also, and they were kept amused by my "kid kit," a bag of toys brought along for this purpose.

When I asked Tansy to tell me a bit about herself, she said she liked to roller skate and play pool when she wasn't busy baby sitting. Then she said she had had "bone" problems for years. Her condition sometimes caused her a lot of pain. She took pills to control the pain, but it still prevented her from being active. *"[The pain is] everywhere in my body. Sometimes it could go in my hands, or sometimes it just goes into my knee. My knee's been bugging me a lot lately. Sometimes, it'll just go away. And then other times it'll just come right back, where I can't, like in gym, when I run and that, I can't do that."* Tansy came back to this three or four times during her interview. It was an important concern, one that related to weight. When I asked her what she would change about herself, she replied *"If I could change something, I'd probably change the fact that my bones hurt. Or my waist line."* After a short pause, she said her waistline was the more

important.

I asked her if girls were thinking about different things than boys and Tansy responded with a laugh, *"Well, I don't think about boys all the time. I look at them, think they're cute."* And then she described some of the pressures she was dealing with:

> *T: And then there's my friends, like they used to be my friends, they pressure them [their friends] to do drugs or something. But I don't do drugs or anything like that. I smoke. That's it.*
> *G: Why do you smoke?*
> *T: I don't know. [Laughs.] That's addictive. I started off with my friends and then after, when I tried to quit, I just couldn't.*
> *G: How old were you when you started?*
> *T: Eleven. Yeah and then after when I tried quitting a couple of months later it was, I couldn't. 'Cause of all the chemicals they put in there and everything.*
> *G: So you got hooked pretty fast?*
> *T: Yeah I got hooked pretty fast. And then I had a couple of friends who tried to get me to do drugs, and then I dropped them right away because I know a whole bunch of people who do drugs, and I look at them and I don't want to turn out like them. Like my mom. She's on welfare and everything. She had me when she was sixteen, and she dropped out of school, and I just don't want to make the same mistakes as her.*

Some of these concerns came up again when she described what she'd like to see in a boy: *"The fact like he doesn't do drugs or he just doesn't want um--he doesn't want sex like, something like that. And who would look at you, not for your looks but for what's inside."* She said *"I went out with a guy before. He was like that but then, I'm only thirteen and he did want sex, so I dumped him."* She added, that she too would go for what's inside when choosing a boyfriend.

Tansy listed her background as Christian and *"more Indian than anything else."* She said she knew that she was smart, but she was in danger of failing her grade. She reported missing more days than she had attended so far. She was pleased with herself

because she'd recently arranged to be suspended if she skipped classes. This allowed her to refuse her mother's requests for her babysitting services.

Despite all this, or maybe because of it, weight concerns were central to Tansy. I asked her if weight was a problem for girls. She said, *"Lots of girls I know, it's just like 'I'm so fat.' And they'll be skinny but it's in their heads that they're fat."* When I asked why this was the case, she replied, *"they want to impress guys probably."* She said weight is important to girls *"because they want to feel good about themselves, how they look."*

Tansy said she was 5 foot, 9 inches and 120 pounds, and "very unhappy" with her looks. She said, *"Everyone says I'm skinny but I know I'm fat. ... They say 'you're skinny.' I'm like 'No. I'm not. I'm fat. Look at all my fat.'"* She wanted to weigh 100 pounds and she said she dealt with this by not eating. Here is our conversation after I asked her if she had ever done anything to try to change her weight:

> *T: I don't eat.*
> *G: You don't eat. Can you tell me a bit about that?*
> *T: Well, like, sometimes like I have my, what I like. I, I never eat breakfast. I don't know why, I never eat. I would never eat breakfast. Then I wouldn't eat lunch, and I just drink water all day, so it kind of filled me up and then, I wouldn't eat anything all day. And then the next day only, I'd only eat, like lunch or something and then I wouldn't eat anything. Stuff like that.*
> *G: And how about the evenings? What do you do at night?*
> *T: Umm, uh, what I do at night is just I sit around and like eat crackers and water and that, trying to fill myself up. ... And then I would like I, I try running, exercise and that. But because of my knee it. I can't run very far. ... One of my cousins, she never eats either. Like once in awhile we eat a big meal but that's about it. We don't eat much.*
> *G: Hmm. How's it working?*
> *T: I lost weight. I weigh a hundred and twenty.*
> *G: And what did you weigh before?*
> *T: One fifty.*

G: How long did that take you?
T: About a month.
G: That's a lot to lose isn't it? Hmm. And how do you feel?
T: I feel okay I guess but I think I'm still fat.

Later, she said, *"I'm afraid of getting fat all the time. Just the fact that when I eat I feel like I'm gonna gain like ten pounds if I eat this and that."* She was not afraid of getting too thin: *"'Cause I think I'm fat. ... To get too thin would be actually, I'd be happy if I was skinnier."*Tansy said she didn't talk about weight with most of her friends, *"Just my friend [Lily]. Yeah. She's like 'I'm fat.' And she's like 'No, you're not. You're skinny.' 'I'm fat.' She goes like that."* She continued to describe her friend's concerns, which were similar to her own:

> *'Cause Lily used to be really chubby, you see how skinny she is. You could tell in her face, that it's just been thinner. 'Cause she used to have a fat face and it's skinny now. And she lost about sixty pounds. Not eating. She used to weigh like one sixty nine. Well, not sixty, about forty pounds. She used to weigh one seventy, and now she only weighs one thirty.*

Barbara

Barbara called me after hearing about the study in one of her classes at university. She said she wanted to share her experience in the hopes of helping others. As mentioned in the introductory comments, there is a great diversity of experience captured when people identify themselves as Aboriginal. Barbara, like many Urban Aboriginal people, had grown up in a non-Aboriginal family. She was candid about her difficult, early life experiences. The details of her story are, of course, unique, but the experience of growing up in foster homes, or with adoptive parents is relevant, as much as any unique

experience can be, to others who share a similar background.

At the time of the interview, Barbara was a 38-year-old mother of three children. There were two girls who met the eligibility criteria. I used the time-tested randomization procedure of flipping a coin and ended up interviewing the younger daughter. Barbara's interview took approximately three hours. There were a number of interruptions, including making coffee, chatting with her older daughter and moving from the living room to the porch of her third floor walk-up apartment. It poured while we talked, which was refreshing on a hot day, and the sound of the falling rain was soothing.

Barbara planned to work in the North with Aboriginal people after finishing her degree. She described her early years as *"scattered"* and said she didn't know much about her life before age three, other than she was taken from her Ojibway birth mother and placed in a number of foster homes before getting settled into the *"White, Caucasian"* working class family that raised her.

Prior to returning to school, Barbara had worked in an office and had been a dance instructor. She said her ex-husband was Caucasian and college-educated. She pegged her annual household income as *"totally inadequate,"* but was expecting it to improve because she had just been awarded a prestigious scholarship.

Barbara identified with her Aboriginal heritage, saying it was very important to her. She described herself as *"an honest person. Also compassionate"* and was proud of her children. She said her youngest two were *"more Aboriginal."* The older daughter, she said, looked White, even before she dyed her hair blond. She commented that her older daughter was sensitive to Aboriginal issues, but had rarely experienced discrimination.

Barbara said she was proud of her children, and she was proud of having survived. Barbara inherited the gene for story telling. Her story spilled out in one more-or-less continuous stream of consciousness:

> *It's really funny because I didn't realize when I was in Grade 9, like my [older] daughter's in Grade 9 right now, I didn't realize that the more I ate, the tighter my jeans would get. I didn't realize there was a connection there. [Laughs.] And I had ulcers since I was thirteen. I was hospitalized for ulcers quite often. I have the type of ulcer that when you ate, it relieved the pain. I can't remember which one that is, I think it's a stomach ulcer. But anyways, I never made that connection.*
>
> *And then all of a sudden, one day, me and my girlfriends, it was spring time and we just started walking to McDonalds every day for lunch from school, which was quite a walk for us. ... We did it for about two weeks, and all of a sudden my girlfriend's mother said to me, "Barbara, it looks like you're losing weight. You were getting quite fat there for awhile." ...*
>
> *Then all of sudden my one girlfriend who was older, told me she was eating these diet candies. They were called Ayds at the time. Do you remember them? And she was taking those and not eating. And so she says, "Oh you know you can get skinny on these things." Then I started doing that. I was losing weight and then my other friends, like I don't know we just started drinking and partying and I noticed if I drank alcohol that I never ate and I'd get skinnier. [Laughs.] You know we were taking bennies and stuff like this and I met more people through partying and everything and these girls would tell me that if you eat bennies and you don't eat food [you] get really skinny. So I started doing that. And uh and then everything just kind of like followed after that. The vomiting and trying to starve myself and that sort of thing.*
>
> *G: So why do you think it had such a hold for those years?*
>
> *B: It was like--hey I can control this thing. I can starve myself, and I see results. I lose weight. It was sort of like instant gratification more or less. You see results right away. You starve yourself for about three days. You see results. And then it was also like everybody was trying to always lose weight. And everybody, we all said, "Wow, you're so skinny. You're so lucky." And stuff like this. So it was compliments that I received. And you go out and look for clothes and everything. I guess clothes initially fit me better but then it got to the point where I looked horrible.*
>
> *G: How did you switch into the exercising and dropping all the other ways?*

B: Well, it wasn't like an overnight decision or anything. I don't know it was [laughs]--this is a really deep--I guess like I had to be hospitalized several times for overdoses and everything. I'd had quite a bit of problems with doing drugs when I was younger. One day I was over at one of my friends' apartments and I realized that "Whoa what a dump you live in." [Laughs.] She was on her own, and she was one of my best friends. We had gone through all this stuff together. And I just thought, "Oh I don't want to end up like you." I don't know what made me all of sudden think this one day. We were just sitting over at her apartment, and I realized I could never live like this. I think we were about maybe seventeen at the time and I just couldn't imagine myself living like that. You know, like that's all there was to life--this dumpy apartment and just going out and getting high. I just figured there's got to be something else.

And I just dislocated myself from my friends and I stopped associating with them. And uh, actually I started reading the Bible. I think I was about sixteen. But then I still kept doing drugs at that time. Umm, just reading the Bible and trying to figure out what it meant. I guess it was a form of meditation.

And my parents had a cottage out near Victoria Beach. When I was a teenager I hated going out there. And I just all of a sudden loved going out there, and I would go out by myself early in the morning and go for a walk and just have nature all around me, and like sit on a rock and just listen to the wind going through the trees and watching the birds. ... Watching ants build the nest and stuff like this. [Laughs.] And I just got away from that type of behaviour.

And then one day I was standing downtown by myself and I saw this guy and this girl walking down the street, and I looked at the woman and I thought, "Like wow, has she ever got a gorgeous body! Like, you must be born that way or something, right." [Laughs.] And they walked into a gym or some type of workout place. I didn't understand yet about your muscles. I didn't even actually know what a muscle was. And I noticed that they had gone into this place, and there was this book advertised on the wall. It was Lisa Lyon's. She was a body builder. She was the first woman body builder. ... I bought the book, and I started reading about it. And then this other girlfriend told me that she had joined the spa. She says, "You know you should come down there." ... And so I ended up joining and that's actually how it started.

Something definitely happened. I don't know what it was but I was on a big down hill slide to nowhere. And I don't know what it was that brought me up.

Weight was still an issue for Barbara, although again, not to the extent it was when she was younger. She said she was not happy with the way she looked. Like the majority of women, she'd like to lose 10 pounds. In response to my question about whether she was afraid of getting fat, she said, *"I don't want to get fat. I don't know if I'm*

afraid of it though." In her explanation, she talked about how she was better able to get her way if she was at a comfortable weight, mediated partly through being more attractive, since she worked mostly with men, and partly through feeling more confident because she felt attractive. She said she controlled her weight now by working out and eating healthfully.

Barbara said that while weight was not more of an issue for girls than for women, it could be *"more traumatizing"* to a younger person. She said she talked to her daughters about weight. It was not an issue for her older daughter, who eats nutritiously and was active. She said that her younger daughter likes more treats and was not athletic and consequently was *"a little chubby"* and starting to get *"very conscious"* about it. She advised her daughter that she was not fat, didn't need to diet, but should stop eating junk food and start eating nutritiously and exercising more.

I interviewed Barbara's younger, and extremely busy, daughter about three months later. She was a petite girl. She said she'd gained weight when her parents got divorced and had purposefully thinned out last year by being active. She seemed only moderately concerned about weight.

Summary and Discussion

Weight dissatisfaction was almost universal for the girls and women in this study, reaffirming the appropriateness of the *normative discontent* label (Rodin et al., 1985). Most of the dissatisfaction was oriented to desires to weigh less (63.6% of girls; 85.1% of women). The frequency of participants who reported dieting *sometimes* to *always* was

much lower (24.3% for girls and 33.7% for women). This may be because many girls and women did not label their weight loss efforts *dieting,* but talked about *"just watching"* or *"just exercising."* For some, *healthy eating* may be code for *weight loss efforts*. The majority defined *"diet"* as efforts to lose weight, or in terms that implied weight loss. Some viewed this as a favourable activity, but others responded to the concept of *"diet"* extremely negatively. Motivations behind *healthy eating* are difficult to interpret given the ambiguous social acceptability of weight loss efforts, in combination with most women's continued desire to lose weight.

A strong interest in weight issues clearly exists in the Aboriginal sample, both in the city and in the First Nations community. Moreover, as the women's memories of their own risky behaviours illustrate, a high level of personal dissatisfaction with weight has existed for at least a generation, at least in these two southern Manitoba locales. More Aboriginal women and girls related stories of distress around their weight than non-Aboriginal participants, likely because of the sampling bias noted earlier. Extreme behaviours were rarely reported by the non-Aboriginal girls that I interviewed, although some mothers spoke of their own past difficulties around eating, often a continuing struggle. The non-Aboriginal women who talked to me had received counselling. They were extremely hesitant to talk with me, and some did not. By contrast, none of the Aboriginal girls or women for whom this was an issue had received counselling. Perhaps knowing that Aboriginal girls' problems with weight were not being addressed was part of their motivation for participating in the interview.

Aboriginal women's experiences with disordered eating may be under-recognized.

In *"The Health of Manitoba's Children,"* eating disorders such as anorexia or bulimia, are noted as one of the few conditions for which "Status" children are less at risk than other Manitobans (Postl, 1995, p. 27). No further data has been reported since 1995 (personal communication P. Martens, July 24, 2000; L. Elliott, July 17, 2000). The findings of risk for an eating disorder, as assessed by the EAT-26, although not corroborated, suggest risks may be under-estimated, at least in or close to urban communities. It is unlikely that anorexia nervosa would be overlooked. However, it seems possible that referral biases may be operating for bulimia.

These interviews demonstrate that some Aboriginal girls in and near the city have been seriously concerned about their weight for at least a generation. Several of the girls exhibiting the behaviours discussed in this chapter had BMIs above 25, and none were extremely thin. The women exhibiting these behaviours were mostly heavier, and none were extremely thin. Some women in the sample, and this is especially true of Aboriginal women, would be construed as being at risk of health problems due to overweight. These women, and girls who may be headed in this direction, also need help. Admonishments to lose weight, however, do not seem to be helpful, given that almost everyone already desires to lose weight. Almost all had tried, using a multitude of methods, most of which were unsuccessful. Some were unhealthy. There is greater potential to deal holistically with the various environmental influences leading to these concerns in small communities. Obesity prevention is the classic situation requiring a broad-based public health perspective with co-operation across multiple sectors. The public health approach, as outlined by Ritenbaugh and colleagues (1999), focusses on the structural complexity

underlying individual behaviours. Education, transportation, health and food policies for the community co-ordinated in the work, school and home environments need to be addressed to foster healthier individual living patterns.

Despite the findings of the last chapter, where a substantial number of Aboriginal women, especially from the First Nations community, did not perceive weight as more important to women than to men, this chapter makes it clear that some of the Aboriginal girls' and women were extremely concerned about weight. The next analysis extends this discussion by examining consensus within and between the four locations on a set of values statements related to weight. The findings support an overall consensus amongst all participants except the First Nations community women. Results again point to the First Nations community as being somewhat different from the other locations. The consensus analysis is also used to examine the agreement between mothers and daughters in their responses to the statements.

CHAPTER SIX

A Consensus Analysis of Weight-Related Values Statements

> "Cultural consensus analysis maps out patterns of agreement and helps to corroborate claims about shared cultural understandings, while pointing out areas where there is less agreement" (Garro, 2000, p. 312).

This chapter presents the findings of an analysis of weight-related values statements constructed in a way intended to preserve the focus on the participants' framework for understanding weight issues. Responses have been analysed with cultural consensus theory to determine the extent of sharing of concepts within and between the generations across the four locations. The analyses were modelled on Garro's work (1986; 1988; 1995), particularly her examination of agreement and diversity of cultural understandings in causal accounts of diabetes in three Ojibway communities (1996). This research also drew on the work of Kempton, Boster and Hartley (1995), whose study, *Environmental Values in American Culture,* demonstrated the appropriateness of using these techniques with diverse groups within their own culture.

Cultural consensus analysis is relatively new, and so a brief overview of the theory and method is provided prior to discussing its application in this project. The technical details of the mathematical model are given in Romney, Weller and Batchelder (1986). More general explanations are provided in Weller and Romney (1988) and Borgatti (1994).

Cultural Consensus Theory and Method

The use of cultural consensus analysis is based on the assumption that people share perceptions about the world around them (Garro, 1988). It is further assumed that agreement and disagreement in such understandings is patterned and can be measured. Cultural consensus analysis and the quadratic assignment program are specific methods designed to assess the pattern of similarities and differences within and between different social groups (Garro, 1995; 1996; 2000; Hubert & Schultz, 1976; Kempton et al., 1995; Weller et al., 1993).

In the following explanation of consensus theory and method, the term *knowledge* is used to help convey the basic concepts underlying the method. Consensus analysis is derived from and is analogous to test theory, but there are some differences. References to *knowledge* are intended to facilitate understanding the parallels between the methods. In discussing the application of consensus analysis to this project, I use the terms *shared understandings* or *cultural agreement* to emphasize that my objective is to assess if there is a pattern of culturally accepted responses to the questions.

Weller and Romney (1988, p.75) explain the central concept of the theory behind cultural consensus as "the use of the pattern of agreement or consensus among informants to make inferences about their knowledge of the answers to the questions." Their method allows cultural knowledge to be measured and its distribution in a group of participants to be described mathematically (Romney et al., 1986, p. 313).

The mathematical model was derived from reliability testing theory but is applied differently. In reliability testing, test scores are used to describe something about

individuals. For example, a score on a spelling test predicts a person's ability to spell. In cultural consensus theory, people's answers are used to predict the correct spelling of words (Weller & Romney, 1988). More practically, it has been used to determine the folk names used for the plant manioc (Boster, 1987), or the common features of the disease empacho (Weller et al., 1993). These examples illustrate how it is used in situations where there is no *answer key* known to the researcher (Batchelder & Romney, 1988).

In cultural consensus analysis, it is assumed that the "correspondence between any two informants is a function of the extent to which each has knowledge of the culturally correct answers" (Weller & Romney, 1988, p.75). Knowledgeable respondents are expected to give a higher proportion of such answers, and therefore respond more similarly to each other than those with less knowledge about the domain under investigation. The technique developed by Romney, Weller and Batchelder (1986) estimates how much each respondent "knows" (or, to use their terminology, *measures competency in a cultural domain*), weights each respondent's input and uses the aggregate to estimate the most likely answers. Consensus analysis, therefore, estimates the reliability of the information content of an interview (Weller & Romney, 1988). This is important in the discovery of the (unknown) culturally appropriate responses to the questions.

The assumptions underlying the model are that (a) there is a single culturally acceptable answer for each question, which if known, is always given; (b) each question is answered independently of every other question, and respondents answer independently of each other; and (c) all questions are drawn from the same cultural domain (Borgatti,

1994, p.275; Romney et al., 1986). Over-reliance on individual questions is cautioned against, given the model's inability to test individual questions for independence or difficulty level.

Analysis involves calculating a matrix of response matches among participants. This matrix is corrected for guessing and then factor analysed. The first factor represents cultural competence. Subsequent factors account for the remaining variability (Kempton et al., 1995). If the assumption of a shared cultural domain is met, the first factor will account for the structure of the matrix. The amount of variance accounted for by the first factor should be several times larger than the second with all other factors being relatively small and positive (Romney et al., 1986, p. 333). If these conditions are not met, there could be more than one set of answers, and a common culture with respect to the domain being studied cannot be assumed. Under these circumstances, systematic subgroup differences could produce a patterning of responses, and therefore it would not be meaningful to aggregate responses.

The reliability for a set of responses is derived from the number of respondents and the extent of agreement between respondents and is the basis for estimating the validity of aggregated responses. Validity is estimated by taking the square root of the reliability coefficient (Weller & Romney, 1988, p.76). The average inter-correlation among respondents (corrected for guessing) gives the proportion of answers reflecting shared cultural understandings. This is referred to as the *mean consensus factor*, or the *mean competency* of respondents (Weller & Romney, 1988; Garro, 1996). A mean competency of less than .3 is considered to represent too little sharing to meet the

assumptions of the model (Romney et al., 1986, p. 333). Consensus for individual questions with associated level of confidence can be estimated (Romney, Batchelder, & Weller, 1987, for an example, see Garro, 1995).

Since cultural consensus theory is used to predict cultural knowledge of a domain with a single answer for each question, well known to most of the respondents, only a small number of informants is needed to reliably predict the culturally accepted responses. For example, a small number of hockey professionals would give accurate information about the rules of the game. Their answers would be more reliable than even a large random sample of grocery shoppers. Romney, Weller and Batchelder (1986) illustrate this principle by using the responses of four informants (two each with high and low cultural competence) to correctly predict the answers to 27 of 30 questions on a general information test. Weller and Romney (1988, p.74) conclude that the technique provides "as much assurance as if we had the actual answers." For example, a mean competency of .6 based on interviews with 20 respondents would indicate that the aggregated responses should correlate approximately .99 with the culturally appropriate responses (c.f. table in Weller & Romney, 1988, p.77). While systematically collected data provide a statistically valid way to assess the prevalence of expressed sentiments, Weller and colleagues (1993) caution that such comparisons are only valid when ethnographically informed.

The analysis for this project was based on cultural consensus analysis, the Quadratic Assignment Program (QAP) and a binomial test using Anthropac 4.0 (Borgatti, 1996) and Number Cruncher Statistical System (Hintze, 1997). First, the extent of

agreement was determined for the responses to the set of values statements. To do this, consensus was determined for girls and women separately at each location, and if appropriate, groups were aggregated to assess the extent of consensus (all the girls, all the women, the mothers and daughters at each location, and the overall sample). Next, the consensus responses for each statement were examined. Even with overall consensus, there are usually some differences within and between research sites. QAP was used to explore this with particular reference to comparing locations, generations and mother-daughter pairs. In contrast to consensus analysis, which is based on a summary measure across all questions, QAP examines patterned differences based on subgroup responses to the yes-no statements (Garro, 2000, p. 295).

Exploring Consensus

As stated, the first step in cultural consensus analysis involves determining the extent to which responses to the 24 true-false values statements were shared. Table 6.1 shows the results for the women and the girls separately at each site and for all combinations of groups which met the conditions of consensus.

The assumptions of consensus were met for all but the First Nations community women. Although the average competency for the First Nations community women was high (.58, *SD* of .19), the ratio of the first to second eigenvalues was only 2.46. This combination of results suggests that although there is much agreement, there is insufficient patterning to produce consensus. This could result from a subgroup giving systematically different responses. Alternatively, the First Nations community women

Table 6.1 Consensus Factor Loadings for Values Statements

Generation and location		Consensus factor[a]		Eigenvalue ratio[b]	
	N	Mean	*SD*	1st to 2nd	2nd to 3rd
Girls					
Suburban	20	.64	.16	5.51	1.23
Rural	20	.73	.10	6.23	1.27
Urban Aboriginal	21	.69	.15	6.43	1.31
First Nations community (FNC)	19	.56	.23	3.46	1.44
All	80	.65	.18	7.29	1.03
Women					
Suburban	21	.67	.13	4.19	1.48
Rural	21	.68	.20	6.69	1.21
Urban Aboriginal	22	.64	.20	4.08	2.13
First Nations community	19	.58	.19	2.46	1.87
All except First Nations women	64	.66	.16	5.05	1.32
Mothers and Daughters					
Suburban	41	.64	.13	5.01	1.24
Rural	41	.70	.16	7.94	1.07
Urban Aboriginal	43	.66	.15	6.27	1.21
All participants except First Nations community women	144	.64	.16	6.93	1.05

[a]The mean consensus factor is the average inter-correlation among respondents and is an estimate of shared responses (corrected for guessing). [b]The eigenvalue ratio is used to test the assumption of a shared cultural domain. The first eigenvalue should be at least three times the second with all subsequent factors relatively small and positive.

could have a different framework for weight than the other groups. Either way, their statements should not be included in the aggregated analyses. The responses of the First

Nations community women will be discussed subsequent to examining the similarity and difference in the other participants. There was considerable agreement overall, and the extent of consensus will be examined next.

For the analyses of the seven other groups, the ratio for the first to second eigenvalues was higher than three (3.46 to 6.69), mean consensus factors ranged from .56 to .73, and all the other factors were positive.[22] As can be seen from Table 6.1, the assumptions of consensus were also met for the aggregated samples shown. The results suggest, that with the stated exception, participants shared cultural understandings of weight for each generation and across both generations at each research location. The overall mean consensus factor of .64 indicates that 64% of responses reflect shared understandings. (This would be approximately 82% without the correction for guessing.)[23] These results demonstrate high levels of consensus and low variance (based on criteria cited in Garro, 1996) and provide evidence of general sharing of weight-related values amongst middle-aged women and teen-aged girls at these different locations.

Cultural consensus analysis is also a technique for discovering the (unknown) culturally shared responses to questions. The consensus responses to individual statements across the four locations and the two generations will be compared next. As expected, given the overall consensus findings, there was a high level of congruence in

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[22]Eighty-three per cent of the individual values were above .5. One individual factor loading was below zero in a First Nations community girl. This girl described a history of struggling to overcome her anorexic and bulimic behaviours.

[23]Assuming that individuals will guess in agreement with the culturally shared response for half of the questions over the overall mean value of .64, this estimate is calculated as follows: (.642 + [1 - .642/2] = .821).

the responses given. Table 6.2 gives the statements for which the analyses indicated congruent responses at all four locations and for both generations. Agreement (or disagreement) is indicated by a *Y* for *Yes/true* (or an *N* for *No/false*), followed by the proportion agreeing (or disagreeing) to the statement. Statements are listed from a high to a low level of consensus, with statements where agreement was the consensus response listed first. Each of these 11 statements attained significance at $p < .01$ by the binomial test, which indicates that the response differed significantly from an even split of agree/disagree responses.

Differences Between Locations

Table 6.3 lists the 13 statements that elicited somewhat more variable responses, although even here there is much agreement. Small letters for *yes* and *no* indicate responses given by the consensus program that had Bayesian values at the confidence level of $p < .01$ but were not classified as significant by the binomial test. Statements that did not meet the Bayesian criterion are indicated with a dash preceding the consensus response. These responses cannot be considered reliable. However, the *consensus* response indicated by the program is given to enable interpretation of the proportion agreeing or disagreeing with this response. For example, *-y = .57* means that there was no reliable consensus response even though 57% of the group agreed with the statement.

Eight statements did not meet the Bayesian criterion in at least one of the eight groups (see Table 6.3, statements 2, 3, 4, 7, 9, 16, 19, 21). Looking at each generation separately, the proportion of matching statements for each pair of communities was over

Table 6.2 Proportion of Agreement with Consensus Position for Values Statements Meeting the Binomial Criterion by Generation at Each Location

Statement	Generation	Suburban	Rural	Urban Aboriginal	First Nations
		Proportion agreeing with statement			
5. It is wrong to judge another person on the basis of their weight.	Women	1.00	1.00	.95	1.00
	Girls	1.00	1.00	.95	.95
22. A fat woman can be beautiful.	Women	1.00	.95	1.00	1.00
	Girls	1.00	1.00	1.00	.83
23. The media should show women of different shapes and sizes.	Women	1.00	1.00	1.00	.89
	Girls	1.00	1.00	1.00	.95
13. If people felt good about themselves, they would accept their body as it is, whatever their size and shape.	Women	.90	.81	.86	.89
	Girls	.85	1.00	1.00	.95
15. Women ought to be more concerned about being fit than about their weight.	Women	.95	.95	.91	.89
	Girls	.90	.85	.95	.84
6. Girls pay more attention to what their friends say than what their mothers say about how they look.	Women	1.00	1.00	.81	.83
	Girls	.90	.95	.90	.79
20. Mothers should help their daughters lose weight if they need to lose.	Women	.86	.95	.82	.68
	Girls	.85	.80	.76	.95
		Proportion disagreeing with statement			
1. Teasing a friend is a good way to get her to realize she needs to lose weight.	Women	1.00	1.00	.95	.95
	Girls	.85	1.00	.90	.84
18. A heavy woman should not wear a bathing suit or do things that show too much body.	Women	.90	.90	.86	.74
	Girls	1.00	1.00	.90	.84
11. If a cute guy tells a girl she's too fat, and if she likes him she should try to lose weight.	Women	.90	.90	.95	.89
	Girls	.90	.95	1.00	.68
10. If you had the money, it would be worth spending it on plastic surgery or liposuction to improve your appearance.	Women	.81	.86	.86	1.00
	Girls	.90	.95	.81	.95

Note. All statements met criterion for consensus analysis and significance for the binomial test at the level of $p < .01$ for all groups tested. Statements are listed from high to low consensus, numbered according to the order in which they were asked.

Table 6.3 **Proportion of Agreement with Consensus Position for Values Statements *not* Meeting the Binomial Criterion by Generation at Each Location**

Statement	Generation	Suburban		Rural		Urban Aboriginal		First Nations	
14. A girl or woman should worry about her weight because more people will like her, she will have an easier time attracting a boyfriend, and getting a job. All other things being equal, she will do better in life if she is slim.	Women	n	.71	N	.86	N	.86	n	.78
	Girls	N	[illegible]	N	.95	N	.86	n	.63
8. Models are thinner than they should be, but they look great so it's okay.	Women	n	.71	N	.95	N	.77	n	.63
	Girls	N	.90	N	1.00	N	.95	n	.63
9. People should not weigh themselves.	Women	-y	.48	N	.76	n	.73	N	.84
	Girls	n	.75	N	1.00	N	.81	N	.95
2. Weight is not so important. People shouldn't spend so much time thinking about it.	Women	Y	.86	Y	.81	Y	.81	-y	.58
	Girls	y	.70	y	.75	Y	.90	y	.61
3. People should refuse to buy a product that uses extremely thin models in its advertising.	Women	-n	.60	n	.57	-n	.55	N	.74
	Girls	N	.80	N	.85	N	.90	n	.63
21. If a woman is very concerned about her own weight, then it's likely that her daughter will be too.	Women	Y	.95	Y	.86	Y	.86	y	.74
	Girls	-n	.50	y	.55	-y	.57	n	.63
7. Some people are meant to be big and it would not be healthy to try to change their weight.	Women	y	.67	y	.67	Y	.86	y	.59
	Girls	-n	.58	y	.68	Y	.76	n	.63
24. There should be a special tax on junk food and the money should be spent to build bike paths and swimming pools and to teach people about healthy living.	Women	Y	.76	n	.57	y	.64	y	.63
	Girls	y	.70	y	.60	n	.52	Y	.74
17. In general, people are not born fat; they let themselves get fat.	Women	y	.62	n	.50	n	.73	y	.58
	Girls	n	.70	n	.68	n	.67	n	.53
12. Dieting is unhealthy.	Women	y	.62	n	.65	y	.55	n	.63
	Girls	n	.60	n	.65	n	.67	n	.58
16. Mothers should tell their daughters not to worry about their weight no matter what they weigh.	Women	N	.81	n	.76	-n	.59	n	.53
	Girls	y	.65	-n	.50	y	.71	Y	.74
19. Women should always watch what they eat because it's easier to stay thin than to lose weight.	Women	n	.60	n	.57	n	.64	-n	.50
	Girls	y	.60	-n	.55	y	.62	y	.74
4. If people felt good about themselves, they would take the time and energy needed to lose weight.	Women	-y	.52	n	.62	n	.59	y	.68
	Girls	n	.55	-y	.53	y	.62	y	.68

Note. The letters *y* and *n* indicate consensus responses of *yes* and *no*, respectively. Capital letters indicate significance for the binomial test at the level of $p \leq .01$. A dash means the responses cannot be classified as *yes* or *no* using Bayesian values at the confidence level of $p \leq .01$. Statements are listed from high to low consensus, numbered according to the order in which they were asked.

75%. Most of the variability was due to unclassifiable rather than contrasting responses. Within each generation, there were contrasting differences between communities at the level of the consensus response for only four of the 24 statements. In the three communities where consensus indicated aggregated responses were meaningful, the proportion of matching responses was over 87.5%. These results show that the women in the First Nations community often gave the same answers as the other women even though a pattern of culturally accepted answers cannot be assumed for this group.

Despite these high levels of agreement in the responses to the statements, there is some disagreement as well. QAP was used to test for significant differences between locations (as used by Garro, 1986, 1996). The analyses were conducted on women and girls separately. A proximity matrix of inter-respondent correlations at all the locations was created and compared with a structure matrix created by placing 1s where agreement is expected and 0s elsewhere. That is, 1s were placed to correspond to correlations within the same location and 0s were placed elsewhere (see Figure 6.1). QAP correlates these two matrices cell-by-cell, then compares this observed correlation to a distribution of correlations generated by correlating hundreds of randomly permutated matrices. This can be interpreted similarly to a p value. (Borgatti, 1994, p. 273; Garro, 1996). The level for rejecting the null hypothesis of no difference between subgroups was set at $p < .05$, considered appropriate given the exploratory nature of the study. The alternative hypothesis being tested is that correlations within locations will be higher than elsewhere.

QAP indicated significant correlations for both the women and girls ($p = .02$ and .002, respectively). This means that correlations between participants within a community

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Figure 6.1. **The structure matrix to test for differences between Suburban (S), Rural (R), Urban Aboriginal (U) and First Nations (F) girls. The 1s and 0s indicate the expected pattern of agreement and disagreement for conditions where there are significant differences between locations.**

were higher than correlations with participants in other communities. These results indicate significant differences between communities for both women and girls.

QAP was then used to see if differences between the four sites could be more specifically determined. Because a comparison of pairs of sites suggested that the significant differences were between the First Nations community and the other locations, the above analysis was repeated without the First Nations community participants. This time the null hypothesis was supported, suggesting no significant differences between the other three locations, and confirming that the differences were between the First Nations community and the other communities for both women and girls.[24]

QAP does not indicate the source of the differences between communities but this can be deduced by comparing the individual responses with the consensus response for the appropriate comparison group (not shown). There were three statements where the First Nations community women gave responses that contrasted with the consensus response for the other women (compared with two, one and none for the Rural, Suburban and Urban Aboriginal women, respectively). The girls at each location gave one response that contrasted with the consensus response for all girls.

Most of the differences were not due to contrasting statements, but rather to varying strength of agreement. Differences were diffused throughout the statements for both generations as shown by the number of statements that were at least 15% above or

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[24]The p value was .31 for the women and .71 for the girls. Using the same method, no significant differences were found for self-identified ethnicity or current urban-rural residential status in either the women or the girls.

below the proportion of participants giving the consensus response (see Table 6.4).[25] There were ten such statements for First Nations community women, compared to a maximum of three for women at the other locations. There were five for the First Nations community girls, compared to none or two for the girls at the other locations.

Responses to the statements may reveal strong and consistent patterns in the data. Compared to the overall consensus responses, more First Nations community participants agreed with statements suggesting greater concern about weight, and fewer disagreed with statements that might have mitigated such concern. These differences will be examined more closely, starting with the girls where the pattern seemed clearer.

Table 6.4 Statements Varying from Proportion Giving the Consensus Response

Generation and location	More than 15%	More than 20%
Women		
Suburban	9, 17, 24	--
Rural	12, 24	--
Urban Aboriginal	17	--
First Nations community	3, 8, 9, 10, 16, 18, 20, 21	2, 4
Girls		
Suburban	--	--
Rural	16, 19	--
Urban Aboriginal	2, 7	--
First Nations community	3, 7	8, 11, 14

[25]Kempton, Boster and Hartley (1995) used a similar strategy. The cut-off is arbitrary, but seemed reasonable given the pattern of results.

The First Nations community girls' responses that varied more than 15% from the aggregated response for the girls were:

- 7. Some people are meant to be big and it would not be healthy to try to change their weight (19% more First Nations community girls disagreed. This negative response contrasted with the consensus response for all girls.)
- 8. Models are thinner than they should be, but they look great so it's okay (25% more agreed).
- 11. If a cute guy tells a girl she's too fat, and if she likes him she should try to lose weight (21% more agreed).
- 14. A girl or woman should worry about her weight because more people will like her, she will have an easier time attracting a boyfriend, and getting a job. All other things being equal, she will do better in life if she is slim (21% more agreed).

These all fit the pattern of greater concern about weight, but there was one that did not. Seventeen percent more First Nations community girls agreed that people should refuse to buy products that use emaciated models in their advertising. There may have been a problem with this statement. Some girls did not seem to understand it.

The First Nations community women's contrasting responses were:

- 4. If people felt good about themselves, they would take the time and energy needed to lose weight (24% more First Nations community women agreed).
- 17. In general, people are not born fat; they let themselves get fat (12% more agreed).
- 12. Dieting is unhealthy (14% more disagreed).

Three other statements with more than a 15% discrepancy in response from the other women add to the impression of support for the importance of weight to the First Nations community women. These were:

- 9. People should not weigh themselves (18% more disagreed).
- 2. Weight is not so important. People shouldn't spend so much time thinking about it (25% more disagreed).
- 18. A heavy woman should not wear a bathing suit or do things that show too much body (15% more agreed).

The First Nations community women's responses to some statements ran contrary to support for weight control. For example, although all groups opposed liposuction or surgery to improve one's appearance (statement 10), the First Nations community women were the only group that was unanimously opposed (with their daughters close behind). Some other statements where their responses did not fit the pattern of greater support for weight control were:

- 8. Models are thinner than they should be, but they look great so it's okay (18% more agreed).
- 3. People should refuse to buy a product that uses extremely thin models in its advertising (17% more disagreed).
- 16. Mothers should tell their daughters not to worry about their weight no matter what they weigh (19% more agreed).
- 20. Mothers should help their daughters lose weight if they need to lose (19% more disagreed).
- 21. If a woman is very concerned about her own weight, then it's likely that her daughter will be too (15% more disagreed).

It is plausible that other values, perhaps the desire to communicate love and acceptance to their daughters, a disbelief in criticizing others, the value of non-interference, respect for the integrity of the body may explain these statements and take precedence over the importance of weight. Consequently, the pattern of greater concern about weight in the First Nations community is more complex for the women than for the girls. Some statements imply greater support for weight control, but others seeming to be based on competing values.

Given the lack of consensus for the First Nations community women, their results were examined for evidence of a subgroup who might be responding differently. The variables tested (income, level of education, BMI or current body shape, and residential

pattern)[26] provided no strong evidence of patterned responses. Comparing those who had always lived in the First Nations community with those who had lived in a city or town (residential pattern) was not significant ($p < .06$, N.S.). This comparison grouped any residence off the reserve as living away, whether it was six months or 10 years, in a large city or a small town, as an adult or while growing up. Although there is not enough data to explore this relationship further, the bluntness of the measure, and its theoretical probability suggest further exploration along these lines may be fruitful. We turn now to a discussion of the similarities and differences between mothers and daughters by age group, and then paired within families.

Comparing Generations

The proportion of matching statements between women and girls was 79%. As with the differences between locations, there were some differences between the age groups, within the context of this high level of agreement. Again, their significance was tested with QAP. The data for the generations at each location was compared with a structure matrix that had 1s for girl-to-girl comparisons, 1s for woman-to-woman comparisons, and 0s for girl-to-woman comparisons. The alternative hypothesis being tested was that correlations within age groups would be higher than elsewhere.

The resulting correlations were significant for the Suburban and Urban

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[26]QAP was used to test for systematic subgroup differences on the basis of income (using the median income to divide the sample into two groups), education (those with less than a high school education compared to those with high school graduates and/or some college or university), current BMI (using the median [26.2] to divide the women into two groups), and self-assigned body shape drawing (smallest, median and largest).

Aboriginal participants ($p < .000$ and .02, respectively). At these two locations, the girls' responses correlated more with other girls' responses than with the women's responses. Likewise, the women's responses were more similar to the other women's. At the other two locations, the correlated responses within age groups were not significant so the null hypothesis of no differences cannot be rejected ($p = .11$, N.S. for the Rural community; $p = .10$, N.S. for the First Nations community).

In other words, the age groups were more similar in the rural communities than in the city. Plausibly, there may be fewer competing influences on girls and/or women in rural locations and therefore the effect is one of overall congruence of messages. Families may spend more time together, or girls may spend less time with their peers. Or it's possible that there is an influence acting on both age groups in the country, or on only one in the city. There is insufficient data to address this question.

An examination of Table 6.3 allows a comparison of responses between the generations at each location. There were few differences in the number of statements where the generations responded differently at the consensus level (four each in the Suburban, Urban Aboriginal and First Nations community; one in the Rural community). Specific contrasting statements varied across locations. The direction of the difference, however, was generally consistent. There were two questions where women's and girls' responses varied by more than 15% at all locations ($p \leq .00007$ when tested with a chi square test). Both questions concerned mothers' influence and treatment of daughters.

A large majority of women (86%) agreed with question 21, "If a mother is very concerned about her own weight, it is likely that her daughter will be concerned too." Far

fewer girls perceived mothers as having such influence. Only half of the girls (50%) agreed with this statement.

The responses to statement 16 were even more diametrically opposed. Two-thirds of the women (67%) disagreed, whereas almost two-thirds of the girls (65%) *agreed* that "mothers should tell their daughters not to worry about their weight no matter what they weigh." When participants disagreed, they usually gave explanations based on health. A few of those who agreed talked about love. One Rural girl (RD13) said, *"I'd probably have to agree with them because it just kind of tells them, 'Well, we'll love you no matter what you weigh, [no matter] what you look like, you're still our kid.'"* One of the Urban Aboriginal mothers (UM8) said, *"I'd love my daughter no matter how big she was. As long as she doesn't have a bad heart, then I guess it'd be all right because I wouldn't want her to die."* Even though only a few participants explicitly raised similar thoughts, the implications are enormous. They suggest the intertwining of weight and worthiness. Despite the high proportion of girls who said that mothers should tell girls not to worry about their weight no matter what they weigh, 84% of the girls agreed that mothers should help their daughters lose weight if they needed to lose. This contradiction would seem to place mothers in a bind. The next two chapters examine mothers' and daughters' views on appropriate actions to take around weight, looking specifically at what mothers and daughters say about advice given and received.

This comparison has looked at the statements where mothers and daughters (as groups) gave different responses. Next, the degree of matching responses within mother-daughter pairs is examined.

Comparing Mother-Daughter Pairs

Comparing mother-daughter pairs is similar to a test-retest situation (except girls' responses are compared to their mothers' responses rather than to their own upon re-testing). It is important to evaluate similarity and variation within mother-daughter pairs within the context of all variation (Garro, 1983). To determine if the responses a girl gave were more similar to her own mother's than to her classmates' or the other mothers' responses, the mean correlations and mean matches for individual mother-daughter pairs at each location were calculated and compared to those for girl-to-girl pairs and unrelated pairs of women and girls.[27] The results are presented in Table 6.5.

The correlations between related mother-daughter pairs at each location varied from .32 to .53 in the First Nations and Rural communities, respectively. Similarly the

Table 6.5 Correlations and Matching Responses for Pairs of Girls (D-D), Mothers and Daughters (M-D) and Unrelated Women and Girls (W-G)

Location	*n*	Mean correlations			Proportion of matches		
		D-D	M-D	W-G	D-D	M-D	W-G
Suburban	20	.42	.42	.40	.71	.70	.69
Rural	20	.54	.53	.50	.77	.76	.74
Urban-Aboriginal	21	.49	.49	.42	.74	.72	.71
First Nations	19	.33	.32	.32	.66	.66	.66

[27]The matrix of agree/disagree responses for the girls at each location were entered into similarity (correlations or matches respectively), and then into univariate statistics (without the diagonal) to get the mean correlation or matching statistic for the girls. This was done for the mother and daughter responses at each location, but only the results on the diagonal were averaged to give the means for the related mother-daughter responses.

proportion of matching responses given by related mother-daughter pairs is high, from .66 to .76 in the First Nations and Rural communities, respectively.

By itself, this would seem to support the common sense notion that girls learn these concepts from their mothers. However, the agreement must be evaluated in the context of how the other participants responded. There was a similar high congruence in the average correlations and matching responses between pairs of girls, and among all unrelated women and girls. Despite evidence of similarity between mothers and daughters, girls were not more similar to their mothers than to their peers. The findings of similar associations between related mother-daughter pairs and within the group of girls and within the group of unrelated women and girls suggest the high degree of similarity is no more than would be expected given the level of consensus overall. There was no evidence in this data to suggest that girls were more similar to their mothers or their peers than to the broader community.

Summary and Discussion

There was consensus in the overall sample of participants except for the First Nations community women. Even in this sample, there was fairly high agreement as indicated by the high competence value (.58), and the matching of over 75% of responses with women at the other locations. There was agreement at the binomial level for all groups for 11 of the 24 statements. Despite this similarity, the lower consensus ratings for the First Nations community women indicated a lack of patterning in their responses to the questions.

Analyses with QAP did not find any significant differences between the generations in the First Nations community. QAP highlighted both the girls and the women in the First Nations community as responding differently than the participants at the other locations. Differences in their responses were largely due to varying level of support for statements rather than to contrasting responses. An examination of the responses suggested a pattern of greater concern about weight in the First Nations community girls. There was greater variability in the women's responses, including both greater acceptance and greater rejection of statements about the importance of weight. There are a number of possible explanations for this finding.

It is possible that there was a sub-group within the community who systematically responded differently to the questions. However, there were no significant differences within the First Nations community women when comparisons were made on the basis of income, education, BMI, self-rated body shape, or residential pattern. A more finely delineated comparison of those who have lived outside the community with those who have always lived in the community may be helpful in determining if this could account for differing responses, given the results of this analysis.

Another possibility is that the First Nations community women may have a somewhat different framework for viewing weight issues. The First Nations community women may be aware of the culturally dominant responses, but have an underlying perspective that departs from this. Their responses suggest they may be pulled in several directions simultaneously. If the First Nations community participants have a different framework for understanding weight issues, then using a questionnaire based on

statements made by inner city families would not be expected to correspond with their perspective. The lack of consensus suggests this is the case. Although appropriate for studying comparability of responses at a number of locations, this questionnaire cannot do more than highlight the lack of consensus in the community. The open-ended interview data from the First Nations community can now be used to construct a fixed-structure questionnaire to clarify an alternative framework within this community.

The results demonstrated that the First Nations community girls share understandings about weight with their mothers and also with the other girls. The pattern of their results is compatible with the hypothesis that the girls may be intermediate between cultures with respect to learning about weight issues: Consensus was lowest for the First Nations community girls; they were the only girls highlighted as having some differences from the overall sample of girls; and the mean correlations and proportion of matching between mothers and daughters were lowest for the first Nations community. Studying a more isolated First Nations community would be interesting in that it could clarify whether less exposure to the broader culture would result in greater differences from girls in other locations and more similarity with the older generation in their community. Alternative ways of understanding weight would likely be more evident in a more isolated community.

Comparing Aboriginal and non-Aboriginal participants, or urban and rural participants did not reveal any differences greater than would be expected by chance except for the different inter-generational patterns.

The women and girls living in the city responded more similarly to their own age

group. These differences also appeared to be due to greater or lesser proportions agreeing to statements rather than to contrasting responses. There was no evidence of differing responses between the generations at the two rural locations, although the general direction of their responses seemed similar to the urban locales. Finally, mother-daughter pairs did not have higher correlations or matching responses than non-related pairs.

In conclusion, there are some demonstrated differences between the four locations and between the younger and older generations. Despite this, there is much similarity in the way participants responded to the values statements. The next chapter continues to examine similarities and differences, turning to the responses to open-ended questions about weight management within families.

CHAPTER SEVEN

Mothers' Advice to Their Daughters

> "Let us put our minds together and see what life we can make for our children" (words of Lakota Sioux leader Sitting Bull in 1877, cf Story et al., 1998, p. 175).

How do mothers cope with a culture that presents girls with damaging models of womanhood? What do they tell their daughters? How do girls take their mothers' advice? Can we take what mothers and daughters say about each other's attitudes and advice at face value? In particular, do girls hear their mothers' comments accurately? Do mothers who diet have daughters who diet? Does it make a difference if the girl is lighter or heavier than average? Should mothers discuss weight issues with their daughters, and if so, how should they approach it?

I attempted to obtain at least partial answers to these questions by asking each mother: "Do you talk to your daughter about weight? Do you give her any advice? Does she give you any advice?" I asked girls similar questions about their parents. When asked what they talked about (an intentionally open question), 13 participants who initially answered "no" went on to give examples of what they talked about. These responses were coded affirmatively. Hoping to obtain perceptions of longer-term influences, I also asked each woman if she thought her feelings about her weight affected her daughter's attitudes.

A girl's weight status may be a major factor in eliciting concerns about weight (her own, her parents' and other people's). Consequently, this analysis was stratified by girls' weight. Girls at each location were divided into quintiles of BMI. This chapter

focuses on the interviews of mother-daughter pairs for the girls with the highest, median and lowest BMIs. The range of BMIs for each category is given in Table 7.1.[28]

Table 7.1 Body Mass Index (BMI) Range for Girls by Location

	BMI range for quintile		
Location	Highest $n = 18$	Median $n = 16$	Lowest $n = 16$
Suburban	21.5-23.4	18.7-19.8	<18.0
Rural	>25.0	19.8-20.6	<18.0
Urban Aboriginal	>25.0	20.3-21.8	<19.0
First Nations community	>25.0	20.1-21.5	<19.0

Who do Girls Talk To?

When asked if they talked to their *parents* about weight, 68.4% of girls said they did. Forty-three girls specifically said they talked to their mothers. Seven mentioned their fathers. More mothers (88.5%) said they discussed weight or related issues with their daughters. Mother-daughter responses matched in 70.5% of the families, with both usually agreeing that they discussed the issues.[29] Mothers explained the conversations

[28]When height and weight were not available, the girl's body shape selection was used. One Urban Aboriginal girl was not considered due to lack of data. There were more girls in the highest quintile due to the inclusion of ties.

[29]Despite seemingly high agreement, the concordance between mothers' and daughters' responses was non-significant, as indicated by a kappa value of .34. This test measures inter-rater agreement for categorical scales, correcting for chance-expected agreement. Rather than having two people rate many items, many mother-daughter pairs rated the same item. Kappas greater than .75 represent excellent agreement beyond chance, values between .4 and .75 suggest fair to good agreement that is reliable, and values below

more extensively than their daughters. Daughters were expert at succinctly summing up their mothers' main points.

Participants mentioned numerous weight-related interactions with other people, including advice or teasing from fathers, siblings, grandmothers, other relatives, friends and acquaintances, especially boys, and especially at school. Professionals were also mentioned, including teachers, coaches and health professionals.

When asked whom they *should* talk to if they were having problems with their weight, girls said parents (50), other family members (10), a variety of professionals (50), and friends (29). Seventeen girls raised their mothers. Three girls also said fathers, but each added that dads might not listen or understand the issues as well.

Heavier than Average Girls

Knowing how to cope can be particularly perplexing when girls are heavier than their peers. The 18 sets of interviews in this category show how mothers see the difficult issues that come up for their daughters, how they attempt to resolve them, and how their daughters react. Girls' BMIs were at or above 25 except at the Suburban location, where the highest BMIs fell between 21.5 and 23.4. Although these girls' BMIs fall within healthy weight guidelines (Centers for Disease Control and Prevention, 2000; Cole et al., 2000), they were above BMI norms of 18.2 and 19.3 for 13 and 14 year-olds, respectively (Beumont, Al-Alami, & Touyz, 1988), and they were heavier than the other girls at their

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.4 represent poor agreement (Fleiss, 1981, p. 218).

location. They are included here for these reasons, but because they are lighter than the other girls, they are also examined separately at the end of this section. Mothers are the other half of the equation, and therefore their weights are also relevant. Two-thirds of the girls' mothers (11) had BMIs over 30. There were five with BMIs under 25, and one was under 20. All but two girls and two women wished to be smaller or to lose weight.[30] Half of the participants (10 women; 8 girls) indicated on the Restraint Scale that they were dieting.

Two major themes came up in this discussion. Ten mothers' accounts of the advice they gave their daughters were either explicitly focussed on weight control or the context suggested this was part of the motivation. Their advice often focussed on nutrition and exercise. It was always moderate and sometimes cautioned against extreme behaviours based on the recognition of their daughters' desire to lose weight. Advice was usually given in a context of concern for health. Seven of the girls echoed their mothers' advice, two said their mothers didn't give them advice and one repeated only her mother's cautionary advice, *"She told me not to starve myself to death."*

The second theme also focussed on nutrition or exercise, but five mothers explicitly stated that their advice was given to improve health rather than for weight control. All of their daughters repeated this advice. Of the three remaining mothers, one did not give any advice, and two said they told their daughters they were fine. Four other

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[30] Their desired weight was less than their current weight, or their *desired* body shape was smaller than their current *perceived* shape on the BSDQ (see Chapter 9). The exceptions included one Suburban woman, one First Nations community woman, one Rural girl and one Suburban girl (who reported she was always dieting).

mothers also said this in the course of their response. None of the girls repeated these complimentary remarks.

Despite the relative ease of classifying responses into these broad categories, each answer was uniquely embedded within a mother-daughter relationship, and a family and social context. Mothers often brought in a multitude of factors as they deliberated the reasons for the advice they considered most appropriate for their daughters. Mothers' explanations and their daughters' reactions are examined next.

Weight Control Advice

One of the Rural mothers was very concerned about her daughter's eating and activity habits, explaining, *"She's not a big eater. When it comes to eating, she eats often. She'll eat in between meals and then, of course, when it comes to eating your main meal, she's not hungry, and so she picks. And then, after that she's going for a bag of chips. If she could leave her snacks and pop alone, she'd do okay."* And she added, *"She's not involved in anything--she doesn't get any exercise."*

RM2 said she talked and talked, but it seemed to go in one ear and out the other. She said her daughter worked part-time with a group of slightly older girls, who were slim and frequently talked about dieting. After these exposures, her daughter would talk about starting a diet, too, but it never lasted more than a day or two. The mother speculated:

> RM2: *I'm hoping she'll grow a little bit and lose some of it but what can you say? ... She doesn't really care. It doesn't bother her. ... She has lots of friends, and she gets along with everybody. Even if somebody makes fun of her, it doesn't seem to*

bother her. ... I guess I'm glad that it doesn't bother her because if it did there could be problems. But in the same token, I wish it did bother her a little bit so that she'd try and do something about it.

RM2's reference to "problems" was an allusion to an earlier comment she'd made about the suicidal feelings of another girl, who was the same height and weight as her daughter. She didn't want a suicidal daughter, but she wanted one who was motivated to lose weight. She ended by commenting *"Put it this way, if she's not changed any by Grade 10, because then you're mature enough to know how you wanna look, if nothing's changed by then, then she's probably not going to change."*

The daughter understood and agreed with her mother's advice, *"My mom always tells me to cut down on the ice cream and sometimes pop and start eating more healthy, like eating more salads. ... but it's hard."* Both said they dieted, although the mother's efforts seemed to be more effective. The frustration expressed by this mother also came up in other mothers' interviews. Several participants commented that their weight-related conversations typically shaped up as arguments.

Some weight control advice seemed to be given in acknowledgement of their daughters' stated intent to lose weight, and seemed intended to prevent extreme measures. For example, a First Nations community mother said:

FM17: Like my daughter, she's always worried about her weight. She gets mad with herself. She's trying to lose her weight or she's trying to be slim. ... I say, "You gotta walk and get enough exercise." For sure, cut out all her junk food. ... I said, "Give it time."

Her daughter said her mother's advice was *"'If you think you're too big,' she says, 'well start exercising.'"* It would seem that the daughter got the mother's message, although

following it was more difficult. When asked how her daughter took this advice, FM17 replied, *"She says, 'Okay.' Next thing you know, she's eating it."*

Mothers also worried about discussing weight with their daughters. One of the Suburban mothers was worried about her daughter because there was a family history of weight problems. And she worried that being loved might make it too easy to gain weight:

> *SM1: I guess if you grew up, if you grow up in a household where people are overweight, you know you love that person and they're okay. Maybe it wouldn't be so bad, if you kept eating and did all the wrong things and gained weight too. It's after, when you know you can't do anything about it, or it's hard for you to do something about it. By then it's too late.*

SM1 seemed to be reflecting on her own past experience to predict how being loved and accepted might influence her daughter. She talked about weight and love together several times in her interview. She discussed a similar hesitation in approaching her mother with her concerns about her weight increasing her risk for a heart attack. She noted that thin mothers must be selfish women because time spent on personal grooming and exercise was time not devoted to their family. But if loving and being loved result in unwanted and unhealthy weight gain, there's an obvious dilemma for mothers who love their daughters and feel responsible for ensuring a healthy weight. When I asked SM1 if she discussed weight with her daughter, she replied:

> *SM1: I haven't really sat down and told her why I think she should get into better eating habits. Of course I've said, "I don't want you to gain weight, or keep gaining weight, or get heavy like me." ... It's just, "Stop eating that. You're gonna gain weight." That's about the extent of our conversation about weight. ... I would advise her, "If you gain 10 pounds or 20 pounds do something about it then, you know. Don't wait 'til it gets to 40, 50." [G: Have you told her this?] No, that's the thing. I didn't think it would be a good idea yet to tell her. If she notices her jeans*

are getting too tight and that she has to buy new jeans every four months, then I think it's time to take a look.

Her daughter's response was short and direct: *"My mom just goes, 'We should lose some weight or something.'"* Elsewhere she added, they never did, although she indicated serious efforts on her own. Given the mother's ambivalence about discussing weight control with her daughter, the suggestion of mother-daughter tandem dieting may have been a way of suggesting weight loss without compromising the relationship.

An Urban Aboriginal mother spoke about her admiration for her daughter's *"incredibly neat"* and *"really progressive"* feminist perspectives, which encompassed weight and were different from her own. She also expressed scepticism and caution:

> *UM17S: I try and do it [talk about weight] more from an exercise perspective, rather than a food consumption perspective. ... She's kind of got a strong feminist perspective that looks mean nothing, but I don't know if it's a defense mechanism. But also, she's 14. You have to remember that [laughs]. They don't do well with moms at that age. ... Hmm fine, but I mean she's overweight and I just want to encourage her to exercise 'cause she doesn't do anything. ... But she'll have a different perspective on it, she'll think that I care all about her weight. It's typical of the age. They over-dramatize things. Like I mention it once in six months, and she'll just [say], "you always want me to be thin." ... So I stay away from it.*

UM17's rationale hints at wanting to respect her daughter's autonomy. Despite the warning that her daughter's perspective may not reflect what she actually said, her daughter faithfully played back her advice, saying *"She'll look at the treadmill and she's like 'Oh you should work out on that." Or she'll go, "Here you should try these [lower fat recipes]. We should eat differently."* When asked how she reacted, she said, *"Oh, I just let her do whatever she wants. If I want to do it, then I'll do it. If I don't then I won't."*

The phrase *junk food* came up frequently in these discussions. For example, one of

the Urban Aboriginal mothers (UM4) said she advised her daughter *"Just not to eat so much. Well, she doesn't really eat that much but I just tell her not to eat so much junk food or stuff like that."* A First Nations community mother (FM4) said, *"I guess it's just the eating habits. ... My hands are tied with that because when they're out and it's junk food, you know, they go for it."* The first girl said her mother did not discuss weight with her. The second girl echoed her mother's words when I asked her what her mother advised her, *"Just try and cut down on the junk food."*

Junk food was used in 42% of interviews across all of the participants.[31] Participants also talked about *no treats,* or cutting out specific foods, such as chips and pop. This advice was not limited to discussing weight control, but was also given in the context of healthy eating. Chapman (1993) noted that *junk food* was contrasted to *healthy eating* in her interviews with girls aged 11 to 18. She commented on, among other things, how junk food was used in the adolescent search for autonomy. Girls associated healthy eating with weight loss, parents and being at home. Junk food was associated with friends, pleasure, weight gain and guilt.

Health Advice

Five mothers discussed nutrition and exercise, making these recommendations for health reasons rather than weight loss. All of their daughters indicated they understood this advice, although two girls indicated their goal was weight loss. One of the Suburban

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[31]This phrase has reached the Canadian Arctic. Egan (1999, p. 235) has noted references to junk food in her interviews with Inuit women in Coral Harbour, Nunavut.

mothers, for example, said they didn't specifically talk about weight:

> *SM19: We talk sometimes about, oh, I don't know, staying in track because it's a good way to keep in shape and things like that. But no, not about losing weight or gaining weight. ... She restricts herself a little bit, like at night time if we're having potato chips she won't indulge in them. She doesn't restrict her portions but you see her making choices that are good for her, or healthy ones and I can see that's a conscious effort for her.*

SM19 recognizes that her daughter's goal (weight loss) differed from her goal for her (to keep in shape). She did not confront her daughter on her goal or interfere with it, but neither did she support it. She said her daughters were larger than she was, and she wanted to prevent this from creating problems for them.

Her daughter echoed her advice quite clearly, saying her mother talked *"about eating healthily, but not that I should lose weight, or I shouldn't."* And although she was concerned about her weight and said she dieted, she also said she mostly did it by *"eating more healthy, but not like going on a strict diet or anything. ... Just to get more in shape and exercise and stuff."* Her mother's approach did not change her goal, but seems to have influenced her methods.

One Urban Aboriginal mother was dissatisfied with her own weight, but focussed on eating well and being active. She stated that health was her goal but she hoped she would lose weight too. She said she talked about weight a lot with her daughter but focussed on health. She referred to her own experience of pressure from her family while growing up. It seemed that sharing her story was intended to be instructive, perhaps to acknowledge that she knew how it felt, that people's comments shouldn't be taken personally. She explained her philosophy:

> *UM22S: I'm trying not to make comments on whether she looks heavy or thin, trying not to put too much emphasis on that, or "you could lose weight." ... It's really amazing she gets that pressure from people, that she's overweight and people tell her she is and she gets it [from] my family. My sister. My mom. ... One of her cousins, they're quite vocal about her weight, and again, use it as a put down or oppression. ... I can't really make it go away or make it hurt less. But then we just keep talking about it.... I've been very conscious of not wanting her to diet and lose weight and not eat, and that kind of stuff.*

UM22S said she found it difficult not to focus on weight and emphasized how hard she tried to stop herself from pressuring her daughter about her weight. Her daughter's emphasis was somewhat different:

> *Once in awhile she'll ask me if people tease me. One time she just came out and asked me if people teased me about my weight, and I said, "No." ... [I] never have like conversations but once in awhile she'll be, "I wish [I] wasn't fat." And then I just go, "Ah." And then we just don't really talk about it. ... It's kind of uncomfortable 'cause I don't really know what to say, so I usually don't say anything. [G: Does she ever give you any advice?] She always tells me to eat healthier, and once in awhile she'll tell me to exercise more.*

Although she may be referring to different conversations, she seemed to interpret her mother's sharing her own experience as seeking reassurance from her. This conversation made her uncomfortable, perhaps because she felt unable to give her mother the reassurance that she wanted. This same discomfort was apparent in the mothers' talk about their daughters' size and shape.

Descriptions of Daughters

At least half a dozen mothers discussed praising their daughters specifically about their looks, weight or shape, commenting that they were *"just fine," "just right," "perfect."* Tellingly, not one girl said her mother made these kinds of comments to her.

FM11 answered my question with *"I told her she was nice the way she is. She doesn't need to lose weight. But she said she'd like to try it, like to lose a little more."* Her daughter said they did not discuss weight. RM13 said she did not have to give her daughter any advice *"because she's a healthy eater."* She described a typical interaction, *"If she says that she's chubby, then I'll say, 'Well, no. You're not fat, you know. You're just right.' I will compliment her on her weight."* This daughter also said she didn't discuss weight with her mother, except to support her mother's efforts to watch her own weight. SM7 also said she complimented her daughter:

> *SM7: Not constantly but I have because as I said before, with her being in these teen years, every now and [then] she might come down and say ... "I look too fat in this." I go, "No. You're just perfect the way you are." ... To me she's perfect and she'd be perfect if she was fat, or extra skinny.*

Her daughter commented, *"They don't really give me any advice, except for when we see on TV like, 'It's not worth making yourself sick, or it's not worth making yourself have health problems because you want to look a certain way. You can look that way without having any of those problems.'"* This comment was consistent with her mother's emphasis, although again she did not repeat her mother's praise. The mothers' compliments were almost always prompted by a question, a negative comment or other indication of concern from their daughters.

Some spoke of complimenting their daughters, not on their appearance, but on their handling of appearance-related issues or on other aspects of character. For example, UM17S's admiration for her daughter's feminist analysis, which she applied to weight issues. RM5 said, *"I think she's got a really healthy attitude. She's the first person to tell*

you, you have to accept me the way I am. And uh. ... She's she's overweight, but not extremely. ... She's just very comfortable with herself, I find. Her own person." Another said, *"She's [a] pretty on the ball kid."*

Some mothers were direct about their daughters' "overweight" as in some of the already-cited references. Other examples are: *"She's not that fat, but you know she's only 13. She's bigger than I am." "She gained too much for her age." "She's uh she's pretty big--for her, you know for her age. I find her big. Big bone size." "She's built bigger."* These statements were punctuated by long pauses, nervous laughter and sometimes stuttering. Only a few volunteered that they would tell their daughter that she was overweight. Mothers tried hard to be tactful in describing their daughters' body shape.

Some stated they intentionally avoided commenting on weight to their daughters. One mother said, *"If I notice her getting chunky, I'll tell her, 'You shouldn't eat before you go to bed. You should eat your supper and then that's it. And if you get hungry in the evening have a fruit.' I don't say anything like 'You're fat' or 'You might get fat.' I say that to her, but I don't say 'You're fat.'"* She noted, however, that her daughter reacted testily anyway, *"She gets kind of umm--touchy."* The daughter's reaction suggests that promoting the need for weight loss or weight control implies the unstated concerns.

Do Dieting Mothers Have Dieting Daughters?

Similarity in dieting habits would likely be most evident in this quintile, which contained nine dieters, half of the 19 girls in the overall sample who reported dieting *sometimes, usually* or *always*. As the discussion of the meaning of the word "diet"

indicated, not everyone who is trying to lose weight said they were dieting. Self-reports of dieting should be interpreted cautiously, more as a statement of desire and intent to lose or control weight, rather than flagging particular behaviours. Self-reported dieting of mother-daughter pairs for the entire sample is given in Table 7.2.

Table 7.2 Mother-Daughter Dieting Reports by Daughters' Body Mass Index (BMI)

BMI	Pairs *n*	Both diet *n*	Neither diets *n*	Only mother diets, *n*	Only daughter diets, *n*
Highest	18	4	3	6	5
Median	16	1	11	1	3
Lowest	16	0	9	5	2
Other	28	0	19	5	4
Total	78	6.4%	53.9%	21.8%	18.0%

There were five families in the overall sample where both mother and daughter said they dieted. In this quintile there were four families where both dieted and three families where neither dieted, six with a "dieting mother" and five with a "dieting daughter." This is not convincing evidence of mothers and daughters dieting together.[32]

Perhaps a mother's advice is more important than whether or not she diets. Of the 10 mothers who gave advice in a weight control context, five of their daughters said they dieted, and five said they *rarely* or *never* dieted. Of the five mothers who said they did not advise weight control, one of their daughters said she dieted. The two mothers who

[32] Kappa statistics did not indicate any significant agreement for mother-daughter dieting in the overall sample (-.02) or in the heaviest BMI quintile (-.22).

said they gave compliments, not advice, to their daughters both had daughters who dieted. Examining a mother's dieting status and advice to her daughter together did not seem to produce any consistent outcome either. (See Table 7.3.)

The stratification of girls by BMI somewhat controls for body weight. The Suburban girls, however, had BMIs within healthy weight guidelines for their age group and weighed less than the other girls. Nevertheless three of the four Suburban girls said they dieted. The one girl who said she didn't diet had a mother who said she dieted and gave her daughter weight control advice. Two of the dieting girls' mothers did not diet or promote weight loss. The last girl, a dieter, had a mother who dieted and advised similarly. These results are consistent with the overall lack of a pattern.

Table 7.3 Girls' Reported Dieting by Mothers' Dieting and/or Advice in Highest Quintile of Body Mass Index (BMI)

Behaviours of mothers	Mothers, *n*	Dieting daughters, *n*
Diets and advises weight control	7	4
Diets only	3	0
Advice only	3	1
Neither diets nor advises weight control	5	4

Girls At-risk

Some health professionals would consider all girls with BMIs over 25 as at-risk of long-term health problems. Some would consider all teen dieting to be problematic. Two girls in this group had high EAT-26 scores, suggesting a potentially serious risk. Another

girl talked of having lost more than 20 pounds, only to regain it all. One girl said she slit her wrists, and highlighted weight-related teasing as important in her distress. Although not assessed in this study, all of the girls in the previous research reported teasing was prevalent (Marchessault, 1993a).

Lighter than Average Girls

Weight issues of lighter than average girls are seldom discussed, aside from eating disorders (which are extensively discussed because they fascinate, horrify and mystify). This section is based on the 16 girls with the lowest BMI (four from each location) and their mothers. The Aboriginal girls had BMIs below 19. The non-Aboriginal girls had BMIs below 18. Ten of their mothers had BMIs under 25 (with two under 20). Two were between 25 and 27, and two were over 27.

The majority of these girls were either satisfied with their weight (3) or wanted to gain weight (10), from 2.5 to 35 pounds. Three girls (all Aboriginal) said they wanted to lose weight, and two of them said they were dieting. Nine of the mothers wanted to be smaller, and five said they were dieting. There were no families in this group where both mother and daughter were dieting, but there were nine with no dieters.

A slight majority of the mothers and daughters agreed that they did (8) or did not (1) discuss weight issues. In all but one of the remaining families, the mothers said they discussed weight, and their daughters said they did not. In the one family where this was reversed, the mother said she did not discuss weight with her eighth grader, but she did with a younger daughter who had a different body build.

The concerns expressed by this group were somewhat different than those discussed so far. Only one mother (from the First Nations community) gave her daughter advice in a weight control context. It was brief, and the daughter said she didn't discuss weight with her mother, although she was concerned about her weight. The majority of mothers (11) gave their daughters advice that focussed on nutrition and eating enough. Three mothers (and one girl from a different family) were concerned about overly zealous weight control. Three of these were Aboriginal families. Other mothers indicated they watched for, but did not see, risky behaviours in their daughters.

Of the nine girls who said they discussed weight with their mothers, there was some similarity in their responses in four interviews. Five girls said their mothers wanted them to eat more, and one said her mother's advice was to eat a greater variety of foods.

About half of the mothers spoke positively of their daughters' body shape or weight, although sometimes it was simply a denial that she was skinny. Two of their daughters repeated this commentary.

Compared to the previous quintile, there was slightly more acknowledgement of mothers' compliments, and more matching of non-dieting status within pairs. There was less agreement in mother-daughter reports of dieting, the occurrence of discussions on weight and the content of such discussions. These mothers and daughters seemed to talk about other issues as much as the former group. The lower congruence regarding their weight discussions may have resulted because the mothers' issues were different than their daughters'. Most of the girls were not concerned with weight control. The girls' slightly easier affirmation of compliments accords with this speculation.

Just for Good Health

The majority of mothers (11) gave advice focussed on eating regular meals, eating when hungry, eating enough to satisfy hunger, and eating more fruits and vegetables and fewer sweets. Several mothers also talked about the importance of activity for building healthy bodies and healthy attitudes. Here is a sampling of their comments:

> *FM1: [We don't] really talk about weight. I just want to know if she's eating properly, to make sure that she's eating. Because I always tell her, even if she's not really hungry, "Just have a fruit or vegetable in the afternoon, and then something to drink. I said, "because you'll be tired," I said "if you don't eat properly."*
>
> *RM3: She has breakfast. ... She has that to set her off in school. She gets money to buy her lunch. If she doesn't buy something that's nutritious, it doesn't matter. Supper time, she'll have a nutritious meal. Then she has a snack before going to bed. So to me that's all I worry about is making sure she eats regular meals.*
>
> *SM16: I'd like her to be more active definitely. She's thin, and thin doesn't mean healthy. So I've told her that too. ... but if you can have a positive feeling about yourself, not just because you're thin, but because you're healthy, because you exercise and you're involved.*

Only two of the daughters of these 11 mothers said they discussed weight or eating with their mothers. SD16's summary of her mother's advice was *"Oh, I don't know. And my mom sometimes goes like, 'You have to eat more or something.'"* In addition to the above comments, her mother had talked about the importance of eating nutritiously, not skipping meals, and not relying on potato chips and coke for lunch. The other girl responded, *"She just says to not be so picky about what you eat."* Her mother had talked about the food guide, her own weight problems and had advised her daughter that she shouldn't worry about being skinny.

Possibly the messages reflect advice given at other times. However, weight did

not seem to be very salient for these girls, and it seems likely that the girls did not attend to their mothers' comments. It's also possible that because the mothers' and daughters' body shapes and concerns were more varied, the messages were also more varied and therefore harder for girls to grasp. The mothers may not have perceived weight to be a problem for their daughters, and so may not have discussed it with them to any great extent. Weight had become an issue in some families, however, and the responses of mothers and daughters in these families were more consistent.

Worried Mothers

Most of the girls who weighed less than the median seemed to be following their growth trajectory as indicated by discussions of long-term efforts to gain weight, recent gains in height and the lack of dieting and weight control talk in the majority of their interviews. Several mothers indicated they were watching for signs of an eating disorder because their daughters were thin, but most concluded that there was no necessity to intervene. A suburban mother said:

> *My daughter's thin, you know, because she's growing right now. She's only 13, and she's grown so tall in the last little while that she is just seeming to be all legs and arms. But no, I would discuss it with her if I felt she was being really ridiculous about eating and watching her weight, or thinking she was heavy or something.*

One of the Rural mothers said her dentist had told her that her daughter had *"more corrosion behind her teeth than she should've, and that would only be caused by stomach acids."* This mother said she had talked to her daughter, watched her carefully for signs of bulimia, and three years later she continued to think it was not an issue. She said her

daughter was always thin, but had recently *"started to fill out,"* which was naturally reassuring. She, like other mothers, was concerned about her daughter's eating habits.

Three of the four Urban Aboriginal girls in this category had recently lost enough weight to disturb their families. One girl's story was reported in Chapter 5. The second mother, as with the Rural mother above, had watched closely and decided her daughter was doing okay. *"I was worried when she had lost weight so drastically, but then I did watch. She does eat, but she just eats differently now. She eats a lot of more nutrition things, not too many fatty things. No butter whatsoever on anything. Very little bread."*

The third mother tells how she became alarmed at her daughter's weight loss:

> *I think what had happened before was I was just letting her, kind of take it for granted that she was eating her meals, and then all of a sudden I notice she's getting really thin. And it happened in a matter of maybe two or three months, eh? [Father: Yeah it didn't take long at all.] She was losing, losing really fast, you know, yeah. Quite unhealthy looking.*

The mother said this occurred as her daughter was preparing to write exams and *"she was getting all stressed out"* in her effort to maintain her record of straight As. Beginning to date was another issue that came up, discussed as a pressure that directed attention to appearance. She said her daughter told her she was feeling stressed and experiencing dizzy spells. The mother reported that her daughter is *"starting to eat more now. I have to be firm with her, though."*

Both girls were aware of their mothers' concerns. One was concerned herself and trying to gain weight. The other seemed dismissive, reporting that she wanted to lose eight pounds, and adding *"just kidding,"* a phrase she used repeatedly through her interview.

Descriptions of Daughters

More mothers (at least half) indicated they told their daughter that she was fine, or expressed appreciation of their daughters' size or appearance, but it was often expressed as a denial of her "skinniness." Two of their daughters indicated this in their response. FD3 said, *"I just keep walking around the house saying, 'Oh I'm skinny and I want to gain a little bit of weight.'"* I asked how her parents responded, and she replied, *"My mom tells me, they tell me that I'm not skinny, but I think I am."* RM11 said she told her daughter that she was thin, but she would start filling out soon. RD11 said her parents told her *"They just tell me just be happy with the way you look."* This was as close as the girls got to repeating the complimentary remarks of their mothers.

Again, mothers almost always offered compliments reactively, in response to their daughters' concerns. SM15 said, *"She's mentioned to me, some people make fun of her because they think she's too skinny, but I told her that she's not too skinny. She's gonna fill out."* UM3 talked about reassuring her daughter that she was not big, saying, *"Last year I was talking about 'I'm gaining too much.' And then we noticed that she was starting to say the same things. I mean later, you know. I didn't notice at the time but she was doing that, and I'd say 'No. You're perfect. You're fine. You're healthy."*

Most mothers indicated they thought their daughters were doing fine. It seemed that this was so obvious that it need not be mentioned. Considerably more girls with a slighter build rated themselves as "very happy" with their looks than any of the other groups, as indicated in Table 7.4.

Table 7.4 Girls' Reported Satisfaction with their Looks by Body Mass Index (BMI)

BMI	*n*	Very happy, %	Somewhat happy %	Neutral %	Somewhat or very unhappy %
Highest	15	13.3	46.7	26.7	13.3
Median	16	12.5	68.8	12.5	6.3
Lowest	16	50.0	37.5	6.3	6.3
Other	28	25.0	46.4	14.3	14.3

Average Weight Girls

All of the BMIs of the 16 girls in the median weight quintile also fell within pediatric guidelines for healthy weights (Centers for Disease Control and Prevention, 2000; Cole et al., 2000). The BMIs of the Aboriginal girls in this category were 1.6 to 2 units larger than the non-Aboriginal girls. This may have affected perceptions of what a normative weight or body shape was, in different ways. The First Nations community participants might judge girls' body weight against the heavier weight norms of their community. The girls in the snowball sample, on the other hand, would be more likely to view the lower weights of their non-Aboriginal classmates as normative. (See Chapter 9 for a further discussion each group's perception of attractive, healthy and personally desireable weights.) About half (9) of the girls' mothers had BMIs under 25. One was under 20. Two were over 30.

Seven girls wanted to be smaller, seven were satisfied and one wanted to gain weight. A majority of the women (13) indicated they wanted to be smaller, with two women indicating they were satisfied and one wanting to gain weight. Six participants

said they were dieting, including one mother-daughter pair, one family where only the mother said she dieted, and three families where only the daughter reported dieting. In the majority of families (11), both said they *never* or *rarely* dieted.

All but one mother said she discussed weight or eating issues with her daughter. Ten daughters also said they discussed weight or eating issues. There was one family where both said they did not discuss weight.

The majority of the mothers discussed nutrition and activity either within the context of weight control or for health with little discussion of weight. Sometimes the discussion focussed almost exclusively on health, with an explanation that weight was not a problem, implying that advice would change if weight changed. Five mothers advised caution. Again, two of the Aboriginal girls reported they had recently lost a fair bit of weight, and it had caused some concern. An additional girl scored above the cutoff for risk on the EAT-26, and several other mothers discussed their own or another daughter's risky behaviours, making risk a strong theme in this category also. A majority of mothers (11) made complimentary remarks to and about their daughters. Four girls said their mothers made such comments, with two pairs matching.

Comments were similar to those discussed already and will not be elaborated. This chapter will conclude with a look at how mothers discussed their own weight, and their perceptions of their influence on their daughters. Themes seemed similar regardless of girls' weight, and will be discussed for the entire sample.

Talking about Mothers' Weight

Most of the discussion around mothers' weight concerned being heavier than desired. This came up in 61.5% of the 78 families. There were relatively few comments about mothers who were wanting to gain weight (2 mothers; 1 daughter), or unsolicited compliments (2 mothers; 3 daughters).

Mothers were presented as raising the issue in almost 40% of the families. About one-quarter of the girls (18) stated their mother raised her weight as a problem in a way that required a response. Most of these girls came from the Suburban location (10), with the remainder split between the Aboriginal girls in the two settings.

Girls commonly reassured their mothers they were not fat. For example, FD10 said, *"She always says 'Oh, I've gotta try to lose some weight. And then I always tell her 'No, you just look fine just the way you are.'"*Other than using *sometimes* rather than *always,* her mother's response is very close, *"Sometimes I would say, 'Do you think I should like lose some weight and that?' She says, 'Mamma you look good the way you are.'"* SD5's response is typical, *"Sometimes she says that she thinks she's kind of big and stuff. A couple of weeks ago she went out for dinner, and she was wearing this dress, and she said, 'Oh my gosh, I used to fit this, and now I can barely fit it.'" And I just keep on telling her that she's not that fat at all."* When I asked if her mother accepted her advice, SD5 laughingly pointed out that she continues to remark that she's fat and added, *"I don't think she really listens to me."*

Girls encouraged their mothers in their weight loss efforts and gave advice oriented at weight loss or at dressing to disguise problems. A Suburban mother reported

the following interaction with her daughter:

> *I'll say things like, "I want to lose weight. I'm too fat." I've asked her this before. Just her and I chatting, eh. I'm not obsessed with this, it's just, I've said to her before, "If you had to describe me, what would you say? If you had to point me out in a crowd to somebody, would you call me fat?" And she's always said, "No."*

Her daughter said her mother would ask her *"Do you think I'm fat and stuff."* And she would tell her *"Uh no, and if you want to lose weight then, to start exercising and eating the right foods and stuff."* Compliments, coupled with advice to help with weight loss, although sending contradictory messages, seemed intended as support and encouragement. The mothers' responses indicated they perceived this as support.

Sometimes, a girl said her mother's question made her uncomfortable. At other times, advice seemed to be volunteered, as in the following comments:

> *FM2: They're always telling me to quit eating and that I'm gonna be sorry if I keep eating.*
>
> *SM2: When I'm pigging out on chocolates, I think she sometimes says something about that. ... Like she'll just say, "You ate all that!"*
>
> *FD4: Not to stay home, because when she's home she eats lots.*
>
> *RD19: I just tell her to exercise more.*

These and other similar brief comments came up frequently, giving the impression that girls regularly assessed their mothers' weight as in need of remedial action.

As already discussed, sometimes mothers shared their own experiences, hoping perhaps to indicate they understood their daughters' situation, or that their experience would spare the daughter unwanted weight gain, or unreasonable concern about weight. Girls did not seem to understand the motivation behind this sharing.

Perceptions of Influence

I asked the mothers, "Do you think the way you feel about your weight affects the way your daughter feels about her weight?" The responses to this question provide a glimpse into mothers' perspectives of the influences on their daughters' feelings, attitudes and behaviours towards weight. Overall, approximately one-third of the mothers (30.8%) concluded their feelings did not influence their daughters, and almost half (48.7%) that they did.

Most of the mothers who felt they did not influence their daughters' feelings about weight explained that they never talk about weight or suggested the daughter thought for herself or was dealing with different issues. One mother said, *"I don't think so. We're too different. We're centuries apart, you know. I'm old [laughter]. That's the truth. She's in her own little world."* Another said, *"I'll say, 'Oh, I've gotta lose some weight to get in these pants,' or something. But I wouldn't say it enough that my daughter would ever, ever say--. 'Cause she's so thin I think that her concern right now is not weight."* One mother felt that although she tried to influence her daughter, her efforts did not have any effect: *"Not really. She's very outspoken, and to her, I'm powerless. Like she goes out and has a treat like it's nothing wrong with that."* This mother added that she hadn't given up, suggesting that she continued to believe she might yet have some influence.

A majority of the mothers responded affirmatively. SM19 stated one of the strongest positions, *"I think that everything you do as a mom, as a role model, affects what your kids think. And whatever you do, I think the example is far stronger than what you actually say."* This position supports role modelling, whether the orientation is for

weight-control or for body acceptance. Mothers cited effects of both.

RM2, who hoped that her daughter would eventually take her weight more seriously, saw her efforts having a short-term positive effect: *"That's probably why she's trying to do sit-ups. 'Cause she sees me doing aerobics all the time, so she might feel a little guilty so she tries."* SM8 responded that her example and instruction helped her daughters set a healthy course, *"I think so. I think that they know that I exercise and I always tell them you know, 'Make sure you eat. Make sure you eat properly.'"*

Negative effects of weight control were implied by the mother who admired her feminist daughter's ideas about dieting when she said *"I think when I'm dieting it does."* SM5 seemed to vacillate between positive and negative effects of her efforts at weight control. She worried about her older daughter mimicking her behaviour and taking it too far, saying, *"Oh yeah. I see my 17 year-old, and she works out. She takes my tapes, and she works out. And she eats salad for dinner, and she's very much like I am [laughs], which is very scary."* However, her next remark suggested her behaviour set a positive example, *"It makes me want to kind of watch. I don't want to get more overweight and not care how I look because I think what I've been doing has rubbed off on her. She saw me working out and eating all this healthy food and she saw that I was shaping up."*

Reflecting on nondieting attitudes, FM5 stated a common theme when she said, *"I am overweight and then if I obsessed about it, and she [saw] me doing that, she would probably go the same way, obsess about her weight. I think it would affect her lots."* UM22S referred to herself *"as a victim to a lot of the fads on exercise, or dieting,"* and reflected on a past incident:

UM22S: Recently we came across a little card that was really interesting about her telling me that if I went on a diet, everything would be okay. Like somewhere she got that message too. [G: Oh.] I don't know whether it was from me or my family or a TV told her, you know "Ultra Slim Fast" told her it was all gonna be okay.

In addition to the impact of her behaviour on her daughter, her answer realistically suggests a multitude of influences. Another Suburban woman spoke of this:

SM18: I think my daughter gets an earful from everywhere else. Not just me. I mean, she'll get it from her friends. She'll get it from TV. She gets it from everywhere. All women get it. And if I was excessively over-worried about my weight, then I guess she would pick up on it. But I think she's kind of picked up on my attitude of, "whatever weight you are is what you are."

Mothers also spoke of specific interventions to counteract influences. Some mothers spoke of trying to educate their husbands to refrain from making potentially hurtful comments to their daughters, asking granny not to criticize, or talking with the daughter about other people's motives. One mother said she'd broken up with a long-term live-in boyfriend to protect her daughter from his influence, explaining:

I broke up because of his attitude towards women. He liked going to see the strippers, and he'd make comments about the TV shows, "Baywatch," that kind of stuff. And I told him "I don't want you around my daughter." ... Because she watches how he responds to women. And if that's what she sees men see of women, then that puts more pressure on her.

Some mothers who countered the weight control paradigm looked for, and often found, a similar self-accepting attitude in their daughter. For example, SM6 said, *"It's not something in our house that either of us, my husband or I, talk about really or give much thought to. And so I think as a result it's not something she would concern herself with too much."* FM16 said, *"Maybe because I don't have an issue about it, she doesn't either."* And RM1 said, *"I don't always make it [weight] the main issue. And hopefully,*

she's gonna see that as well. Like that's not your whole life. It's just your weight. Make sure that you're maintaining a healthy lifestyle. ... And I think she's gotten that."

Several mothers reflected on their experience with their mothers to understand their impact on their daughters. For example, RM13 commented, *"I think back to when I was a teenager and some of the things that my mom was negative about, I find I have to correct myself because those are habits I picked up, I think, from my mom. And, I don't want a pattern. I don't want her to pick up on the habit of being negative."*

I wondered if girls felt their mothers' feelings about weight affected their own, and added this question to the last interviews. One of 15 responses was affirmative: *"Sometimes my mom says she's so fat and I think, 'That's what I think about myself sometimes.'"* Eleven girls said "no," without hesitation or elaboration, and three didn't know. These girls did not seem to share their mothers' opinion. Harking back to the consensus statements, 85.9% of women, but only 51.3% of girls, agreed that if a mother was very concerned about her own weight then her daughter would be too. More participants agreed that mothers in general passed on specific concerns about weight than believed such an influence had occurred in their own families.

Summary and Discussion

Girls most often mentioned their mothers as an appropriate person to talk to about weight, and about two-thirds indicated they had such discussions with their mothers. Even more mothers said they talked about weight with their daughters, and mother-daughter pairs often agreed on this. There was also much agreement on what was talked

about, especially as girls' BMI increased. Possibly heavier girls had a greater interest in weight issues. They may have discussed weight at greater length or more often with their mothers, and may have received more consistent messages. Despite the high levels of agreement, mothers' weight-related advice or dieting example did not predict their daughters' stance towards dieting. More than half of the mothers thought their view of their own bodies had influenced their daughters' views on weight, but fewer daughters said this.

The greatest disagreement between mothers and daughters was the reporting of compliments. At least half of the mothers indicated they made complimentary remarks on their daughters' appearance, but only 12 girls repeated their mothers' compliments. Nichter (2000, p.156) also noted the "paucity of positive messages from parents." At a later point, she wonders if the message was truly absent or did parents' compliments fall on deaf ears. This research suggests that mothers did attempt to compliment their daughters, but for a variety of reasons, girls didn't register their mothers' approval. First, girls expect mothers to approve of them no matter what, leading some to discount their compliments. Several girls said this, or implied it by saying if you wanted an honest answer you asked your friends, not your mother. Approximately 90% of both mothers and daughters agreed to the consensus statement expressing a similar sentiment. Even with friends, girls commonly discounted compliments, knowing how often they, themselves, dished out insincere flattery. Most of the mothers' compliments were in response to daughters' direct questions or critical self-appraisals. Pro-active compliments might be more credible to girls. Mothers who wish to de-emphasize appearance can compliment

their daughters' style and self-expression, and capabilities that depend on the body.

There were two main approaches to weight issues evident in mothers' advice to their daughters. One focussed on the importance of weight control, including weight loss if necessary. The other de-emphasized weight and focussed more on behaviours affecting health. The mothers of the heaviest girls most commonly advised weight control, but some promoted self acceptance. Mothers of the lightest girls largely focussed on health, with or without messages about weight. Mothers also expressed concern or were watchful when girls weighed less than their peers, or when they had lost a lot of weight. These concerns were discussed at every BMI level.

The promotion of weight control or avoidance of talk about weight might seem to be diametrically opposed, but there was much that was common to both. Mothers favouring either strategy were concerned with their daughters' physical and psychological health, their overall success and happiness. Both groups recommended the same behaviours--healthy eating and regular physical activity. Both groups of mothers recommended moderation, expressing uneasiness about some girls' over-concern about weight and resultant unhealthy, sometimes extreme, efforts to lose.

The main difference was the focus or pointed avoidance of focus on monitoring or changing weight. Those favouring the weight control approach believed that restricting food and increasing activity was desirable and would lead to weight loss or weight control. Other mothers seemed to worry that a focus on weight would be more likely to cause eating problems or damage self-esteem than to resolve weight problems.

A Parallel Discussion in the Health Literature

Approaches to weight are controversial within the health community as well (Marchessault, Spigelman, Omichinski, & Harrison, 1999). The recently published Manual of Clinical Dietetics, a joint effort of the American Dietetic Association and Dietitians of Canada (2000a; 2000b; 2000c), reviews position papers on weight management in adults and children. The chapter on obesity lists the arguments for several positions, concluding that different approaches may be appropriate in different situations.

Arguments for vigorously promoting the traditional treatment goals for obese clients include the high costs of obesity to society and the enormous personal, economic and social burdens associated with obesity. Studies indicate that successful weight loss is possible, although challenging.[33] Almost all obese people who achieve weight loss experience short-term reductions in health risks or medical problems. Although no study has demonstrated lower mortality with weight loss, benefits are thought to outweigh the risks. A focus on preventing further weight gain is suggested when weight loss goals, including a consideration of maintenance, are not seen as achievable. The review cites the Canadian Task Force on Preventive Health Care's recommendation for weight loss for adults with BMIs over 27 with co-morbid conditions. This recommendation was based on decreased risks and lower requirements for drug therapy. The Task Force did not

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[33]The studies cited were all based on volunteer samples (Ball GDC, 1999; Colvin & Olson, 1983; Fletcher, 1994; Foreyt & Goodrick, 1991; Schachter, 1982). Volunteer samples provide useful data about successful weight loss, but they do not provide generalizeable success rates. Paul Ernsberger has suggested the appropriate denominator for these samples is the national population trying to lose weight (personal communication, April 29, 2000), which creates even more dismal statistics than the oft-cited 95% failure rate for weight loss programs.

recommend weight loss for obese people without co-morbidities because of the poor long-term effectiveness of treatment. This is contrasted with recommendations for aggressive treatment starting at BMIs of 25, or less if recent weight gains of 10 or more pounds have occurred. This recommendation is similar to that of the National Institutes of Health and the National Heart, Lung, and Blood Institute (1998) to intervene at BMIs of 25 or waist circumferences of 88 cm in women and 102 cm in men, if patients are willing.

In support of the promotion of healthy lifestyles independent of changes in body weight, the Manual argues that weight loss proponents have not addressed "the fact that there is currently no effective, long-term, safe treatment for obesity" (American Dietetic Association & Dietitians of Canada, 2000b, p. 370). This lack of efficacy, coupled with the pressure to be thin, is said to have created new problems that impair the psychological and social well-being of people who are heavy. Risks of dieting are listed as weight cycling (repeated bouts of losing and regaining body weight) and associated adverse psychological and physical consequences, including higher risk for binge-eating disorder. Epidemiological data link repeated fluctuations of body weight with increased mortality. Several recent studies suggest intentional weight loss has no effect on either cardiovascular or total mortality. Emerging evidence suggests that physical activity is more relevant to health and longevity than weight.

The manual then lists and explains a variety of approaches to weight problems, including general dietary recommendations, size acceptance, calorie-reduced and very-low-calorie diets, prepackaged meal programs, fad diets, physical activity/exercise, behaviour modification, pharmacotherapy, surgery and alternative weight loss products.

Weight issues in children and youth are addressed separately, although not as thoroughly (American Dietetic Association & Dietitians of Canada, 2000a; 2000c). The recommendations are based on one expert review committee (Barlow & Dietz, 1998). The main recommendation--to establish healthy eating habits and regular physical activity to maintain baseline weight while growth occurs--is consistent with other reviews (Canadian Task Force on the Periodic Health Examination, 1994). The manual suggests that children under age seven with BMIs above the 95th percentile, or older children with BMIs above the 85th percentile (of the National Center for Health Statistics CDC growth charts, one presumes) who are experiencing complications related to obesity may benefit from weight loss. Clinicians are advised to encourage and empathize rather than criticize, to avoid rapid weight loss, to begin intervention early if the family is ready, to involve the family and all caregivers, to make small, gradual and permanent changes, and to teach families about the medical complications of obesity and how to monitor eating and activity.

Other reviews offer a different emphasis. The Canadian Task Force on the Periodic Health Examination (1994) concludes that there are few known physical health risks to obese children. It cautions that screening for obesity could result in the child and family becoming anxious, citing reports of parental anxiety about obesity leading to malnutrition in their children. As with the adult interventions, the Task Force's evaluation revealed that most weight reduction programs have limited long-term effectiveness. The Task Force did not recommend for or against screening for obesity, or for or against exercise programs or intensive family-based programs for most obese children. It

recommended against very-low-kilojoule diets for pre-adolescents. It noted that the American Academy of Pediatrics and the U.S. Preventive Services Task Force have made similar recommendations.

The Canadian Task Force on Preventive Health Care, mentioned above, recommended prevention of obesity should be a high priority for health-care providers because of the limited long-term effectiveness of weight-reduction methods (Douketis et al., 1999). This was similar to an earlier position of the Canadian Dietetic Association (1988). "Vitality," Canada's national weight management philosophy, is based on three principles intended to shift the focus from weight to health. "Vitality" advises people to "Enjoy eating well, being active and feeling good about yourself" (Health and Welfare Canada 1991b; Health Canada, 2000). This approach is recommended for people of all ages and for those who need to lose or gain weight for health reasons. The approach is based on expert reviews of the literature (Health and Welfare Canada, 1988b; 1991a).

Qualities that predict or improve success in structured weight-loss programs have not been determined (American Dietetic Association, 1997; Dalton, 1997; Miller, Koceja, & Hamilton, 1997; Miller & Lindeman, 1997). Recent studies suggest that attempting to lose weight is associated with weight gain. The Finnish Twin Cohort Study of 3,536 men and 4,193 women found a weak association between dieting and subsequent major weight gain after 6 to 15 years of follow-up even when initial weight was controlled (Korkeila, Rissanen, Kaprio, Sorensen, & Koskenvuo, 1999). Stice (1998) found that teen-aged girls' moderate efforts to lose weight were associated with weight gain. Only girls who made extreme lifestyle changes lost weight, but they were at risk for bulimia.

Obviously, parents are not alone in finding weight issues challenging. Some mothers pointed out girls are surrounded by messages about weight. Weight may become an issue regardless of a mother's concern over her own or her daughter's weight. It may be that if mothers want to help their daughters avoid becoming obsessed with weight, they need to confront weight preoccupation head on. A small group of mothers seemed to be attempting to do this and their efforts are explored in more detail in the next chapter.

CHAPTER EIGHT

Participants' Advice to Other People

> "One is not born, but rather becomes, a woman" (Beauvoir, 1952/1989, p. 267).

This chapter extends the discussion beyond personal weight management strategies. Asking how girls (or women) in general should deal with their weight was intended to elicit participants' opinions, particularly when they did not see their own weight as a problem. Participants readily gave advice making it possible to compare mothers' and daughters' perspectives even though weight was not a personal issue.

Most of the participants' advice seemed aimed at facilitating self-acceptance. Some participants saw the route to self-acceptance as conditional upon altering the body; others saw it as more dependent upon altering attitudes towards the body. I have labelled these positions *weight control* and *body acceptance* orientations. In the weight control orientation, participants gave suggestions intended to assist in weight control or weight loss. Participants with a body acceptance orientation advised others to strive to accept their body or themselves as they were, or not to worry about weight. Some participants gave both orientations. Others said they did not give advice, accounting for most of the unclassified comments. Table 8.1 lists selected responses from pairs of mothers and daughters to demonstrate each possible permutation. Table 8.2 shows the distribution of responses for women, girls and mother-daughter pairs across locations.

Almost half of the participants' recommendations supported weight control exclusively (45.5%), and almost a quarter recommended body acceptance exclusively

Table 8.1 Advice About Weight to Others from Selected Mother-Daughter Pairs

Responses of both are oriented to weight loss:
FM10: I know that it always has to do with exercise.
FD10: Exercise.

Responses of both are oriented to body acceptance:
UM16S: I don't see it as an issue myself. I think society puts too much emphasis on it, and all that emphasis, time and energy could be put to better things.
UD16S: They should just be happy the way they are.

Responses of both are oriented to both body acceptance and weight loss:
SM16: Whatever fits their schedule. You don't have to lose the forty pounds, but maybe ten would be fine for their own feelings if that's how they want to be. I think some people are very satisfied with their weight and that's wonderful. And it is sort of a coming to grips with it. So I think that whatever you feel comfortable with, ... then to me, as long as you're healthy and you're getting out to do something, like walking or whatever you're doing. I think that part's important. I don't know that the weight is as important as being generally healthy.
SD16: At my age they shouldn't worry about it. If you're really overweight maybe get into sports and stuff, and get active. And if you're underweight and you can't help it, then don't do anything about it. Just don't worry about it that much. If you like eat tons then don't eat at night. ... Just eat your meals and snacks in between. Just don't worry about it too much I think.

Mother's response is oriented to body acceptance; daughter's to weight loss:
RM3: Maybe it's because the way I believe, the good lord put you on this earth, your body is gonna come to the size it's supposed to come and that's it.
RD3: [laughs] Go to their doctor's before they do any diet plans.

Mother's response is oriented to weight loss; daughter's to body acceptance:
UM22S: I guess education. A combination of physical activities and I think there's still a lot to look at with weight issues on how the combination of foods affect weight, different foods in different combinations. High carbohydrates and meat and potato. ... I still think there's some key.
UD22S: Not to change yourself to fit everyone else's expectations.

Mother is oriented to body acceptance and weight loss; daughter to weight loss:
SM7: I can only talk for myself but until you have the willpower there's not anything you can do about it. Hopefully sometime, though, there will be a generation, they'll like the way they are and it won't matter to them.
SD7: I personally feel, just deal with it. [Laughs] There are things out there that can hurt you, if you take them if you're trying to diet, and there's things out there that can help.

Mother oriented to body acceptance; daughter to body acceptance and weight loss:
UM3: It'd be nice if they'd be encouraged to work at their self-esteem .
UD3: That she's still growing and she shouldn't have to lose weight or she should start eating healthier if she's really pudgy. [Laughs]

Table 8.2 Participants' Advice About Weight to Others by Generation and Location

Generation and Location	Weight loss %	Body acceptance %	Both %	Neither %	Total %
Women, *N* = *78*	**44.9**	**28.2**	**14.1**	**12.8**	
Suburban	30.0	25.0	35.0	10.0	20.0
Rural community	30.0	50.0	10.0	10.0	20.0
Urban Aboriginal	50.0	25.0	10.0	15.0	20.0
First Nations community	72.2	11.1	0.0	16.7	18.0
Girls, *N* = 78	**46.2**	**19.2**	**19.2**	**15.4**	
Suburban	50.0	10.0	25.0	15.0	20.0
Rural community	50.0	15.0	25.0	10.0	20.0
Urban Aboriginal	20.0	45.0	25.0	10.0	20.0
First Nations community	66.7	5.6	0.0	27.8	18.0
Mother-daughter pairs, *n*	**18**	**6**	**6**	**2**	**32**

(23.7%). Both orientations were given by 16.7% of participants. Support for a weight control position in the First Nations community participants was high. Only three respondents from this location gave advice that supported a body acceptance orientation.

As the comments in Table 8.1 illustrate, mothers and daughters sometimes responded similarly, and sometimes they responded differently. Overall, 32 of the 78 families gave *matching* responses when categorized by their major orientation (41.0%). The proportion of mother-daughter pairs who gave similar answers was as follows:

- 50.7% of the 45.5% of participants who gave weight control advice were paired.
- 32.4% of the 23.7% who gave body acceptance advice were paired.
- 46.2% of the 16.7% who gave both were paired.
- 18.2% of the 14.1% who gave neither category were paired.

Because there was poor agreement between the advice given by a mother and her daughter,[34] and the advice given in the weight control paradigm was similar to that already discussed, I turned to the interviews promoting body acceptance. This focus is of interest for its potential for interventions with teen-aged girls, as I have discussed elsewhere (Marchessault, 2000).

The Struggle for Body Acceptance

In 1993, the leader of Weight Watchers in Manitoba wrote a column for the Winnipeg Sun in which she urged readers to "Tell yourself that you are OK, just the way you are." She then went on to promise success at weight loss would surely follow. This message *to accept yourself, and then lose weight*, might seem contradictory, but it is likely that if asked, many people would suggest both are worthy goals. Eighty people (50.6% of participants) agreed to both of the following consensus statements:

- "If people felt good about themselves, they would accept their body as it is, whatever their size and shape" (91% agreed).
- "If people felt good about themselves, they would take the time and energy needed to lose weight" (53% agreed).

There was evidence of a struggle for body acceptance throughout the 163 interviews. The difference between the body acceptance orientation and weight control

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[34]Kappa statistics were used to test if the proportion of pairing was higher than would be expected, given the proportion of overall responses categorized in the same category. Kappa was .05 for advice oriented to weight control, .12 for advice oriented to body acceptance, .36 for those who gave both and .05 for the no-response category. Results were similarly non-significant for a comparison of Aboriginal and non-Aboriginal families. The kappa was .11 and .11 for weight loss; .17 and .19 for body acceptance, and .23 and .31 for both orientations, respectively. This ruled out the possibility of opposing trends cancelling each other.

orientations was one of frequency and consistency, not complete separation.

Logically, those who both gave body acceptance advice and attempted to practice it themselves, could be expected to have the most consistent perspective. Participants' descriptions of their personal weight history were used to screen out those who were currently trying to lose weight in order to identify interviews with a strong body acceptance orientation. Twenty-one such participants were identified.[35]

Mother-Daughter Pairs

Participants with a strong body acceptance orientation were distributed as follows:

- 4 women, 2 girls from the Suburban site (including 2 mother-daughter pairs).
- 6 women, 1 girl from the Rural site (including 1 pair).
- 3 women, 4 girls from Urban Aboriginal families (including 3 pairs).
- 1 woman, 0 girls from the First Nations community (no pairs).

The kappa statistic for this comparison was .51 indicating fairly strong agreement beyond that expected by chance for this comparison. Mothers with a consistent promotion of body acceptance were more likely to have daughters who expressed a similar philosophy. This post-hoc analysis finding of association contradicts most of the other findings, and is offered in the exploratory tradition as of sufficient interest to merit further research.[36]

Two-thirds of the girls who gave both orientations had mothers who gave at least

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[35]This included participants who did not give advice but expressed a striving towards the body acceptance position for themselves.

[36]To be consistent, I also compared participants who both gave weight control advice and were currently trying to lose weight as per their open-ended explanations of how they managed their weight. The kappa statistic, although approaching significance, indicated poor agreement at .30.

some body acceptance advice in their answers. There were no cases where mothers gave mixed advice and their daughters gave body acceptance advice. There were, however, 15 girls who raised some degree of body acceptance whose mothers did not. This suggests the likely direction of influence is from mother to daughter and that mothers' discussion of body acceptance leaves an impression on girls, but also that girls have other opportunities to learn about body acceptance.

Nichter (2000, p. 39) reported similar responses from the girls she interviewed but interpreted them as indicative of the adolescent conflict between their struggle for autonomy and their need to give and receive social approval. This may be the case for some girls, especially those who waffled back and forth. However, the agreement of participants to similar opposing statements on the more neutrally phrased consensus questions, the number of women who responded similarly, and the increasingly common presence of such comments in descriptions of weight loss programs suggests that more than adolescent angst is operating. The mixed responses may reflect some confusion in the girls as well as the women. Although the discussion was seldom *pure* body acceptance, there was sufficient emphasis on this orientation to explore how this emerging paradigm (Berg & Marchessault, 2000) was interpreted by participants.

The unmatched mothers and daughters. It is not possible to determine the reasons why mothers and daughters gave similar or different advice. However, several observations seem pertinent. There were eight mothers who gave strong body acceptance advice but whose daughters did not. The daughters could be characterized as follows:

- Four expressed little concern about weight.

- Two were trying to lose weight (one *"just watching,"* one *"eating less, doing more"*).
- One girl started crying while describing her father's comments about her eating habits. The mother described this as well.
- One had an EAT-26 score above the cutoff for risk of an eating disorder.

This last family lived in the First Nations community. The mother articulated clear body acceptance advice (not quoted due to confidentiality concerns). Her daughter reported that her mother was not trying to lose weight, and gave her advice to just eat healthy, be active and not worry about what other people thought. Both mother and daughter described how classmates, grandparents, the father, and various other relatives all warned her that if she ate too much, she was going to get as fat as another young girl in her school. The mother was very concerned about her daughter's extreme efforts to lose weight and was trying hard to protect her from these potentially harmful concerns. Her message seemed to be overwhelmed by the innumerable others the daughter was hearing.

The one *unmatched* girl who promoted body acceptance had a mother who emphasized body acceptance particularly when she talked about her communication with her daughter. The mother was not included in this group because she was attempting to lose weight.

Size Issues

While it might seem to be easier to promote body acceptance if you are smaller, this was not always the case. BMIs for both girls and women ranged from less than 20 to over 30. Interestingly, there was only one participant (a woman) with a BMI in the 25 to 27 range, while there were seven with BMIs over 27. Since there were a similar number

of participants in both BMI ranges, this suggests a BMI of 25 to 27 might be particularly difficult to accept, possibly because at the lower range of heavier weights, weight loss continues to be viewed as a viable option.

Nor does a strong promotion of body acceptance indicate that the participants were necessarily satisfied with their own bodies. It was quite obvious that most were not. A strong body acceptance orientation indicated only that these participants were struggling to accept their bodies rather than trying to change them. A comparison of their current and desired weights indicated that 14 of the 21 wished to lose weight (from 5 to 82 pounds), two wished to gain (10 to 20 pounds), and four said they were satisfied.

Some larger women talked about an active and on-going struggle to achieve body acceptance, which they viewed as critical to a reasonably happy life. This sometimes came after a long and painfully unproductive struggle to lose weight. Some of the women who viewed themselves as too thin reasoned that because they could not gain weight, weight loss must be just as difficult. Several mothers had come to focus on body acceptance, not for themselves, but because their daughters were struggling with weight and self-esteem issues.

Self-Acceptance and Health Issues

Self-acceptance at any size and health were major themes discussed by participants with a body acceptance orientation. A third theme, control, will be contrasted with the perspectives of participants with a weight control orientation.

Self-acceptance and health were often raised together, as can be seen in some of

the following quotes. Advice from mother-daughter pairs is cited first, with the mother's advice, followed by her daughter's. (See also UM16S and her daughter whose quotes appear in Table 8.1.)

> *SM9: I just feel that people have to accept themselves for who they are, and that it's really unfair to try and box people into something that some people, say five percent of the population or whatever it is, achieve naturally. I just don't think that the rest of the world should be trying to fit themselves into that mold. I think we should be far more accepting. ... Like I said about other cultures, there's nothing inherently great about any one particular look. If you could value all the different types, and just be pleased that there is all this diversity, and be able to celebrate yourself, and not worry so much about that. Just try and do what you need to do to be healthy and fit.*
>
> *SD9: They should just not be so obsessed with how their friends' ... Everyone's gonna have different shapes, and that's what makes them interesting. If we all were exactly the same bodies and stuff, it would be not that interesting. They should take that as kind of a good thing. They look different than their friend.*
>
> *RM5: I think self-esteem. Because I've been heavy all of my life, I'm the person I am and I know how I feel about myself. It probably took a lot of years to get to that, but I'm comfortable with myself and I think people, maybe who are thinner to start with, if they tend to gain weight, it's a big change for them.*
>
> *RD5: I think they should accept themselves for who they are. Unless you have like a problem, then you should get help. [G: What kind of a problem?] Like if you're overweight or underweight to the point that it's causing a health problem.*
>
> *UM15S: I think if it's gonna affect their health, then I think they should take care of it. But I think if they're healthy at the weight they are, I think that's fine.*
>
> *UD15S: I think they should just eat properly and just forget about it. ... It doesn't matter--what they look like.*

Participants suggested the importance of self-esteem, that one should not worry about what other people think, or drew on the relative unimportance of looks, often in comparison to qualities of personal character. Ignoring or discounting the importance of the body isn't quite the same as accepting it, but worrying about what other people think

about your body plausibly weakens body acceptance. Their advice lays a foundation for body acceptance.

The struggle to accept your body's deviation from the popular ideal, the internalization of that ideal, or even a personally constructed variation of it, came up, particularly when people discussed their personal weight history. Several participants commented on the difficulty of sustained weight loss, and concluded that it was probably best not attempted. More women than girls related such experiences. We have already discussed one girl's conclusion that her crash diet was *"a stupid thing to do"* since she had re-gained all of the lost weight *"and more."* Here, the women relate some of their thinking behind their own conclusions that weight loss efforts were not appropriate:

> *RM4: Some people just have very metabolic differences and, metabolism, genetics all those kinds of things, that are kind of givens for people. I guess that can be modified somewhat by diet or eating style and exercise pattern. [G: Somewhat?] Yeah there's not much justice in it. [Laughs.] It seems like some people can get away with sedentary lifestyle and eating whatever they please, and others can't get to have any treats ever without gaining but they're just kind of pre-dispositioned to body size. ... I don't think everybody could decide that they were going to weigh a hundred and twenty pounds and do it. Some people just aren't meant to be. ... And I also don't think it's worth the bother. [Laughs.]*
>
> *RM5: We all have sort of basics where we're meant to be and there's extremes on either side of that. ... You can probably control anything. ... But at what cost? Where's the cost involved? Health-wise. Everything. I think if you try to go beyond a certain point, you're just doing more harm than good.*
>
> *SM4: I tried and tried and tried for years, and all I ever did most of the time was get very frustrated. And the more frustrated I got, the worse it was for me. So, I got to the stage where I learned to deal with it. And I became a lot happier with myself.*

A qualification implying the necessity of weight loss if health seems to be affected by weight was a common stipulation. RM3, cited in Table 8.1, articulated a clear position

on the immutability of the body and the futility of trying to change it: *"You don't control that as far as I'm concerned. You can't control that. ... Once you reach the point the good Lord expected you to be at, that's as far as you're gonna go and that's all there is to it. So to me it's unchangeable."* Recognizing that some people do succeed in losing weight, however, she continued, explaining why this did not alter her view: *"I can see losing a few pounds or adding a few pounds. I can't see a real drastic change, and if that happens ... is it gonna stay off? Like if it's a real mega change."*

Despite this strong position that body weight is essentially unchangeable, she prefaced her answer with *"Unless it's a health issue I can't see why anybody would want to change."* This draws out a common contradiction: If you're motivated by health concerns, changing the unchangeable body becomes an acceptable goal.

RM4 also started off by considering health as a possible exception: *"I guess I don't think it [what you weigh] really does matter, I mean unless there's health concerns."* However, she continued:

> *RM4: But I think if there is, then we should be concerned about our health not about the weight. Lots of people are very heavy and don't have health problems as a consequence. So it's unfortunate that women put their lives on hold sometimes because of, well, weight preoccupation.*

People who were advising body acceptance were not advising giving up health goals. On the contrary, some suggested that losing the focus on weight loss helped them to achieve a healthier lifestyle. Some expected or hoped that weight would adjust naturally as a result of their efforts, but, as with the advice to their daughters, most stressed that health, *not* weight loss was their goal. Participants were clear that they cared

about their health. Several raised health issues as reasons to alter their lifestyle:

> *UM16S: I'm worried [about] my weight simply because my family's prone to diabetes. So I know I have to watch and not over-indulge and I'm in the process of learning about the diabetic diet. My mom was diagnosed a year ago, so I've been learning with her kind of. That would be my concern. Not so much as the weight. It would be more of the health. ... I've started making some of the changes slowly.*

Another Urban Aboriginal woman also spoke of changing her diet and walking her dog on a daily basis because of a family history of health problems.

> *UM22S: Heart disease runs in both sides of my family. That's how my father died. And my mother had a heart attack before she was fifty. So I looked at that and said "Well I think it's a matter of time not of a matter of if I will." I'm very high risk.*

She, too, suggested, *"I don't necessarily think skinny or thin, but just physically strong, whatever that looks like. ... I don't think big muscles but just strong physically. ... I don't think it necessarily means you're skinny. I think big people are also healthy."*

One participant commented on how healthy she was despite being larger: *"I just had my physical, January 15th, and my doctor told me, I'm as fit as a horse. I might be a big horse, but I'm as fit as a horse. And I'm probably in better shape than most of the women she sees who are slim."* She then discussed her personal experience with weight being used as a measure of fitness in her job:

> *We used to have to run a mile and a half. ... In the 20 years I was in the military, I've never failed my physical fitness test. And I saw girls that I played ball with, in the military. They were tall and slim, and halfway through the test, they'd be, "I can't do this any more." And they would give up. And I'm looking at them. "I'm twice your size and I can do mine. What's wrong with you?" ... But about the last five years that I was in, they went more to the BMI. ... They went from one extreme to the other extreme, to now everybody's supposed to look like Arnold Schwarzenegger. ... Slim, physical fit, strong.*

This participant was critical of the military's substitution of the BMI for the fitness test.

She, who could run a mile and a half, would not have passed the weight test, but her thin friends would pass even though they could not complete the running test. The confounding of weight, fatness and fitness is also apparent in SD9's reference to a movie she had seen:

> *SD9: And it was a mother, who was really fat, and she hadn't walked or went anywhere. She sat in the same spot for seven years or something. And then she, died because she just moved upstairs. She died from that. [G: That was too much exertion?] Yeah. So, I think that if you're like really, really fat it's bad for you.*

Although a sedentary lifestyle is likely to increase body weight, it seems plausible, even likely, that a fit and equally fat lady would not have died from moving upstairs. SD9 ignored my implication that it was inactivity that was the problem, and continued to emphasize that the woman in the movie died from being fat. Later, she commented that *"Some really fit people are heavier,"* a comment which recent research supports. It has been found that men and women with poor fitness levels, but no other risk factors have greater overall mortality than those with moderate-to-good fitness levels and multiple risk factors, including being overweight (Blair et al., 1996). This confounding of body weight with fitness and eating habits, common also in the health literature, may explain the frequency with which health issues were raised along with body acceptance.

Control Issues by Orientation

Participants' attitudes towards control also seemed pivotal to the difference between a weight control or a body acceptance orientation (see Table 8.3). Although asked as an open-ended question, participants promoting body acceptance were most

likely to respond *"sometimes"* or *"to a certain extent"* when asked if people could control their weight. Even when they said that it could or could not be controlled, they qualified their responses in this way. A slight majority of participants with a weight control orientation thought that most people should be able to control their weight most of the time, and generally seemed much more certain of their responses.

Table 8.3 Perspectives on Control from Participants with Different Orientations

Orientation	*n*	Mostly yes %	Mostly no %	Sometimes/to an extent %
Body acceptance	21	23.8	28.6	52.4
Weight control	34	52.9	8.8	44.1

Responses of participants with a body acceptance orientation. Some participants explained that if you got your other problems under control, or if you ate well and got exercise, your weight would naturally maintain its appropriate level, although there was some scepticism about this. SM9, the Suburban mother who talked about the value of diversity, explained, *"If you're sort of reasonable about health and fitness, then you'll be fine. You won't be either terribly overweight or terribly underweight. It'll just--happen. [Laughs.] Wouldn't that be nice?"* The long pause, her laughter and her ironic comment *"Wouldn't that be nice?"* may suggest she's aware that if you eat well and are active, your weight will not necessarily be fine. SM19 said *"If you eat healthy and you practise a healthy lifestyle, then you'll be at your ideal weight. But I don't think that to stay thin should be the focus for doing that."* Although she accepted a direct link between lifestyle

and weight, she put the emphasis on the behaviour, not the weight.

Both these women ended up concluding that weight could sometimes be controlled or could be controlled to a certain extent. As already stated, these were the most common responses from the participants with a body acceptance orientation:

> *RM5: Probably everybody has a basic weight that you were meant to weigh. Mine was probably 40 pounds ago. And, that would be easy [to] maintain, so. ... I think that for me, I could control that to a degree. But I could never be thin. I don't think that is in my genetic make-up.*
>
> *SD9: I guess sometimes you could. Say someone just sat around and never exercise[d] and ate all this food. And that would be controlling weight by not doing anything about it. But also, some people can't get thinner. ... Bigger people think that they could be like thinner people, but they can't because that's just not the way they're built.*
>
> *SM19: Whether or not they eat a bag of potato chips [laughs] a night would be under control. What genes you're born with are not under control. I really think you're born with a certain physical frame and you can do two things with it. You can either accept it and work with it, or always go against it. [G: Hmm. That sounds like you've done a fair bit of thinking about this issue.] Only because I would say that my girls were born with a very different [frame], and I never wanted to make them feel like they were different.*

Some participants' attitudes to the control issue have been included in the quotes already cited, particularly those who were most certain that weight was not something that individuals could control. Recall the participants' discussion of the difficulty of sustaining weight loss, often based on their personal weight histories. Participants referred to metabolism or genetics, or made comments such as, *"They're just kind of pre-dispositioned to body size,"* and *"You don't control that as far as I'm concerned. ... So to me it's unchangeable."* Others explained that people did not have as much control over their weight as they thought, or emphasized circumstances under which individuals did

not have control over their weight:

> *RM16: If you're obviously an overweight person because you're inactive and eating poorly, I think then you can do something about it. You have some people that they've been larger as children and they've grown into larger adults. I mean it's a life-long problem. It isn't as easy to get a handle on. And maybe you never will.*
>
> *UD9: If you had a big family, then you have a good possibility of going big yourself. [G: And you wouldn't be able to do anything about that?] I don't think so. May[be], you might. I don't think so though.*
>
> *UM15S: Because believe me, I wouldn't like to be as heavy [laughs] as I am now, if I can control it. I just think people get comfortable in their lifestyles.*
>
> *RM7: No, not really. I'm not saying to sit at the buffet and just pork out. I guess they'd have control there. That'd be the only place [laughs].*
>
> Examples of the *mostly yes* responses are represented with comments such as:
>
> *RM6: I hope they could. [G: MmmHmm.] Well, yeah if they want, I suppose they could. Maybe there's a few cases where they can't control it, I suppose if they have a--a--I don't know [laughs] I'm not a doctor.*
>
> *SD21: It's probably not always true but, probably, 7 out of 10 times it is.*
>
> *FM: Yeah, they have control over it. [G: Always, would you say?] Hmm. Yeah, because well they're sticking anything in their mouth, to you know feed you, I think they always have control over their weight. [Not identified to preserve confidentiality]*

The degree to which respondents qualified their answers, even when they were generally responding negatively or affirmatively characterized the overall responses to this question with a sense of uncertainty or hesitation to make a strong pronouncement.

Responses of participants with a weight control orientation. Thirty-one of 34 participants from this orientation responded that weight was something people could control, at least somewhat. The three girls who disagreed did not elaborate. The responses differed largely in the degree of certainty that weight could be controlled. First, comments from those who said weight could sometimes be controlled:

> *SD17: [Laughs.] Like I said before, if you're lazy you can control it, and if it's in your genes, you can fight it, but you can't control it.*
>
> *SD20: Maybe if they work out, they'll lose weight and then right after that, they like won't go eat junk food. Maybe if they're hungry they'll eat something healthy instead of like having to gain all that weight back that they just lost from working out.*
>
> *UM4: Most of the people I know they're skinny, not too big. ... They only gained a few pounds here and there but they still lose. They lose it after awhile by walking around. I guess by exercising, controlling it, and just watch what you're eating.*
>
> *UM14S: I think some people can control their weight and others can't.*
> *G: What makes the difference between those who can and those who can't?*
> *UM14S: Biology and genetics. Like I know a lot of overweight women who are overweight, I think directly related because they were sexually abused as youth and so there's a different issue in that. ... Whereas other people I know ... they've just been really chubby babies, and just never lost it. Like they're just overweight and to try to lose that weight, as adults would probably be very self-defeating.*

The majority of responses in this category indicated certainty that weight was something that could be controlled:

> *FM2: Oh yes. [G: Yeah. Always?] I think so. Yeah, if you really, like really put your mind to it. I believe it can be controlled.*
>
> *RM21: I personally have a very difficult time. But I guess, [sigh] it would seem you should be able to control it. It's very difficult but [laughs] logically you should be able to control it, right?*
>
> *SD5: If they really tried to.*
> *G: Are there any circumstances under which they wouldn't be able to?*

SD5: Hmm. No. I can't think of anything. [Laughs.]

SD8: They just have to eat right, and exercise. [Laughs.]

UM12: Yeah. I think if they really wanted to they could control [it].

Much of the advice for weight loss and these comments about control imply that heavy people currently have unhealthy eating and activity habits, and that if they improved their lifestyle they would lose weight and their health would improve. These assumptions are also evident in scientific studies and advice given by health professionals (National Institutes of Health & National Heart, Lung, and Blood Institute, 1998; World Health Organization, 1998), although it has been difficult to establish that heavier people currently eat more or expend less energy than lighter people (McCabe, Mills, & Polivy, 1999; Miller & Lindeman, 1997; Teufel & Dufour, 1990). Problems in establishing the long-term impact of intentional weight loss on health and mortality have already been discussed.

One participant, recognizing the difficulty in correcting weight imbalance, recommended catching it before it became a problem. She is one of the few in this category to emphasize that weight loss is difficult and requires constant vigilance. FM4 said *"It's something that you have to work with right away. Don't let it get too carried away. And it's something you can't let down. You have work on it at all times. Well, you can control it if you're willing to work on it at all times."*

Another participant also stated the difficulty and feasibility of weight loss in the same breath. She was optimistic, but ended on a cautionary note:

RM17: Look at the picture and find out what is causing it. Be careful if you do

lose weight. Just take it one day at a time. It's a hard job, but there are good benefits from it. You do see the weight come off, you know, little by little. And little by little the clothes get smaller on you and then when you look in the mirror -- yes you can start feeling better about yourself. It will lift your self-esteem up. But there's also scary benefits from it too. You can get carried away with it and you could end up getting sick from it.

Comments about the need for willpower come closest to dealing with the lack of success that most people have when they attempt weight loss. As SM7 (cited at the beginning of this chapter) put it, *"I can only talk for myself but until you have the willpower there's not anything you can do about it."* Several girls said, *"Just deal with it."* RM19 says *"I would think you should just, if you really feel very strongly about it, just take it into your own hands and do something about it."*

These familiar comments do not sound extreme or unusual. They do, however, distract from the difficulties inherent in weight loss and place the focus on the individual's ability to persevere. Comments about willpower admit or imply the difficulty of weight loss and then move quickly to focus on success in terms of self-control.

Even those promoting body acceptance did not discuss the immense difficulty of the weight loss venture. Few people focussed on what is actually involved in weight loss. One participant recommended *"just, kind of come to peace with yourself,"* and then in considering why this was so difficult, she expressed resentment over unreal expectations being set by older models:

UM10S: The only thing that bothers me about commercials is like I said, Goldie Hawn is fifty years old, and she's like, "I've got a body of like a eighteen year old." That really bugs me. 'Cause it's not natural. You have to work darn hard to have a body like that at fifty. And I just don't feel like I'm going to have the energy or the time when I'm fifty to do that.

Summary and Discussion

When asked how girls or women should deal with their weight, almost half of the participants (45.5%) recommended lifestyle changes oriented at weight control or weight loss. About half of these cautioned against extreme measures to lose weight. Participants recommended watching what you eat, cutting down on food, and increasing exercise. Consistent with their advice, a slight majority of the participants with a weight loss orientation responded that most people should be able to control their weight and most of the remaining participants said that it could sometimes be controlled. The First Nations community participants were most likely to recommend weight control actions.

About one-quarter of the participants recommended attempting to accept your body as is, with attention to food and exercise for the purpose of maintaining health rather than losing weight. A change in health status could alter this position for some participants, although others suggested that it was appropriate to focus on the behaviours rather than the weight even when weight was assumed to be negatively affecting health. Some participants, drawing on their own experience, were sceptical about the possibility of lasting weight loss. About one-third said that weight loss was not under the individual's control. Others thought that if you got lifestyle correct, weight would follow, and therefore the focus should be on lifestyle, not weight. Most thought you could control weight *"to an extent,"* but some added that the arduous effort to achieve weight loss might not be worth it. Although frequently discussed as an achieveable goal if one is sufficiently disciplined, if examined in the context of the enormity of the daily effort

required, this ordinary-seeming goal looks quite extraordinary.[37]

A further 16.7% supported both these positions, often saying they supported whatever the individual wanted to do. Occasionally, participants suggested that a person should accept their body and attempt to change it. About half of the participants (50.6%) agreed to a statement linking self acceptance with body acceptance and another linking self acceptance with weight loss. These responses suggest that self acceptance may not suggest body acceptance to people. The slogan of Canada's national weight management program is "Enjoy eating well, being active and feeling good about yourself. That's Vitality" (Health Canada, 2000). The text accompanying the Vitality promotion makes it clear that "Feel good about yourself" is intended to communicate the acceptance of your body. The Vitality information links body image with the other components of a healthy lifestyle, moving from body acceptance to taking care of yourself and accepting the weight that results. Vitality stresses this approach even for people who need to lose or gain weight for health reasons.

There was much agreement in the advice given by mother-daughter pairs, but comparisons were not significant with one exception, a post-hoc analysis of a small group of participants with the most consistent body acceptance orientation. This may suggest little difference in a daughter's orientation to weight in families where the mother is

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[37]Theoretically, an energy deficit of 500 calories per day results in one pound of weight loss per week. A weight loss of one to two pounds per week is frequently recommended. Because recidivism is almost universal, some recommend lower weight loss goals (e.g. 1/4 pound per week). Assuming the formula works, a modest weight loss of 25 pounds would take 12.5 to 100 weeks, or up to 700 days of being slightly under-nourished in terms of energy balance, with continued lifestyle monitoring to maintain the loss.

neutral about or supportive of weight control. A mother's active promotion of body acceptance may play a role in her daughter's consideration of the same advice. Given all the other factors promoting the importance of weight to girls, whether or not a mother is weight preoccupied may be less influential than active campaigning to prevent weight preoccupation. This is offered as an area for further exploration. While this was the one area where a comparison of the mothers' and daughters' weight perceptions were significantly associated, the number of such families in this study was small and the analysis was post hoc. It also raises the possibility that high background similarity is masking a small degree of mother-daughter similarity in other respects.

The next chapter makes statistical comparisons based on the three administered questionnaires. There is sufficient power in these tests to respond to some of these concerns. This final results chapter looks at the associations between a mother and her daughter's scores. It also tests for differences between the generations, the Aboriginal and non-Aboriginal participants and the urban and rural participants.

CHAPTER NINE

Analysis of Three Questionnaires

"The Nature of This Flower Is to Bloom."
Alice Walker.

This chapter describes the participants' responses to three questionnaires frequently used to study weight issues: (a) a modified version of the Restraint Scale, (b) the Eating Attitudes Test (EAT-26), and (c) a questionnaire based on the Body Shape Drawings (BSDQ). As reviewed in Chapter 3, these scales measure (a) dieting tendencies, (b) risk for an eating disorder, and (c) perceptions of and satisfaction with body shape. The emphasis of the analyses in this chapter is to test for differences in specific weight-related attitudes between the groups and for association in the responses of mothers and daughters.

The hypotheses being tested are as follows:

1. There will be differences in mean (or median) responses on the Restraint Scale, the EAT-26 and the BSDQ in comparing:

- Generations (women and girls).
- Self-Identified Ethnicity (Aboriginal and non-Aboriginal).
- Regions (urban and rural).
- Locations (Surburban, Rural, Urban Aboriginal and First Nations community).

2. There will be an association between mothers' and daughters' test scores.

3. Comparing girls with the 10 highest and 10 lowest Restraint scores:

- Mothers of the high-scoring girls will score higher on the Restraint Scale and the EAT-26 than mothers of the low-scoring girls.
- There will be an association between the girls and their mothers' Restraint and EAT scores in these 20 families.

Sample Size and Power Considerations

The qualitative portion of this investigation determined a sample size goal of 20 mothers and 20 daughters at each of the four locations. This in turn set the sample size for regional and ethnic comparisons at 40 (within each generation), and for generational comparisons at 80. The minimum detectable difference, assuming two-tailed testing, a Type 1 error probability of .05, 80% power, and using the standard deviation of the collected data (Hassard, 1991), is presented for these sample sizes for paired and unpaired comparisons in Appendices H-1 and H-2. Power calculations are based on assumptions for parametric testing and will be lower than indicated for the non-parametric tests.

Comparisons between locations would have the power to detect a minimum mean difference of 2.9, 4.7 and 6.1 for the Modified Restraint Scale, Restraint Scale, and EAT-26 respectively. There would be sufficient power to detect differences in scores of approximately 0.5 body shape for most of the BSD questions, but only one body shape for the question concerning *perceived* body shape. Differences of approximately half this size could be detected with the largest samples. Slightly smaller differences could be detected in paired samples of comparable size.

The critical value was set at .01 as a reasonable compromise between type 1 and type II errors. Although multiple questions were asked, Bonferroni critical values were not used.[38] Bonferroni values guard against the danger of abandoning an old treatment for

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[38]The Bonferroni value is .004 for analyses of the four locations for two generations). This was calculated as follows: $.05/c$; where c = number of comparisons. The number of comparisons = $k \times (k-1)/2$; k= number of groups (Hassard, 1991). A critical value of .01 with 12 comparisons provides a .89 probability that results are not due to chance (.99 raised to the power of 12; personal communication, P. Martens, June 25,

one that may not be better, which is not a concern in this research. Missing differences was considered equally as problematic as erroneously concluding there were significant differences when none exist. An error in either direction would lead to misunderstanding people's concern about weight. Results at the $p \leq .05$ are reported as non-significant trends to highlight patterns in the data that merit further research.

Data Analysis

Data were analysed using the Number Cruncher Statistical System 1997 (NCSS Hintze, 1997). Scatterplots and descriptive statistics were processed for each scale. Nonparametric tests were used when the data were not normally distributed (Hassard, 1991). Correlations between two measures of weight (BMI and *perceived* body shape), the two versions of the Restraint Scale and the EAT-26 are given in Appendix I-1 for girls and I-2 for women. These results are based on all respondents unless otherwise indicated. This includes three women in addition to the 80 mother-daughter pairs. There were no significant differences in test scores of the random and snowball Urban Aboriginal samples, and so they were combined for these analyses. Five families where the daughter's ancestry was different from the mother's were omitted from all comparisons involving ethnicity in a paired sample. This includes the univariate and multi-variate analyses of the Modified Restraint Scale, Restraint Scale and the EAT-26.

High scores on the EAT-26 were not considered outliers because they recur in

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2000). Given the exploratory nature of this research, this was deemed acceptable. A critical value of .05 provides a .54 probability that results are not due to chance. This is unacceptable for individual comparisons, but may be useful in highlighting patterns.

most studies (Garner & Garfinkel, 1979; Leichner et al., 1986; Rosen et al., 1988b; Wood et al., 1992). As such, they represent valid proportion of the sample and removing them would create a bias. Nine Restraint questionnaires with one missing response were included in the analysis of the full Restraint Scale. These scores were generally above the average score, so omitting them would have created more bias than including them. Eight questionnaires (4.9%) with more than one missing response were omitted from the analysis of the full Restraint Scale. These were distributed throughout the sample.[39] There were no missing responses on the Modified Restraint Scale or the EAT-26. There were from 1 to 11 missing responses per question on the BSDQ.[40] A maximum of 6% of respondents gave either the midpoint or a range of shapes in their response to a particular question. The midpoint was used in this analysis.

Restraint Scale

The distribution of responses to both versions of the Restraint Scale met the assumptions of normality and equality of variance when tested with a one-way analysis of variance (ANOVA). Participants' scores were included in a one-way ANOVA to examine the univariate influence of generation, ethnicity, region and location, for each scale separately. A split-unit or repeated measures ANOVA included region and ethnicity in the

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[39]The distribution of missing scores was: three women, one in each group except the First Nations community; five girls, one in each group with two in the First Nations community.

[40]Missing responses were distributed as follows: *perceived* - 1 girl; *desired* - 2 girls *women attractive* - 4 girls, 4 women; *girls attractive* - 5 girls, 6 women; *guys prefer* - 1 girl, 2 women; *women healthiest* - 3 girls; *girls healthiest* - 4 women.

model using family to nest generation. Non-significant terms were dropped in sequence. The research design was unbalanced with 19, 21, 17 and 18 pairs of mothers and daughters for the Modified Restraint Scale, and 18, 18, 17 and 13 pairs for the Restraint Scale.[41] NCSS generates approximate F-tests for unbalanced ANOVA designs.

Eating Attitudes Test

The distribution of results for the EAT-26 did not meet the assumptions of normality or equality of variance when tested with a one-way ANOVA. There were high scores in four groups. Consequently, the EAT-26 was analysed with the non-parametric test, the Kruskal-Wallis. There is no non-parametric equivalent of the split-unit ANOVA. The Wilcoxon Signed Rank Sum test with the continuity correction factor was used to test for differences in EAT-26 scores in mother-daughter pairs.

Mother-Daughter Comparisons

Correlations. The association between a mother and her daughter's scores for the Restraint Scales and the EAT-26 were calculated, again using Pearson's correlation coefficient and Spearman's rank correlation coefficient for normally and non-normally distributed scores, respectively.

Comparing Families of High- and Low-Restrained Girls. Two subgroups of families were formed. The first consisted of the 10 girls with the highest Restraint scores

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[41]NCSS is unable to handle missing values in the split-unit ANOVA (Hintze, 1997). A filter was used to screen out missing scores. Both mother's and daughter's scores were excluded if either one was missing (relevant only for the full Restraint Scale).

and their mothers. The second group consisted of the 10 lowest-scoring girls and their mothers. Two-tailed t-tests were used to test the separation of the two groups of girls. One-tailed T-tests were used to test if mothers of the high-scoring girls scored higher on the Restraint Scale and the EAT-26 than mothers of the low-scoring girls. Pearson's product-moment correlation coefficient was used to assess the association between the 20 pairs of girls and their mothers for scores on both scales. This portion of the analysis is a partial replication of Hill, Weaver and Blundell (1990) and therefore the full Restraint Scale was used. The analysis was repeated with the Modified Restraint Scale and non-parametric tests, where appropriate.

Body Shape Drawings Questionnaire

The non-parametric Kruskal-Wallis test was used to assess differences in responses to individual questions by location. The Mann-Whitney U test (corrected for ties and with the correction factor for continuity) was used to assess differences by region or ethnicity. Groups were combined only if there were no significant differences between them (using $p \leq .05$ as the criterion).

Logistic regression analysis was used to test if generation, ethnicity or region (with up to three-way interactions) could predict the likelihood of *yes/no* responses to the following questions: (a) Is *desired* body shape smaller than *perceived* body shape? (b) Are participants making the same selection for *desired* and *healthiest* body shape? and (c) Are participants making the same selection for the shape they find *most attractive* and the one they think *guys prefer*? Participants' responses for their own generation were used for

questions referring to *most attractive* and *healthiest*. If no significant differences were indicated, the responses from all participants were combined and a chi-square test was used to assess responses within a question set. The agreement between a mother's and daughter's level of body satisfaction (a comparison of responses to the first question listed above) was assessed using methods devised for establishing inter-rater reliability. A kappa value above .4 indicates greater agreement than would be expected by chance (Fleiss, 1981).

Results

Restraint Scale

Girls' and women's mean Modified Restraint scores were 4.83 (*SD* of 3.18) and 5.68 (*SD* of 3.23), respectively for the 75 mother-daughter pairs. (Further descriptive statistics are given in Appendix J.)

There were no significant differences between the generations ($t = 1.58$, $df = 148$, $p = .12$). In separate univariate analyses for each generation, there were non-significant trends by ethnicity ($H = 3.74$, $df = 1$, $p = .05$, using Kruskal-Wallis due to suspected non-normality) and location ($H = 8.95$, $df = 3$, $p = .03$, differences were specified as between the Rural and the First Nations communities) for the girls, and by region for the women ($t = 2.22$, $df = 73$, $p = .03$). (See Appendix K for details.)

In the split-unit ANOVA, generation (the nested term) was not significant ($F = 2.82$, $df = 1, 74$, $p = .10$ N.S.). There was a non-significant trend for the interaction between ethnicity and region ($F = 4.36$, $df = 1, 71$, $p = .04$). Figure 9.1 illustrates that the

First Nations community participants (noted as rural Aboriginal) had higher mean Modified Restraint scores than the three other locations. (See Appendices L-1 and L-2 for the ANOVA table and the results of the Tukey-Kramer Multiple-Comparison test.)

The results of a similar analysis of the full Restraint Scale are given in Appendix M 1-4. Mean Restraint scores for girls and women were 9.25 (*SD* of 5.17) and 11.75 (*SD* of 5.20), respectively. In univariate analysis, there was a non-significant trend by

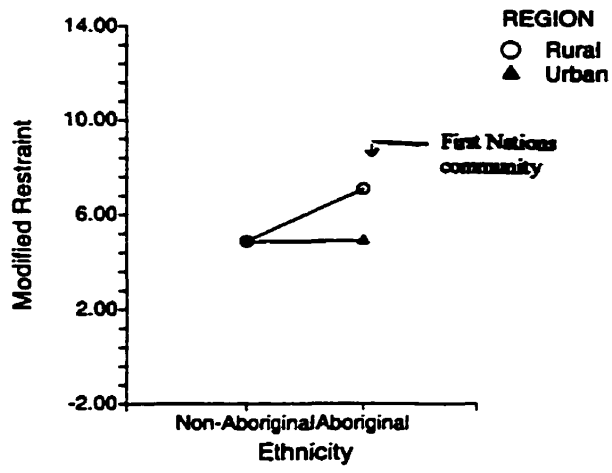


Figure 9.1. Mean scores for Modified Restraint Scale. Higher scores indicate greater dietary restraint. The maximum score is 19. Results are from a Split Unit Analysis of Variance with generation as the nested term and ethnicity and region as factors ($F = 4.36$, $df = 1, 71$, $p = .04$; $N = 75$ mother-daughter pairs.)

generation ($t = 2.47$, $df = 142$, $p = .02$; women scored higher). The Aboriginal girls scored significantly higher ($t = 2.97$, $df = 66$, $p = .004$). In multi-variate analyses, there were differences by ethnicity ($F = 8.94$, $df = 1, 64$, $p = .01$), and by generations ($F = 6.49$, $df = 1, 64$, $p = .01$). These results are confounded by actual body weight (higher Restraint scores for heavier participants). Different slopes for the weight measures precluded controlling the influence of weight in the Restraint Scale comparisons.

Eating Attitudes Test

The median EAT-26 scores for the girls and women were 4 and 3, respectively.[42] Figure 9.2 plots the median scores for girls and women by location (with further descriptive details in Appendix N). A Kruskal-Wallis test on ranks was used to test for univariate differences. There were no significant differences between EAT-26 scores by generation ($H = 1.58$, $df = 1$, $p = .21$).

Univariate analyses for each generation by ethnicity, region and location found significant difference only for locations for the women ($H = 11.21$, $df = 3$, $p = .01$). Rural women were specified as different from the women at the three other locations. The greatest difference was with the First Nations community. (See Appendix O for details.)

A Wilcoxon Signed-Rank Test of medians found no significant differences between paired mother-daughter scores ($z = 0.91$, $p = .37$ N.S. for the 57 families without

[42]For comparative purposes, the mean EAT-26 score was 6.75 (*SD* of 8.39) for the girls and 4.66 (*SD* of 4.88) for the women.

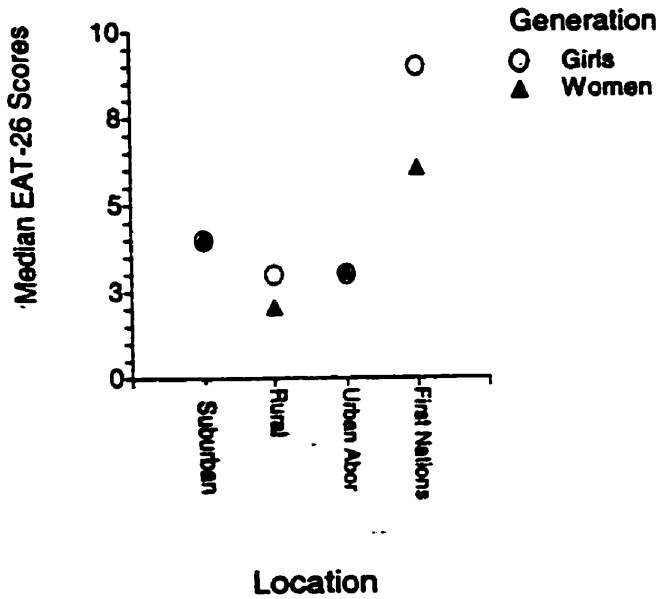


Figure 9.2. Median scores of Eating Attitudes Test-26 by generation and location. Higher scores indicate greater concern about weight. The maximum score is 78. ($N = 75$ mother-daughter pairs).

the First Nations community; $z = 0.65$, $p = .51$ for the 58 pairs without Rural families; $z = 0.60$, $p = .55$ for non-Aboriginal families; $z = 0.76$, $p = .46$ for Aboriginal families.) Results were similarly non-significant at each location.

Nine of 163 participants (5.5%) scored above the cut-off for risk of an eating disorder, distributed as follows:

- 21% of First Nations community girls (4 of 19),
- 14% of Urban Aboriginal girls (3 of 21),
- 5% of Suburban girls (1 of 20), and
- 5% of First Nations community women (1 of 19).

Mother-Daughter Comparisons

Correlations. There were no significant correlations between a mother and her daughter's scores on the Restraint Scales or the EAT-26 for all pairs of participants, or when examined by ethnicity, region or at any location (see Appendix P). For example, Pearson's correlations for the Modified Restraint and Restraint scales for the 80 families were .10 (p = .36, N.S.) and .03 (p = .78, N.S.), respectively. Spearman's correlation was .04 (p = .73, N.S.) for the EAT-26. These correlations indicate the variability in Restraint or EAT-26 scores shared by mothers and daughters was very low, less than 1%.

Comparing Families of High- and Low-Restrained Girls. Analysis of the Restraint scores confirmed the separation of the 10 highest scoring girls from the 10 lowest scoring girls (t = 21.21, df = 18, p < .00001). The mean scores for the high and low-restrained girls were 18.2 (± 0.65 SE) and 2.2 (± 0.39 SE), respectively. The Restraint scores of the mothers of these two groups were not significantly different (one-tailed t = 0.00, df = 18, p = .50, N.S.). The mean score of the mothers of both groups of girls was 11.4 (± 1.31 SE for mothers of high-scoring girls; ± 1.77 SE for mothers of the low-scoring girls). The correlation between the Restraint scores of the mothers and daughters was low and non-significant (Pearson's r = -.01, p = .98).

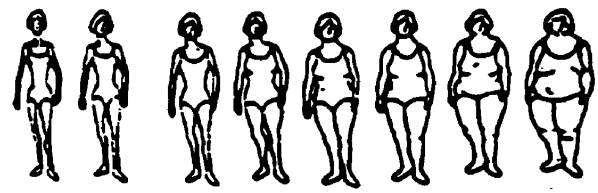
Separation was also confirmed for the EAT-26 scores of the two groups of girls (t = 4.14, df = 18, p = .0006). The highly restrained girls had a mean EAT-26 score of 20.4 (± 4.01 SE). The low-restrained girls had a mean EAT-26 score of 3.5 (± 0.73 SE). Again there was no significant difference between the mothers (one-tailed t = -0.54, df = 18, p = .30 N.S.). The mean EAT-26 score of the mothers of the high-scoring girls was 3.5 (±

1.48 SE). The mean score of the mothers of the low-scoring girls was 4.7 (± 1.64 SE). Pearson's correlation coefficient for EAT-26 scores of mother-daughter pairs was -.14 (p = .57, N.S.). The results were similar when the analysis was repeated using the Modified Restraint Scale and non-parametric tests (results not shown).

Body Shape Drawings Questionnaire

Girls' and women's responses to the BSDQ are given in Table 9.1. More than 80% of participants chose D or E as their response for all questions except their own

Table 9.1 Responses of Girls and Women to the Body Shape Drawings Questionnaire



Question	Participant responses (%)							
	B	C	D	E	F	G	H	I
Girls: n = 80								
Perceived	1	8	35	34	19	1	0	1
Desired	0	9	60	31	0	0	0	0
Women attractive	0	1	24	61	15	0	0	0
Girls attractive	0	12	72	16	0	0	0	0
Guys prefer	0	17	65	15	3	0	0	0
Women healthiest	0	0	12	70	18	0	0	0
Girls healthiest	0	4	65	29	3	0	0	0
Women: n = 83								
Perceived	0	4	10	36	24	18	7	1
Desired	0	4	37	55	4	0	0	0
Women attractive	0	3	30	62	5	0	0	0
Girls attractive	0	13	49	36	1	0	0	0
Guys prefer	1	12	54	28	1	1	1	0
Women healthiest	0	0	24	65	11	0	0	0
Girls healthiest	0	11	48	35	5	0	0	0

perceived body shape. Overall, 69% of the girls (N =79) selected D or E, with 21% choosing heavier and 9% choosing lighter shapes. Sixty percent of the women (N = 83) selected drawings E or F to represent their current body shape, with a further 26% choosing heavier, and 14% choosing lighter shapes.

Figure 9.3 displays the median response to each of the seven questions for girls and women. Girls' median response was E for *perceived* body shape, D for their *desired* shape, the *most attractive* and the *healthiest* shape *for girls* and the shape *guys prefer*. They selected E as the *most attractive* and *healthiest* shape *for women*.

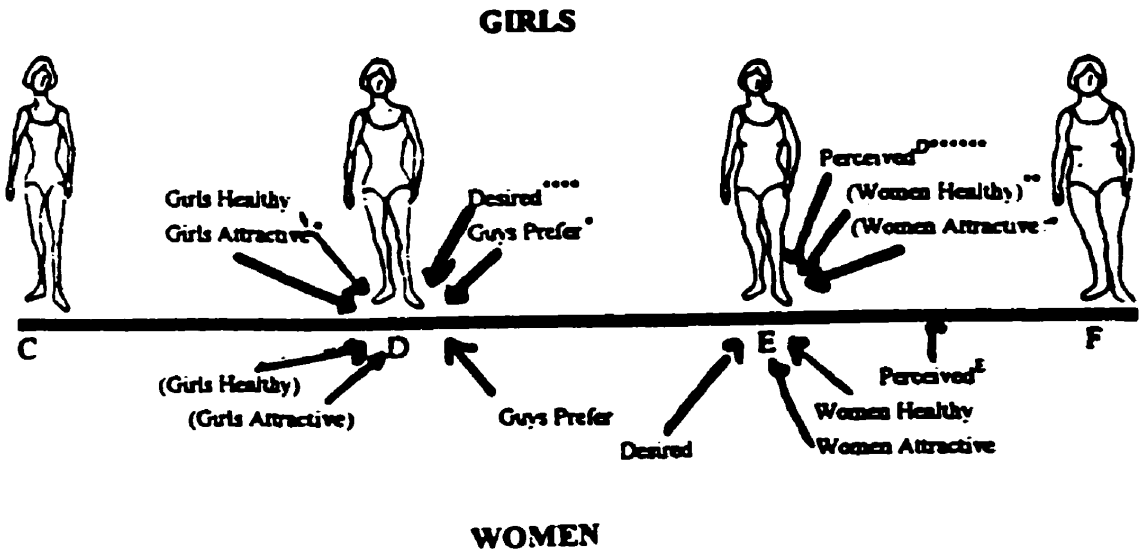


Figure 9.3. Median responses to Body Shape Drawings Questionnaire by generation. (Only the relevant portion of the figure scale is shown, including 4 of the 9 figures.) Girls' responses are graphed above the line; women's below. Answers pertaining to the other generation are bracketed. Letters in superscript refer to the mode, given only when it differs from the median. Differences between generations were assessed with the Mann Whitney U test and significance is indicated as follows: ****** $p < .000001$; **** $p < .0001$; ** $p < .01$; * $p \leq .05$.)

Women's median response for their *perceived* body shape was between E and F. They selected E as their *desired* shape, the *most attractive* and *healthiest* shape *for women* and D as *attractive* and *healthiest for girls* and the shape *guys prefer*.

Generations were compared with a Mann-Whitney U test unless otherwise noted. Women chose significantly heavier selections for *perceived* ($z = 5.50, p < .00001$) and *desired* body shape ($z = 3.89, p = .0001$). Girls chose a slightly heavier shape as *healthiest for women* ($z = 2.90, p = .004$). There were non-significant trends for three other questions: Girls selected a larger body shape as *attractive for women* ($z = 2.17, p < .03$ N.S.) and smaller shapes as *attractive for girls* and the one *guys prefer* (Kolmogorow-Smirnov test, $Dmn = 0.22, p = .04$ N.S.; $z = 2.08, p = .05$, N.S., respectively). There were no significant differences between girls and women in their choice of *healthiest shape for girls*.[43] (The details of these tests are given in Appendix Q.)

Looking at the differences by ethnicity, the Aboriginal girls selected a heavier *perceived* body shape (E) than the non-Aboriginal girls (D; Mann-Whitney U test, $z = 3.35$, $df = 72$, $p = .0008$). There were no other significant differences between Aboriginal and non-Aboriginal girls (see Appendix R).[44]

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[43]The Kruskal Wallis Multiple-Comparison Z-Value test indicated medians for the women were different at $p \leq .05$ on all questions except *healthiest for girls*. Normally, this precludes combining groups for further tests. However, the medians for mothers and daughters varied in a consistent direction. For example, women at each location perceived their shape as heavier than girls. Since it is the relationship between women and girls that is being compared, the locations were combined and tested.

[44]This is a widely discussed point, therefore the distribution of choices was examined in more detail. About 5% more Aboriginal than non-Aboriginal girls selected heavier shapes as *healthiest*. About 7% more Aboriginal girls selected lighter shapes as *healthiest*. Fewer Aboriginal girls (5-7%) selected heavier shapes as *attractive* and

As with the girls, the Aboriginal women at both locations selected a heavier median response (F) than the non-Aboriginal women (E) to represent their *perceived* shape (Mann Whitney U test, $z = 2.81$, $df = 76$, $p = .005$). There were non-significant trends for Aboriginal women to select slightly heavier shapes than non-Aboriginal women for *desired* body shape, *most attractive for girls*, and *healthiest for girls* (Mann Whitney U test, $z = 1.98$, $df = 76$, $p = .05$; Kolmogorow-Smirnov test, $Dmn = 0.30$, $df = 71$, $p = .05$, $z = 2.35$, $df = 74$, $p = .02$, respectively). There was no significant difference by ethnicity for the shape participants thought men would prefer. Responses for the shapes that were *most attractive* and *healthiest for women* could not be tested because differences between Suburban and Rural women precluded combining the groups (The differences between Aboriginal and non-Aboriginal women are shown in Figure 9.4. Details of the tests are given in Appendix S.)[45]

There were no significant differences between the urban and rural regions for the girls for six of seven questions. Differences between *perceived* body shape were not tested because of differences between Aboriginal and non-Aboriginal girls.

Regional differences for the women could not be tested for six of the seven BSDQs because differences between the Suburban and Urban Aboriginal women precluded combining groups. There were no significant differences for the question that

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attractive to guys, and more (~5%) selected lighter shapes as *attractive to guys*. This does not provide any evidence that Aboriginal girls preferred heavier shapes than non-Aboriginal girls.

[45]Approximately 5 to 7% more Aboriginal women selected heavier shapes as *healthiest, most attractive* and *attractive to guys* than the non-Aboriginal women. More Aboriginal women (~7%) also selected lighter shapes as *attractive to guys*.

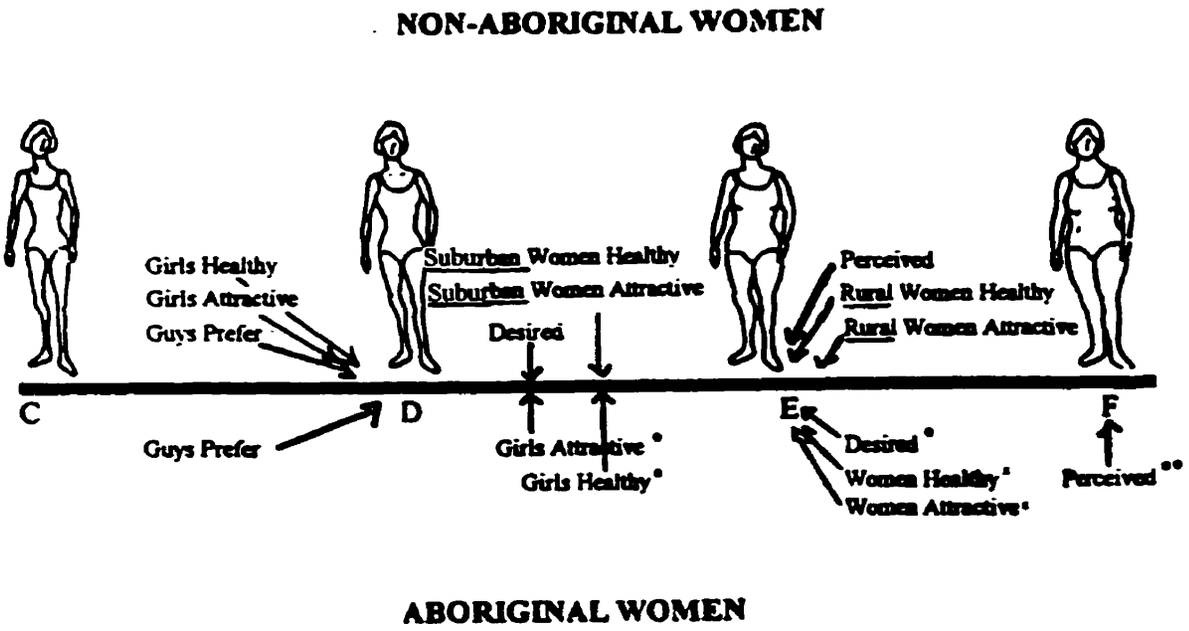

Figure 9.4. Median responses to Body Shape Drawings Questionnaire by self-identified ethnicity for women. (Only the relevant portion of the figure scale is shown, including 4 of the 9 figures.) Non-Aboriginal women's responses are graphed above the line; Aboriginal women's below. Differences were assessed with the Mann Whitney U test and significance is indicated as follows: ** $p \leq .01$; * $p \leq .05$; ^{x} indicates response was not tested (due to differences between Suburban and Rural locations at $p \leq .05$).

could be tested--*guys' prefer*ence.

Median responses to the BSDQs are graphed by location in Figure 9.5. Only questions with a significant difference (or trend as indicated by $p \leq .05$) between locations or ethnicity are shown. (Appendices T and U give test results for girls and women, respectively.)

For the girls, *perceived* body shape differed significantly by location ($H = 12.38$, $df = 3$, $p = .006$). The Kruskal Wallis Multiple Comparison Z Value test specified the Urban Aboriginal girls differed from the Suburban and Rural girls ($p \leq .01$ for Urban

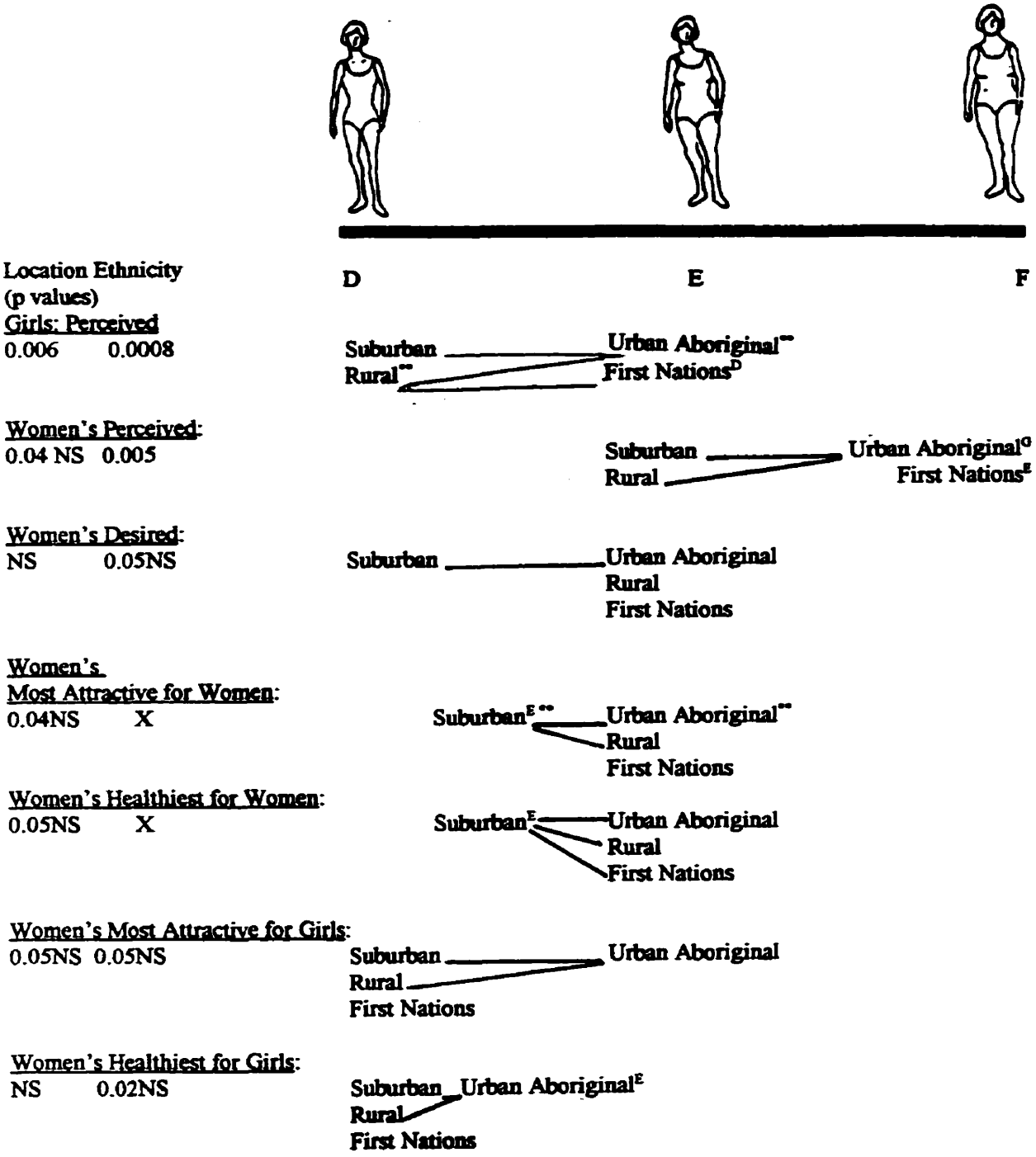

Figure 9.5. Median responses to Body Shape Drawings Questionnaire by location and self-identified ethnicity. Letter on the line graph indicates participants' median response to question at the left. Only relevant figures and questions with differences at $p \leq .05$ are shown. Lines join locations that are different. ** indicates $p \leq .01$. X indicates not tested because groups to be combined differed (at $p \leq .05$). Superscript gives the mode when it differs from the median. The Mann Whitney U test and the Kruskal Wallis test assessed for differences by ethnicity and location, respectively.

Aboriginal Rural comparison). The First Nations community girls also differed from Rural girls.

For the women, there were non-significant trends for differences between the locations for *perceived* body shape, *most attractive* and *healthiest for women* and *most attractive for girls*. ($H = 8.19, p = .04$ N.S.; $H = 8.51, p = .04$; $H = 7.84, p = .05$; $H = 7.75$, $p = .05$, respectively with each test having 3 degrees of freedom).

The Suburban women selected a slightly smaller shape as *most attractive for women* compared to the one chosen by the Urban Aboriginal women ($p < .01$, Kruskal Wallis Multiple Comparison Z Value test). They also selected a smaller median shape as *most attractive* than the Rural women (a non-significant trend). The Suburban women's median choice for the *healthiest* shape *for women* was smaller than all three other locations, and their selection for their *desired* shape was smaller than the Urban Aboriginal women's. The Urban Aboriginal women selected a heavier size than the Suburban and Rural women as their *perceived* size and also as the *most attractive* and *healthiest* shape *for girls*.

The differences, as shown in Figure 9.5, seem to be patterned. Girls differed only on *perceived* body shape. Women differed to some extent between locations on all questions except for the shape they thought men preferred. Suburban and Urban Aboriginal women varied on six of seven questions. Urban Aboriginal and First Nations community women did not demonstrate significantly different responses (or a trend) for any of the questions. There were no significant differences between the First Nations community and the Rural community women either. (Urban Aboriginal women varied

from Rural women on four questions; Suburban women varied from Rural women on two and from the First Nations community women on one question.)

The differences between women in different locations have implications for the differences between women and girls at the individual locations (See Appendix V). All groups of women selected heavier *perceived* shapes than the girls at the same location. This was highly significant for the non-Aboriginal participants and was a non-significant trend for the Aboriginal participants. The Suburban and Rural women's *desired* body shapes were not significantly different than their daughters, whereas the Aboriginal women chose heavier *desired* shapes than their daughters ($p = .007$ for Urban Aboriginal and .02, N.S. for First Nations community participants). The Suburban women selected lighter shapes than their daughters as *most attractive* and *healthiest for women* ($p = .002$ and .004, respectively). The Urban Aboriginal women selected heavier shapes as *most attractive* ($p = .002$) and *healthiest* ($p = .03$, N.S.) *for girls* than their daughters selected. These patterns parallel the differences between locations for women.

Next, logistic regression (with generation, region, ethnicity and up to three way interactions) was used to predict probable responses to the following questions:

- 1. Is *desired* body shape smaller than *perceived* body shape (or not)?
- 2. Are selections for *desired* and *healthiest* body shape the same (or not)?
- 3. Are selections for *most attractive* body shape and the shape *guys* would *prefer* the same (or not)?

Results of the logistic regression modelling were:

- 1. $\chi^2 = 18.02$, $df = 2$, $p = .0001$.
- 2. $\chi^2 = 0.55$, $df = 1$, $p = .46$, N.S.
- 3. $\chi^2 = 2.20$, $df = 1$, $p = .14$, N.S.

Only the first relationship, concerning body dissatisfaction, was significant, with generation and ethnicity remaining in the equation (see Figure 9.6). Overall, 70% of respondents' indicated their *desired* shape was different from their current *perceived* shape. Sixty percent of respondents desired a smaller shape, and 10% wanted to be larger. Seventy-two percent of women wanted to be smaller compared to 46% of girls (Odds Ratio = 3.2, confidence limits = 1.6, 6.4). Seventy-three percent of Aboriginal participants wanted to be smaller compared to 51% of non-Aboriginal participants (Odds Ratio = 2.7, Confidence limits = 1.3, 5.5). Dissatisfaction, as measured by the discrepancy between *perceived* and *desired* body shape, ranged from a low of 25% for Rural girls to a high of 82% for Urban Aboriginal women.

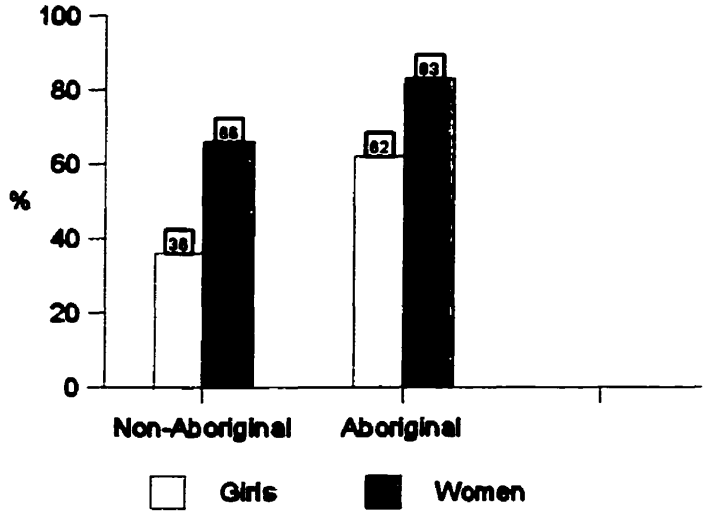

Figure 9.6. Proportion of participants selecting a larger *perceived* than *desired* body shape by ethnicity and generation.

The logistic regression analysis indicated no significant differences by generation, region or ethnicity for the other comparisons, so responses were combined.

- 39% chose a *desired* body shape different from the one selected as *healthiest* (27% wanted to be smaller than what they perceived as healthiest);
- 43% selected different shapes for *guys' preference* and their own choice for *most attractive* shape (33% indicated men's preference was smaller than their own).

Each of these responses was significantly different than would be expected had the participants given similar responses to both questions. (Chi square $\chi^2 = 309.9$ and 446.3, respectively with $df = 2$, and $p < .000000$ for both). See Appendix W for further details, including an analysis that indicated the words *desired* and *attractive* have different meanings for most participants).

Last, the measure of body satisfaction mentioned above (*perceived - desired*) was compared to test if mothers and daughters responded more similarly to each other than would be expected by chance. The results were:

- Kappa = .30 for the Suburban mothers and daughters ($n = 20$).
- Kappa = .18 for the Rural mothers and daughters ($n = 20$).
- Kappa = .29 for the Urban Aboriginal mothers and daughters ($n = 19$).
- Kappa = -.19 for the Suburban mothers and daughters ($n = 19$).
- Kappa = .18 for all mothers and daughters (and .29 without the First Nations community families; $n = 78$ and 59, respectively).

The results for First Nations mothers and daughters were contrary to the direction of the other locations, and therefore kappa values were calculated for the overall sample with and without their responses. Results were non-significant at each location and for both tests of the overall sample.

Table 9.2 summarizes the major findings reported in this chapter.

Table 9.2 Summary of Findings for Body Shape Drawings Questionnaire, Modified Restraint Scale and the Eating Attitudes Test (EAT-26) by Location, Region, Ethnicity, and Generation

	Body Shape Drawing Questions									
	Perceived	Desired	Women Attractive	Girls Attractive	Guys Prefer	Women Healthiest	Girls Healthiest	Shape Dissatisfaction[a]	Modified Restraint[b]	EAT-26[c]
Girls										
Location	**	--	--	--	--	--	--	X	FNC[T]	--
Region	X	--	--	--	--	--	--	--	Interaction	--
Ethnicity	**	--	--	--	--	--	--	**	Interaction	--
Women										
Location	T	--	T	T	--	T	--	X	FNC[T]	T
Region	X	X	X	X	--	X	X	--	Interaction	--
Ethnicity	**	T	X	T	--	X	T	**	Interaction	--
Generations	**	**	T	T	T	**	--	**	--	--
Mother-Daughter Association								--	--	--

** $p \leq .01$; T Non-significant trend ($p \leq .05$); -- $p > .05$.
X Not tested because of differences between groups to be combined (at $p \leq .05$) were significantly different.
[a] Dissatisfaction with body shape was measured by subtracting desired body shape from perceived body shape; [b] Multivariate analyses;
[c] Univariate analyses.

Summary and Discussion

Generation

The results of BSDQ indicated body dissatisfaction was more prevalent amongst women than girls. There were no significant differences between the generations on either the Modified Restraint Scale or the EAT-26, although eight of nine high EAT-26 scores were in girls. This indicates more extreme levels of concern about weight in some girls.

There were differences between girls' and women's median responses on six out of seven of the body shape drawing questions. As anticipated, girls selected smaller median shapes than women for their *perceived* and *desired* shapes (significantly different) and as *prefer*red by *guys* (non-significant trend). Girls also selected a larger shape as *healthiest for women* than the one selected by women (significantly different). Each generation selected a slightly heavier median as *most attractive* (trend) for the other. There were no significant differences on the shape seen as *healthiest for girls*. Both generations represented their *perceived* size as larger than the shapes selected for *desired, most attractive, healthiest* and the one *guys prefer*.

Overall, 70% of participants selected different shapes for their *perceived* and *desired* body shapes, with 60% of the total sample wanting to be smaller. Women were more likely than girls to want to be smaller (72% vs 46 %), probably a reflection of women's larger size.

Taken together, these results suggest that women are more dissatisfied with their body shape than girls, however more girls are concerned to an extreme degree as shown by the distribution of EAT-26 scores, and the unhealthy behaviours used to lose weight

discussed in the interviews. Other studies have reported similar or greater weight dissatisfaction or dieting in women than in girls, but have not compared measures of risk for the different ages (Lafrance et al., 2000; Rozin & Fallon, 1988; Thelen & Cormier, 1995).

More than a quarter of participants selected *desired* body shapes that were smaller than those they selected as *healthiest*, suggesting, as others have found, that attractiveness rather than health is often the primary goal (Cockerham, Kunz, & Lueschen, 1988; Garner, 1997). This did not vary significantly by generation, ethnicity or region.

That participants chose an *attractive* body shape smaller than their own *perceived* body shape is not surprising. However one-third of participants' selection for the shape *guys prefer* was smaller than their own selection for *attractive*. This did not vary significantly by generation, ethnicity or region. Rozin and Fallon (1988) found little difference between college women's own choice of attractive body shape and what they said men would find attractive. They found women exaggerated men's preference for thinness in women compared to men's actual choices. They speculated that women may be misinformed about men's preference, or may be inferring the elite male preference from television and magazines. This perception may have more impact on girls than women, given their interest in dating. The comparison of male and female views merits further investigation. It offers potential for ameliorating concern in some girls.

Looking at differences across location, girls differed significantly only on *perceived* body shape. There was a trend to differences between locations for women on all questions except for the shape they thought men preferred. That girls at all locations

chose similar figures for *desired, most attractive* and *healthiest*, despite differences in their mothers' selections, suggests other influences on girls than simply their mothers' choices.

Mother-Daughter Comparisons

Correlations between mothers' and daughters' scores were consistently low and non-significant for each scale across the entire sample (Pearson's $r = .10$, $p = .36$ for the Modified Restraint Scale; Pearson's $r = .03$, $p = .78$ for the Restraint Scale; and Spearman's $r = .04$, $p = .73$ for the EAT-26). Correlations by self-identified ethnicity, region or individual location were also low and non-significant, ruling out the possibility that opposing trends in the subgroups were cancelling out important effects. There was no compelling evidence that mother-daughter pairs gave similar reports of body satisfaction (or dissatisfaction) at any location or overall (kappa for the overall sample = .18). Nor did pairing mothers and daughters increase the explanatory power in the split unit ANOVA of the Modified Restraint scores, as would be anticipated if there were similarities in restraint within families.

To maximize the ability to detect effects, an analysis modelled after that of Hill, Weaver and Blundell (1990) was carried out. The mothers of the 10 girls who scored highest on the Restraint Scale were compared with mothers of the 10 girls who scored the lowest. There were no significant differences in Restraint or EAT-26 scores between the two groups of mothers. In fact, the mean Restraint scores were identical, and the median EAT-26 scores ran contrary to expectations. The mothers of the high-scoring girls scored

lower than the mothers of the low-scoring girls (N.S.). There were no significant associations between mothers' and daughters' scores in the analyses of these 20 families. The associations were negative, although again non-significant.

Hill, Weaver and Blundell's (1990) results were in the expected direction for both scales. The findings were significant for the Restraint Scales ($r = .68$). They concluded there was "a strong family link between mothers and their 10-year-old daughters in their motivation to diet" (p. 347). No such conclusion arises from this study despite an initially larger sample, similar analyses and a good separation of the two groups.

The cross-cultural nature of this sample may have influenced results. It is possible that parental influence is more important when culture is stable and children can rely on their parents for culturally appropriate information. This could be tested with other cultural groups experiencing transition, for example immigrant families. It is also plausible that 10-year-old girls are more similar to their mothers than 13 and 14 year-old girls. In a subsequent study with girls closer to age 12, findings were similar to those of this study (Hill & Franklin, 1998).

These results do not provide any evidence to suggest that girls learn their concern about weight from modelling their mothers' weight concerns, at least not at this age.

Ethnicity, Region and Location

A higher proportion of Aboriginal than non-Aboriginal participants indicated they were dissatisfied on each of these measures. The First Nations community participants scored higher on the Modified Restraint Scale, (a non-significant trend in the split unit

ANOVA). This is consistent with the higher prevalence of and support for dieting reported earlier.

There were significant differences in the EAT-26 scores by location. The Rural women scored lower, indicative of less concern, than the women at the other three locations, and this achieved significance for the comparison with women in the First Nations community. More importantly, the prevalence of scores above the cutoff for risk of an eating disorder was concentrated in Aboriginal girls. Seven of 40 (17.5%) had high scores. One of 40 (2.5%) non-Aboriginal girls scored this high. One of 19 First Nations community woman also had an at-risk score (5.3%).

The prevalence of at-risk scores in the Aboriginal girls is comparable or higher than the rates for same-aged girls reported by others. Leichner and colleagues (1986) reported a rate of 23.7% in a Manitoba sample, Wood and colleagues (1992) reported a rate of 9.2%. As noted, the higher non-response rate in the Suburban and Rural samples likely leads to an under-estimation of prevalence. Girls were not promised confidentiality in the event of a high score, so this may have prevented some girls from disclosing eating problems, leading to further under-estimation. For these reasons, the finding of higher prevalence of at-risk scores in the Aboriginal girls than the non-Aboriginal girls is not valid. However, the results indicate that Aboriginal girls living in and within driving distance of an urban centre are vulnerable to weight pressures.

High scores are an indication for referral, not confirmation of an eating disorder. All of the Aboriginal girls with high scores discussed severely restricting their food intake or vomiting to control their weight. The EAT-26 sometimes raised issues not discussed in

the interviews, but clarified in a follow-up interview. High scores were discussed first with the participant, and then in the case of girls, with their mothers or a counsellor. The EAT-26 had face validity as a screening tool for serious eating problems with the Aboriginal samples used in this research.

Comparing individual's choices for *perceived* and *desired* body shape, the Aboriginal participants were more likely than the non-Aboriginal participants to want to be smaller (73% vs 51%). The discrepancy was greater in the women (83% and 62%) than in the girls (66% and 33%).

Aboriginal girls selected a larger *perceived* body shape than the non-Aboriginal girls. This was the only difference in the median responses to the BSDQ for the girls (and it was highly significant). The non-Aboriginal girls' median *perceived* body shape was consistent with their other selections, but the Aboriginal girls' selections for *desired, most attractive, attractive to guys*, and *healthiest* were all smaller than their *perceived.* This discrepancy would explain the higher levels of body dissatisfaction in the Aboriginal girls. The results did not provide any evidence that Aboriginal girls preferred larger shaped bodies as attractive or healthy.

Aboriginal women also perceived themselves as heavier (significant) and selected heavier shapes than non-Aboriginal women for their *desired* body shape (trend). Women have been reported to adjust their personally desired shape in accordance to what they realistically feel is possible for them to achieve (Allan, 1988). This is suggested here in that participants made different selections for their *desired* body shape and the shape they viewed as *most attractive*. The finding of a heavier *desired* body is probably linked more

to Aboriginal women's heavier weight norms than to heavier ideals for attractiveness (see Appendix W). The Urban Aboriginal women's selection of heavier shapes for *most attractive* and *healthiest for girls*, however, does suggest some preference for, or at least acceptance of, heavier shapes. This was weak (non-significant trends) and requires further research for confirmation. There were no significant differences between Aboriginal and non-Aboriginal women's selection of the shape that men prefer. Differences between Suburban and Rural women precluded testing for differences between Aboriginal and non-Aboriginal women in their choices for *most attractive* and *healthiest* shapes *for women*. The analysis by locations adds some pertinent information.

There were differences between the Suburban and Urban Aboriginal women on six of seven questions (at the $p < .05$ level). By contrast, there were no such differences between the First Nations community women, and either the Rural or the Urban Aboriginal women. That is, most of the differences were between the Aboriginal and non-Aboriginal women in the city, with no differences between Aboriginal and non-Aboriginal women in the rural setting or between the urban and rural Aboriginal women. (Urban Aboriginal women varied from Rural women on three questions; Suburban women varied from Rural women on two and from the First Nations community women on one question. These differences precluded testing for regional differences on all but one question for the women. Similar differences precluded testing one of the questions for the girls. All performed tests were non-significant for both girls and women.)

These results suggest that only in the city did Aboriginal women prefer larger sizes as heavier and more attractive. However, it may be more appropriate to say that the

Suburban women preferred smaller body shapes than the other women (Rural as well as Aboriginal women) than to focus on differences between the Aboriginal and non-Aboriginal participants. Suburban women seemed to have narrower personal ideals for slenderness as inferred from their smaller median selections for *desired, most attractive* and *healthiest* shapes *for women*. They also had a smaller median *perceived* body shape than the women at the other three sites. Additionally, it was the Urban Aboriginal women who seemed most accepting of heavier shapes as *most attractive* and *healthiest for girls*, rather than First Nations community women. Consequently, it is not clear from the findings of this study that Aboriginal women preferred larger sizes as attractive and healthier. Sample size is small for tests by location, and the comparisons are complex for an ordinal scale and parametric statistics, so further research is needed to clarify these results.

There are widespread anecdotal references to First Nations peoples' preferences for heaviness. Several studies report results that support these impressions, but these are studies of older men and women, often diagnosed with a chronic disease, and often living in more isolated communities (Garro & Lang, 1993; Hickey & Carter, 1993). Results quite plausibly could differ in such different samples.

Gittelsohn and his colleagues (1996) studied a sample that included younger First Nations people living in an isolated Northern Ontario community. They also reported the Ojibway-Cree people surveyed preferred relatively larger body shapes compared to those reported in the literature for Anglo populations. They recognized this comparison was problematic because the usual population surveyed is school-aged and college-aged

women. They used the same body shape drawings (although as an interval scale). The results can quite easily be compared with the findings of this project.

The Ontario girls selected a mean perceived current body shape slightly bigger than E, and mean desired and healthiest shapes that were slightly smaller than D. Although a broad range of ages (10 to 19) was included, this is consistent with the choices of the Aboriginal girls reported here. The 30-39 year-old-women chose a mean perceived current body shape of F, similar to the Manitoba Aboriginal women. The Ontario Aboriginal women's mean selections for desired and healthy shapes were slightly smaller than D. These choices were similar to or smaller than the median choices at all locations in this study. When compared to same-aged samples, the Ontario Aboriginal girls and middle-aged women did NOT select larger desired and healthy body shapes than non-Aboriginal girls and women.

There have been similar findings of greater dissatisfaction with body weight in Native youth and women in several recent studies in the United States (for a summary, see Marchessault, 1999). These studies find higher levels of self-reported potentially dangerous methods of weight control in Aboriginal people than in non-Aboriginal people, regardless of age. This is the first report of a higher level of concern about weight for Canadian Aboriginal people, other than my earlier study (Marchessault, 1993a).

Aboriginal participants living in or close to the city are already concerned about weight and weight control. These results, particularly in combination with the responses given in the open-ended interviews and the results of other studies, suggest vulnerability to weight preoccupation exists in Aboriginal girls and women.

CHAPTER TEN

Teaching Ophelia to Swim

> "This above all -- to thine own self be true; And it must follow, as the night the day, Thou canst not then be false to any man" (Shakespeare, 1604/1963, I.3.78).

Two of the women interviewed for this project mentioned they had read Mary Pipher's (1995) popular book, *Reviving Ophelia: Saving the Selves of Adolescent Girls.* Pipher, a clinical psychologist who works with troubled girls, takes Hamlet's Ophelia as the touchstone for what happens to girls as they reach adolescence. Pipher sees a universal theme in Ophelia's transition from a happy and carefree girl to a young woman who loses herself in her attempt to please others. Ophelia falls so deeply in love with Hamlet that she lives only for his approval. She sacrifices her "self" to please Hamlet, a sacrifice that leaves her with no resources when he rejects her. She goes mad and drowns, ever so elegantly, dragged down by the weight of her skirts in a flower-strewn stream with no evidence of any struggle to save herself.

"To thine own self be true," Ophelia's father advised her brother. However, he urged his daughter to please Hamlet, a direction that leads to Ophelia's demise. Pipher interprets this scenario based on the work of psychologist Carol Gilligan and her colleagues who argue that our society continues to encourage this sacrifice of self in girls. Their research with adolescents suggests that somewhere between the ages of 10 and 13, girls begin to lose their authentic selves in their efforts to fit into cultural ideals of femininity that endanger their psychological health (Brown & Gilligan, 1992; Gilligan,

Rogers, & Tolman, 1991). In our society, the importance of appearance and thinness to female identity and women's success is seen as central, as portrayed in Eric Stice's sociocultural model of influences on bulimia (1994). An adapted version of this model was presented in Chapter 2 to demonstrate the myriad factors that influence weight perceptions in addition to the mother-daughter relationship. Although my purpose was not to test Stice's model, the results of this study have implications for its applicability. In this final chapter, I summarize the findings with respect to the main research questions, suggest their policy implications and end by suggesting promising areas for further research. I will start by reviewing the three methods used and how they influenced the results.

Limitations and Strengths of the Study

The purpose of this project was to discover the extent to which Aboriginal and non-Aboriginal girls and their mothers shared understandings about weight. Families were selected from an urban centre and from rural communities within driving distance of this centre. Sample selection allowed comparisons to be made within mother-daughter pairs as well as between the two age groups, and the Aboriginal and non-Aboriginal participants at urban and rural locations.

Three data collection methods were used to explore agreement and variation within and between these groups. The first two, the dual interview design modelled on the work of Garro (1996), provided complementary sets of data. The open-ended portion of the interview allowed participants to raise salient issues in their own words. The language

they used and the emphasis they gave certain ideas provided clues to cultural meanings (Fine, 1994). These meanings provided the framework for understanding participants' perspectives and informed the analysis of the more systematically elicited data. The fixed-structure values statements, analysed with cultural consensus theory, facilitated comparability between the various groups by obtaining responses to a standard set of statements. These statements were based on an earlier set of interviews with similar-aged inner city participants and were written to preserve their perspectives. The three questionnaires, on the other hand, were drawn from published psychology studies. Their useage allowed an assessment of the extent of restraint, risk for eating disorder and body dissatisfaction relative to established norms. These questionnaires enhanced comparability to other research and facilitated an understanding of participants' attitudes to weight from the perspective of health professionals.

Combining these three interview techniques worked well. When all three methods resulted in similar results, confidence in their validity was increased. When conflicting results were obtained, it was necessary to push the analysis further and deeper to understand apparent contradictions. Examining the topic from different angles ultimately provided a richer understanding of the meaning and role of weight to participants.

The major disadvantage of using three data collection methods was the additional time required for administration and analysis. Participants were generous with their time and although it was a long interview, everyone completed the questionnaires. This added approximately 5 to 10 minutes to the interview. This additional time provided an opportunity to observe the environment, to reflect on the interview and to consider if

additional information was needed.

All three methods used were based upon a single interview and relied on self-report. People typically are inaccurate when they talk about their behaviour (Bernard, 1994), and discrepancies may be greater when observations about other people are requested. Although interviewing mother-daughter pairs may have provided a check on conscious errors, the distinction between perspectives and behaviour remains important. The main focus in this study was on participants' perspectives and understandings about weight. The findings would have been enriched by collecting other kinds of data. However, methods were chosen based on a consideration of their appropriateness and feasibility for a single-investigator study that focuses on people's perspectives. Partnering, greater involvement of Aboriginal researchers or participatory action research is recommended for future projects (Cohen, 1995; Postl, Moffatt, & Sarsfield, 1987; Travers, 1997).

The interviews captured the participants' perspectives at a single point in time. People's ideas about weight change over time and may be context dependent. It would have been ideal to have multiple interviewers (including collaborators of Aboriginal ancestry) and to interview people more than once in a variety of settings. Given the scope of the project, and the available time and money, this was not possible. The cross sectional design of the study precludes conclusions about causality.

The large number of qualitative interviews in this study (163) is both a limitation and a strength. Interviewing multiple participants is another way of triangulating data (Huberman & Miles, 1994). The amount of data collected necessitated focussing on

particular questions and constrained the depth to which themes could be pursued. However, it also increased the ability to detect patterns across diverse samples, a major goal of the research. More detailed analysis of particular sites remains possible. Although finding consensus in all participants except the First Nations community women is an interesting finding, the effort at comparability limited the ability to tailor the consensus statements to this one location. To explore their perspective further with this method would require re-interviewing with statements derived from their interviews.

The credibility of the findings relies on people's honesty, interest and ability to communicate their thoughts about a complex topic. The samples were primarily random, and some participants, particularly the girls, were shy. Most, however, warmed to the interview early on, and the questionnaires provided an alternative way for them to communicate their thoughts. A volunteer sample may have been more forthcoming but would have limited understanding of the range of interest in weight issues. Additionally, the random nature of the sample helps to establish that participants were not selected to prove the point being investigated (Patton, 1990). The emergence of quite different points of view is evidence that the questions allowed people to express their own thoughts.

As others have noted, objectivity in social research is a myth (Bernard, 1994; Denzin, 1994; Olesen, 1994). Although the objective was to understand the participants' perspectives on weight issues, the report more accurately reflects my interpretation of their perspectives. This cannot be avoided because analysis requires the selection and interpretation of evidence. I have attempted to represent the range of views present in the interviews and to present my analysis as distinct from the participants'. It is possible,

however, that I have missed significant patterns or misinterpreted the data (Marshall & Rossman, 1989). These considerations, which pertain to all studies, are particularly important when cultural differences are involved (Cannon, Higginbotham, & Leung, 1991; Parker et al., 1995; Riessman, 1987). To guard against this, interested participants are sometimes invited to read sections of draft reports. The relationships between participants limited the use of this check. The frequent citation of participants' own words was used as an alternative to enable readers to assess the sufficiency of evidence and the validity of my interpretation and analysis. As mentioned above, the purpose of triangulating data collection is to establish validity. Using data from questionnaires alongside participants' responses to open-ended questions aids interpretation of the appropriateness and completeness of each interview format.

In qualitative research, it is the investigator's responsibility to provide sufficient detail to enable the reader to judge the credibility of the findings and to determine the extent to which they apply in other situations. In the final analysis, this will ascertain if the data and interpretations are valid and useful.

Summary of Research Findings

The Aboriginal/Non-Aboriginal Comparison

The first research question concerned the extent to which the well-established weight concerns of middle-class females in our culture were shared by Aboriginal girls and women. The findings of this study demonstrate that weight is an important, but perhaps different issue to some of the Aboriginal participants, especially in the First

Nations community. It was not as clearly central to female identity, although there were some indications that it may be becoming more central.

All three methods of analysis provided evidence that the First Nations community participants were most concerned about weight. In their responses to the semi-structured interview questions, First Nations community participants supported weight control and weight loss beyond that of the participants at the other locations. For example, the participants in the First Nations community overwhelmingly gave advice oriented to weight control or weight loss, whereas participants at the other locations had a more mixed orientation with some advice promoting acceptance of the body at its current size. Analysis of the 24 weight-related values statements indicated consensus in all participants except the First Nations community women.[46] There was more support for weight control, although there was also evidence of competing values in the way they responded to other questions. The trend to higher scores on the Modified Restraint Scale for the First Nations community participants also suggested more dieting intent. Although non-significant, this would be worth following up, particularly since sample size at the community level was small.[47]

Concurrent with these expressions of concern, there was also a decidedly different tone to the interviews. The First Nations community women were most likely to respond

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[46]For all participants except the First Nations community women, the consensus factor was .64 (*SD* of .16) and the ratio of the first to second eigenvalue was 6.93. For the First Nations community women, results were .58 (*SD* of .19) and 2.46, respectively.

[47]This was tested with a Split Unit Analysis of Variance with generation as the nested term and ethnicity and region as factors ($F = 4.36$, $df = 1, 71$, $p = .04$).

that weight was *not* more important to women than to men, with the non-Aboriginal women almost unanimous that it was (and the Urban Aboriginal women's responses split both ways.) The First Nations community women's explanations for why people were concerned about weight focussed on health in very personal terms. Those who saw weight as more important to women than men tended to speak of physiological differences between the sexes that made it easier for women to gain and harder to lose. The non-Aboriginal women spoke of cultural influences that made weight part of a woman's identity. Several non-Aboriginal women made statements about weight, such as *"for women, it's who they are."* First Nations community women did not talk about weight this way, nor did they talk about feeling judged in terms of appearance or weight. The manner in which weight was discussed relative to other issues further supported an impression that weight was not central to identity. The lack of patterning in the First Nations community women's responses revealed by the cultural consensus analysis suggested either greater variability or that the framework used to structure the questions was inappropriate to their perspective. These results suggest that although the concerns look similar, the very central feature of Stice's model does not apply to the First Nations community women. The research assumptions about women's weight preoccupation embodied in this model were supported by the observations of the non-Aboriginal participants, and by some of the Urban Aboriginal participants. There were subtle differences in the First Nations community that became apparent when the group responses were compared. This analysis questions the centrality of weight to feminine identity in the First Nations community. Alternative models were not explored with

cultural consensus analysis because of the way the consensus statements were derived.

The analysis suggested consensus for First Nations community girls, both among themselves and with the other girls. Despite these findings, there were differences between the First Nations community girls and the girls at the other locations ($p = .002$), and no significant differences between the girls and the women within this community ($p = .10$).[48] The First Nations community girls seemed to be responding both similarly to and differently from both the other girls and their mothers. In the open-ended interviews, the First Nations community girls agreed that weight was more important to girls than to boys and gave similar reasons as the other girls. There were no significant differences between Aboriginal and non-Aboriginal girls in their body shape selections for *desired, healthiest, most attractive*, and *attractive to guys*. The Aboriginal girls, however, selected heavier *perceived* body shapes than the non-Aboriginal girls. The results provided no evidence that Aboriginal girls viewed larger body shapes as more attractive or healthier than the non-Aboriginal girls.

The Aboriginal women selected larger *perceived* and *desired* body shapes than the non-Aboriginal women. Their choices for *most attractive* and *healthiest* body shapes could not be tested due to differences between Suburban and Rural women. Tests for differences between the locations specified the differences for these questions were between the Suburban women and the women at the other three locations. There was no

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[48]These differences were indicated by QAP. The First Nations community girls had a consensus factor of .56 (*SD* of .23) with a first to second eigenvalue ratio of 3.46. The consensus factor for all girls combined was .65 (*SD* of .18) with an eigenvalue ratio of 7.29.

significant difference between Aboriginal and non-Aboriginal women's selection of the shape that would be attractive to men. Taken together, these results suggest the Aboriginal women's larger *desired* selections were practical choices stemming from their larger *perceived* size. Some researchers have asked about desired body shape or weight, assuming these represent ideals for attractiveness. The findings reported here indicate that this can lead to inappropriate conclusions.

There was, however, a non-significant trend for the Aboriginal women to choose larger shapes as *most attractive* and *healthiest for girls*. If confirmed, this implies greater differences in what mothers see as appropriate weights for younger people. This did not seem to influence the girls' choices, and consequently may lead to Aboriginal mothers being taken by surprise if their daughters become weight preoccupied.

There were a number of comparisons where differences between Aboriginal and non-Aboriginal participants were significant (with the greatest number of differences at the $p < .05$ level occuring between the Urban Aboriginal and the Suburban women). The dissatisfaction with weight was significantly greater in Aboriginal participants at both the urban and rural locations.[49] More Aboriginal girls (66%) than non-Aboriginal girls (33%) wanted a smaller body shape. More Aboriginal women (83%) than non-Aboriginal women (62%) wanted a smaller body shape. As indicated, weight status was also significantly different in the expected direction whether based on self-reported height and

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[49]Differences by generation and ethnicity (but not region) were indicated in a logistic regression analysis examining satisfaction with body shape: $\chi^2 = 18.02$, $df = 2$, $p = .0001$.

weight or *perceived* body shape.[50]

There were more Aboriginal girls with high scores on the EAT-26, indicating risk for an eating disorder at both locations. The rates for Aboriginal girls (17.5%) are consistent with rates reported for girls in the general population (Leichner et al., 1986; Wood et al., 1992). The rates for non-Aboriginal girls (2.5%) were low and may be under-estimated due to the weight-related refusals in the non-Aboriginal families. Although some of the refusals may have related to mothers' concerns about their own weight, it is possible that serious eating problems had occurred and been dealt with at a younger age in the non-Aboriginal girls. It is possible that rates for both samples are under-estimated because girls were not promised confidentiality, and some were hesitant to bring up their weight control efforts. Nevertheless, 26% of the First Nations community girls (and 16% of the women) either scored high or indicated on the EAT-26 that they had vomited for the purpose of weight control (with concerns confirmed in follow-up interviews). Another 25% of the First Nations community girls indicated they had considered vomiting to control their weight.

The interviews were consistent with this finding of serious concerns. Some of the Urban Aboriginal and First Nations community women reported a similar history of serious concern about weight when they were girls, indicating that risky attempts to control weight have existed for some Aboriginal girls for at least a generation.

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[50]The results of ANOVA comparing BMI were $F = 7.49$, $df = 1, 137$, $p = .007$. Comparisons of *perceived* body shape were significant ($z = 3.35$, $df = 72$, $p = .0008$ for girls; $z = 2.81$, $df = 76$, $p = .005$ for women, Mann Whitney U test).

Differences between Aboriginal and non-Aboriginal participants precluded combining the samples to test for differences between the urban and rural regions on many questions. There were no strong differences or indications of patterned results between the comparisons that were made except the contrast in EAT-26 scores was strongest between the Rural women and the First Nations community women.[51] There were no other significant differences (or trends) between the First Nations community participants and either the Rural or the Urban Aboriginal participants. The differences between Aboriginal and non-Aboriginal participants were greater than those between the urban and rural participants, suggesting the differences in the First Nations community were not due to "small town" effects.

The Mother/Daughter Comparison

Children are socialized first within their families, and it seems logical that mothers (among other family members) would be key in the transmission of cultural values to their children. The evidence is far from clear, and the second major research focus was on the mothers' advice to and modelling of weight-related behaviours to their 13- and 14- year-old daughters.

A majority of girls in this study and approximately two-thirds of the mothers said they discussed weight with each other. There was much agreement on content of their

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[51]Univariate analysis indicated significant differences in EAT-26 scores between the Rural and First Nations community women ($H = 11.21$, $df = 3$, $p = .01$, Kruskal-Wallis test).

discussions, especially as the weight of girls increased. An exception to this was the area of compliments. At least four times as many mothers reported complimenting their daughters as girls reported receiving compliments. A partial explanation for this discrepancy may be seen in the tendency of mothers to give their positive comments reactively in response to their daughters' self-criticism or a direct question concerning appearance.

I also looked at other aspects of mother-daughter similarity, including open-ended reports of the advice they said they gave to others, their body dissatisfaction, dieting habits, and responses on structured questionnaires. Despite much agreement, the results do not make a strong case for mothers' influence over and above the broader cultural positions on weight, at least at this age in terms of modelling specific views.

As with general surveys of older and younger women, *mothers* were not significantly different than *daughters* when the generations' responses to the Restraint Scale or the EAT-26 were compared.[52] As already discussed, the finding of consensus for participants on the 24 statements supports a conclusion of shared cultural values regarding weight at the three locations where it made sense to aggregate results. At the fourth, the First Nations community, there were no significant differences between the generations.[53]

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[52]In the split unit ANOVA, of the Modified Restraint Scale, generation, the nested term, was not significant ($F = 2.82$, $df = 1,74$, $p = .10$, N.S.). Nor were there any significant differences between the generations on the EAT-26 (Kruskal-Wallis test on ranks $H = 1.58$, $df = 1$, $p = .21$).

[53]QAP indicated no significant differences in the consensus responses between the generations for the First Nations community families ($p = .10$).

Despite an overall lack of difference between generations, there was little association evident between individual mother-daughter pairs. This was indicated by non-significant associations for the 80 families for the Modified Restraint scale (Pearson's r = .10, p = .36, N.S.), the Restraint scale (Pearson's r = .03, p = .78, N.S.) and the EAT-26 (Spearman's r = .04, p .73, N.S.). There was no evidence that a daughter's level of body dissatisfaction was associated with her mother's (kappa = .18). A comparison of matches and correlations between mother-daughter pairs in the consensus analysis also indicated agreement was no greater than in unrelated participants. Nor were there any significant differences between the mothers of the girls with the highest and lowest Restraint scores.[54]

Part of the explanation for this finding of no significant difference between generations, but no association within mother-daughter pairs, was that more of the women were heavier and expressed moderate concerns about their weight. Significantly more women than girls selected heavier *perceived* and *desired* body shapes Significantly more women were dissatisfied with their bodies than girls (72% and 46% respectively, based on a comparison of their body shape selections). There was a much broader range of concern in the girls, from disinterest to extreme concern about weight issues. More girls were extremely dissatisfied as measured by the EAT-26 and according to the revelations in their interviews. A mother's and daughter's level of concern about weight

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[54]Mean Restraint scores for mothers of both groups of girls were the same (11.4). Contrary to expected, mean scores on the EAT-26 were slightly lower for the mothers of the high-scoring girls (3.5 ± 1.5 SE) than the mothers of the low-scoring girls (4.7 ± 1.6 SE), although the differences were non-significant (t = -0.54, df = 18, p = .30, N.S.).

rarely matched. At this age, the dieting mothers did not have dieting daughters, at least not in greater numbers than the non-dieting mothers.

There was no real evidence to support the "like-mother, like-daughter" assumptions that are still common currency as the rationale for how girls learn to fear fat and diet. This finding seems plausible because girls have multiple opportunities to be exposed to culturally shared ideas about weight. The influence of fathers, brothers and sisters, grandmothers, friends and other class mates (especially boys), coaches, teachers and health professionals, media (especially television), and others came up in participants' interviews. These sources usually transmit consistent messages about the importance of being thin, so girls are likely to learn their lessons whether it is from their mothers or others. That is, girls are likely to absorb these messages even if their mothers are not concerned about weight.

There was one exception to this pattern of non-significant mother-daughter associations, although it was based on a post hoc analysis of 21 participants and should be viewed more as a hypothesis than a finding. Mothers who gave advice that focussed on body acceptance had daughters who were more likely to follow suit (kappa = .51). This suggests that mothers who have a point of view that departs from the standard messages may have daughters who express similar counter-culture views. There may, of course, be other factors in these families that facilitate this manner of coping with weight issues, but it was not possible to draw any conclusions about this based on two short interviews per family. Nevertheless, this finding, that mothers who speak of the importance of self-acceptance (specifically including weight and body shape), are more likely to have

daughters who repeat these messages, if verified by further research, offers a new way to look at weight interventions.

Whether mothers focussed on promoting body acceptance or weight control, there was much common ground in their advice to their daughters. Mothers favouring either strategy were concerned about their daughters' overall physical and psychological health and happiness. Both groups recommended the same behaviours (healthy eating and being active). Both groups of mothers recommended moderation and expressed uneasiness about girls' excessive concerns with weight and resulting extreme efforts to lose weight. All of these concerns came up in both orientations across the range of girls' body weight. The main difference between the mothers was the belief that the recommended behaviours would (or would not) lead to weight control or weight loss, and the resulting focus (or pointed avoidance of focus) on weight.

Policy Implications

In addition to the well-documented higher incidence of heavier weight norms in Aboriginal people, this research found evidence of weight preoccupation, including reports of detrimental weight control behaviours in Aboriginal girls living in or close to the city. Although health professionals have not caused this weight preoccupation, it is important that they be aware of its existence when talking to Aboriginal people about weight, both to ensure that appropriate help is offered as needed, and to prevent inadvertently increasing weight preoccupation and disordered eating.

An integrated approach to weight control and weight preoccupation should be

considered in programs that promote healthy weights. One way to do this is to shift health promotion messages away from weight to focus on desirable behaviours (Berg, 2001; Health Canada, 2000; Omichinski & Harrison, 2000; Rice, 1993; Satter, 1987). Messages about weight should enhance self-esteem and encourage youth to feel good about themselves and to express respect for other people. This is particularly important with children who are emotionally vulnerable. This came up in this study and others (French, Story, Downes, Resnick, & Blum, 1995; Marchessault, 1993a).

There is a need to develop and test programs that integrate prevention of obesity and weight preoccupation. Some formal programs using this approach have been tested with adults (Ciliska, 1990; Omichinski & Harrison, 1995), but such programs have not been developed or tested with teens or with Aboriginal people. An integrated approach to weight seems consistent with traditional values and could be framed within lifestyle programs that focus on Aboriginal heritage and pride and principles such as those embedded in the medicine wheel (Bartlett, 1995). Such programs could build on the findings of ongoing research on diabetes and obesity prevention programs in Aboriginal communities (Caballero, 1999; Davis et al., 1999; Macaulay et al., 1996). They could also draw on aspects of existing programs to prevent weight preoccupation (Friedman, 1994; Piran, 1999), taking care to adapt messages to meet the needs of the intended audience. Although the lessons embedded in these programs may be useful, a gendered analysis may not be the most appropriate approach. It is best to start with lived experience of the intended audience and this means involving them in the development of educational approaches.

Using an integrated approach to weight issues would also meet the needs of some of the mother-daughter pairs who were caught in the contradictions inspired by weight. For example, mothers who wished to communicate love and acceptance, while addressing their daughters' health needs could do so by side-stepping the issue of weight control. If these mothers focus their attention on their daughters' nutritional and activity needs, the conflict between self-esteem and physical health dissipates.

In addition to knowing what to advise their daughters, mothers need to communicate effectively with their daughters. Some mothers intuitively communicated that they understood and were empathetic to their daughters' concerns even if they desired different goals for her. This is important because (among other things) these mothers were then in a position to help their daughters temper a focus on weight, if needed. Weight problems caught some families by surprise and attending to issues earlier would also be helpful. This does not mean restricting food intake, as there is some indication that this is associated with the problems it is intended to resolve (Birch & Fisher, 2000; Stice, 1998). Rather it suggests that nutrition issues need to be approached in the context of broader relationships. Parents need to communicate to their daughters that their love is not conditional upon weight status. This may seem obvious, but some girls seemed inclined to interpret weight messages this way.

Rather than focussing on weight, the emphasis can be put on eating nutritiously for the sake of health, being active because it is fun and feels good, increasing self-acceptance and appreciation for the body one has, and respecting diversity in body size and shape. Girls need information about these areas. They also need information about

and positive reinforcement for the increase in body fat that comes with puberty.

Specific and global affirmations of positive aspects of girls' appearance, character and many talents, given pro-actively as well as reactively might help girls hear and internalize compliments and build body pride. Compliments do not have to accord with culturally valued traits, but can confirm alternative points of view. Focussing on what the body can do, rather than what it looks like can change the framework for evaluating the body. Parents can help adolescents cope with teasing and other forms of discrimination, express respect for other people and critique the media methods and images. Mothers (and others) can actively teach a critical consciousness about society's weight preoccupation. The amount of time parents spend with their children, including eating meals together, has been shown to positively effect both weight and attitudes to weight (Swarr & Richards, 1996; Graber et al., 1999).

Other than the association between mothers and daughters for messages promoting body acceptance, this research did not find evidence that 13- and 14-year-old girls model their attitudes to weight mainly on their mothers'. These negative results suggest that the context needs to be broadened beyond the mother-daughter relationship. Family, peers, the media and health systems were noted as carriers of influence in the adaptation of Stice's (1994) model. As many have noted, and as seems particularly relevant here, interventions need to be broadly based and inter-sectoral to effect social change (Graber et al., 1999; Levine & Piran, 1999; Ritenbaugh et al., 1999).

Recommendations for Further Research

There is a need to monitor weight status and the prevalence of potentially harmful weight loss concerns and practices of Aboriginal people, and particularly youth, in a larger number of more diverse communities. This will require both the broader survey approach and the more in-depth examination of participant perspectives.

There is a need to survey Aboriginal youth to determine more broadly what their weight concerns and practices are. There is particularly a need to examine how weight is perceived by people living in more northerly and more isolated communities where history and living conditions vary greatly from those examined here. The First Nations community that participated in this study had year-round roads and was quite similar to the rural community in its access to grocery stores, exercise and extra-curricular activities, educational and employment opportunities. There are also differences in housing and language that may affect exposure to mainstream weight messages. Consequently, these concerns need to be explored in a greater variety of First Nations communities.

There is a need to develop and evaluate culturally appropriate obesity prevention programs that also address weight preoccupation and disordered eating. In addition to focussing on the needs of individuals, ways to address the larger context in which people live their lives need exploration. This is especially appropriate to obesity prevention. There is opportunity to use participatory action research in a First Nation community to focus on community infrastructures that affect peoples' lives. For example, supplying clean drinking water and increasing its social acceptability as a replacement for soft

drinks may do more for weight norms than educational programs (personal communication, Healther Dean, April 30, 2001).

The preliminary findings of this study suggested a role for mothers in promoting resistance to societal attitudes to weight in their daughters. This construct of resistance to weight preoccupation merits further attention, particularly with respect to parental and school interventions. Resistance to weight preoccupation seems to be cited more often in Canadian research (Chapman, 1999; Wakewich, 2000) or in research with Black women (Nichter, 2000; Parker et al., 1995) than in research focussing on the general public in the U.S. or Britain (Grogan, 1999; Nichter, 2000). This may reflect differences between interests of individual researchers or differences between samples. There is reason to suspect a paradigm shift, and this might be worth exploring in relation to Canada's Vitality program.

Studies with younger girls suggest a positive association in various mother-daughter attributes and should be repeated with controls for body weight. There would be benefit to comparing the perceptions about weight of older teens and young women with their mothers to examine this relationship once girls' attitudes have matured. Testing mother-daughter similarities in immigrant families with greater contrasts between generations could also clarify the discussion. Studying male perceptions of weight (their own and their role in making weight important to women), older men and older women also have potential to deepen our understanding of cultural values pertaining to weight.

Stice (1998) has reported that girls who diet end up heavier, except for those who diet to extremes. Nichter (2000) has reported that girls who diet seriously have inadequate

nutrient intakes. There is a need for longitudinal studies to document what girls do when they say they diet, how this affects the nutritional adequacy of their diet and what happens to their weight. This data would help refine messages to girls about their weight.

In the meantime, let us teach Ophelia to swim, both literally and metaphorically. We can continue to encourage active living and healthy lifestyles while teaching girls to swim against the current, or more aptly, cross currents, for the North American culture presents contradictory messages about weight. Shakespeare said "To thine own self be true." The words of the Aboriginal elder were "You've got to follow your heart." Some of the mothers said they told their daughters, *"You're just perfect the way you are."* Girls need to know that striving for the thin ideal is far from ideal.

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APPENDICES

APPENDIX A-1

Descriptions of Questionnaires

Weight/Eating Related Scales

Body Mass Index (BMI) kilogram divided by metres squared.

Versions of the Eating Attitudes Test (EAT)

EAT-40 (Garner & Garfinkel, 1979)

-This 40-item, 6-point Likert scale (with responses from *never* to *always)* indicates the presence of disturbed eating patterns or eating pathology. Scores of over 30 indicate risk of an eating disorder (used by Marchessault, 1994; 28 questions selected by Hill et al., 1990).

EAT-26 (Garner, Olmstead, Bohr, & Garfinkel, 1982)

-This 26-item version of the EAT measures the extent of body weight concern and dieting behaviours. Scores of 20 or more indicative of eating disorder risk (used by Thelen & Cormier, 1995; Steiger et al, 1996).

-There are three subscales: the Diet subscale assesses *pathological* avoidance of fattening foods and preoccupation with thinness, with higher scores indicative of more problematic eating and pathology. The Bulimia and food preoccupation subscale has items related to thoughts about food and bulimic behaviours such as binging and vomiting. The Oral control subscale measures self-control of eating and perceived social pressure to gain weight. (Byely et al., 2000 used 7 items of the Diet subscale. Attie & Brooks-Gunn, 1989 used 3 items from each factor.)

ch(EAT) (Maloney, McGuire & Daniels, 1988 adapted EAT-26)

-The EAT-26 was simplified with third grade level language. It was also a 6-point scale (used by Thelen & Cormier, 1995).

Eating Disorder Inventory (Garner, Olmsted, & Polivy, 1983)

-This 64-item self-report, multiscale measure assesses psychological and behavioural traits common to anorexia nervosa and bulimia There are three subscales measuring attitudes and behaviours related to disordered eating: Drive for thinness, Bulimia, and Body dissatisfaction. Five subscales measuring psychological constructs thought to be related to psychopathology of eating disorders are: Ineffectiveness, Perfectionism, Interpersonal distrust, Lack of interoceptive awareness and Maturity fears (used by Pike & Rodin, 1991).

Scales to Measure Restrained Eating

Dutch Eating Behaviour Questionnaire (Van Strien, Frijters, Bergers & Defares, 1986)

-The Restrained eating section consists of a 33-item questionnaire that assesses dietary restraint, emotional eating, and external eating behaviour. Each scale has a range of means from 1 to 5, with higher scores indicating higher levels of restraint

(used by Hill & Franklin, 1998; Ogden & Steward, 2000; Steiger et al, 1996; Ogden & Elder, 1998; Ogden & Chanana, 1998).

Three Factor Eating Questionnaire (Stunkard & Messick, 1985)

-Three subscales assessing cognitive (dietary) restraint, emotionally based disinhibited eating and perceived hunger. The Dietary restraint subscale measures cognitive control of food intake and assesses the restriction of certain foods, energy intake or macronutrients (e.g., "*I count calories as a conscious means of controlling my weight.*") The Dietary disinhibition subscale measures overeating and the extent to which eating is triggered by emotional, social and environmental influences ("*Sometimes things just taste so good that I keep on eating even when I am no longer hungry.*" (used by Cutting et al. 1999; Stice et al. 1999; Birch & Fisher, 2000).

Restraint Scale (Herman & Polivy, 1975, 1980)

-This questionnaire measures chronic dieting and attitudes toward weight and eating, (1980 version used by Keel et al, 1997; (& slightly simplified) by Hill et al., 1990).

Modified for children (Davis, Best & Hawking, 1981 adapted Herman & Polivy's scale)

-30 questions were used to measure dieting concern and eating behaviours, 15 to give restraint score (with higher scores indicative of high eating restraint), and 15 for descriptive purposes (e.g. *How much do you weigh? How much would you like to weigh?* (used by Ruther & Richman, 1993).

Eating Patterns Questionnaire (Bennett, 1982)

-A retrospective account of the previous week's eating behaviour, with a focus on reasons for eating, situation variables and eating behaviours. It was developed to measure eating patterns during an obesity treatment program (used by Hill, et al., 1990).

Child-Feeding Questionnaire (Birch & Fisher, 2000)

-This self-report questionnaire measures perceptions of child's or parents' overweight, concerns about overweight and parents' child-feeding attitudes and practices. It consists of a 6-item Perceived child weight subscale, which queries perceptions of daughters' weight during different childhood stages with responses from 1 *(markedly underweight)* to 5 *markedly overweight*. The 3-item Concerns about child overweight subscale asks about future problems or necessity of dieting with responses from 1 *(unconcerned)* to 5 *(concerned)*. The 8-item Restriction subscale measures mothers' attempts to restrict access to types and/or amounts of foods. Responses are scored from 1 (*disagreee)* to 5 (*agree*); e.g. *I have to be sure that my child does not eat too many high-fat foods.* Monitoring subscale has 3 items measuring the mothers' monitoring of their daughters' consumption of energy-dense foods. Responses range from 1 (*never)* to 5 (*always);* e.g. *How much do you keep track of the snack food (potato chips, Doritos, cheese puffs) that your child eats?*

Restricted-Access Questionnaire (Birch & Fisher, 2000)

-This scale measures mothers' restriction of their daughters' access to 10 snack foods. Ten questions (e.g. limitations on the time of day the food is allowed; extent of upset if the daughter gets the food without asking) are asked about each item.

Self-Esteem/Body Image Questionnaires

Silhouettes - (Stunkard, Sorenson & Schuisinger, 1980, 1983)

-9 line drawings of male or female figure are presented in order, from extremely thin to obese. Participants are usually asked what they currently look like, and what they would like to look like, with the differential used to calculate body dissatisfaction or the desire to be thinner (used by Thelen & Cormier, 1995; 7 figures used by Hill & Franklin, 1998).

-Set of 12 female body silhouettes randomly presented from emaciated to very obese (used by Ogden & Elder, 1998; Ogden & Chanana, 1998).

Self-Image Questionnaire for Young Adolescents (Petersen, Schulenberg, Abramowitz, Offer & Jaracho, 1984)

-Body image subscale is a 6-point Likert scale, with higher scores indicative of more positive body image (used by Attie & Brooks-Gunn, 1989; Byely et al, 2000 used a shortened 9-item version).

-Family Relations subscale is 6-point Likert-type scale from 1 *describes me not at all*, to 6, *describes me very well*, with higher scores indicative of warmer and less conflicted family relations (used by Attie & Brooks-Gunn, 1989; Byely et al, 2000).

-Pubertal status, Personality subscales (used by Attie & Brooks-Gunn, 1989).

Body Dissatisfaction Scale (Garner, Olmsted & Polivy, 1983)

-This 9-item scale measures attitudes toward body parts; concerns with eating, weight and body image (used by Steiger et al, 1996).

Body Shape Questionnaire (Cooper, Taylor, Cooper & Fairburn, 1987)

-Higher scores on this 10-item scale indicate greater dissatisfaction (used by Ogden & Steward, 2000; shorter version used by Ogden & Elder, 1998; Ogden & Chanana, 1998).

Piers-Harris Children's Self-Concept Scale (Piers, 1969)

-This 80-item yes-no questionnaire measures self-esteem with a focus on physical self-esteem. Higher scores indicate higher self esteem (used by Ruther & Richman, 1993).

General Self-esteem

-This was a list of 10 positive and 10 negative adjectives taken from self-concept scales (used by Ruther & Richman, 1993).

Locus of Control (Stanford Preschool Internal-External Scale (Mischel, Zeiss & Zeiss, 1974)

-This scale presents 14 scenarios with two responses. Higher and lower scores indicate more internal or external locus of control (used by Ruther & Richman, 1993).

Body Esteem Scale (Mendelson & White, 1982, 1993)

-This is a 24-item questionnaire of yes-no responses (1982 version used by Hill & Franklin, 1998). Smolak et al, 1999, used six questions from the 1993 version focussed directly on weight and shape concerns e.g. *My weight makes me unhappy*. Scores ranged from 6 to 12 with higher scores indicative of more positive body esteem.

State Self-esteem Scale (Heatherton & Polivy, 1991)

-This is a 20-item questionnaire with three subscales: Performance self-esteem (7 items), Social self-esteem (7 items) and Appearance self-esteem (6 items). The combined subscales give a total self-esteem score (used by Hill & Franklin, 1998).

Family Environment Scale (Moos & Moos, 1987)

-This is a 90-item questionnaire with 10 subscales, measuring socio-environmental aspects of family life, including Relationship dimension (Cohesion, Expressiveness, and Conflict subscales); Personal growth (Independence, Achievement orientation, Intellectual-cultural orientation, Active-recreational orientation and Moral-religious emphasis subscales). System maintenance dimension (Organization and Control subscales) The "Real Form" measures people's current perceptions of conjugal or nuclear family life (used by Hill & Franklin, 1998; Attie & Brooks-Gunn, 1989).

Other measures:

Acculturation Rating Scale, Rating Scale of Child's Actual Behavior, Texas Social Behavior Inventory, Self-Perception Profile for Children (used by Hall et al., 1991).

Dramatic-erratic Traits: Affective Instability Stimulus Seeking, Rejection, Narcissism and Anxiousness. Obsessive-Compulsive traits: Restricted Expression, Anxiousness (used by Steiger et al, 1996).

Center for Epidemiological Studies Depression Scale (used by Attie & Brooks-Gunn, 1989).

Family Adaptability and cohesion Evaluation Scale III (used by Pike & Rodin, 1991).

APPENDIX A-2

Studies of Mother (M) and Daughter (D) Associations in Weight-Related Attitudes and Self-Reported Behaviours[a]

Author, year	Sample	Measures used	Findings
Aged 5 years and under			
Abramovitz, et al., 1998 [abstract]	197 pairs Mean age 5.4 yrs	M + D: Weight concerns scale; self esteem measure. M: weight loss behaviours. D: "What is a diet?"	-Mothers' and daughters' weight concerns were significantly correlated (r =16; p <.02). -Mothers using unhealthy weight control behaviours (62%) had daughters who were almost twice as likely to understand the concept of a diet.
Cutting, et al., 1999	75 pairs + fathers (35 girls; 40 boys) Mean age = 5.0 years (3 to 6) -Mostly white -Recruited from a university day care.	M + F: Body mass index (BMI), dietary restraint, and dietary disinhibition (Eating Disorder Inventory). C: weight-for-height; kilojoules of palatable snacks eaten in the absence of hunger.	-No relationship between mothers' dietary restraint and daughters' eating & weight outcomes. -Three of 24 parent-child variables were significant: Heavier mothers had heavier daughters; maternal disinhibition was associated with both daughters' overweight & free access intake. -Mothers' disinhibition predicted daughters' overweight independently of daughters' free access intakes. (No significant associations for father-daughter or either parent-son)
Stice, et al., 1999	216 pairs (100 girls, 116 boys) -Longitudinal design. 0 to 5 yrs -Most Caucasian - Median college education	M: BMI; Three Factor Eating Questionnaire; Eating Disorder Inventory; report of child's inhibited eating, secretive eating, overeating and vomiting. Infant: BMI; sucking duration.	-Infant BMI, sucking duration, maternal characteristics (body dissatisfaction, internalization of the thin-ideal, dieting, bulimic symptoms) and maternal and paternal body mass prospectively predicted the emergence of disturbed eating. -Disturbed eating increased annually.
Birch, & Fisher, 2000	156 pairs Mean age 5.4 years (4.6 - 6.4) -Recruited by advertisements -White, non-Hispanic -Well-educated	M: BMI, Restraint Subscale of Three Factor Eating Questionnaire; Child-Feeding Questionnaire; Restricted Access Questionnaire; Daughter's energy from 24-hour recalls. D: weight-for-height, energy compensation following pre-load drink; kilojoules of snacks eaten.	-Maternal BMI associated with daughters' relative weight. -As daughters' relative weight increased, mothers' perceptions and concern about daughters' weight increased. -Higher maternal restraint was associated with maternal restriction of daughters' food intake. -Maternal restriction predicted less self regulation of energy intake, less adjustment for energy level of pre-load, and higher free access snack intake in absence of hunger in daughters. -Daughters' short-term energy intake was associated with 24-hour energy intake.

Elementary School-Aged			
Hill, et al., 1990	20 pairs (10 high & 10 low- scoring girls selected from 52 respondents to Restraint Scale.) Mean age 10.1 y., (9 - 11), Inner-city, Leeds, U.K.	M + D: Restraint Scale; Eating Attitudes Test; Eating Patterns Questionnaire.	-Mothers of high-scoring girls scored higher on Restraint scale, but not on the EAT. -Mothers' and daughters' Restraint scores were significantly associated ($r = .68$). EAT scores were not ($r = .35$). -(Highly restrained respondents more likely to attribute eating to negative mood states.) -Did not control for body weight.
Hall, et al., 1991	37 pairs (19 mothers from weight loss group; 18 from church). Aged 7-12 years (Mean 8.9 & 9.2) -Mexican-Americans -Response = 84%	M + D: BMI; Figure drawings of girls (Ds perceived and ideal size, attractiveness. M: Acculturation Rating Scale; Rating Scale of Child's Actual Behavior; Texas Social Behavior Inventory. D: Self-Perception Profile for Children.	-The daughters' global self-worth was related to mothers' size, daughters' age and size, but not to mothers' self-concept. Only daughters' age was related to physical appearance esteem. -Daughters perceived themselves as larger than mothers perceived them, daughters selected thinner figures for their ideal than mothers selected; daughters selected thinner ideals than perceived, but mothers' (group) rankings of their daughters' ideal and actual sizes were congruent. -(There were no differences between the groups of mothers in perceived and ideal size of daughters or attractiveness ratings of obese and thin figures.)
Ruther & Richman, 1993	44 pairs (26 girls; 18 boys) 4th grade -High SES	M + D: Restraint scale C: Understand dieting; desire to change weight; self-esteem; locus of control.	-Mothers' restraint was associated with daughters' restraint ($r = .35$); but not sons' ($r = .09$). -No control for body weight.
Thelen & Cormier, 1995	70 pairs + fathers (35 girls; 35 boys) 4th grade; age 9-10.5 years -Most Caucasian -Response rate: 358 families contacted.	M + D: BMI; desire to be thinner(DTBT) using silhouettes; self-reported diet frequency; EAT-26 or ch(EAT); M + F: Concern with child's weight. C: Perception of parents' concern.	-No significant association between DTBT and weight control measures of parents and children. -Daughters' body weight, DTBT, and dieting were correlated with both parents' encouragement to control weight. When BMI was controlled, only dieting and fathers' encouragement significant. -25% of mothers and 24% of fathers said they never encouraged weight loss in their daughters; 43% & 46% of girls reported their mother and father never encouraged weight loss. Girls' dieting correlated more with parental reports.
Smolak, et al., 1999	148 families (131 mothers, 89 fathers; 72 couples). 4th & 5th grade -White, working to middle class -Rural -Response rate - 552 families contacted.	M + F: Questions about frequency of dieting; importance of weight; weight complaints; belief in efficacy of calorie restriction; frequency of comments to child about child's weight. C: Body Esteem Scale; weight concerns; frequency of weight loss attempts.	-Child more concerned about weight loss when both parents commented on weight than just one. -Mothers' (but not fathers') comments about daughters' weight were significantly correlated with weight loss attempts, Body Esteem scores, and concern about gaining weight. -Mothers' concern about their own weight and the importance of weight to the father were related to daughters' concern about gaining weight. -Comments from parents, especially mothers, seemed more influential than parental modelling. Parental modelling was associated with children's beliefs and behaviours, especially girls. Weight was not controlled.

Middle School-Aged			
Hill & Franklin, 1998	40 pairs (used Restraint Scale to select 20 girls with highest scores; 20 with scores between 50th and 25th percentile of 106 respondents). Mean age 11.75 years -Most Caucasian -Lower middle class -Urban, U.K. -Response 35/38.	M + D: BMI; Dietary Restraint Scale (Dutch Eating Behaviour Questionnaire); body shape preferences using silhouettes; Body esteem; State Self-esteem Scale; Dieting history and self-perception; Family Environment Scale.	-There were no significant differences between mothers in Restraint scores, having dieted; age of first diet, maximum weight lost by dieting, or current BMI. -Both groups of mothers saw themselves as slightly overweight, selected thinner preferred than current shapes and did not differ on self-esteem. -Both groups viewed their daughters' current weight as "just right" and slightly more attractive than other same-age girls. Mothers of high Restraint girls rated them less attractive. -Mothers of high Restraint girls had slightly greater past weight range and were more likely to snack; 20% had fasted vs 5% of other mothers. -high Restraint girls were heavier, scored lower on total self-esteem; 10% skipped breakfast; 15% had fasted for a whole day; (vs 0 of low-Restraint girls) and were twice as likely to have a brother. -Notes that differences in family functioning (lower cohesion, moral-religious emphasis & organization) occur in families with weight preoccupied girls without eating disorders. -Did not control for body weight.
Byely et al., 2000	77 pairs at Time 1 55 pairs at Time 2 -Mean age = 12.2 y, grade 6-7 at Time1 -White, urban, middle-to upper-middle class, well educated families. -Longitudinal design.	-Body image (M & D), Family Relations (D only) subscales of the Self-Image Questionnaire for Young Adolescents; Diet subscale of Eating Attitudes Test; Ds' & Ms' assessment of girls' relative weight; dieting history and encouragement (D only); BMI.	-Mothers' dieting and body image did not predict girls' dieting or body image either concurrently or one year later. -Girls' perceptions of family relations and mothers' perceptions of daughters' weight at Time 1 predicted dieting at Time 2. -Girls' body image and dieting at Time 1 predicted more body dissatisfaction at Time 2. -Controlled for BMI and age.
Marchessault 1993	20 pairs Aged 13-14 years, 8th grade -Primarily lower income -Ethnically diverse -Urban, Canada -Response 80%.	M + D: BMI; EAT-40; frequency of dieting; weight satisfaction; Qualitative interview.	There was no evidence of significant difference between mothers' and daughters' EAT scores (Mean and standard deviation for mothers = 16.05 ± 10.3; for daughters = 16.55 ± 14.3). -There was no association between their scores (r = .2, N.S.). There was extensive variability within each generation and within pairs in test scores and in open-ended responses to interviews. -Did not control for body weight.

High School Aged			
Attie & Brooks-Gunn, 1989	193 pairs Mean age = 13.9 & 16.1 yrs at Time 1 and 2, 7th to 10th grade (initially) -White -Middle-class -Response = 85% at Time 1; 23% dropped out at Time 2.	M + D: EAT-26; Body Image Scale from Self-Image Questionnaire for Young Adolescents (SIQYA); Center for Epidemiological Studies Depression Scale; Family Environment Scale. D: Height & weight; pubertal status; personality and family relationship scales from SIQYA; Youth Behaviour Profile; Eating Disorders Inventory -Longitudinaldesign.	-Mothers' body image and degree of compulsive eating did not contribute significantly to prediction of compulsive eating among daughters. Mothers' EAT-26 scores approached significance ($p < .1$). -Body image at time 1 was the strongest predictor of eating problems at time 2. -Stressed physique in early adolescence; early adolescent attitudes and family functioning in older adolescence. -Time 1: Physical maturity explained 10% of variance in EAT scores; negative body image 18%; psychopathology 8%. -Time 2; body image explained 15% of variance; depression and ineffectiveness also contributed to eating problems. Pubertal status was no longer significant. (Mothers' perceptions (not daughters') of family relationships were associated with eating problems.)
Keel et al., 1997	51 pairs + fathers Mean age 14.8 years (12-18) -Caucasian -Middle-class -Suburban -Response = 26%	ALL: Restraint Scale; questions about disordered eating behaviours; weight perception and satisfaction; diet frequency and stringency; BMI.	-There was no significant association between Restraint scores, or frequency and stringency of dieting of daughter and either parent. -Parental comments about daughters' weight, mothers' describing them as overweight and the fathers' own weight dissatisfaction were associated with outcomes: mother variables with daughters' Restraint score, father variables with daughters' weight dissatisfaction. -Daughters' self-reported BMI was not associated with their own (or parental) rating of her weight, however daughters' self-perception of their weight status was related to parental ratings of her weight, suggesting common family standards. -Daughters' self-reported BMI was not associated with their weight satisfaction or Restraint score.
Pike & Rodin, 1991	77 pairs (used Eating Disorders Inventory to divide 350 girls into disordered eating girls (> 75th percentile) and controls (10 - 35th percentile). -Mean age =16 yrs -Grade 9 to 12 -White -Middle-class -Urban, suburban -Response = 57%	-M: BMI; Eating Disorders Inventory; Questions about weight & ideal weight, dieting history; ratings of attractiveness; Family Adaptability and Cohesion Evaluation Scale III	-Mothers of daughters with disordered eating had dieted at earlier age (21.3 vs. 27.4); scored higher on the Eating Disorders Inventory (17.8 vs. 12.1); were more critical of their daughters than of themselves; wanted their daughters to be thinner (12.1 lb vs. -0.1 lb., controlled for daughters' weight); rated their daughters as less attractive than daughters rated themselves (rated themselves as comparable to other women their own age). -There were no significant differences between groups in BMI; prevalence of dieting (90% vs. 79%); largest amount of weight ever lost by dieting, and desired amount of weight loss. -Girls with disordered eating were heavier than those without (BMI = 22.9 vs 20.7). (-Mothers' dissatisfaction with family cohesion was related to daughters' disordered eating.)

Ogden & Steward, 2000	30 pairs Mean age 17.1 years (16-19) -Majority white & upper class, U.K. -Response = 52%.	-Restrained eating section of Dutch Eating Behaviour Questionnaire; Body Shape Questionnaire; M-D Relationship questions; BMI.	-There was no significant association between mothers' and daughters' restrained eating (r = -.01) and body dissatisfaction (r = -.21), despite significant correlations for BMI (r = .58). (-Daughters' restrained eating and body dissatisfaction was associated with aspects of the mother-daughter relationship (autonomy and projection.)
University students			
Ogden & Elder, 1998	50 pairs (25 Asian; 25 White) Mean age 20 years (18-26) -Daughters in medical school, U.K.	-Silhouettes; Body ShapeQuestionnaire; Calorie concern; Restrained eating section of Dutch Eating Behaviour Questionnaire; acculturation; BMI.	-There was no matching between mothers and daughters on body image or eating behaviour. -Mothers reported greater body dissatisfaction, larger current and "ideal" body shapes. -White daughters were the most dissatisfied with their bodies; White mothers were most satisfied with their bodies.
Ogden & Chanana, 1998	40 pairs + father & a sibling (20 Asian; 20 White) Mean age 20.5 y -Daughters in 3rd year of medical school, U.K.	-Body Shape Questionnaire; silhouettes; Restrained eating section of Dutch Eating Behaviour Questionnaire; questions on values; BMI.	-Daughters' restrained eating score was related to mothers' higher valuation of physical appearance and siblings' lower valuation of competitiveness and non-traditional roles for women. -Daughters' body dissatisfaction was related to higher ratings of materialism, fathers' preference for thinner female bodies, siblings' lower rating of non-traditional role for women, lower concordance within the family concerning the value of competitiveness and higher educational level of the 'head of the family.'
Steiger et al., 1996	-24 "Restrictor eating disordered" (+ 21 M, 15 F, and 17 sisters) -64 "Binge eating disordered" (+ 51 M, 35 F, 31 S) -42 "Psychiatric controls" (+ 33 M, 22 F 19 Sisters) -59 "Normal controls" (+ 53 M, 32 F, 35 sisters) -Mean Age = 27.8; 25.6; 29.1; 24.6, respectively. -Volunteers.	11 self-report scales to create three factors: 1) Eating concerns and symptoms (ECS (included scores for Restraint, Emotional Eating, EAT-26 and Body Dissatisfaction scales) 2) Dramatic-erratic Traits (DET: Affective Instability, Stimulus Seeking, Rejection, Narcissism, and Anxiousness) and 3) Obsessive-compulsive traits (OCT: Restricted Expression and Anxiousness). BMI.	-Mean BMI of restrictors, bingers, psychiatric controls and Normal-controls was 17.7; 21.2; 22.3; 25.8, respectively. Weight was not controlled for, but BMI ≥ 29 was exclusion criterion. -There were significant associations between mothers and both daughters' eating concerns (r = .48 and .39 for normal controls and their sisters; r = .22 and .17 for total sample and sisters). -Correlations were not significant for fathers (r = .03 and .22 for normal controls and their sisters; r = -.04 and .07 for total sample and sisters). -found relationships between parents' DET and Daughters' ECS and negative association between parents' OCT and daughters' ECS. -found traits characteristic of eating disorder sufferers were familial, but did not distinguish relatives. Investigators suggest that traits are familial but insufficient on their own to cause eating disorders.

[a]Questionnaires are described in Appendix A-1

APPENDIX B

Interview Protocol and Questions

RECORD OF INTERVIEW

Code: Mother-_____
Daughter-_____

1. Date of Interview: Month/Day/Year_____

Start_____ End_____ Length ____hours ____minutes

2. Physical Setting:_____

_____

General Directions to researcher:

Name on consent forms only. Code all forms immediately.

1. Information about the Study -- leave with Participant
2. Consent Form -- leave copy with Participant
3. Background Information -- mothers only
4. Oral Interview -- tape-record
5. Consensus Questions
6. Body Shape Drawings
7. Eating Attitudes Test
8. Restraint Scale
9. Consent form for Daughters -- mothers only; leave copy
10. Field notes

BACKGROUND INFORMATION QUESTIONNAIRE Mother-___
TO BE GIVEN ORALLY TO MOTHERS ONLY

1. Where were you born?
2. How long have you lived in this neighbourhood (community)? 1 SINCE BIRTH; 2 SINCE CHILDHOOD; 3 SINCE ADOLESCENCE; 4 SINCE ADULTHOOD
3. If not a long-time resident, when did you move here? Where did you live before you moved here?
4. What is your present marital status? (Circle number.) 1 NEVER MARRIED; 2 COMMON LAW; 3 MARRIED; 4 DIVORCED; 5 SEPARATED; 6 WIDOWED
5. How many children do you have? 6. What is the age of each child?
7. How old are you?
8. Who lives in your home?
9. How much formal education do you have? (Circle number.) 1 NO FORMAL EDUCATION; 2 LESS THAN GRADE SEVEN; 3 GRADE 7-9; 4 GRADE 10-12; 5 COMPLETED HIGH SCHOOL; 6 SOME COLLEGE OR UNIVERSITY; 7 COMPLETED COLLEGE OR UNDERGRADUATE DEGREE; 8 SOME GRADUATE WORK; 9 COMPLETED GRADUATE WORK Level:
10. How much formal education does your spouse/partner have? (Use above codes)
11. Do you speak any language other than English? 1 YES; 2 NO
12. If yes, what other language(s) do you speak?
13. How would you describe your ethnic background (nationality; ancestry)?
14. Is your ethnic background important to you in your everyday life? 1 YES; 2 NO
15. What is your spouse/partner's primary ethnicity or national ancestry?
16. How would you describe your daughter's ethnicity?
17. Where were your parents born? (What is their ethnicity?) Mother; Father
18. What was your father's occupation when you were growing up (around age 16)?
19. Father's education? (Use above codes)
20. What was your mother's occupation when you were growing up (around age 16)?
21. Mother's education? (use codes above.)
22. What religion were you raised in? 23. What is your present religion?
24. Are you presently? (Circle number.)1 WORKING FULL TIME; 2 WORKING PART TIME; 3 UNEMPLOYED; 4 RETIRED; 5 FULL-TIME HOMEMAKER; 6 STUDENT
25. What jobs have you had since you finished school or left your parents' house? (Include homemaking and returning to school.) Currently? Before that? Before that?
26. Is your spouse/partner presently working? (Include former spouse.) (Use codes above.)
27. What is your spouse/partner's occupation? 28. Has he had other jobs in the past?
29. What is your annual household income? 1 LESS THAN $5,000; 2 $5,000 - $9,999; 3 $10,000 - $14,999; 4 $15,000 - $19,999; 5 $20,000 - $24,999 6 $25,000 - $29,999; 7 $30,000 - $34,999; 8 $35,000 - $39,999; 9 $40,000 - $44,999; 10 $50,000 - $54,999; 11 $55,000 - $59,999; 12 $60,000 - $64,999; 13 $65,000 - $69,999; 14 $70,000 - $74,999; 15 $75,000 OR MORE
30. What is/are the source(s) of income for your household?

31. Do you rent or own your home? 1 RENT; 2 OWN

33. How well do you think your income (including that of your spouse, if appropriate) satisfies your needs? 1 VERY WELL; 2 ADEQUATELY; 3 WITH SOME DIFFICULTY; 4 NOT VERY WELL; 5 INADEQUATE

INTERVIEW GUIDE FOR MOTHERS

I am going to ask a few questions just to help me get to know you before we start the interview.
1. How would you describe yourself to someone you are just meeting?
2. Imagine you could instantly change anything you wanted about yourself. What would you change? Anything else? Which is most important to you?
3. What are a couple of things about yourself that make you feel good? Probes: What kinds of things do other people say about you? Think about one of your friends. Why do you like her?
4. Do you think women have different concerns in their lives than men?
Probe: What sorts of things do women worry about?
5. What is your idea of the ideal woman?
6. What is your idea of the ideal man?
7. Do you think girls have different concerns than women?
8. Do you think weight is a problem for women? If so, in what way? Why do you think that? Probe: What would that (being overweight/underweight) mean to you?
9. Do you think weight is more of an issue for women than for men?
10. If yes, why do you think women are more concerned? Probes: What do you think influences the way women feel about their weight? Is there anything you see as affecting the way you feel about your own weight? Is there anything that's different for men?
11. Do you think weight is more of an issue for women or for girls?
12. What does the word "diet" mean to you?
13. Are happy with the way you look? Would you say you are: 1) very happy; 2) somewhat happy; 3) neither happy nor unhappy; 4) somewhat unhappy; 5) very unhappy?
14. It would be helpful to know your weight history. Thinking now of your whole life, have you done anything to try to change your weight? If yes, what did you try and how did it work? What was your age when you tried this? Were there any other times you tried to change your weight? (Repeat as necessary.)
15. Why do you think some people gain more weight than they would like? Probe: What do you think causes overweight? Is there anything here that's different for men and women?
16. Why do you think some people have trouble losing weight?
17. How do you think being overweight might affect a woman's life?
18. How are overweight people treated? Probe: Are overweight women and men treated differently?
19. Are you ever afraid of getting fat? Why or Why not?

20. Sometimes women who aren't heavy will say things like "I'm fat." Do you see women doing this? Why do you think they say this?
21. Why do you think some people are underweight? Probe: What do you think causes people to be underweight? Is there anything here that's different for men and women?
22. How would being underweight affect a woman's life?
23. How are underweight people treated? Probe: Are underweight women and men treated differently?
24. Are you ever afraid of getting too thin? Why/why not?
25. Do you ever talk to your daughter about weight? What do you talk about?
26. Do you ever give her advice? If yes, what is the advice?
27. Does she give you advice? If yes, what is the advice?
28. Does having a teenage daughter affect the way you feel about weight?
29. Do you think the way you feel about your weight affects the way she feels about her weight?
30. How do you think women should deal with their weight? Probe: Do you think that feminism has affected the way women deal with their weight?
31. Who do you think people should talk to if they're having problems with their weight?
32. In general, compared to other persons your age, would you say your health is:
1) Excellent? 2) Very good? 3) Good? 4) Fair? 5) Poor?
Why do you rate your health that way? How do you know your health is ... ?
33. Do you think weight has anything to do with health? Why or why not?
34. Do you think being fat is a disease? Why or why not?
35. Do you think being too thin is a disease? Why/why not?
36. Is weight something that people can control? Under what circumstances do they have control? No control?
37. Do you ever talk about weight with your friends? Probe: What do you talk about?

LAST QUESTION OF INTERVIEW:

What is your overall impression of the things we have been talking about today? Is there anything that you would like to add?

INTERVIEW GUIDE FOR DAUGHTERS

I am going to ask a few questions just to help me get to know you before we start the interview.

A. Where were you born?

B. Do you speak any language other than English?

C. If yes, what other language(s) do you speak?

D. How would you describe your ethnicity?

E. Is your ethnic background important to you in your everyday life?

1. Tell me a little about yourself. How would you describe yourself to someone you are just meeting? What kinds of things do you like doing? Family; School; Friends; Hobbies; Goals in life.

2. Imagine you could instantly change anything you wanted about yourself. What would you change? Anything else? Which is most important to you?

3. What are a couple of things about yourself that make you feel good? Probes: What kinds of things do other people say about you? Think about one of your friends. Why do you like her?

4. Do you think girls have different concerns in their lives than boys? Probe: What sorts of things do girls worry about?

6. What is your idea of the ideal boy?

7. Do you think girls have different concerns than women?

5B. What is your idea of the ideal girl?

5A. What is your idea of the ideal woman?

8. Do you think weight is a problem for girls? Probe: If so, in what way? Why do you think that? What would that (being overweight/underweight) mean to you?

9. Do you think weight is more of an issue for girls than for boys?

10. If yes, why do you think girls are more concerned? Probes: What do you think influences the way girls feel about their weight? Is there anything you see as affecting the way you feel about your own weight? Is there anything that's different for boys?

11. Do you think weight is more of an issue for girls than for women?

12. What does the word "diet" mean to you?

13. Are happy with the way you look? Would you say you are: 1) very happy, 2) somewhat happy, 3) neither happy nor unhappy 4) somewhat unhappy or 5) very unhappy?

14. It would be helpful to know your weight history. Thinking now of your whole life, have you done anything to try to change your weight? If yes, what did you try and how did it work? How old were you when you tried this? Were there any other times you tried to change your weight? (Repeat as necessary.)

15. Why do you think some people gain more weight than they would like?

16. Why do you think some people have trouble losing weight?

17. How do you think being overweight might affect a girl's life?

18. How are overweight people treated? Probe: Are overweight girls and boys treated differently?

19. Are you ever afraid of getting fat? Why or Why not?

20. Sometimes girls who aren't heavy will say things like "I'm fat." Do you see girls doing this? Why do you think they say this?
21. Why do you think some people are underweight?
22. How would being underweight affect a girl's life?
23. How are underweight people treated? Probe: Are underweight girls and boys treated differently?
24. Are you ever afraid of getting too thin? Why/why not?
25. Do you ever talk to your parents about weight? If yes, who? What do you talk about?
26. Do they give you advice? If yes, what is the advice?
27. Do you ever give them advice? If yes, what is the advice?
30. How do you think girls should deal with their weight? Probe: Do you think that feminism has affected the way girls deal with their weight?
31. Who do you think girls should talk to if they're having problems with their weight?
32. In general, compared to other persons your age, would you say your health is:
1) Excellent? 2) Very good? 3) Good? 4) Fair? 5) Poor?
Why do you rate your health that way? How do you know your health is ... ?
33. Do you think weight has anything to do with health? Why or why not?
34. Do you think being fat is a disease? Why or why not?
35. Do you think being too thin is a disease? Why/why not?
36. Is weight something that people can control? Under what circumstances do they have control? No control?
37. Do you ever talk about weight with your friends? Probe: What do you talk about?

LAST QUESTION OF INTERVIEW:

What is your overall impression of the things we have been talking about today? Is there anything that you would like to add?

CONSENSUS QUESTIONS

A1. I have been asking the girls and women I've been interviewing why they think weight is important. Here are some reasons they have given me. Please pick out all the reasons that you agree with.

1. GUYS WANT THIN GIRLFRIENDS

2. SO YOU CAN WEAR NICE CLOTHING

3. SO YOU DON'T GET TEASED

4. TO GET A JOB MORE EASILY

5. BECAUSE OF HOW YOUR FAMILY TREATS YOU

6. FOR YOUR HEALTH

7. TO MAKE FRIENDS MORE EASILY

8. TO BE ATTRACTIVE

9. BECAUSE OF WHAT OTHER PEOPLE THINK

10. SO YOU CAN FEEL GOOD ABOUT YOURSELF

11. TO HAVE MORE ENERGY TO DO THINGS

12. BECAUSE OF THE MEDIA. ALL THE MODELS ON TV AND IN MAGAZINES ARE THIN

13. BECAUSE OF RELIGION

A2. These are the statements that you agreed were reasons why weight is important to girls and women. Please choose the three most important reasons that girls are concerned about their weight Which is the most, second most and third most important?

B1. Here are some reasons people have given for why some people gain more weight than they would like. Please read each statement and pick out the ones you agree with.

1. People gain weight because they have poor willpower. If they put their mind to it they'd be able to control their weight.

2. People gain weight because they are unhappy or bored or worried. Sometimes people eat to make themselves feel better.

3. People gain weight because they eat a lot.

4. People gain weight because they don't do much exercise.

5. People gain weight because they eat fattening foods (such as sweets, chips, coke, fast foods, greasy foods, junk food, beer and so on).

6. People gain weight because they don't know how to balance their food. For example, they might eat too much meat and not enough vegetables.

7. Women gain weight easier after having a baby. It changes your body.

8. Women gain weight because having a baby changes your life. You're home with kids preparing food and there's no time to exercise.

9. Women gain weight because their bodies are designed to make fat. Men's bodies are designed to make muscle.

10. People gain weight because it's natural to gain weight as you reach middle-age.

11. Girls gain weight because it's natural to gain some fat as you reach your teens.

12. People gain weight because they tend to eat the way their parents ate. So if your parents are fat or thin, it is likely that you will be too.

13. People gain weight because they inherit a tendency to be fat or thin. People take after their parents.

14. People gain weight because of being poor.

15. People gain weight because of dieting.

16. People gain weight because of toxins, chemicals and hormones. It confuses the body and affects its size and shape.

B2. These are the statements that you agreed were reasons why people gain more weight than they would like. Please choose the three reasons that you think are most important. Which is the most, second most and third most important?

C1. Please say if you agree or disagree to each of the following statements. They are all based on statements that people have made in previous interviews:

1. Teasing a friend is a good way to get her to realize she needs to lose weight.
2. Weight is not so important. People shouldn't spend so much time thinking about it.
3. People should refuse to buy a product that uses extremely thin models in its advertising.
4. If people felt good about themselves, they would take the time and energy needed to lose weight.
5. It is wrong to judge another person on the basis of their weight.
6. Girls pay more attention to what their friends say than what their mothers say about how they look.
7. Some people are meant to be big and it would not be healthy to try to change their weight.
8. Models are thinner than they should be, but they look great so it's okay.
9. People should not weigh themselves.
10. If you had the money, it would be worth spending it on plastic surgery or liposuction to improve your appearance.
11. If a cute guy tells a girl she's too fat, and if she likes him she should try to lose weight.
12. Dieting is unhealthy.
13. If people felt good about themselves, they would accept their body as it is, whatever their size and shape.
14. A girl or woman should worry about her weight because more people will like her, she will have an easier time attracting a boyfriend, and it will help her to get a job. All other things being equal, she will do better in life if she is slim.
15. Women ought to be more concerned about being fit than about their weight.
16. Mothers should tell their daughters not to worry about their weight no matter what they weigh.
17. In general, people are not born fat; they let themselves get fat.
18. A heavy woman should not wear a bathing suit or do things that show too much body.
19. Women should always watch what they eat because it's easier to stay thin than to lose weight.
20. Mothers should help their daughters lose weight if they need to lose.
21. If a woman is very concerned about her own weight, then it's likely that her daughter will be too.
22. A fat woman can be beautiful.
23. The media should show women of different shapes and sizes.
24. There should be a special tax on junk food and the money should be spent to build bike paths and swimming pools and to teach people about healthy living.

RESTRAINT SCALE Mother ___ Daughter ___

Please circle your answer to each question.

1. How often are you dieting?

   Never Rarely Sometimes Usually Always

2. What is the maximum amount of weight (in pounds) you have ever lost within one month?

   0-4 5-9 10-14 15-19 20+

3. What is your maximum weight gain within a week?

   0-1 1.1-2 2.1-3 3.1-5 5.1+

4. In a typical week, how much does your weight fluctuate?

   0-1 1.1-2 2.1-3 3.1-5 5.1+

5. Would a weight fluctuation of 5 pounds affect the way you live your life?

   Not at all Slightly Moderately Very Much

6. Do you eat sensibly in front of others and splurge alone?

   Never Rarely Often Always

7. Do you have feelings of guilt after overeating?

   Never Rarely Often Always

8. How conscious are you of what you're eating?

   Not at all Slightly Moderately Extremely

9. How many pounds over your desired weight were you at your maximum weight?

   0-1 1-5 6-10 11-20 21+

10. How often do you have regular menstrual periods?

    Never Rarely Sometimes Usually Always

Reprinted, with permission, from Herman, C. P., & Polivy, J. (1980). Restrained eating. In A. Stunkard (Ed.), *Obesity* (pp. 208-225). Philadelphia: W. B. Saunders.

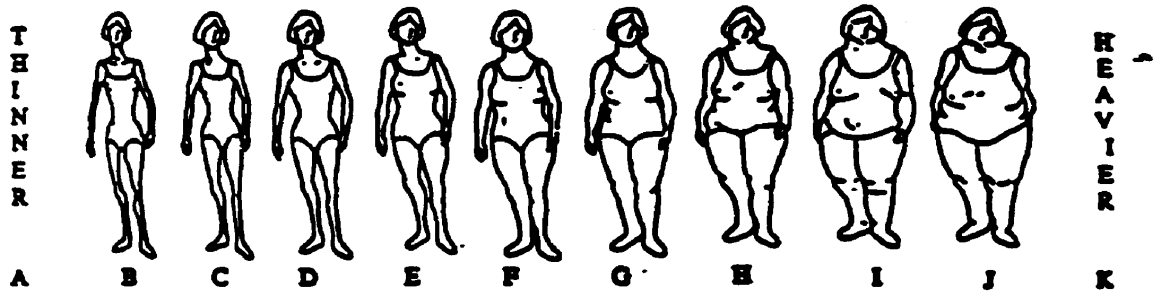
EAT-26 Mother___ Daughter___

Please place an (X) under the column which applies best to each of the numbered statements.

	Always	Very often	Often	Sometimes	Rarely	Never
1. I am terrified about being overweight.	( )	( )	( )	( )	( )	( )
2. I avoid eating when I am hungry.	( )	( )	( )	( )	( )	( )
3. I find myself preoccupied with food.	( )	( )	( )	( )	( )	( )
4. I have gone on eating binges where I feel that I may not be able to stop.	( )	( )	( )	( )	( )	( )
5. I cut my food into small pieces.	( )	( )	( )	( )	( )	( )
6. I am aware of the calorie content of food that I eat.	( )	( )	( )	( )	( )	( )
7. I particularly avoid foods with a high carbohydrate content (bread, potatoes, rice, ...).	( )	( )	( )	( )	( )	( )
8. I feel that others would prefer if I ate more.	( )	( )	( )	( )	( )	( )
9. I vomit after I have eaten.	( )	( )	( )	( )	( )	( )
10. I feel extremely guilty after eating.	( )	( )	( )	( )	( )	( )
11. I am preoccupied with a desire to be thinner.	( )	( )	( )	( )	( )	( )
12. I think about burning up calories when I exercise.	( )	( )	( )	( )	( )	( )
13. Other people think that I am too thin.	( )	( )	( )	( )	( )	( )
14. I am preoccupied with the thought of having fat on my body.	( )	( )	( )	( )	( )	( )
15. I take longer than others to eat my meals.	( )	( )	( )	( )	( )	( )
16. I avoid foods with sugar in them.	( )	( )	( )	( )	( )	( )
17. I eat diet foods.	( )	( )	( )	( )	( )	( )
18. I feel that food controls my life.	( )	( )	( )	( )	( )	( )
19. I display self control around food.	( )	( )	( )	( )	( )	( )
20. I feel that others pressure me to eat.	( )	( )	( )	( )	( )	( )
21. I give too much time and thought to food.	( )	( )	( )	( )	( )	( )
22. I feel uncomfortable after eating sweets.	( )	( )	( )	( )	( )	( )
23. I engage in dieting behaviour.	( )	( )	( )	( )	( )	( )
24. I like my stomach to be empty.	( )	( )	( )	( )	( )	( )
25. I enjoy trying new rich foods.	( )	( )	( )	( )	( )	( )
26. I have the impulse to vomit after meals.	( )	( )	( )	( )	( )	( )

Reprinted, with permission from: Garner, D. M., Olmsted, M. P., Bohr, Y., & Garfinkel, P. E. (1982). The Eating Attitudes Test: Psychometric features and clinical correlates. *Psychological Medicine, 12*, 871-878.

BODY SHAPE DRAWINGS Mother___ Daughter___



Look at the above figures to answer the following questions. Choose a letter for your answer.

1. Which drawing looks most like your body shape at this moment?
   Figure #_____

2. Which drawing shows the body shape you would most like to look like?
   Figure #_____

3. Which body shape do you think is most attractive?
   For women? _____ For girls? _____

4. Which body shape do you think guys would find most attractive?
   Figure #_____

5. Which body shape do you think would be healthiest?
   For women? _____ For girls? _____

6. What is your present weight? _____ Height? _____

7. What would you like to weigh? _____

8. List all the words you can think of to describe person B:

9. List all the words you can think of to describe person J:

10. List all the words you can think of to describe person F:

Reprinted with permission from: Stunkard, A., Sorensen, T., & Schulsinger, F. (1980). Use of the Danish Adoption Register for the study of obesity and thinness. In S. Kety (Ed.), *The genetics of neurological and psychiatric disorders* (pp. 115-120). New York: Raven.

APPENDIX C-1

Approval from University of Manitoba Faculty Committee on the Use of Human Subjects in Research

UNIVERSITY OF MANITOBA

FACULTY COMMITTEE ON THE USE OF HUMAN SUBJECTS IN RESEARCH

NAME: Ms. Gail Marchessault

OUR REFERENCE: E96:175

DATE: July 2, 1996

YOUR PROJECT ENTITLED:

Cultural Understandings About Weight: A Comparison of Mothers and Daughters from Aboriginal, Non-Aboriginal, Lower and Higher Income Families.

HAS BEEN APPROVED BY THE COMMITTEE AT THEIR MEETING OF:

June 24th, 1996.

COMMITTEE PROVISOS OR LIMITATIONS:

None.

You may be asked at intervals for a status report. Any significant changes of the protocol should be reported to the Chairman for the Committee's consideration, in advance of implementation of such changes.

****THIS IS FOR THE ETHICS OF HUMAN USE ONLY. FOR THE LOGISTICS OF PERFORMING THE STUDY, APPROVAL SHOULD BE SOUGHT FROM THE RELEVANT INSTITUTION, IF REQUIRED.**

Sincerely yours,

Gordon R. Grahame, M.D.,
Chairman,
Faculty Committee on the Use of
Human Subjects in Reserach.

TELEPHONE INQUIRIES:
789-3255 - Lorraine Lester

APPENDIX C-2

Approval from The Winnipeg School Division No. 1 Research, Planning and Technology, Research Advisory Committee

THE WINNIPEG SCHOOL DIVISION NO. 1
RESEARCH, PLANNING AND TECHNOLOGY
1180 NOTRE DAME AVENUE, WINNIPEG, MANITOBA R3E 0P2
TELEPHONE (204) 775 - 0231
FAX (204) 775 - 1569

DOUGLAS R. EDMOND
DIRECTOR OF RESEARCH, PLANNING AND TECHNOLOGY

November 19, 1996

Gail Marchessault
604 Strathcona Street
Winnipeg, MB
R3G 3E7

Dear Gail:

Re: **Research Request - Cultural Understanding About Weight: A Comparison of Mothers and Daughters from Aboriginal, Non-Aboriginal, Lower and Higher Income Families**

This letter is to inform you that the appropriate officials of the Winnipeg School Division No. 1 have reviewed the above-mentioned research study. The study has been approved, in principle, providing the approval from the principals of [redacted]

Please contact [redacted] to discuss your data collection procedures. Participation in your research project is voluntary and any participant may withdraw at any time during your data collection procedures.

As a result of the Division's participation in your study a copy of the research results should be submitted to this office at its completion.

Regards,

Douglas R. Edmond
Chair,
Research Advisory Committee

p.c. [redacted]

APPENDIX D-1 Code: Mother-_____

CONSENT TO PARTICIPATE IN STUDY Daughter-_____

I understand that I am being asked to take part in a study about weight, called "Mothers' and Daughters' Understandings of Weight" The interviewer will ask me questions about what I think about weight. This interview will last between one and two hours. I have been given an oral and written explanation of the study. I have been given the researcher's name and university address and have been given a chance to ask questions. I understand that I can ask more questions at any time.

I understand that I can choose to take part, or not to take part in this study and that I can stop the interview at any time. My decision to take part or not to take part will not affect the way I or my family is treated at school. I have been told this study may not benefit me in any way. However, my participation will add to the knowledge about weight concerns of teen-aged girls and their mothers.

I understand that my identity will not be revealed and answers to all questions will be kept entirely confidential. I also understand that a summary of the results of the study will be sent to the school, and a copy of the final report will be sent to the school division. I understand that if my scores indicate that I might have an eating disorder, this will be discussed with me, and if I am under 18, I will be referred to either the school counsellor or a counsellor outside of the school, if I prefer. I understand that this information will not be disclosed to anyone else without my consent.

My signature on this page indicates that I understand and agree to take part in the study.

Name: (print)_____

Signature of participant:_____ Date:_____

Signature of witness:_____ Date:_____

If you would like a summary of the results, please print your address below:

Address:_____

_____

Phone: _____

***

I have explained to _____ the nature and purpose of this research project as described on the information sheet which has been given to the participant. I have asked her if she has any questions about the study and have answered these questions to the best of my ability.

Signature of Investigator: _____ Date:_____

APPENDIX D-2 Code: Mother-_____

MOTHER'S CONSENT FOR DAUGHTER'S PARTICIPATION

I understand that I am being asked to give permission for my daughter to take part in a study about weight, called "Mothers' and Daughters' Understandings of Weight." The interviewer will ask her questions about what she thinks about weight. This interview will last between one and two hours. I have been given a written explanation of the study and the researcher's name, university address and phone number so that I can ask questions. I understand that I can ask more questions at any time.

I understand that my daughter can choose to take part, or not to take part in this study and that she can stop the interview at any time. Her decision to take part or not to take part will not affect the way she is treated at school. I have been told this study may not benefit us in any way. However, her participation will add to the knowledge about weight concerns of teen-aged girls and their mothers.

I understand that her identity will not be revealed and her answers to all questions will be kept entirely confidential. I also understand that a summary of the results of the study will be sent to the school, and a copy of the final report will be sent to the school division. I understand that if my daughters' scores indicate that she might have an eating disorder, this will be discussed with her and she will be referred to either the school counsellor or a counsellor outside of the school, if she prefers. This information will not be disclosed to anyone else without her consent.

My signature on this page indicates that I understand and agree that my daughter can take part in the study if she chooses to participate.

Daughter's name: _____

Parent's name: (Print): _____

Signature of parent: _____ Date: _____

Signature of witness: _____ Date: _____

***

I have explained to _____ the nature and purpose of this research project as described on the information sheet which has been given to her. I have asked her if she has any questions about the study and have answered these questions to the best of my ability.

Signature of Investigator: _____ Date: _____

APPENDIX E

INFORMATION ABOUT THE STUDY: MOTHERS' AND DAUGHTERS' UNDERSTANDINGS OF WEIGHT

Project Title: Mothers' and Daughters' Understandings of Weight.

Investigators: Gail Marchessault will be doing the research. She is a graduate student in the Department of Community Health Sciences, Faculty of Medicine, University of Manitoba, 750 Bannatyne Ave., Winnipeg, Manitoba, R3E OW3. Ph: (204) 774-4637.

Dr. Linda Garro, Department of Community Health Sciences, is supervising the research. Ph: (204) 789-3365.

Purpose of Study: The purpose of this study is to learn how mothers and daughters talk about weight. I will talk to mothers and daughters separately because I am interested in comparing how mothers and daughters talk about weight issues. I will be talking to a number of grade eight girls from three schools and their mothers. The people being asked to take part in this study are selected by chance. Except for the fact that I am doing the study through your school, I have not chosen people for any special reason. For example, I have not selected people because of what they weigh.

The Interview: The interview usually takes between one and two hours. I will meet with mothers at an agreed upon time and place. I will meet with daughters at school during the school day. I will interview the mothers first. The questions for both interviews will be about the same, except I ask the mothers more questions.

Let me tell you about the questions I will only ask the mothers. I will ask the mothers for background information about themselves and their family. This information will help me understand the influences on your thinking about weight. Questions for the mothers will include: how long the family has lived in the neighbourhood, the mother's age and the daughter's age, marital status, number of children, religion, occupation, level of education, and income.

After this, the interviews for the mothers and the daughters are just about the same. I will ask you some questions about what you think about weight. THERE ARE NO RIGHT OR WRONG ANSWERS. I am interested in what you think. I will then ask you about your own weight history: height, weight, what you'd like to weigh, if you've ever tried to change your weight and what happened. Then I will ask you some true-false questions. The last part consists of two short questionnaires about attitudes towards eating and your weight.

I would like your permission to tape record the interview. I cannot write as fast as people talk and the interview will go more smoothly and take less of your time if it is done this way. Also, the interview results will be more accurate if your actual words are tape recorded instead of having me just write down a summary. The tapes will be erased at the end of the study.

INFORMATION ABOUT THE STUDY:
MOTHERS' AND DAUGHTERS' UNDERSTANDINGS OF WEIGHT

Confidentiality: Records of the interview with you will be coded only with a number and not your name, so that any records of your interview could only be identified by myself. No other person will be given any of the interview data or the records. The consent forms will be the only record with your name on it. Any reports written about this project will not mention your name or provide any description of you that would identify you. I will treat the tape-recording of the interview in the same confidential way. A secretary may type up the interview, but she will not know who you are. If I think you might have an eating disorder, I will help you to see a counsellor. As an eating disorder can be very dangerous, it is important to seek help. I will talk this over with you before talking to anyone else.

Participation: Joining the research is completely up to you. I hope you will volunteer, but you are under no obligation to join the study. You can decide not to join the study or to drop out at any point in time, even while we are talking. If you decide not to talk with me, this will not affect your treatment at school. I am not working for the school division and this project is not being done for the school. The school and the school division will only receive a report about the whole project. I will not report back any information about your interview.

Mothers will be asked to give consent for themselves at the beginning of their interview and for their daughters at the end of their own interview. Daughters will also be asked to give their consent. Daughters will not be interviewed unless the mother has consented for her daughter to take part.

Risk and Discomfort: In all research projects carried out by the university, the person doing the project must point out any risks or discomforts for the study. I do not think this study will cause any problems for you other than 1) taking up your time to answer questions, and 2) although we don't think this will happen, asking questions that may bring up personal problems. You may refuse to answer any questions that you do not wish to answer. Just let me know if you would like to skip any questions.

Benefits: All university projects must also point out if there are any benefits for the study. I do not expect the study to have any direct benefits for you. You will not receive any payment for taking part in this study. When completed, this research should help health professionals and school personnel understand more about the thinking and concerns of teen-aged girls and their mothers about weight issues. This could be used to improve health teaching.

For More Information: If after the interview you have any further questions about the study, please feel free to contact me, Gail Marchessault. My telephone number is 774-4637. I will also be pleased to provide you with a summary of the study findings if you are interested.

APPENDIX F

Summary of Findings for Participants

Perspectives on Weight

Report to Participants with Thanks

Thank you to the 163 mothers and daughters who shared their views on weight with me. Each interview was helpful and I feel privileged to have had a chance to meet with you. I would like to share some of the findings with you.

In this study, I examined what people said about weight in two main ways: 1) I looked at the similarity between what girls and their mothers said; and 2) I compared the views of Aboriginal and non-Aboriginal participants. Families were recruited from four schools, as follows:

- Non-Aboriginal families were from:
  1. A ***Suburban*** Winnipeg school.
  2. A ***Rural*** Manitoba school.

- Aboriginal families were from:
  3. An ***Urban Aboriginal*** school in Winnipeg (plus volunteers).
  4. A rural Manitoba ***First Nations community*** school.

Overall, 71.3% of the families asked to participate agreed. Some Suburban and Rural mothers declined because of prior problems around weight and eating concerns. Concern about weight is likely under-estimated at these locations.

Overall Agreement

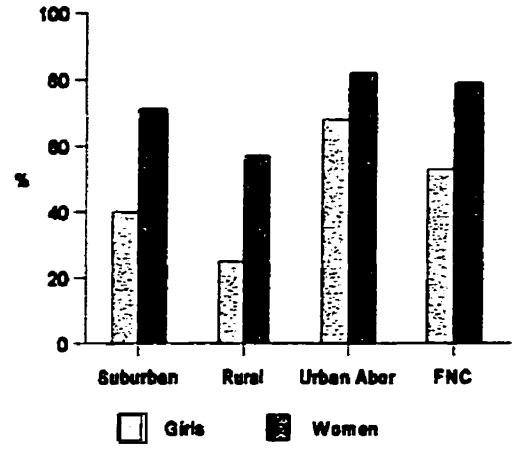
There was much agreement in people's answers to the interview questions. There were also some differences. For example, 86% of women, but only 50% of girls, thought that if a mother was very concerned about weight, it was more likely that her daughter would be too.

A majority of girls (65%) said that mothers should tell their daughters not to worry about weight no matter what they weighed. Mothers (65%) said the opposite. But over 80% of both agreed that mothers should help their daughters lose weight, if needed.

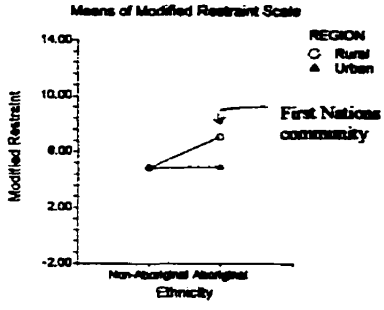
Mothers' advice about weight seemed aimed at increasing self-acceptance either through weight control or through learning to accept body size as a given. Both positions focussed on eating well and being active. About half of the girls repeated their mothers' advice accurately, except only 12 girls repeated their mothers' compliments.

What was the concern about weight?

This chart shows how many girls and women at each location were dissatisfied with their body shape. (They selected a desired body shape that was larger than the one they thought they looked like.) Dissatisfaction ranged from 25% in the Rural girls to 82% in the Urban Aboriginal women. Despite these high levels of dissatisfaction, few participants reported they were currently dieting--only 24% of girls and 28% of women. There were many more who reported "just watching" what they ate or trying to be more active, sometimes for weight loss, sometimes for health, sometimes for both.



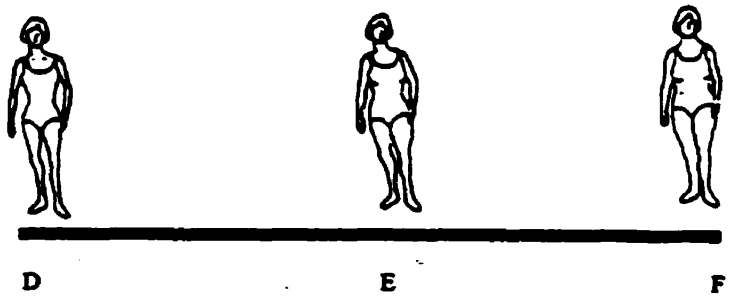
More on Dieting



The Restraint Scale is another way to measure tendency to diet. The figure indicates that First Nations community girls and women were the most likely to diet. This came up in the interviews too. Another scale, the Eating Attitudes Test, indicated risk for eating disorders in nine participants (four girls and one woman in the First Nations community, three Aboriginal and one non-Aboriginal girl in the city). Some women (both Aboriginal and non-Aboriginal) told stories of similar concern when they were young.

The next page shows participants' responses to some of the questions about body shapes. Median (or middle) responses are given for each location for girls and for women. To read this graph, find your location and look up to see the letter indicated on the line. This is the answer that participants at your location gave to that question. Only responses that were statistically different between at least two locations are shown. Lines join locations that gave different responses. Girls gave different answers to only one question--their perceived shape. Girls' responses to the other questions are given in brackets after the question. Both girls and women thought men preferred body shape D. Differences between Aboriginal and non-Aboriginal participants are indicated in the left margin with a checkmark (√) for possible differences and stars (**) for more certain differences (99 times out of 100). The X means differences between Aboriginal and non-Aboriginal women couldn't be tested because there were differences between the Suburban and Rural women.

Responses to Body Shape Questions



Question	Girls	Women
** Which drawing looks most like your body shape at this moment?	Suburban, Rural** — Urban Aboriginal**, First Nations	
** Which drawing looks most like your body shape at this moment?		Suburban, Rural — Urban Aboriginal, First Nations
√ Which drawing shows the body shape you would most like to look like? (Girls answered D)	Suburban** — Urban Aboriginal**, Rural, First Nations	
X Which body shape do you think is most attractive for women? (Girls answered E)	Suburban[E] — Urban Aboriginal, Rural, First Nations	
X Which body shape do you think is most attractive for girls? (Girls answered D)	Suburban — Urban Aboriginal, Rural, First Nations	
√ Which body shape do you think would be healthiest for women? (Girls answered E)	Suburban, Rural, First Nations — Urban Aboriginal	
√ Which body shape do you think would be healthiest for girls? (Girls answered D)	Suburban, Rural, First Nations — Urban Aboriginal	

Like Mother, Like Daughter?

Perhaps the daughters are on to something. There was little evidence that girls follow their mothers' example with respect to weight concerns. There were no significant associations between mother-daughter pairs in any of the measures of concern about weight (which included the values statements, the Restraint Scale, the Eating Attitudes Test, dissatisfaction with body shape, and broad categories of advice both would give to others). Results sometimes tended to go in the opposite direction.

There weren't many dieters in the group, but mothers who dieted did *not* have daughters who dieted in any greater numbers than the mothers who didn't diet.

There was one exception to this general pattern. Non-dieting mothers who advised people to accept their bodies as they were and focus on healthy living, rather than weight, were more likely to have daughters who also gave this advice. This was a small group of families, but it suggests that mother-daughter similarity may be most evident when it departs from the norm. Girls are not necessarily emulating their mothers' weight concerns but they may learn to counter the cultural obsession with weight from them.

Aboriginal Girls At-Risk

The findings indicated that Aboriginal participants, both girls and women, were *more* concerned about their weight than non-Aboriginal participants. Aboriginal girls and women living in or close to Winnipeg exhibited high levels of concern about their weight. This suggests both weight and weight preoccupation need to be considered in promoting health.

For information, please contact Gail Marchessault:
Department of Foods and Nutrition
Faculty of Human Ecology
University of Manitoba
Winnipeg, Manitoba R3T 2N2
Phone (204) 474-7080

I wish to acknowledge and thank the following:

- Drs. L. Garro, P. Kaufert, S. Macdonald & M. Spigelman, my doctoral committee members.
- Drs. B. Tate, P. Martens & T. Hassard for advice with statistics.
- Principals & school personnel who graciously fit the needs of the research into their busy schedules.
- the Winnipeg School Board Division No. 1, the rural school boards, and the Chief and Council of the First Nations Community, who granted permission to conduct the research.

This research was made possible in part by Health Canada through a National Health Research and Development Program (NHRDP) Research Training Award, the Manitoba Health Research Council, the Children's Hospital Research Foundation, the Canadian Home Economics Association, the Women's Health Research Foundation of Canada, and the Canadian Dietetic Association.

APPENDIX G

Introductory Letter to Parent

THE UNIVERSITY OF MANITOBA

FACULTY OF MEDICINE
Department of Community Health Sciences

750 Bannatyne Avenue
Winnipeg, Manitoba
Canada R3E 0W3

FAX: (204) 772-8748

January 12, 1998

Dear Parent,

My name is Gail Marchessault. I am a graduate student at the University of Manitoba. As part of my program, I am doing a study to learn how grade eight girls and their mothers talk about weight issues. I am writing ALL parents of grade eight girls at your school to explain this study. I am also talking to families from several other schools. I am trying to get an idea of the sorts of opinions held by girls and women from different backgrounds.

The families asked to take part in this study are not selected because of what they weigh. I am interested in finding out what people think, even if they are not concerned about their weight. The study's findings will be more convincing if more people take part.

The interview usually takes about an hour with mothers, and about 45 minutes with daughters. I talk to the mother first, and then ask permission to approach the daughter. I ask girls the same kinds of questions as mothers. Depending on what is most convenient, these interviews could be done either at your home or at school.

All information gathered through this study will be kept confidential. The results should help health professionals and teachers educate about weight issues.

I am writing to ask you if I can call you to talk about this study. I am not yet asking for your permission to interview you or your daughter. I am just asking if I can contact you to explain more about the study, to answer any questions you might have and to find out if you are willing to participate. It is, of course, up to you whether you choose to participate in this study, although I am hoping you will.

If you do NOT want the school to give me your name, address and phone number, please call the principal, [redacted] before January 30. I would appreciate it if you would allow your name to be included even if you later decide you don't want to be interviewed. Allowing your name to be included does not mean you are agreeing to be interviewed.

I would be happy to talk with you if you have any questions or concerns. (Call me collect at 204-774-4637.) I look forward to talking with you.

Sincerely,

Gail Marchessault, R.D., PHEc, Ph.D. (Cand.)

APPENDIX H-1

Detectable Effect for Group Comparisons of Different Sample Sizes

Questionnaire	Standard deviation	Detectable effect		
Sample size, *n*	163	20	40	80
Restraint Scale	5.32 (4.17-6.10)[a]	4.70 (3.69-5.40)[a]	3.34	2.35
Modified Restraint Scale	3.23 (1.95-3.92)	2.86 (1.73-3.50)	2.03	1.43
EAT-26	6.89 (2.51-10.69)	6.10 (2.22-9.46)	3.82	3.05
Body Shape Drawings				
Perceived shape	1.27 (0.80-1.44)	0.99 (0.71-1.27)	0.80	0.25
Other shapes: low	0. 55 (0.32)	0.49 (0.28)	0.35	0.24
Other shapes: high	0.77 (1.18)	0.68 (1.04)	0.48	0.34

Note. Calculations were based on standard deviation of the collected data, assuming a Type 1 error probability of .05, 80% power and two-tailed testing.
[a]Bracketed numbers refer to minimum and maximum (standard deviation or detectable effect) for the eight groups (girls and women at each of the four locations).

APPENDIX H-2

Detectable Effect for Paired Comparisons of Different Sample Sizes

Questionnaire	Standard deviation of difference	Detectable effect		
Sample size, *n* pairs	80	20	40	80
Restraint Scale	7.34	4.60	3.25	2.30
Modified Restraint Scale	4.32	2.71	1.91	1.35
EAT-26	9.60	6.01	4.25	3.01

Note. Calculations were based on standard deviation of the collected data, assuming a Type 1 error probability of .05, 80% power and two-tailed testing.

APPENDIX I-1

Correlations Between Measures of Weight and Weight-Related Scales for Girls

Questionnaire	Body Mass Index		EAT-26		Restraint Scale		Modified Restraint	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Perceived body shape	(.66)	<.00001*	(.09)	.42	(.51)	<.00001*	(.42)	.0001*
Body mass index			(.21)	.09	.49	.00005*	.35	.004+
EAT-26					(.41)	.0003*	(.43)	.00007*
Restraint Scale							.83	<.00001*

Note. Pearsons' *r* is used when both scales are normally distributed; Spearman's *r* (in brackets) when one of the scales is ordinal or non-normally distributed.
* = $p \leq .0001$; + = $p \leq .001$.

APPENDIX I-2

Correlations Between Measures of Weight and Weight-Related Scales for Women

Questionnaire	Body Mass Index		EAT-26		Restraint Scale		Modified Restraint	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Perceived body shape	(.84)	.000000*	(.06)	.59	(.47)	.00001*	(.26)	.02~
Body Mass Index			(.005)	.96	.51	.000002*	.25	.02~
EAT-26					(.42)	.0001*	(.49)	.000003*
Restraint Scale							.82	.000000*

Note. Pearsons' *r* is used when both scales are normally distributed; Spearman's *r* (in brackets) when one of the scales is ordinal or non-normally distributed.
* = $p \leq .0001$; ~ = $p \leq .05$

APPENDIX I-3

Summary and Discussion of Correlations Between Measures of Weight and Weight-Related Scales

1. There is high agreement between perceived body shape and the BMI (Spearman's r = .66 for girls; .84 for women; $p < .00001$ for both).

2. The correlations between the Restraint Scale and the measures of weight status are higher than between the Modified Restraint Scale and the weight measures (by approximately .2). This is not surprising since the full scale includes questions based on weight status.

3. There is a high correlation between the Restraint and the Modified Restraint scales (Pearson's r = .82). This difference in agreement (~ .18) estimates the effect of the four questions on weight status that were removed.

4. For the girls, there was a significant correlation between the Modified Restraint Scale and perceived body shape (Spearman's r = .42; p = .0001). The relationship was lower and only a significant trend for the women (Spearman's r = .26; p = .02). This estimates an association between dietary restraint and body weight, in the expected direction. (Heavier participants were more likely to be classified by the Restraint Scale as "dieters.")

5. The association between EAT-26 scores and perceived body shape was low and non-significant (Spearman's r = .06; p = .59 for women; r = .09, p = .42 for girls), suggesting that extreme attitudes to food restriction are not predicted by body weight. However, the number of high scores was low, and the lack of significance may reflect inadequate sample size.

6. There were moderate and highly significant ($p < .00001$) correlations between the EAT-26 and the Modified Restraint Scale (Spearman's r = .49, for women; .43 for girls). This suggests a link between the tendency to diet and risk for eating disorder. Perhaps this is obvious. Participants who score high on the EAT-26 would always score high on the Restraint Scale.

APPENDIX J

Descriptive Statistics for the Modified Restraint Scale

Group	*n*	Mean	Standard deviation	Standard error	Median	Mode	Min-Max
All	163	5.26	3.23	0.25	5	3	0-13
Girls	**80**	**4.83**	**3.18**	**0.36**	**4**	**5**	**0-13**
Suburban	20	4.40	3.02	0.67	4	2	0-11
Urban Aboriginal	21	4.81	3.56	0.78	5	5	1-13
Rural	20	3.65	1.95	0.44	3	3	1 - 9
First Nations community	19	6.53	3.45	0.79	6	—	1-13
Women	**83**	**5.68**	**3.23**	**0.36**	**5**	**--**	**0-13**
Suburban	21	5.29	2.71	0.59	5	—	0-11
Urban Aboriginal	22	4.86	2.92	0.62	4	4	0-10
Rural	21	5.76	3.21	0.70	5	4	0-11
First Nations community	19	6.95	3.92	0.90	8	9	0-13
Pairs (difference)	**80**	**0.88**	**4.32**	**0.48**	**1**	**1**	**-9-10**

Note. The Modified Restraint Scale consists of the Restraint Scale with four questions based on weight status removed.

APPENDIX K

Univariate Analyses of Modified Restraint Scale for 75 Paired Participants

Variable	*Df*	Test value	*p*	Group	*n*	Med	Mean	*SE*
Generation	148	$t = 1.58$	.12		150		5.39	
Girls					75	5.0	4.97	0.37
Location	3	$H = 8.95$[a]	.03	Suburban	19	4.0	4.53	0.70
				*Rural	17	3.0	3.71	0.74
				Urban Aboriginal	21	5.0	4.81	0.67
				*First Nations	18	6.5	6.83	0.72
Ethnicity	1	$H = 3.74$[a]	.05	Non-aboriginal	36	4.0	4.14	0.52
				Aboriginal	39	5.0	5.74	0.50
Region	1	$H = .999$[a]	.31	Rural	35	5.0	5.31	0.54
				Urban	40	4.5	4.68	0.51
Women					75	6.0	5.80	0.37
Location	3	$F = 2.14$	.10	Suburban	19	5.0	5.16	0.72
				Rural	17	6.0	6.00	0.76
				Urban Aboriginal	21	4.0	4.95	0.68
				First Nations	18	8.5	7.28	0.74
Ethnicity	73	$t = 0.63$	.53	Non-Aboriginal	36	5.0	5.56	0.54
				Aboriginal	39	6.0	6.03	0.52
Region	73	$t = 2.22$	.03	Rural	35	8.0	6.66	0.53
				Urban	40	5.0	5.05	0.49

Note. Med = Median; *SE* = Standard Error.
[a] Kruskal-Wallis test was used due to suspected non-normality.
* Identified as significantly different by Tukey-Kramer Multiple Comparison Test.

APPENDIX L-1

Split Unit Analysis of Variance Table for Modified Restraint Scale for 75 Mother-Daughter Pairs

Source Term	*DF*	Sum of Squares	Mean Square	*F*-Ratio	Prob Level
A (Ethnicity)	1	46.81691	46.81691	4.68	.03*
B (Region)	1	44.5059	44.5059	4.45	.04*
AB	1	43.62759	43.62759	4.36	.04*
C(AB)	71	710.611	10.00861	1.10	.34
D(Generation)	1	25.62667	25.62667	2.82	.10
S	74	673.3734	909964		
Total (Adjusted)	149	1541.573			
Total	150				

* Term significant at alpha = .05

APPENDIX L-2

Tukey-Kramer Multiple-Comparison Test to Locate Differences for Split Unit Analysis of Variance for Modified Restraint Scale for 75 Mother-Daughter Pairs

Term	Count	Mean	Standard Error	Different From Groups
All	150	5.4		
A: Ethnicity				
Non-Aboriginal	72	4.9	0.37	Aboriginal
Aboriginal	78	6.0	0.36	Non-Aboriginal
B: REGION				
Rural	70	6.0	0.38	Urban
Urban	80	4.9	0.35	Rural
D: Generation				
Girls	75	5.0	0.35	
Women	75	5.8	0.35	
AB: Ethnicity; Region				
(0,0) non-Aboriginal; rural (Rural)	34	4.9	0.54	(1,0)
(0,1) non-Aboriginal; urban (Suburban)	38	4.8	0.51	(1,0)
(1,0) Aboriginal; rural (First Nations)	36	7.1	0.53	(0,1) (0,0) (1,1)
(1,1) Aboriginal; urban	42	4.9	0.49	(1,0)

Note. Critical Value=2.82 for Ethnicity and Region; 3.72 for AB (ethnicity, region interaction) .

APPENDIX M-1

Descriptive Statistics for the Restraint Scale

Group	*n*	Mean	Standard deviation	Standard error	Median	Mode	Range
All	155	10.5	5.32	0.43	10	8	0 - 23
Girls	**75**	**9.3**	**5.17**	**0.60**	**9**	**8**	**0 - 21**
Suburban	19	7.6	4.35	1.00	8	--	0 - 15
Urban Aboriginal	20	10.8	5.56	1.24	9.5	--	3 - 21
Rural	19	7.4	4.17	0.96	7	4	2 - 16
First Nations community	17	11.3	5.65	1.37	11	20	2 - 20
Women	**80**	**11.8**	**5.20**	**0.58**	**11.5**	**15**	**0 - 23**
Suburban	20	11.6	5.28	1.18	11	7	0 - 21
Urban Aboriginal	21	11.6	4.57	1.00	11	--	2 - 23
Rural	20	11.0	5.05	1.13	10	10	0 - 20
First Nations community	19	12.9	6.10	1.40	13	17	2 - 22
Pairs (difference)	**72**	**2.4**	**7.34**	**0.87**	**2.5**	**7**	**-17 - 20**

Note. Nine scores with 1 missing answer were included.

APPENDIX M-2

Univariate Analyses of Restraint Scale for Paired Participants

Variable	*Df*	Test value	*p*	Group	*n*	Mean	*SE*
Generation	142	$t = 2.47$	.02			10.7[a]	
Girls					68	9.6	0.64
Location	3	$F = 2.88$	.04	Suburban	17	7.8	1.23
				*Rural	16	7.7	1.26
				Urban Aboriginal	19	11.1	1.16
				*First Nations	16	11.6	1.26
Ethnicity	66	$t = 2.97$	.004**	Non-aboriginal	33	7.8	0.87
				Aboriginal	35	11.3	0.84
Region	66	$t = 0.10$	.94	Rural	32	9.7	0.94
				Urban	36	9.6	0.88
Women					68	11.8	0.64
Location	3	$F = 0.74$	.53	Suburban	17	11.2	1.29
				Rural	16	10.8	1.33
				Urban Aboriginal	19	12.0	1.22
				First Nations	16	13.4	1.33
Ethnicity	66	$t = 1.28$	.20	Non-Aboriginal	33	11.0	0.91
				Aboriginal	35	12.6	0.89
Region	66	$t = 0.37$	.71	Rural	32	12.1	0.94
				Urban	36	11.6	0.89

Note. Analyses were repeated with all participants (including unmatched participants). Results were essentially the same, except they were stronger. *SE* = Standard Error.
* Identified as significantly different by Tukey-Kramer Multiple Comparison Test.

APPENDIX M-3

Split Unit Analysis of Variance Table for Restraint for Mother-Daughter Pairs

Source Term	*DF*	Sum of Squares	Mean Square	*F*-Ratio	Prob Level (Alpha=.05)
A (Ethnicity)	1	237.8287	237.8287	8.94	.004*
B (REGION)	1	4.113446	4.113446	0.15	.70
AB	1	12.12654	12.12654	0.46	.50
C(AB)	64	1702.895	1702.895		
D (Generation)	1	175.9811	175.9811	6.49	.01*
AD	1	31.07029	31.07029	1.15	.29
BD	1	0.8321514	0.8321514	0.03	.86
ABD	1	2.481087	2.481087	0.09	.76
CD(AB)	64	1735.211	27.11267		
S	0	0			
Total (Adjusted)	135	3891.382			
Total	136				

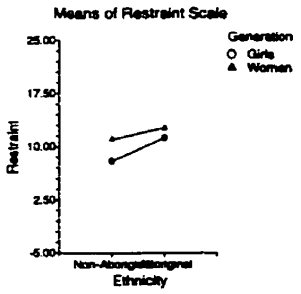
* Term significant at alpha = .05

APPENDIX M-4

Tukey-Kramer Multiple-Comparison Test

Term	Count	Mean	Standard Error	Different from Groups
All	136	10.70		
A: Ethnicity				
Non-Aboriginal	66	9.38	0.63	Aboriginal
Aboriginal	70	12.03	0.62	Non-Aboriginal
B: REGION				
Rural	64	10.88	0.65	
Urban	72	10.53	0.61	
D: Generation				
Girls	68	9.56	0.63	Women
Women	68	11.84	0.63	Girls
AB: Ethnicity,REGION				
Non-Aboriginal,Rural	32	9.25	0.91	
Non-Aboriginal,Urban	34	9.50	0.89	
Aboriginal,Rural	32	12.50	0.91	
Aboriginal,Urban	38	11.55	0.84	
AD: Ethnicity,Generation				
Non-Aboriginal,Girls	33	7.76	0.91	Abor women & girls
Non-Aboriginal,Women	33	11.00	0.91	
Aboriginal,Girls	35	11.37	0.88	Non-Aboriginal girls
Aboriginal,Women	35	12.69	0.88	Non-Aboriginal girls

Critical Value = 2.83 for Ethnicity and Generation; 3.73 for AD (Ethnicity, generation interaction)



APPENDIX N

Descriptive Statistics for the Eating Attitudes Test - 26

Group	*n*	Mean	Standard Deviation	Median	Mode	Range	At-risk score, *n*
All	163	5.7	6.9	4	1	0 - 44	9
Girls	**80**	**6.8**	**8.4**	**4**	**3**	**0 - 44**	**8**
Suburban	20	4.7	5.0	4	4	0 - 22	1
Urban Aboriginal	21	7.6	10.7	3	3	0 - 44	3
Rural	20	3.5	2.8	3	3	0 - 11	0
First Nations community	19	11.5	10.3	9	--	1 - 33	4
Women	**83**	**4.7**	**4.9**	**3**	**1**	**0 - 28**	**1**
Suburban	21	4.8	4.1	4	4	0 - 19	0
Urban Aboriginal	22	3.1	2.5	3	--	0 - 11	0
Rural	21	3.1	2.9	2	1	0 - 9	0
First Nations community	19	8.1	7.4	6	1	0 - 28	1
Pairs (difference)	**80**	**-2.1**	**9.6**	**0**	**-3**	**-41 - 27**	

APPENDIX O

Univariate Analyses of Eating Attitudes Test-26 for 75 Paired Participants

Variable	*Df*	Chi Square *H*	*p*	Group	*n*	Median
Generation	1	1.58	.21		150	3.5
Girls					75	4.0
Location	3	7.19	.07	Suburban	19	4.0
				Rural	17	3.0
				Urban Aboriginal	21	3.0
				First Nations	18	8.5
Ethnicity	1	3.48	.36	Non-Aboriginal	36	3.5
				Aboriginal	39	4.0
Region	1	1.27	.26	Rural	35	4.0
				Urban	40	3.0
Women					75	3.0
Location	3	11.21	.01	Suburban	19	4.0
				*Rural	17	1.0
				Urban Aboriginal	21	3.0
				*First Nations	18	6.5
Ethnicity	1	1.00	.32	Non-Aboriginal	36	3.0
				Aboriginal	39	3.0
Region	1	0.18	.67	Rural	35	4.0
				Urban	40	3.0

Note. Missing data due to ethnic comparison. Kruskal-Wallis test was used for univariate differences.

* Significantly different at the Bonferroni critical value of the Kruskal-Wallis Multiple-Comparison Z-Value Test. Additionally there were trends at the regular test level for the following: Suburban women differed from Rural women; Urban Aboriginal and Rural women differed from First Nations community women.

APPENDIX P

Mother-Daughter Correlations for Restraint Scale, Modified Restraint Scale and Eating Attitudes Test (EAT-26) Scores for All Families and by Location, Ethnicity and Region

	Restraint			Modified Restraint			EAT-26		
Group	*n*	Pearson's *r*	*p*	*n*	Pearson's *r*	*p*	*n*	Spearman's *r*	*p*
All	72	.03	.78	80	.10	.36	80	.04	.73
Location									
Suburban	18	-.07	.79	20	.07	.77	20	.22	.35
Urban Aboriginal	19	.22	.36	21	.17	.47	21	-.18	.45
Rural	18	-.22	.37	20	-.30	.20	20	-.13	.59
First Nations community	17	.02	.95	19	.14	.58	19	-.25	.31
Ethnicity									
Non-Aboriginal	35	-.08	.63	38	.02	.90	38	.10	.53
Aboriginal	37	.02	.90	42	.12	.45	42	-.09	.59
Region									
Urban	37	.09	.58	41	.12	.45	41	.05	.77
Rural	35	-.02	.90	39	.07	.69	39	.02	.91

APPENDIX Q

Comparing Median Responses to Body Shape Drawings Questionnaire by Generation

Question	Girls' *n*	Women's *n*	Girls	Women	*z* score	*p*
Perceived	79	83	5.0	5.5	5.05	.00001*
Desired	78	83	4.0	5.0	3.89	.0001*
Women attractive	76	79	5.0	5.0	2.17	.03
Girls attractive	75	77	4.0	4.0	*DMN* 0.22[a]	.05
Guys prefer	79	81	4.0	4.0	2.08	.05
Women healthiest	77	83	5.0	5.0	2.90	.004*
Girls healthiest	80	79	4.0	4.0	0.41	.68

Note. Differences between generations were tested with the Mann-Whitney U Test (with normal approximation to correct for ties and the correction factor for continuity).
[a]KS = Kolmogorow-Smirnov Test used (due to possible unequal variances).
* = $p \leq .01$.

APPENDIX R Comparing Girls' Body Shape Drawing Responses by Ethnicity and Region

	Ethnicity					Region				
Question	NonAboriginal median	Aboriginal median	n^n, n^a	z score	p	Rural median	Urban median	n^r,n^u	z score	p
Perceived	4	5	36, 38	3.35	.0008*	4	5	X	X	X
Desired	4	4	36, 37	0.86	.39	4	4	39, 39	0.44	.66
Women attractive	5	5	35, 36	0.05	.96	5	5	37, 39	0.05	.96
Girls attractive	4	4	33, 37	0.22	.82	4	4	37, 38	0.13	.90
Guys prefer	4	4	36, 38	1.23	.22	4	4	39, 40	1.31	.19
Women healthiest	5	5	36, 36	1.03	.31	5	5	37, 40	0.48	.63
Girls healthiest	4	4	36, 39	0.73	.47	4	4	39, 41	0.89	.38

Note. Mann-Whitney U Test with normal approximation to correct for ties and correction factor for continuity. n^n, n^a; n^r, n^u = sample size for the non-Aboriginal, Aboriginal, rural and urban samples, respectively.
* = $p \leq .01$. X = Groups to be combined differed (at $p \leq .05$; Kruskal-Wallis test) and therefore were not tested.

APPENDIX S Comparing Women's Body Shape Drawing Responses by Ethnicity and Region

	Ethnicity					Region				
Question	Non-Aboriginal median	Aboriginal median	n^n, n^a	z score	p	Rural median	Urban median	n^n, n^a	z score	p
Perceived	5.0	6.0	38, 40	2.81	.005*	5.0	6.0	X		
Desired	4.3	5.0	38, 40	1.98	.05†	5.0	5.0	X		
Women attractive	4.5	5.0	X			5.0	5.0	X		
Girls attractive	4.0	4.3	35, 38	*DMN* 0.30 [a]	.05†	4.0	4.0	X		
Guys prefer	4.0	4.0	37, 39	*DMN* 0.14 [a]	0.78	4.0	4.0	39, 42	0.64	.52
Women healthiest	5.0	5.0	X			5.0	5.0	X		
Girls healthiest	4.0	4.5	38, 38	2.35	.02†	4.0	4.0	X		

Note. Mann-Whitney U Test with normal approximation to correct for ties and correction factor for continuity. n^n, n^a; n^r, n^u = sample size for the non-Aboriginal, Aboriginal, rural and urban samples, respectively.
[a]Kolmogorow-Smirnov test was used (due to possible unequal variances).
* = $p \leq .01$; † = $p \leq .05$; X not tested because groups to be combined differed (at $p \leq .05$; Kruskal-Wallis test).

APPENDIX T

Comparing Girls' Median Responses to Body Shape Drawings Questions by Location

Question	Suburban	Rural	Urban Aboriginal	First Nations community	Chi square	*p*
Perceived	4	4	5	5	12.38	.006*
Desired	4	4	4	4	1.51	.68
Women attractive	5	5	5	5	0.29	.96
Girls attractive	4	4	4	4	0.50	.92
Guys prefer	4	4	4	4	3.96	.27
Women healthiest	5	5	5	5	1.10	.78
Girls healthiest	4	4	4	4	1.42	.70

Note. The *df* for the test of each question was 3.
* = $p \leq .01$; Kruskal-Wallis test.

APPENDIX U

Comparing Women's Median Responses Body Shape Drawings Questions by Location

Question	Suburban	Rural	Urban Aboriginal	First Nations community	Chi square	*p*
Perceived	5.0	5.0	6.0	6.0	8.19	.04†
Desired	4.0	5.0	5.0	5.0	6.23	.10
Women attractive	4.5	5.0	5.0	5.0	8.51	.04†
Girls attractive	4.0	4.0	5.0	4.0	7.75	.05†
Guys prefer	4.0	4.0	4.0	4.0	1.56	0.67
Women healthiest	4.5	5.0	5.0	5.0	7.84	.05†
Girls healthiest	4.0	4.0	4.5	4.0	7.29	.06

Note. The *df* for the test of each question was 3.
† = $p \leq .05$ (non-significant trend); Kruskal-Wallis test.

APPENDIX V

Comparing Girls' and Women's Median Responses to Body Shape Drawings Questionnaire at Each Location

Question	Suburban			Rural			Urban Aboriginal			First Nations		
	n^1 n^2	z	p	n^1 n^2	z	p	n^1 n^2	z	p	n^1 n^2	z	p
Perceived	20 21	2.97	.003*	20 21	2.74	.006*	20 22	*Dmn* 0.46	.02NS	19 19	2.01	.04NS
Desired	20 21	1.47	.14	20 21	1.40	.16	19 22	2.70	.007*	19 19	2.33	.02NS
Women attractive	19 20	3.13	.002*	20 19	0.49	.62	20 22	0.06	.95	17 18	0.90	.37
Girls attractive	18 20	0.21	.84	19 19	0.23	.82	20 22	*Dmn* 0.54	.002*	18 16	1.03	.31
Guys prefer	20 21	0.10	.92	20 20	0.65	.52	20 21	*Dmn* 0.33	.14	19 19	1.05	.29
Women healthiest	20 21	*Dmn* 0.52	.004*	20 21	1.04	.30	20 22	0.92	.34	17 19	1.19	.24
Girls healthiest	20 20	0.82	.41	20 21	0.37	.72	21 22	2.21	.03NS	19 16	0.04	.97

Note. DMN = Kolmogorow-Smirnov test was used (due to possible unequal variances).
* = significant at $p \leq .01$. NS = non-significant trend at $p \leq .05$

APPENDIX W-1

Participant Satisfaction Rating of Body Shape by Generation, Ethnicity and Region

	All	Generation		Ethnicity		Region	
		Women	Girls	Non-Aboriginal	Aboriginal	Urban	Rural
Sample size	163	83	80	78	75	82	79
Perceived body shape, %							
larger than desired	60	72	46	51	73	66	53
same as desired	30	23	39	37	22	28	33
smaller than desired	10	5	15	12	5	6	14
Desired body shape, %							
Larger than attractive	13	5	22	15	12	15	11
Same as attractive	76	80	71	69	81	74	77
Smaller than attractive	11	15	7	16	7	10	12
Desired body shape, %							
Larger than healthy	12	8	15	11	12	15	9
Same as healthy	62	63	60	61	61	60	63
Smaller than healthy	27	29	24	28	27	26	28
Attractive body shape, %							
Larger than guys' prefer	33	42	23	32	34	37	28
Same as guys prefer	57	53	62	52	62	53	62
Smaller than guys' prefer	10	5	15	16	4	10	10

Note. Numbers may not add up to 100 due to rounding.

APPENDIX W-2

Comparing *Desired* and *Attractive* Body Shape Selections

Desired and attractive (and ideal) are often used interchangeably (Fallon & Rozin, 1985; Gittelsohn et al., 1996; Silberstein et al., 1988; Stevens et al., 1999; Tiggeman & Wilson-Barrett, 1998). The logistic analyses discussed in Chapter 9 and reported in Appendix W-1 was extended to test this semantic question: Are participants' selections for desired and attractive body shape the same (or not)? Results of the logistic regression modelling were: $\chi^2 = 1.96$, $df = 1$, $p = 0.16$, N.S. This allowed responses to be combined to assess if respondents had selected the same body shape for both questions. The results were:

- 24% of participants chose a desired body shape different from the one they selected as most attractive (with 13% selecting a larger desired shape, and 11% selecting a smaller desired shape).

This response was significantly different than would be expected had the participants given similar responses to both questions ($\chi^2 = 78.93$, $df = 2$, $p < .000000$. See Appendix V for details.)

These results demonstrate that *desired* and *attractive* do not necessarily have the same meaning for people. (And this should be suspected for *ideal* as well, although it was not tested.) This is important because it is possible to interpret Aboriginal participants larger *desired* weights as indicative of heavier norms for the ideal of attractiveness. This could be quite misleading. Precise language is required when discussing the meaning of participants' responses to specific weight questions.