

THE FOOD EXPERIENCES AND EATING PATTERNS
OF VISUALLY IMPAIRED AND BLIND PEOPLE

by

MARIE CLAIRE BILYK

B.A.S., Ryerson Polytechnic University, 1998

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE

in

THE FACULTY OF GRADUATE STUDIES

(Human Nutrition Graduate Program)

We accept this thesis as conforming to the required standards

UNIVERSITY OF BRITISH COLUMBIA

August, 2002

©Marie Claire Bilyk, 2002

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Human Nutrition

The University of British Columbia
Vancouver, Canada

Date 26 Aug 2002

Abstract

The number of visually impaired and blind Canadians is rising dramatically. Some of the areas which visual impairment and blindness have been shown to impact are level of education, employment, and income. The impact of visual impairment or blindness on an individual's experience of food and eating has not been examined in the past. The purpose of this study was to view the food experiences and eating patterns of visually impaired and blind people from their perspective, and identify factors which influenced these experiences and patterns. Nine visually impaired and blind people residing in the lower mainland of British Columbia were recruited through various blindness related organizations. A semi-structured, in-depth interview was conducted with each participant. Interviews were transcribed verbatim and analyzed for relevant themes.

Participants experienced blindness related obstacles when shopping for food, preparing food, and eating in restaurants. Inaccessible materials and environments also left the participants with limited access to nutrition information and physical activity. Patterns of behaviour that appeared related to these factors included a lack of variety in the participants' diets, higher than average restaurant use, limited application of nutrition knowledge, and a higher than average tendency to be outside of the recommended range for Body Mass Index (BMI). All of the participants described individually managing the obstacles they faced, but very few people expressed the opinion that society was also responsible for removing the obstacles they experienced during their encounters with food. This tendency towards individual management is hypothesized to be related to the participants' view of their blindness as an individual medical condition but not a category of social identity with social and political implications.

Nutrition and blindness professionals must work together to reduce the food related obstacles faced by visually impaired and blind people. Professionals must address both individual skill development and social and structural inequities.

Table of Contents

Abstract	ii
Table of Contents	iii
List of Tables and Figures	vi
Acknowledgments	vii
 CHAPTER 1: Introduction	 1
 CHAPTER 2: Literature Review	 3
2.1 Blindness	3
2.1.1 Prevalence	3
2.1.2 Services for Blind Adults in Canada	4
2.1.3 Socio-Economic Characteristics	6
2.1.4 Perceptions of Blindness	10
2.2 Food and Nutrition	13
2.2.1 Food Decision Making	13
2.2.2 The Impact of Personal Traits on Food Behaviour	18
2.2.3 The Social Organization of Nutritional Inequities	20
2.3 Food Literature in the Field of Blindness	22
2.3.1 Food Preparation Skills	22
2.3.2 Body Image	23
2.3.3 Portion Size	24
2.4 Summary of the Literature Review	24
 CHAPTER 3 Study Design and Methods	 26
3.1 Qualitative Research Design	26
3.2 Methods	28
3.2.1 Data Collection	28
3.2.2 Data Analysis	32
3.2.3 Enhancing Rigor	33

CHAPTER 4: Results and Discussion	35
4.1 Participant Profile	35
4.1.1 Participant Profile Summary and Discussion	40
4.2 Shopping for Food	41
4.2.1 Logistics - Method and Frequency	41
4.2.2 Finding Out About New Foods and Food Products	47
4.2.3 Deciding what to Buy	50
4.2.4 Shopping Summary and Discussion	54
4.3 Food Preparation	56
4.3.1 Inclination Towards Cooking	56
4.3.2 Food Preparation Instruction	58
4.3.3 Problems and Proficiencies	63
4.3.4 Common Foods Prepared and Eaten at Home	70
4.3.5 Food Preparation Summary and Discussion	72
4.4 Meal Patterns	74
4.4.1 The Unemployed Participants	74
4.4.2 The Employed Participants	76
4.4.3 Employment, Education, and Food Choices	76
4.4.4 Meal Pattern Summary and Discussion	77
4.5 Restaurants	78
4.5.1 Motivation and Contributing Factors to Restaurant Use	78
4.5.2 Frequency of Restaurant Use	81
4.5.3 Deciding which Restaurants to Use	82
4.5.4 Accessing Information on the Menu	88
4.5.5 Other Factors that Influence Restaurant Food Choices	92
4.5.6 Restaurant Summary and Discussion	96
4.6 Nutrition And Health	99
4.6.1 Accessing Nutrition Information	99
4.6.2 Concept of the Word "Nutrition"	105
4.6.3 Sense of Control Over One's Own Health	106
4.6.4 Conscious Efforts to Participate in Health Promoting Behaviour	108
4.6.5 Awareness of Participation in Activities that Make One Less Healthy	110
4.6.6 Nutrition and Health Summary and Discussion	112
4.7 Body Weight and Satisfaction	115
4.7.1 Body Weight	115
4.7.2 Body Satisfaction	116

4.7.3	Body Weight and Satisfaction Summary and Discussion	117
4.8	Physical Activity	120
4.8.1	Walking	120
4.8.2	The Role of Sport Programs for People who are Blind	120
4.8.3	Difficulty Accessing Safe And Enjoyable Physical Activity	121
4.8.4	Physical Activity Summary and Discussion	124
4.9	Personal Reflections	126
4.10	Limitations of the Research	129
CHAPTER 5: Conclusions and Implications		131
5.1	Conclusions	131
5.2	Implications for Practice and Research	132
References		136
Appendix A: Subject Consent Form		142
Appendix B: Participant Face Sheet		144
Appendix C: Preliminary Interview Guide		146

List of Tables and Figures

Table 2.1	Highest level of education of non-disabled and visually impaired Canadians of all ages in the year 1985.....	7
Table 2.2	Highest level of education of non-disabled and visually impaired Canadians aged 30 to 64 years in the year 1985.....	8
Table 2.3	The incomes of non-disabled and visually impaired Canadians aged 30 to 64 years in the year 1985.....	9
Table 2.4	The labour force activity of non-disabled and visually impaired Canadians aged 15 to 64 years in the year 1985.....	10
Table 4.1	Participant profile.....	36
Table 4.2	Level of education of participants vs. visually impaired and non-disabled Canadians aged 30 to 64 years.....	37
Table 4.3	Recruiting.....	38
Table 4.4	Food preparation instruction and range of foods prepared at home.....	62
Table 4.5	Common foods prepared and eaten at home.....	72
Table 4.6	Meal patterns.....	77
Table 4.7	Frequency of restaurant use.....	82
Table 4.8	Names and types of restaurants used.....	86
Table 4.9	Important sources of nutrition information.....	113
Table 4.10	BMI, body shape satisfaction, and weight loss attitudes.....	118
Table 4.11	Previous and present participation in physical activity.....	123
Table 5.1	The unmet food and nutrition needs of the participants as identified by this research project.....	134
Figure 4.1	Nutrition related health behaviour.....	109

Acknowledgments

Through the process of this thesis project I have truly come to know and appreciate the extraordinary value of inter-dependance. I would like to thank Dr. Gwen Chapman for her insightful guidance, flexibility, and support. Thank you to Dr. Linda Mamer and Dr. Susan Barr for bringing expert and critical eyes to my work. Many thanks to my participants who shared a little bit of their time, their lives, and their hearts. Thank you to the Canadian National Institute for the Blind who provided me with financial support through the Ross C. Purse Fellowship. And last but not least, thanks to my family and friends for EVERYTHING! In particular I would like to thank my husband, Nicholas, and my brother, Alexander (Uncle Al).

CHAPTER 1: INTRODUCTION

The research project described in this thesis arose from the intersection of two areas of interest: a concern for the well-being of blind people¹ and an interest in promoting healthy eating. In this chapter the distinct fields of blindness and nutrition will be introduced, thus displaying the reasoning behind an investigation of this area. My personal experiences in these areas will also be presented as they acted as a catalyst in this research endeavor.

Approximately one in 300 Canadians has a severe visual impairment (CNIB News and Media, 2002). In a 1986 survey conducted by Statistics Canada, it was determined that the Canadian National Institute for the Blind (CNIB) provided services to most eligible Canadians (Statistics Canada, 1990). Eligibility with the CNIB is determined by an individual's visual acuity, however registration is voluntary. To be registered, a person must be diagnosed by an ophthalmologist or optometrist as "legally blind" (with less than ten percent of their corrected vision) or "low vision" (with approximately 30% or less of their corrected vision)(CNIB Pamphlets and Publications, 2002). In 2001, the CNIB served approximately 100,000 clients and this number is expected to double by the year 2016 as a result of Canada's aging population (CNIB Pamphlets and Publications, 2002).

Blindness is known to impact many areas of an individual's life, for example: educational attainment, employment, level of income, ability to access printed information, and mobility (Statistics Canada, 1990). People who are born blind, as well as those who become blind during their life, require special rehabilitation or orientation and mobility support to enable them to function effectively in a society which assumes sightedness (Magarrell, 1990). The most effective support is given when the impact of blindness on a particular area of the individual's life is fully understood by professionals who work with the visually impaired and blind community.

¹The term "blind people" will be used instead of the more common people-first phraseology (eg. person who is blind) in recognition of the "essentializing feature" (Michalko, 2002, pg. 153) of blindness to the identity of blind people.

The second issue that contributed to the development of this research is an interest in promotion of healthy eating. Many factors, including level of education, level of income, knowledge, availability of food, and effectiveness of health promotion campaigns influence the food experiences and eating patterns of individuals and groups. Nutritionists and dietitians are involved in the development and delivery of individual, community, and population health services, policies, and programs. A clear understanding of the nutrition needs and factors which influence the nutritional health of the individual or group enables the nutrition professional to effectively meet the needs of their clientele.

Unfortunately, the impact of blindness on an individual's experience of food and eating patterns is not known. This means that both nutrition and blindness professionals are somewhat limited in their ability to provide effective food and nutrition related support to people who are blind.

My own background and experiences prompted the initial interest in this junction of two disciplines. In 1994 I worked at a resort in Ontario that served clients of the CNIB. I made the casual observation that a great number of the guests were overweight and that eating and meal-time were held in particularly high esteem. I wondered if the guests that visited the centre were representative of the adult Canadian blind community, and if so, was the obesity I observed different from the rates found in the general Canadian population. Secondly, as a visually impaired woman, I encounter difficulty when shopping for and preparing food. As a student of nutrition, these two experiences aroused my curiosity and enkindled the belief that it was both important and necessary for nutrition and blindness professionals to gain insight into the food experiences and eating behaviours of blind people.

The aim of this research project were to view the food experiences and eating patterns of blind people from their perspective. Factors which influence these experiences and patterns were also identified, as well as the existence of some unmet nutrition related needs of the research participants. This study used a qualitative approach because qualitative research methods have the capacity to view an individual's situation from their perspective.

CHAPTER 2: LITERATURE REVIEW

This chapter consists of three sections. The first presents information on blindness, in particular, topics which are pertinent to the focus of this study. The second section examines food and nutrition literature which will provide a context within which to interpret the stories of the participants. The last section presents the small amount of literature that already exists in the interface between the fields of blindness and nutrition.

2.1 Blindness

This section begins with an examination of the number of Canadians who experience and are expected to experience blindness. Secondly, there will be an exploration of how Canadian society (namely the government and non-profit organizations) responds to blind people. Thirdly, the impact of blindness will be investigated in terms of its effect on socio-economic variables, and lastly, this section will explore the relationship between the representation of blind people through “people-first” language, and its corresponding impact on the understanding of blindness.

2.1.1 PREVALENCE

In the Health and Activity Limitations Survey (HALS) conducted in 1986 by Statistics Canada, 581,110 Canadians over 15 years of age reported a visual impairment. An estimated 9% of the visually impaired population indicated that they had been diagnosed as “legally blind” by an eye specialist (Statistics Canada, 1990). The term “legally blind” refers to individuals with a best corrected visual acuity of 20/200 or worse in the better eye, or a visual field of 20 degrees or less (CNIB Pamphlets and Publications, 2002). Statistics Canada’s number of legally blind individuals corresponded very closely to the 52,000 people registered with the Canadian National Institute for the Blind (CNIB) in 1986 (Statistics Canada, 1990). This correlation of numbers suggests that the CNIB provides service to most eligible Canadians. In 1986, an individual had to be diagnosed as “legally blind” to qualify for membership with the CNIB. As of 2002, the CNIB also represents

individuals who have been classified as “low vision”, or those who have a best corrected visual acuity of less than 20/60 and better than 20/200 (CNIB Pamphlets and Publications, 2002).

The Canadian blind population is increasing. Between 1982 and 1996 the CNIB’s client base rose dramatically from 39,000 to 90,000 people. The increase was primarily fueled by the aging Canadian population. In 1997, 70% of all new clients were 70 years old or over (CNIB News and Media, 2002). In 2001 the CNIB’s clientele reached approximately 100,000 individuals and this number is expected to double by the year 2016 (CNIB Pamphlets and Publications, 2002). The CNIB reports an average of approximately 45 new clients every business day (CNIB News and Media, 2002).

2.1.2 SERVICES FOR BLIND ADULTS IN CANADA

The Canadian government is partnered with non-profit organizations in the delivery of services for blind Canadians. This arrangement ensures that each blind person has access to basic health and social services regardless of age, race, geographical location, or financial status (Magarrell, 1990). The Canadian government established the benchmark definition of blindness as a visual acuity of less than or equal to 20/200. Canadians whose vision is at or below 20/200 may be eligible for income tax breaks based on disability, provincially administered social welfare allowance for disabled people, Canadian Pension Plan for disabled people, and other services funded jointly by the federal and provincial governments (Magarrell, 1990).

Although Canada has legislation that addresses some of the needs of blind Canadians, there is still a need for government regulated policies that would enable blind people to participate more fully in society. For example, of relevance to the topics discussed in this thesis, there is a need for Canadian policy that would ensure the accessibility of menus in Canadian restaurants. In the United States the *Americans with Disabilities Act* (ADA) has established service guidelines for blind Americans when they eat in some restaurants (Americans with Disabilities Act, 2001). In a publication prepared by the United States Department of Justice and entitled, “Guide for places of

lodging: Serving guests who are blind or who have low vision”, places of lodging are informed of their ADA obligations.

Places of lodging, like other places of public accommodation, must provide their services to the public in a way that gives people who are blind or who have low vision a full and equal opportunity to enjoy the services that are provided to others (Americans with Disabilities Act, 2001, pg. 1)

One of the sections within the publication addresses the possible service requirements of blind guests when they visit restaurants or lounges located within hotels. The service requirements and guidelines covered within this section include, seating arrangements (for optimal lighting and access to buffet tables), assistance identifying and serving food at buffets, large print or braille menus, assistance during a meal (eg. explanation of orientation of table wear or food on the plate), and paying the bill (eg. guidelines for handling currency and signing sales slips) (Americans with Disabilities Act, 2001). The need for similar legislation in Canada is obvious when one imagines the number of obstacles a blind customer might encounter when his/her needs are not understood or accommodated.

While the government enacts specific legislation and provides some funding for services for blind people, non-profit organizations deliver most of the support services for blind Canadians. The majority of rehabilitation services are provided by the Canadian National Institute for the Blind (CNIB), a non-profit organization founded in 1918 for war veterans. The CNIB raises necessary revenues from the government, the United Way, and its own fund raising campaigns. Since the CNIB is one organization with over 55 offices nation-wide, service is fairly consistent throughout the country (Magarrell, 1990). The CNIB’s commitment to improving the lives of blind Canadians is vividly displayed in the provision of its seven “core services”. The services are:

1. *Rehabilitation* - includes teaching braille which is viewed as an essential skill for literacy among blind people.
2. *Orientation and mobility* (O&M) - maintains independence.

3. *Counseling* - as it relates to vision loss.
4. *Vision rehabilitation* - working closely with ophthalmologists and optometrists to help clients maximize efficient utilization of remaining vision. Low vision equipment to loan and home visits are part of this service.
5. *Employment and vocational services* - are offered to clients aged 18 to 65.
6. *Technology* - clients are oriented to current technologies which are often specifically adapted for blind people.
7. *CNIB library* - where books and magazines are produced on tape and in braille in both English and French. The books and tapes are distributed nation-wide (Magarrell, 1990).

While this wide range of Canadian services has a tremendous positive impact on the lives of many blind people, the blind community as a whole still experiences educational, employment, and economic inequities (Statistics Canada, 1990). In addition, there are no core services which specifically address possible nutrition needs of the blind community.

2.1.3 SOCIO-ECONOMIC CHARACTERISTICS

There are many ways to measure the impact of blindness or visual impairment on the lives of individuals. Level of education, employment, and income are three socio-economic variables which are closely linked to the health and quality of life of individuals and groups of people (Alleyne, 2001; Burstrom, Johannesson, and Diderichsen, 2001). The Health and Activity Limitations Survey conducted by Statistics Canada in 1986 compared the education, employment, and income of the visually impaired population (VIP) and the non-disabled population (NDP) (Statistics Canada, 1990). This comparison was a means of assessing the socio-economic impact of visual impairment and blindness.

2.1.3.1 Level of Education

Level of education is one of the basic socio-economic indicators that influences employment and income. Data from 1986 indicates that there are dramatic differences between the levels of education attained by the VIP and the NDP (Statistics Canada, 1990). A comparison of the populations' level of education is presented in Table 2.1. In 1985, non-disabled Canadians tended to be more educated than visually impaired Canadians.

Table 2.1 *Highest level of education of non-disabled and visually impaired Canadians of all ages in the year 1985*

Level of Education	% Non-Disabled Population	% Visually Impaired Population
0-8 years	14.0	47.3
Secondary, completed some or all of the secondary schooling (9-12)	43.6	32.0
Some post-secondary, attended university or college but did not complete a degree, certificate, or diploma	18.7	10.1
Post-secondary certificate or diploma, completed	13.5	6.7
University degree, completed	10.2	3.9

(Statistics Canada, 1990)

In this survey the vast majority of the 65 and over age group only completed from zero to eight years of primary education. A greater percentage of the VIP was found in the 65 and over age group as compared to the NDP (Statistics Canada, 1990). This over-representation of seniors in the VIP may, in part, explain the percentage spread of the VIP and NDP by highest level of education.

When a comparison of the level of education was made between the NDP and VIP aged 30 to 64 years, the deference between the populations was not as dramatic, but existed (Statistics Canada, 1990). Thus, it can be said that visual impairment impedes educational attainment. Table 2.2 illustrates this finding.

Table 2.2 *Highest level of education of non-disabled and visually impaired Canadians aged 30 to 64 years in the year 1985*

Level of Education	% Non-Disabled Population	% Visually Impaired Population
0 to 8 years	16.2	37.0
Secondary	38.3	33.6
Some post-secondary	17.9	13.9
Certificate/diploma	14.7	8.3
University degree	12.9	7.1

(Statistics Canada, 1990)

2.1.3.2 Income

Given the relationships between education, employment, and income, it is not surprising therefore, that Statistics Canada found that the VIP had a higher concentration of low incomes than the NDP (Statistics Canada, 1990). Although this trend was found to exist in all three age categories (15 to 29, 30 to 64, and 65 and over), only the results from the 30 to 64 age category will be presented in Table 2.3. In this way, skewed results from an over-representation of seniors will be avoided, and the majority of working age adults will be represented.

Table 2.3 *The incomes of non-disabled and visually impaired Canadians aged 30 to 64 years in the year 1985*

Income Range	% Non-Disabled Population	% Visually Impaired Population
\$0	10.1	16.3
\$1 to \$10,000	22.4	47.3
\$10,000 to \$20,000	21.6	18.1
\$20,000 to \$30,000	19.9	11.4
\$30,000 to \$40,000	13.4	4.6
over \$40,000	12.2	2.0

(Statistics Canada, 1990)

A comparison of income by level of education reinforced the notion that visual impairment adversely affects earning potential (Statistics Canada, 1990). The data presented in the HALS survey indicated that increased education did influence the earning potential of the VIP and NDP, but the distribution of income by education still left the VIP in an inferior position that was, in fact, magnified with education (Statistics Canada, 1990). For example, among university graduates, the non-disabled population had the largest percentage of its population (28.3%) in the highest income category. The largest percentage of the visually impaired population (28.0%) was only located in the second highest income category. The NDP exceeded the VIP in the highest income category by ten percent. This ten percent gap in the upper income categories was the largest percentage spread across all education levels (Statistics Canada, 1990). Taken together, these findings suggest that the VIP is underemployed and/or underpaid.

2.1.3.3 Employment

High rates of unemployment among blind and visually impaired people have been reported by many developed nations around the world (CNIB News and Media, 2002; Kirchner, Schmeidler,

Todorov, 1999; RNIB Campaign Reports, 2001). Labour force participation data presented by Statistics Canada indicate that Canada is no exception. The HALS survey examined the differences in employment, unemployment, and labour force participation between the VIP and NDP of working age (Statistics Canada, 1990). These data are presented in Table 2.4.

Table 2.4 *The labour force activity of non-disabled and visually impaired Canadians aged 15 to 64 years in the year 1985*

Labour Force Activity	% Non-Disabled Population	% Visually Impaired Population
Employed	69.9	26.5
Unemployed, looking for or planning to look for work	6.7	8.1
Not in labour force, not looking or planning to look for work	22.1	64.9

(Statistics Canada, 1990)

Level of education, income, and employment are factors which have been associated with specific food behaviours. The Canadian blind population may share some common food behaviours as a result of their distinct education, income, and employment profile.

2.1.4 PERCEPTIONS OF BLINDNESS

This section will diverge from the previous statistical and descriptive presentation of information to investigate relevant materials within the realm of social theory, a field which examines the interactions of people within the context of society. In recent times, the broad theme of “accepting and celebrating difference” has been adopted by feminist theory, queer theory, and theories pertaining to ethnic minorities. The field of disability studies is no exception to this trend. One of the most powerful opponents to the acceptance of difference is dominant society’s current

inability to perceive that it (society) does not occur “naturally”, but is created by people. As a result, mainstream society perceives itself as “natural” and “normal”, thus experiencing anything other than itself as “unnatural” or “abnormal”. Difference therefore, is not seen as an “other” (an equal), but is seen as deviation. This section examines the reasoning behind the need to accept difference, as well as some of the specific factors which thwart this acceptance.

Within the field of Disability Studies, disability is beginning to be perceived of as a category of social identity, similar to the way race, gender, ethnicity, and profession are understood as categories of social identity. As expressed by one blind academic, disability is an “essentializing feature of our [disabled people’s] identity” (Michalko, 2002, pg. 153). In other words, disability is seen as relating to the real nature or essence of a person, a necessary ingredient in the sum of the person’s intrinsic properties without which the person would cease to be what it is. While academics and some people within the disability movement have adopted this new way of seeing disability, contemporary society, including most disabled people, still view disability as a strictly physical and individual condition. Michalko (2002) and Titchkosky (2001) explain that this contemporary view of disability as an individual medical condition, is housed within the “people-first” ideology, Canada’s current and official understanding of disability.

In his book entitled, *The Difference That Disability Makes*, Michalko (2002), who is blind, examines why disability is seen as “a problem by itself, isolated from the ways in which societies institutionalize and organize the lives of their members” (Michalko, 2002, pg. 18). At the heart of Michalko’s response to this inquiry is his assertion that there is no place for disability in contemporary society because no value has been placed on the “difference” of disability.

Traditionally, disability has been understood as a phenomenon that has a tremendous effect (usually a negative one) on a person’s life but is not related to identity, to whom a person essentially is. Thus, disability is interpreted as happenstance and disabled persons are viewed, and view themselves, as persons with disabilities or persons first (Michalko, 2002, pg. 5).

Although the use of “person-first” language (eg. person who is blind) was intended to emphasize the personhood of disabled people and replace objectifying terms like “the blind” and “the crippled” (Titchkosky, 2001), Michalko argues that, “[This] contemporary requirement of needing to erase disability will, ironically, result in the continuation of exclusionary practices towards disability” (Michalko, 2002, pg. 153). While the intent of the person-first ideology and language is to promote equal opportunity and treatment based on the common denominator of personhood, Michalko believes that the ideology is flawed because it continues to promote the myth of the “normal and natural body”. He explains,

[The “person first”] foundation finds it impossible to imagine disability as Other to able-bodiedness. To do so would be to threaten the essence of the able body as the essentially “natural and normal body”. In the transformation of otherness into sameness, disability is given unessential and conditional status. People have a disability, they are not disability. This unimaginative relation to disability generates the contemporary understanding of it as “lack” or as “something missing”....People who are blind are sighted people with the sight missing. Their status as people is marked by the signifier of conditionality - person with a disability. They are granted personhood on the condition that they will act as if they were a “normal person with a _____” (Michalko, 2002, pg. 63).

The people-first perspective “silences the voice of disability” (Michalko, 2002, pg. 69) and reduces disability to an “asocial” and “apolitical...troublesome condition arbitrarily attached to some people, a condition (unlike gender, race, or ethnicity) that is only significant as a remedial or managerial issue” (Titchkosky, 2001, pg. 2). Within the people-first framework,

...the difference between disabled and non-disabled people lies in the opportunity to participate in society. If society organizes itself so as to provide this opportunity for both, the difference is removed (Michalko, 2002, pg. 81).

In response to this people-first assessment of the “problem” and its corresponding solution, Michalko states,

Necessary as it is to “settle accounts” with society (...through the technical removal of obstacles and changes of attitudes towards disabled people...), it is also

necessary to “settle accounts” with difference (Michalko, 2002, pg. 81).

This discussion around the varying “perceptions of disability” has implications for the ways in which the participants in this study may experience their disability (blindness) and perceive its impact on their lives. The standard of “normalcy” and the requirement to “fit in”, as perpetuated by the people-first ideology, may make it difficult or uncomfortable for the participants to examine, or be examined as to how their blindness might make their experiences of food and patterns of eating “different” from those of sighted people.

2.2 Food and Nutrition

In his book *The Mystery Of The Eye And The Shadow Of Blindness*, Michalko (1998) asserts that blindness always appears through narrative in social life and should be examined as such. Thus, it follows that blind people’s experience of food and eating should be examined as it appears through narrative in social life. The phrase, “narrative in social life” refers to an account of people’s interactions with one another as shaped and influenced by “society”, with the understanding that society does not occur in nature, but is created and institutionalized by people. Before exploring this narrative however, a context of food decision making, and other factors that impact people’s nutritional health must exist. This section examines the process of food decision making, the impact of personal traits such as age, gender, education, and marital status on food behaviour, and the social organization of nutritional inequities.

2.2.1 FOOD DECISION MAKING

In developed nations around the world, consumers have an abundance of foods to choose from when they shop for groceries or go out to eat. Many factors culminate to actualize the choice of a particular food. A keen understanding of the food decision making process allows nutrition professionals to be more effective promoters of health.

2.2.1.1 Food Values

Researchers in the field of food decision making have identified a series of values which impact people's food choices. The most commonly recognized "food values" are taste, cost, nutrition/health, time/convenience (Connors, Bisogni, Sobal, and Devine, 2001; Furst, Connors, Bisogni, Sobal, and Winter Falk, 1996; Glanz, Basil, Maibach, Goldberg, and Snyder, 1998), relationship management (Connors et al, 2001; Furst et al, 1996), weight control (Glanz et al, 1998), and quality (Furst et al, 1996).

A 1998 study examined the relationship between the participants' self-reported importance of certain food values and their actual food behaviour. When the impact of demographics and type of lifestyle were statistically controlled, self-reported food values appeared as predictors of food behaviour (Glanz et al, 1998). For example, the self-reported values of nutrition and weight control were inversely related to fast food consumption while convenience was positively related. Weight control had an inverse relationship with cheese consumption while taste, nutrition, and weight control were predictors of fruit and vegetable consumption (Glanz et al, 1998).

2.2.1.2 Food Value Management

Food values like taste, cost, nutrition, and convenience impact food choices. However, the processes by which these values are operationalized also influence an individual's final food choice (Connors et al, 2001; Winter Falk, Sobal, Bisogni, Connors, Devine, 2001). In a qualitative analysis of interviews with a diverse population of 86 adults, Connors et al (2001) identified three processes by which food values are managed. Firstly, foods and food situations are categorized according to the individual's food values. For example, foods or situations are categorized by the individual as healthy or unhealthy, tasty or unpleasant tasting, costly or affordable. Secondly, conflicting values such as cost versus convenience, or nutrition versus taste, are prioritized according to the situation and the feelings of the individual at the time of the decision. Lastly, when values are not prioritized they are balanced. For example, people may eat a meal consisting of some healthy and some

unhealthy foods, or eat economically during the week but splurge on the weekend (Connors et al, 2001).

Examples of food classification and food value prioritization are found in other food decision making literature (Furst et al, 1996; Glanz et al, 1998; Winter Falk et al, 2001). In a qualitative analysis of interviews with 79 people, Winter Falk et al (2001) sought to understand how people conceptualize and manage *healthy* eating. The researchers determined that part of the management process involved the categorization of foods based on values that made up the individual's definition of "healthy" eating. For example, people who valued low fat and thus defined healthful eating as a low fat diet, categorized healthy and unhealthy foods according to their fat content (fat free or fatty). Similarly, people who valued "natural" food and thus defined healthful eating as a diet containing "natural" food, categorized healthy and unhealthy foods as organic or inorganic, and unprocessed or processed (Winter Falk et al, 2001).

Furst et al (1996) developed a conceptual model of the food decision making process by qualitatively analyzing interviews with a diverse sample of 29 grocery shoppers. "Value negotiation" was identified as a step in the decision making process. The food values being negotiated included sensory perceptions (taste), monetary considerations (cost), convenience, health and nutrition, relationship management, and quality (Furst et al, 1996). In a national survey of over 2,900 American adults, the respondents' food values were prioritized from most to least important. The five most commonly mentioned values that influenced individual food choices were taste, followed by cost, nutrition, convenience, and lastly, weight control (Glanz et al, 1998).

Food value management strategies other than the three identified by Connors et al (2001) (categorization, prioritization, and balance) appeared elsewhere in the literature. Winter Falk et al (2001) identified a specific set of strategies by which people manage the particular value of "healthy" eating. The "action plans" used by the participants to implement the value of healthy eating included *substitution* of healthy for unhealthy foods, *avoidance* of unhealthy food, *limitation* of unhealthy

food, *preparation* of healthy food, *addition* of healthy foods, *comparison* of selection to find the healthiest food, *location* in specific environments, and *compensation* for unhealthy foods under certain circumstances.

2.2.1.3 Other Influences on Food Values, Food Value Management, and Food Choices

As discussed in the previous two sections, values such as taste, cost, and nutrition, as well as value management strategies such as categorizing foods, impact people's food choices. Another crucial influence in the food decision making process is the impact of the individual's personal traits, past experiences, and current environment (Devine, Connors, Bosogni, and Sobal, 1998; Furst et al, 1996; Glanz et al, 1998; Winter Falk et al, 2001). Personal, experiential, and environmental factors affect an individual's food values (Furst et al, 1996; Glanz et al, 1998; Winter Falk et al, 2001), food value management (Furst et al, 1996), and ultimate food choice (Furst et al, 1996; Glanz et al, 1998; Winter Falk et al, 2001).

Personal Influences

The personal influences identified in the literature as impacting an individual's food choices include: demographics (Furst et al, 1996; Glanz et al, 1998), resources (Devine et al, 1998; Furst et al, 1996; Winter Falk et al, 2001), physiological and psychological traits which include physical health and well being (Devine et al, 1998; Furst et al, 1996; Winter Falk et al, 2001), roles and responsibilities (Devine et al, 1998; Furst et al, 1996), and ideals (Furst et al, 1996).

The differences in food consumption patterns between various groups of people distinguished by personal traits (eg. age, gender, income, partner status), will be examined in more detail in section 2.2.2. However, one study will be examined here as it clearly illustrates the connection between personal influences, food values, food value management, and ultimate food choice. In a qualitative study that examined how people manage healthy eating, seven distinct definitions of healthy eating emerged from interviews with 79 people. "Healthy eating" was defined as balance, low fat, weight

control, nutrient balance, natural, disease management, and disease prevention. The researchers stated that “the predominant and secondary themes that a person included in his or her healthy eating definition reflected [his or her] values and beliefs” (Winter Falk et al, 2001, pg. 430). Various personal characteristics were mentioned by the participants and were sorted into groups. People who mentioned family medical history as an important factor in their current eating habits, were likely to define healthy eating in terms of disease prevention. Similarly, people who described their current physical status as a factor that impacted their food choices, often defined healthy eating in terms of weight control or disease management (Winter Falk et al, 2001).

Tangible resources such as money, equipment, and space as well as intangible resources such as skills, information/knowledge, and support are among the personal influences of food decision making (Furst et al, 1996). Research conducted by Winter Falk et al (2001) also demonstrated the connection between the people’s values and the health information resources they accessed. Participants who defined healthy eating as weight control, balance, disease management, and nutrient balance tended to access formal health information channels such as health professionals, health and nutrition classes, the media, and reading materials. Participants whose values were reflected in the healthy eating definitions of disease prevention, low fat, and natural, tended to use informal information channels such as family and friends, and other non-experts (grocery store promotions, herbal consultants, and food labels). The researchers suggested that “people may avoid confusion by selecting food and health information sources that they have found to reliably meet the needs related to their specific definition of healthy eating” (Winter Falk et al, 2001, pg. 436).

Experiential and Environmental Influences

Past experiences and current environments also impact people’s food values, food value management, and food choices (Connors et al, 2001; Devine et al, 1998; Furst et al, 1996; Winter Falk et al, 2001). In a qualitative analysis of food choices, Devine et al (1998) examined the impact of life-course influences on fruit and vegetable trajectories. The word trajectory referred to “a

person's persistent thoughts, feelings, strategies, and actions as he or she approached food choices"(Devine et al, 1998, pg. 361). "Food upbringing" or food experiences early in life were mentioned as major influences on people's current fruit and vegetable trajectories. For example, two of the most prominent, positive experiences with fruit and vegetables were growing up on a farm or having a garden (Devine et al, 1998). In their conceptual model of the food decision making process, Furst et al (1996) showed that ideas and information acquired through life experiences, as well as the environment or "physical surroundings and social climate of the food choice setting" (Furst et al, 1996, pg. 250) impact food values, food value management, and ultimate food choices. Environment and location are also mentioned by other researchers as impacting the food decision making process (Connor et al, 2001; Devine et al, 1998; Winter Falk et al, 2001).

2.2.2 THE IMPACT OF PERSONAL TRAITS ON FOOD BEHAVIOUR

The impact of age, gender, marital status, level of education, and income on the food choices of individuals is evidenced in the food behaviour of groups of people distinguished by these variables.

2.2.2.1 Age

In a 1998 survey of over 2,900 American adults, it was determined that older people ranked nutrition and weight control as more important variables in food decision making than younger people. Conversely, younger Americans identified cost and convenience as being more important to them than older participants (Glanz et al, 1998). The same study found that older people were more likely than younger people to eat fruit and vegetables, while younger people ate more fast food, cheese, and breakfast cereal than older people (Glanz et al, 1998).

2.2.2.2 Gender

Men and women exhibit differences in their food behaviour. In a 1998 Finnish study it was determined that women's food behaviour was more in accordance with dietary guidelines than that

of men (Roos, Lahelma, Virtanen, Ppattala, Pietinen, 1998). An American study revealed that taste, nutrition, cost, and weight control were factors valued more highly by women than men in terms of their impact on food choices (Glanz et al, 1998), and in Canada women are much more likely to choose or avoid food to improve or maintain their health (Statistics Canada, 2001). Women's concerns about health and weight control were also reflected in a study conducted by Oaks and Slotterback (2001) which showed that women viewed low-nutrient foods as more healthy than high-nutrient foods. When compared to men, women emphasized fat content over other nutrients when deciding which foods were healthy. It is not surprising therefore, that men have been shown to eat more fast food than women (Glanz et al, 1998). In a nationally representative sample of Canadian households it was found that females are most often responsible for grocery shopping and deciding upon and preparing the evening meal (Food and Consumer Products Manufacturers of Canada, 1997).

2.2.2.3 *Partner Status*

The literature identifies certain differences in the food behaviour of single versus partnered, cohabiting couples. In an American Food Consumption Survey single women and men reported fewer intakes meeting the RDA for fifteen selected nutrients, as well as significantly lower energy intakes than their counterparts in multi-person households (Gerrior, Guthrie, Fox, Lutz, Keane, Basiotis, 1995). In a study that examined the changes in food choices and eating habits during the transition from single to married/cohabiting, the most significant changes occurred around the meaning and importance of eating together and having a "proper" evening meal. This meant that more thought, planning, and effort had to go into the meal and there were more items on the plate (Kemmer, Anderson, and Marshall, 1998). Males in the Kemmer study reported eating healthier as a result of marriage/cohabitation, whereas females reported an increase in alcohol consumption. In Canada, research shows that young couples appear to derive the most pleasure from cooking and eating, while young singles derive the least (Food and Consumer Products Manufacturers of Canada, 1997). Other studies have found that those living alone eat less fruit and vegetables (Slesinger,

McDivitt, and O'Donnell, 1980), while marital status is associated with dietary behaviour that is more in accordance with dietary guidelines (Roos et al, 1998).

2.2.2.4 *Socio-Economic Status*

Socio-economic status is associated with certain food behaviours. There was a positive relationship between level of education and intakes of milk and fruit and vegetables in a representative sample of individuals living in an urban community in the U.S. (Slesinger et al, 1980). Another study revealed that people with lower education have less healthful eating habits, report more barriers to eating healthy, and resist changes in diet more often than those with higher education (Lappalainen, Koikkalainen, Julkunen, Saarinen, and Mykkanen, 1998). In Australia, a study conducted with eighteen year-olds found that female participants of higher socio-economic status (SES) consumed more fibre and vitamin C and less fat than women of lower SES (Milligan, Burke, and Beilin, 1998). When deciding which foods to buy, cost and convenience were more important to people with lower incomes (Glanz et al, 1998). The same study determined that people with lower incomes consumed more fast food than people with higher incomes. Also, a Finnish study revealed that both level of education and employment status were positively associated with food behaviour that was in accordance with Finnish dietary guidelines (Roos et al, 1998).

In light of such information, the age, gender, marital status, and socio-economic status of the research participants should be considered when interpreting the results presented in Chapter Four.

2.2.3 THE SOCIAL ORGANIZATION OF NUTRITIONAL INEQUITIES

In 1995 Travers conducted an institutional ethnography that studied the social organization of nutritional inequities among socially/economically disadvantaged women living in Nova Scotia. The project revealed that nutritional inequities were imbedded within social constructs such as class, commerce, policy, and the fact that “public and professional discourses organizing nutritional inequities were informed by individualistic ideology” (Travers, 1996). Class, commerce, policy, and

discourse were deemed “social constructs” because “they are not naturally occurring phenomenon but are constructed by people in their relations with one another.” (pg. 547)

Travers (1996) explained that within the individualistic ideology “poverty results from the individual’s failure to seize the opportunity or to work sufficiently hard within the current social structure: it is not a reflection of inadequacies and inequities within that social order” (pg. 551). This ideology “provides a rationale for professionals to continue to practice in a manner which attempts to change the “deficiencies” of the individual while ignoring the social context within which these individuals work” (pg. 551). Travers argued that as long as this continues to happen, it is likely that professionals will blame the “victims” of nutritional inequity, and the individual who fails to live up to professionals’ expectations will feel guilty.

No similar study has been conducted with blind individuals, although disabled people and specifically blind people, have been identified as both socially and economically disadvantaged (Bryans, 1996; Statistics Canada, 1990). As previously described in *Section 2.1.4 Perceptions of Blindness*, people-first phraseology, the language that frames North American society’s understanding of disability, is also informed by an individualistic ideology (Titchkosky, 2001). In a manner similar to that described by Travers (1996), a society that views disability as an individual medical condition in need of management and remedy, will expect disabled people to manage their own “deficiencies” while overlooking the social contexts within which disabled people live. As a result, disabled people who do not live up to expectations generated by people-first ideology, may experience feelings of failure and guilt.

At this point it is necessary to expand on the concept of the “social organization of inequity” as it relates to blindness and other physical disabilities. As described previously, class, commerce, policy, and discourse are “social constructs” because they are “constructed by people in their relations with one another.” (Travers, 1996, pg. 547). In many cases social constructs lead to the creation of physical products and environments that reflect the original social construct. For

example, in a society largely populated by fully sighted people, many socially constructed interactions assume sightedness. Using a printed menu to choose and order a restaurant meal for example, is a socially constructed way of interacting that assumes sightedness and results in a specific physical product, the printed menu which is of course, inaccessible to a blind person. In this way, inequities experienced by disabled people may be socially constructed and/or physically constructed as a result of governing social constructs.

It is possible that blind people are at risk of experiencing nutritional inequities as a result of larger social and physical inequities, and these inequities may be overlooked when disability is viewed from an individualistic ideology.

2.3 Food Literature in the Field of Blindness

A thorough review of the literature located only several current pieces of literature in the area of food and eating in the lives of blind people. For this reason, some of the literature which will be cited in this section is up to forty years old or only indirectly related to blindness. Relevant material in the areas of food preparation skills, body image, and portion size will be discussed.

2.3.1 FOOD PREPARATION SKILLS

During the 1970's and early 1980's a small collection of adaptive recipe books and kitchen technique manuals were published for people who are blind. Suggested recipes are dated and include food items such as: sausage, bacon, fried eggs, pigs in a blanket, coleslaw, creamed onions, meatloaf, and hash brown potatoes (Bell, 1976; Greater Pittsburgh Guild for the Blind, 1977; Rogers, 1984). It does not appear that today's vast selection of interesting and health conscious recipes are widely available in accessible formats for people who are blind.

The kitchen technique manuals indicate that a person who is blind has to learn specific techniques to accomplish even the simplest of food related tasks. Special skills are needed to pour,

measure, spread, use appliances, cut, serve, and eat one's food (Read, 1981). These skills must be carefully explained and demonstrated by an instructing individual because the person who is blind can not pick up the techniques by imitating others. It is also suggested that blind people need to spend a generous amount of time and effort to learn and master these tasks (Mangold, 1980; Yeadon and Newman, 1980). In a study that determined the factors which are perceived to be important barriers to healthy eating, "lack of time" was the most frequently mentioned reason for not eating a healthy diet (Lappalainen, Saba, Holm, Mykkanen, and Gibney, 1997). Taken collectively, these data suggest that the extra time and effort it may take for a blind person to learn and practice good eating habits may be a barrier to healthy eating for many people in this population.

There is evidence of home economist involvement in the "teaching of blind homemakers" in 1970 (Li Wang and Bricker, 1970), and in 1985 dietitians in Maryland reported on "teaching visually impaired diabetics" (Garrett, 1985). Although scant references suggest the need for blind people to acquire special food and eating related skills, no Canadian data exist on the extent to which the blind community is being taught and effectively using these skills. Furthermore, there is no evidence of an evaluation of the barriers to food and eating as reported by blind people themselves.

2.3.2 BODY IMAGE

A small body of knowledge exists on the area of anorexia nervosa among individuals who are blind. In 1986 only four cases of blind people with anorexia nervosa had been reported in the literature (Vandereycken, 1986). A more recent survey determined that when compared to sighted women, blind women were more satisfied with their bodies than sighted women, and had more positive eating attitudes. The authors of the study postulated that visual reinforcement plays a large role in the development of anorexia nervosa as well as body image (Baker, Sivyer, and Towell, 1998). A psychology study that investigated human figure representation by blind children found that when compared to their sighted cohort, blind children between the ages of seven and fourteen were unable to accurately construct a plasticine model of the human body (Kinsbourne and Lempert,

1990). Self perceived body image is known to impact the food choices and eating patterns of individuals in both positive and negative ways. Although limited, these data suggest that the absence of vision among blind individuals may result in body image perceptions that are different from their sighted cohort. It is unknown how these differences in perception influence food behaviour.

2.3.3 PORTION SIZE

Another area where perception may play a unique role in the food behaviour of blind individuals, is in the act of determining portion sizes. A research project showed that there is a discrepancy between portion sizes perceived as “medium” and the United States Department of Agriculture’s (USDA) definition. The authors explain that in order to effectively follow dietary guidelines, individuals must know the portion sizes of the foods they are consuming (Young and Nestle, 1998). There is no evidence of research that investigates the perception of portion size among people who are blind. The possibility of an altered perception of portion size has implications for the effective use of dietary guidelines and subsequent health outcomes among the blind population. Moreover, the experience of low vision or blindness has further implications for health campaigns which assume its target population can read print.

2.4 Summary of the Literature Review

In summary, researchers have identified many factors which influence the food choices and eating patterns of individuals. Age, gender, marital status, level of education, employment status, income, social constructs (such as class, commerce, policy, and discourse), past experiences, roles and responsibilities, the ability to prepare a variety of foods and meals, the ability to access nutrition information, the social role of food, and an individual’s attitude towards body weight and shape are just some of the influencing factors identified in the literature (Devine et al, 1998; Furst et al, 1996; Gerrior et al, 1995; Glanz et al, 1998; Kemmer et al, 1998; Lappalainen et al, 1998; Milligan et al, 1998; Oaks and Slotterback, 2000; Roos et al, 1998; Slesinger et al, 1980; Travers, 1996; Winter

Falk et al, 2001). Understanding these factors and their impact on the food patterns of individuals allows dietitians and nutrition educators to do their job more effectively. Research has indicated that when viewed as a group, blind people share some common characteristics and experiences. Furthermore, when viewed against the backdrop of society at large, these characteristics and experiences are distinctly different from the general population. Compared to its sighted counterpart, the blind community has divergent patterns of education, level of income, employment, participation in sports and leisure activities (Statistics Canada, 1990), homemaking (Li Wang and Bricker, 1970), social development (Kent, 1983; Mangold and Mangold, 1983), self perception (Baker et al, 1998), and political and cultural identity (Titchkosky, 2001). It thus is likely that blind people may present a series of unique food experiences and eating patterns which are both directly and indirectly related to their blindness. In order to effectively meet the needs of this population, it is imperative that nutrition and blindness professionals recognize the food experiences and eating patterns of blind people as well as the factors that contribute to these experiences and behaviours. An appropriate and effective way to begin investigation in this fusion of two fields, is through examination of food in the lives of blind people as it appears through narrative in social life.

CHAPTER 3 STUDY DESIGN AND METHODS

3.1 Qualitative Research Design

A qualitative paradigm and methods were used to examine the food experiences and eating behaviour of nine blind and severely visually impaired individuals residing in the Lower Mainland of British Columbia. The essence of qualitative research is to view events through the perspective of the people who are being studied with an emphasis on process. The investigation and testing of theories may occur simultaneously and the relationship between theory and research is emergent rather than confirming. Qualitative research helps us to understand what lies behind a phenomenon about which little is known and tries to show that a particular hypothesis is plausible (Bouma and Atkinson, 1995, p.207-13).

These tenets of qualitative research informed and guided the design and methods used in this research project. An attempt was made to view the experience of food and eating from the perspective of nine blind people. The identification of “processes” and the factors that contributed to the participants’ food experiences was as important as the identification of the food experiences themselves. Due to the limited research conducted in this area, no theories about the food experiences of blind people are present in the literature. Therefore, as a starting point for the development of knowledge in this area, it was appropriate to use techniques that allowed investigation and theory building to inform each other with the eventual emergence of a conceptual framework. This study did not confirm a hypothesis but rather, it identified the possible existence of phenomena and provided some understanding as to what factors contributed to the creation of these phenomena.

Rubin and Rubin (1995) identify two broad categories of qualitative interviews. Cultural interviews “focus on the norms, values, understandings, and taken-for-granted rules or behavior of a group” (pg. 28) while topical interviews “are more narrowly focused on a particular event or

process, and are concerned with what happened, when, and why” (pg. 28). The design of this research project integrated both cultural and topical approaches although the topical interviewing approach was dominant. During the interviews I tended to seek “explanations of events and descriptions of processes” (pg. 29), a topical interviewing technique. The open-ended questions such as “Describe the role of food in your life”, and the deeper probing of issues unearthed during topical questioning did however, generate substantial cultural data. In the words of Rubin and Rubin (1985), I “learn[ed] about the culture by eliciting examples and stories that reveal[ed] how people [understood] their world” (pg. 28).

The research objectives were to view the food experiences and eating patterns of blind people from their perspective, identify factors which influenced these experiences and patterns, and detect the possible existence of some unmet nutrition needs of the participants. The research objectives were facilitated by underlying questions concerned with both specific topics and general culture. The underlying questions were:

- Do blind individuals have collective/common food experiences and eating patterns?
- If so, how can these shared regularities be classified?
- What are the factors that influence the occurrence of potential “shared regularities”?
- How are the influencing factors related to the shared regularities?
- How do the participants view their experiences of food and eating?
- Do any of the shared patterns or experiences suggest the need for intervention from nutrition and blindness professionals?

3.2 Methods

The two main methodological phases of data collection and data analysis will be described in separate sections although they often occurred simultaneously. The methods used throughout this research project to enhance rigor will also be described.

3.2.1 DATA COLLECTION

3.2.1.1 *Sample Size*

Two techniques were used to determine the final sample size of nine participants. Initially, other qualitative studies with designs similar to this study were used as a guide to determine approximate sample size (Chapman and Maclean, 1993, Travers, 1996). The sample size determined by this method was projected to be in the range of 8 to 14 participants. The second technique used to discern sample size was the goal of theoretical saturation, whereby further investigation would reveal no new information (Patton, 1990, p. 185-186). After interviewing nine participants the researcher was able to decipher many patterns and shared experiences from the transcribed interviews. After consultation with the thesis supervisor, it was decided that nine was a sufficient and appropriate number of participants to achieve the goals of this research project.

3.2.1.2 *Inclusion/Exclusion Criteria*

Inclusion criteria specified that the participants must reside in the Lower Mainland of British Columbia, be severely visually impaired or blind since the age of five years or younger, be between the ages of 25 and 50, and report themselves as healthy at the time of recruitment. The location of the interviews had to be accessible by public transit to both the visually impaired researcher and participants. In addition, to obtain relative continuity of experience, it was important that the participants live in the same geographical area. For these reasons, the participants were all residents of the Lower Mainland of British Columbia. The term "severely visually impaired" included those

who had the ability to recognize the shape of a hand, visual acuity up to 20/600, and/or a visual field of less than five degrees. Visual acuity was self reported. Participants were blind since the age of five years or earlier because basic feeding and simple food preparation skills are learned early in life, and in the case of a sighted child, are very integrated with the use of vision. An individual who has had full vision to assist them in the development of eating behaviours would add an additional and potentially complicating factor to the data being collected and the relationships being drawn. Although the majority of visually impaired people in Canada are over the age of sixty (CNIB News and Media, 2002), it is understood that the elderly experience a unique set of barriers to obtaining, preparing, and consuming food (Wolfe, Olson, Kendell, and Frongillo, 1996). To eliminate confusion between patterns that emerge as a result of blindness and those that are related to old age, participants were not drawn from the elderly population. The lower age limit of 25 was chosen to encourage investigation of people who had fairly well established eating patterns of their own. Participants had to define themselves as "healthy" (a general state of well being and the absence of any major diseases or health conditions) because the experience of disease or major health conditions would interfere with the validity of the connections being developed.

Exclusion criteria specified that the participants could not be visually impaired or blind as a result of poorly managed diabetes, or living at home with their parents or living in an institutional or group home setting. In addition, no more than three participants could be born prematurely. Poor regulation of both Type I and Type II diabetes can result in partial or complete vision loss. Management of diabetes necessitates dietary manipulation and monitoring. The food experiences and eating patterns identified by a blind diabetic may have developed as a result of their diabetes, and would therefore confound the identification of food experiences and patterns that are associated with blindness. People who had lost their vision as a result of the compounding effects of diabetes were not invited to participate in this project. People living with their parents or in institutional settings would not have developed their own eating patterns. Studying individuals in these settings would only reflect the choices and patterns of the family, institution, or group home in which the

individual lived. All nine participants were living alone, with a roommate, or with a partner. Although scientific and sociological literature does not document the relationship, professionals who work with blind people have made the observation that people who experienced vision loss as a result of a premature birth often have a very low interest in food and eating. These individuals are also often very tall and thin. Blindness professionals have speculated that the lengthy hospitalization that many children who are born prematurely experience, may impact the early developing relationship with food. The participation of many such individuals in this project would have potentially confused the connections being made between blindness and eating. For this reason, the number of prematurely born participants was limited to three.

3.2.1.3 Recruiting Participants

In an effort to recruit participants, I made contact with ten organizations of and for the blind. I employed several strategies for information dissemination once I had made initial contact with the organization. In several cases I asked the president of the organization to inform its members about the study. The president of the organization did this through a group e-mail, an announcement during an organizational meeting, or through selective word of mouth. In other instances, I made an appeal to organization members at one of their meetings, or networked on an individual level at one of their functions. Table 4.3 - Recruiting in section 4.1, can be viewed for a breakdown of the organizations contacted and the participants recruited. I screened potential participants over the phone to ensure that the inclusion/exclusion criteria would be met. If the potential participant met the criteria, I invited him/her to participate in the study and we arranged for the first interview. I encouraged the participants to tell other blind people they knew about the study and invite those people to phone me if they were interested in participating. I attempted to balance participant representation in terms of gender, age, level of education, employment, and partner status. I recruited and interviewed a total of nine participants between the dates of January 19, 2000 and December 19, 2000. Table 4.1 - Participant Profile in section 4.1, illustrates the sample characteristics. I ensured that a braille, audio taped, and large print copy of the Subject Consent

Form (Appendix A) was made available to the participants. The Subject Consent Form indicated that the participants would be interviewed three times and one of the interviews would occur in a group setting. However, due to the quantity and quality of information I obtained from the first round of interviews, my thesis supervisor and I decided that only one participant needed to be interviewed a second time. Such a change in the research method is considered appropriate within the emergent nature of qualitative research. All participants signed a regular sized print copy of the Subject Consent Form.

3.2.1.4 Interviews

I collected data from the participants during individual, semi structured interviews. I received three main forms of interview training. Firstly, I successfully completed respective graduate level courses in interview skills and ethnographic research strategies. Both courses provided me with numerous opportunities to interview others and respond to constructive criticism. Secondly, I used a preliminary interview guide to conduct a mock interview with a classmate. I received feedback from both the interviewee and the course instructor. Lastly, transcripts from interviews with the first three participants were reviewed by my thesis supervisor. I implemented the suggestions for improvement that were given by my thesis supervisor.

I interviewed seven of the participants in their homes. I interviewed the other two participants in quiet and private rooms at the Crane Resource Library at the University of British Columbia. Each interview lasted from 1.5 to 2 hours and was recorded onto audio cassettes.

I determined ahead of time the topics and issues that would be discussed during each interview. These topics and issues are outlined in the interview guide (Appendix B). However the exact wording and order of topics followed the natural progression of the conversation and differed during each interview (Patton, 1990). I used a combination of descriptive, structural, and contrast questioning to promote discussion in the areas of shopping, food preparation, meal patterns, restaurant use, health and nutrition, body weight and shape, and physical activity (Spradley, 1979).

As I analyzed the earlier interviews, I also adapted the research guide to address areas which emerged as pertinent. After each interview I completed a "Face Sheet" (Appendix C) whereby the participant answered specific questions about his/her address, level of education, visual acuity, height and weight, and any other information I regarded as salient.

At the time of recruitment, I told the participants that they might be interviewed twice. Only one participant underwent a second interview. I conducted the second interview for two reasons. The participant who I interviewed for the second time was also the person who I interviewed first. At the time of this first interview, both the participant and I were tense. As a result, information did not flow freely and I was not satisfied with the type and depth of information I obtained. The second reason for a repeat interview with this participant stemmed from the fact that she was very involved with and observant of the blind community in Vancouver. She was also pursuing a Masters Degree and was keenly interested in the culture of blindness. I conducted the repeat interview after the other eight participants had been interviewed and data analysis was already in progress. As a result, I was able to use the repeat interview to improve upon the quality of information obtained from the first interview with this participant, as well as use the interview as an opportunity to compare the preliminary findings of the research with the participant's knowledge and experience of blind culture.

3.2.2 DATA ANALYSIS

I produced a verbatim transcript of each interview. My data analysis followed steps similar to those described by Tesch (1990) as the type that "aims at the discovery of regularities" (Tesch, 1990, pg. 64). I examined transcripts for themes. The initial five themes I identified in the transcripts reflected the five areas of questions outlined in the interview guide. The initial five themes included meal patterns, foods consumed, preparing food, shopping for food, and health issues. My further examination of the topics discussed in the interviews generated a refined list of themes and included shopping, food preparation, meal patterns, restaurant use, nutrition and health, body weight and

satisfaction, and physical activity. I isolated and grouped all segments of texts pertaining to a particular theme. For example, in a particular transcript, I isolated and grouped all references related to “food preparation” with text segments on the same theme from all of the other transcripts. I then reviewed and summarized the text segments, organized by theme, by way of point-form notes in the right hand margin. The point-form notes identified the key information and concepts contained in the text segments. At this point, I further divided the seven broad themes into subcategories and sometimes even sub-subcategories as the data indicated. For example, I split “food preparation” into subcategories, one of which included “food preparation instruction received by the participant”. I broke this subcategory down further into “instruction at home, instruction at school” and so on as prompted by data in the text. All categories and subcategories were subject to change if data from subsequent interviews should necessitate. I then displayed the key information and concepts contained in the point-form notes in a chart format. Each participant appeared on the chart with a summary of his or her information that pertained to a particular category. I created a summary chart for each category. In this way, all the elements related to a particular category (eg. ordering food in a restaurant), could be easily compared between participants. I reviewed the charts pertaining to each category. I identified common experiences and patterns as well as differences between the participants within each category. I then cross-checked the experiences and patterns against the original transcripts to ensure that the context of the information had not been distorted during the categorizing and summarizing processes. I also investigated associations between categories. For example, I examined the association between the participants’ access to nutrition information and his or her conscious effort to eat or be more healthy.

3.2.3 ENHANCING RIGOR

Methods for ensuring the trustworthiness of qualitative research have been described by Lincoln and Guba (1986). These methods for enhancing rigor respond to the four principles of credibility, transferability, dependability, and confirmability (Lincoln and Guba, 1986). I established rapport, and used peer debriefing and member checks to ensure credibility; “thick descriptive data” to support

transferability; and “external audits” to establish the confirmability and dependability of the research.

I took the following steps to establish rapport: During the initial conversation with the participants I purposefully let the participants know that I too was visually impaired. Prior to commencing the first interview I also assured the participants that I was not there to judge them or their eating habits. I would often make a joke about my own sweet tooth. The refreshments I provided during the interview as a token of my appreciation, always consisted of foods which are often considered to be “junk food” (eg. pop, chips, cookies, and donuts). I specifically chose these types of refreshments to reinforce to the participants that I was not opposed to these types of food and would not respond negatively if they reported eating such items.

I used peer debriefing by seeking feedback from “disinterested professional peers” (Lincoln and Guba, 1986). Segments of interview transcripts were reviewed by other graduate students in the department of Human Nutrition. My interpretations of the data were compared with the opinions of my colleagues. I conducted member checks whereby I sought reaction to my interpretation of the data from the participants. The “second interview”, described earlier in section 3.2.1.4 (Interviews), is the most obvious example of this method for establishing credibility.

I presented “thick descriptive data” throughout the research finding so that others who may wish to apply these research findings elsewhere, have a context within which to determine if there is similarity or a good fit (Lincoln and Guba, 1986). This “thick description” enhanced the transferability of the research.

I established dependability and confirmability by an “external audit” (Lincoln and Guba, 1986). The research process and results were examined by the thesis supervisor, other members of the thesis committee, and finally scrutinized by the external examiner during the defense process.

CHAPTER 4: RESULTS AND DISCUSSION

4.1 Participant Profile

This section outlines characteristics of the nine participants which may be of significance in terms of their impact on the participants' eating habits and food experiences. These characteristics are the participants' gender, age, partner status, level of education, employment status, visual acuity, birth history, and their general affinity to eating. The participants are referred to by a pseudonym. A summary of this data can be found in Table 4.1 - Participant Profile.

Five men and four women participated in this study. The ages of the participants within the gender categories were not evenly distributed or congruent with each other. Three of the five men were clustered in the "mid to late twenties" age range, while none of the women were in their twenties.

Four of the participants had partners. Two of these four people were living with their partner but identified themselves as single. A possible explanation for this contradiction lies in the wording of the question that related to partner status. Participants were asked to identify whether they were "married or its equivalent", or "single or its equivalent". These descriptions may have been too limited to encompass the participants' partnerships or living arrangements. Since the dimensions of partnership in this study are limited to their association with food and eating, the two participants who were cohabiting and sharing meals and food responsibilities with a partner, but identified themselves as single, will be considered partnered as opposed to single. Therefore, four participants will be considered partnered, and four participants (as opposed to six) will be considered single. Of the four single participants, three were male. One participant had been married for twenty years before her husband died. Since a large portion of her interview included examples from when she was still married, this participant has been classified as "widowed", because her experiences included both partnered and single life.

Table 4.1 Participant profile

Pseudonym	Sex	Age (years)	Partner Status	Level of Education	Employment Status	Visual Acuity	Born Premature	Affinity to Eating
Anne	F	34	partner CH	M.Ed.	student FT	blind - since birth	yes	loves food & eating
Emily	F	30	partner	2 years at university	un- employed	light & color perception - since birth	no	loves food & eating
Kim	F	46	single	high school	employed FT	blind - since birth	yes	loves food & eating
Lin	F	50	widow	B.A.	employed FT	blind - since 1 year old	no	loves food & eating
Andy	M	24	partner	grade 6	un- employed	light perception - since 2 years old	no †	loves food & eating
Art	M	32	single	diploma	employed FT	20/1600 since birth	no	loves food & eating
Ken	M	49	partner CH	grade 10	employed FT	blind - since birth	no	loves food & eating
Mark	M	26	single	diploma + certificate	employed FT	20/600 since 2 years old, blind - since 8 years old	yes	not interested in food & eating
Pat	M	28	single	diploma	un- employed	light perception - since birth	no	likes food & eating

* CH = cohabiting

* FT = full-time

† vitamin A deficiency & infection → blindness

Only one participant indicated that he lived with a roommate. The participant reported that the roommate never shopped for groceries, prepared his own food, or ate at home, unless it was ordered in from a restaurant. Six of the nine participants had completed two or more years of college or

university education. One participant had received no further training after graduation from high school, and two participants had not completed high school. The participants' level of education is displayed in *Table 4.1 - Participant Profile*.

In a Special Topic Series published by Statistics Canada it was determined that Canadians with a visual impairment attain lower levels of education than the non-disabled population (Statistics Canada, 1990). A summary of this information is presented in Table 4.2 - Level of Education of Participants and Visually Impaired and Non-Disabled Canadians Aged 30 to 64 Years. According to the most recent Canadian statistics, the individuals who participated in this study were not representative of the visually impaired population in Canada. The participants in this study appear to have higher levels of education than the average visually impaired population.

Table 4.2 *Level of education of participants vs. visually impaired and non-disabled Canadians aged 30 to 64 years*

Level of Education	Number of Participants in this study	% of Visually Impaired Canadians	% of Non-Disabled Canadians
0-8 years	1/9 (11.1%)	37.0	16.2
secondary (some or complete)	2/9 (22.2%)	33.6	38.3
post secondary (not complete)	1/9 (11.1%)	13.9	17.9
certificate / diploma	3/9 (33.3%)	8.3	14.7
university degree	2/9 (22.2%)	7.1	12.9

(Statistics Canada, 1990)

A review of the recruiting process, as summarized in *Table 4.3 - Recruiting*, revealed that seven of the nine participants were recruited from university affiliations or a prestigious international organization, the World Blind Union. Although the majority of recruiting attempts were directed towards organizations with a presumably more representative sample in terms of their level of

education, only two participants were recruited from these groups.

Table 4.3 Recruiting

Name of Organization	Description of Organization	Response from Organization	Participants Recruited
Canadian National Institute for the Blind (CNIB)	provide services to visually impaired (VI) & blind Canadians	gave me a list of blind organizations & service groups in the area	no direct recruits were made
Canadian Council of the Blind (CCB)	consumer group - provide leadership & resources to help blind & VI people reach their full potential	President told certain members about research	no interest shown
Blind Bowling	bowl for fun and fitness	President spoke to all members	no interest shown
Paul Jones Memorial Symposium at the University of British Columbia	an annual academic symposium on disability issues	I networked throughout the day	2 direct recruits
Association of Sight Impaired Consumers (ASIC)	try to mobilize blind consumers to promote change	President posted recruiting notice on member list-serve	no interest shown
White Cane Club	a social group that has monthly meetings & special events	I made an announcement at a monthly meeting	1 direct recruit + 1 contact recruit
Program for Visually Impaired Adults at Vancouver Community College	branch of the adult continuing education program - focus on upgrading	Instructor made announcements in class	no interest shown
Sky Club	national e-bulletin board for blind people to exchange ideas and chat	I posted a recruiting announcement 2 times	no interest shown
Crane Library at the University of British Columbia (UBC)	provides services to print impaired students at UBC	Director contacted people he knows, I talked to other Crane staff and students	2 direct recruits + 1 contact recruit
5 th General Assembly of the World Blind Union - Melbourne, Australia	international org. that promotes & protects the rights of blind & visually impaired people worldwide	I networked while attending the conference	1 direct recruit + 1 contact recruit

Anne, a participant in this study, a graduate student in counseling psychology and a leading advocate within the Vancouver blind community, felt the participants in this study tended to be more educated. She implied that blind people with less education are more self conscious about their eating habits than those with higher levels of education. As a result, many blind people with low levels of education did not volunteer to participate in the study. Anne said,

"I think you tend to have more educated people in your sample...It was really hard to find people who wanted to do this. I think there are a number of reasons. One is, blind people have been interviewed to death. People who have a disability are quite often subject to lots of studies and stuff. And also, food is a very, very touchy subject amongst blind people...because I think they know they are missing, lacking information, or maybe not eating as healthy as they can and want to. Or they feel as though their etiquette is somehow different and that they're going to be judged on that...So I think that's why you got more educated people, because with the people I've talked to it's like, "No way! I'm not participating in that, no way!"

Anne also expressed the opinion that the study may have failed to identify certain food trends among blind people because of its skewed sample. She said,

"One of the things that I've noticed, and I don't know if you've come across this, but very unhealthy sort of fast food eating. High amounts of it amongst blind people."

When Anne found out that this had not been identified as a major trend among most of the participants in this study she stated, "I think you tend to have more educated people in your sample".

Of the nine participants, three were unemployed, one was a full-time student, and five were employed full-time. The most recent statistics indicate that in 1986 only 26.5% of visually impaired Canadians of working age were employed, contrasting with 70% of the non-disabled population (Statistics Canada, 1990). That this sample does not appear to be representative of the blind population in Canada, may be linked to the education level of the participants. It is noteworthy however, that two participants with no post secondary education were employed, while two participants with at least two years of post secondary training were unemployed.

All participants had a visual acuity of less than 20/600, by or before the age of two years. Five participants were totally blind, two participants had light perception, and one participant had light and some color perception. Only one participant had the ability to read very large print letters, although he preferred to use braille.

Three of the participants in this study lost their vision as a result of being born prematurely. Although it is not reported in the literature, some blindness professionals have noticed that blind people who have lost their vision as a result of premature birth tend to be tall and thin, and have a detached interest in food and eating. Only one of the prematurely born participants exhibited either of these characteristics. Mark was 6'5" tall and described himself as "bone skinny" until the age of twenty-three years or so. In striking contrast to the other eight participants in the study, Mark described the role of food in his life as an "inconvenience" and "a fairly constant expense that happens on a regular basis." Mark said that he wished he didn't have to eat as often as his body required.

Seven of the participants reported that they "loved" food and eating, while one participant said that he only "liked" food and eating. Only one participant, Mark, indicated that he did not particularly enjoy food and eating.

4.1.1 PARTICIPANT PROFILE SUMMARY AND DISCUSSION

Both employed and unemployed men and women with a range of ages, living situations, education levels, visual acuities, and affinities towards eating are represented in this study. In general, the participants have higher levels of education and are more likely to be employed than the average blind Canadian (Statistics Canada, 1990).

As previously reported in the Review of Literature, gender, age, partner status, and socio-economic variables impact people's food choices and overall eating patterns (Furst et al, 1996; Gerrior et al, 1995; Glanz et al, 1998; Kemmer et al, 1998; Lappalainen et al, 1998; Milligan et al,

1998; Oaks and Slotterback, 2000; Roos et al, 1998; Slesinger et al, 1980; Winter Falk et al, 2001). The impact of these characteristics on food behaviour should be considered when interpreting the experiences of the participants that will be presented in the subsequent sections of this chapter.

The participants' tendency to be employed and more highly educated, and Anne's comment about her less educated blind friends' reluctance to participate in the study for fear of being judged, provide insights into the experience of being blind as it relates to food and eating. Some blind people, perhaps especially those who have less education, may feel embarrassed or self conscious about their eating habits (food choices and self feeding techniques). The eating habits about which they feel embarrassed may be related to their blindness, and the eating habits may or may not be perceived as such by these individuals.

4.2 Shopping for Food

When the participants described the task of grocery shopping, three distinct aspects of the task became apparent. They were: Logistics - Method And Frequency, Finding Out About New Foods And Food Products, and Deciding What To Buy.

4.2.1 LOGISTICS - METHOD AND FREQUENCY

The participants identified four distinct approaches to shopping for their groceries. They were: the "big shop", the "small shop", someone else does the shopping, and shopping on-line. None of the participants employed all four approaches to shopping, although some used as many as three of the methods. Each approach will be described and explored in terms of its strengths and limitations as identified by the participants.

4.2.1.1 *The "Big Shop"*

Of the nine participants, six people reported that their current and main method of grocery shopping was an actual trip to the store, during which they purchased a relatively large amount of

food which was intended to last them for two to six weeks. The remaining three participants had used the “big shop” method in the past but due to the difficulties associated with this approach, had switched to other means of acquiring their groceries.

When doing a “big shop”, four of the participants regularly made their shopping trip with a sighted friend or family member. The other two participants preferred making the trip with a sighted friend but did not always have access to such a person. As a result, these people would usually go to the grocery store alone and ask for assistance at the customer service counter. Ken described why people with a visual impairment need a sighted assistant to help them with their grocery shopping.

It's just a matter of, in the store where to find [things]. If you know where you're going you can go there and get it yourself but when you're visually impaired it's a little difficult! It's more tough, but I usually go through where the cashiers are there, the customer service, and ask for assistance.

The sighted assistant would lead the blind shopper to each section of the grocery store, announce what section they were in, and ask the shopper if they needed anything from that aisle. Alternatively, the shopper would present a printed or verbal list of desired grocery items and the sighted guide would only visit the sections of the store which contained the requested products.

The difficulties identified with the “big shop” method were: finding a sighted person to go with, finding out what was available in the store, and transporting the groceries back home. The difficulty of finding out what was available in the store will be explored in *section 4.2.2 Finding Out About New Foods And Food Products*.

Lin related an embarrassing situation which attested to the inconvenience of securing a sighted shopping guide.

I could have fallen under the altar the day that this one woman put it up that she was doing most of the shopping for me and she didn't feel that was right. She felt that the rest of the church should be involved...She announced it from the pulpit! I could have fallen under the floor, but what could you do?!

Kim explained that her mother “used to be really good” and would go shopping with her on a regular schedule. Unfortunately, when Kim’s mother became ill and was no longer able to shop with her daughter, Kim did not have anyone else to go with and stopped shopping on a regular basis. As a result, the intervals between her big shopping trips increased to unpredictable lengths of time and she never knew who she would shop with next. Kim reported that when she did go shopping with a sighted guide, it was important for her to stock up. Pat converted to using the Internet but explained, “[Actually going to the store] was a bit more difficult. You had to hunt down some sighted person...so it was more dependant on their schedule.” Emily regretted that she no longer shopped with a very helpful sighted friend because their schedules were in conflict. The people who did not report difficulty in securing sighted assistance had the consistent support of a dedicated friend or family member.

The inconvenience of transporting the groceries home was identified by four of the participants. Although the main grocery store chain in Vancouver used to offer free delivery for people with disabilities, it was only available during business hours which did not always meet the needs of the participants in this study. One woman explained that the delivery truck would often “beat” her back to her house and, to her discontent, leave her groceries outside her door. On the other hand, several people reported having to wait at home for up to six hours before their groceries were delivered. Since the time of the interviews, the grocery chain has discontinued their complimentary delivery service for disabled people. All shoppers who wish to have their groceries delivered are now charged a fee of \$6. Two participants reported taking the bus home from the store with five or six bags of groceries on each arm. They sarcastically described this part of the shopping trip as “fun”, because it left them unable to orient themselves with their white cane.

4.2.1.2 The “Small Shop”

All nine participants reported current use of the “small shop” method. This approach involved traveling to a local corner store or grocery store alone and picking up one, two, or a few items of

which they had run out. A “small shop” usually occurred one or several times between “the big shop”, and all but one of the participants reported regularly asking for assistance from store employees. Mark was the only person who talked about “grabbing [his] own stuff”.

I'll just walk into the grocery store and grab my own stuff cause I sort of know where some of the main things are in the grocery store, and if I end up in like the dairy section, I know what a milk bottle feels like, and usually if there is somebody standing around I'll say, “hey is this like milk, or is this you know, goat's milk or something?” And then they tell me that it is milk and then I go and buy it.

Two inconveniences were reported in association with the “small shop” method. Three people described receiving unsatisfactory assistance from store employees, and one person described not being able to communicate their item request to store employees who could not understand English. Anne explained,

Usually I try and be respectful and go when I know when it's not going to be really busy...Generally it's pretty good. I mean, sometimes the people that I go around with are new or not all there and don't know where anything is, and it takes a while and it's quite frustrating. But generally the system works very well.

Art expressed a similar frustration,

I've found that when you go shopping with...a store staff member it's sort of hit and miss cause depending...on how busy they are, it affects who they actually give you and...if they take the time to describe things and find the right things. A lot of times when I've been more ambitious and picked up more of the things that I wouldn't normally do on my own shopping trip, it's turned out to be the wrong thing, or if I was looking for a specific sale item, they picked up the wrong thing from the shelf, and I [didn't notice] until I got home and...started looking at the sales slip myself to see what I got.

Emily said that she would have loved to take advantage of the less expensive fruit and vegetables at the produce markets but found it too difficult to get assistance in those stores. As a result, she only shopped at the large chain stores where she found the assistance to be more reliable, however, the higher cost of fresh produce at those stores prohibited her from buying fruit and

vegetables. Anne was the only other participant who mentioned shopping at smaller produce markets but she did not express any difficulty in obtaining assistance from store employees.

Lin was the only participant who reported difficulty communicating with store employees while on small shopping trips.

Sometimes I'd drop into this store on the way home and explain what I wanted. Sometimes they didn't speak good English, oh boy!...And then they don't understand what you want and then you go, "I don't know how to do sign language to get them to understand what I want".

Despite the difficulties mentioned above, the overall attitude towards the "small shop" method was that it was relatively straight forward and effective.

4.2.1.3 *Someone Else Does the Shopping*

Three participants had other people do their grocery shopping for them. When Lin's husband was alive, they settled into a routine in which her husband was responsible for doing all of the grocery shopping. This was because Lin found it very boring to go to the store with him. "I just hate shopping" she said. After her husband died, Lin was eventually able to work out a system by which her cleaning woman picked up groceries for her on a weekly basis. After Anne moved in with Ron, she no longer did the majority of her shopping. She only picked up specific specialty or sale items while Ron assumed the responsibility of doing the main, weekly shopping trip. Anne said that their division of labor was determined by the fact that Ron loved shopping; however, Anne said that she too loved shopping, especially when she had a specialty item in mind. When Ken and Paula began sharing meals together, they would either shop together or Paula would go to the store alone and pick up their groceries.

In all three situations, the responsibility of grocery shopping was shifted, to a greater or lesser degree, to the partner who had full or better vision. In two of the three situations, the shopping responsibility was assumed by the male partner. The only partnered participants who did not transfer

the task of shopping to their partner, was a non-cohabiting couple who had virtually the same degree of blindness. These two participants, Emily and Andy, still shopped for themselves or did a shopping trip together.

4.2.1.4 Shopping On-Line

Only two out of nine participants described using the Internet to do their grocery shopping. Although several other participants knew how to use the Internet, it is interesting to note that the on-line shoppers, Mark and Pat, had completed respective BCIT (British Columbia Institute of Technology) programs in Computer Systems Technology and Computer Programming. Both men had access to speech synthesized computers and the Internet from their homes. Mark only shopped on-line three to four times a year and was much more partial to traveling to the actual store. He identified all the drawbacks to grocery shopping on-line. Pat found a virtual trip to the store to be much more convenient for him than an actual one, and identified most of the advantages to on-line shopping.

To the best of their knowledge, Mark and Pat believed that Stong's, a privately operated store that specializes in alternative grocery shopping, was the only on-line grocery store in Vancouver. Shoppers log onto the Stong's web site and scroll through lists of items which are organized into categories similar to the way products are arranged on shelves and in aisles in an actual store. Pat described the process,

The first time you do it, it takes about an hour to do cause it's like going through a regular store...but then [the computer] remembers everything you bought previously so...I don't have to reconstruct the list every time. I run down and check off what [I] need, just add an item here and there...So like now I can do it in ten minutes.

The shopper identifies when he/she would like their groceries to be delivered, submits the request, and waits for the groceries to appear at their door. The impact of Internet shopping on food choices will be examined in further detail in the subsequent two sections, *4.2.2 Finding Out About*

New Foods and 4.2.3 Food Products and Deciding What To Buy.

Both Mark and Pat acknowledged the independence with which they could shop on-line. Pat said, "All the prices are there and I can check them...it saves having to go with somebody and have them try to read out the entire store, which doesn't usually work too well." Mark expressed a similar appreciation for Internet shopping when he said, "It's strange, when you shop on-line it's truly being independent and getting to see what they have on the shelves." For Pat, the other main advantage to shopping on-line was to have the groceries delivered to him. The difficulty of transporting groceries from the store to their homes was identified by several other participants and has already been discussed in *section 4.2.1.1 The "Big Shop"*.

Although Pat praised the system and "highly recommend[ed]" it to anyone with the "problem" of having to shop with a visual impairment, Mark described a list of disadvantages to shopping on-line that deterred him from using the Internet too often. He did not find the Stong's website to be user friendly for blind customers, he did not like having to pay the \$10 delivery fee, and he found the groceries to be more expensive than at other stores. "I'm not a tight-wad or anything, but it's hard when you see something almost twice as much at one place. It's easier just to go to the other." Mark found that an additional disadvantage to shopping at Stong's was that they only delivered from Monday to Friday before 6 p.m. Since he did not usually get home from work until 6:30 p.m., the delivery service was of little use.

4.2.2 FINDING OUT ABOUT NEW FOODS AND FOOD PRODUCTS

All nine participants identified the same two ways in which they had found out about new foods or new food products. Firstly, they had heard from a friend who had either voluntarily suggested a new food, or responded to a question about what was available. Secondly, the participants also said that they had heard about new foods on television or radio advertisements. Suggestions from store employees, flyers, and recipes were less frequently mentioned means of discovering new foods and food products.

Four of the participants expressed the concern that their lack of vision prevented them from easily finding out about new food items. The obstacles associated with discovering a new food or food product may have prevented the participants from discovering and using products which could be extremely convenient and useful to them. For example, at the time of his interview, Mark had only recently discovered salad in a bag, a product which had been available for several years. "I didn't know it existed" he said. Mark felt that he would be much more likely to eat salad now that it was so convenient. Earlier in the interview he had expressed a concern that he did not eat very many vegetables.

4.2.2.1 *Word of Mouth*

The following anecdote was shared by Lin, but similar accounts were provided by many of the other participants.

Somebody will be grocery shopping with me and they will say, "have you ever tried these pizza pockets?" And I say, "no I haven't but it would be fun to try". I got to know tortellini when another friend of mine said, "you know tortellini is easy to do, you don't have to fuss with it." And she told me how to do it.

The last sentence of the above quote speaks of an important element in the discovery of a new food or food product, that is, learning how to prepare the newly discovered food. For example, Emily was pleased when her friend introduced her to packets of marinades for the purpose of spicing up her meat. She claimed that she was getting very tired of always eating Shake'n Bake chicken. After purchasing the new product, Emily's friend sent her daughter over to Emily's apartment to read aloud the directions on the packages. While the girl was reading, Emily brailled out the instructions. She also prepared braille stickers to stick on the packets which would enable her to identify the three different types of marinades. Emily said that this introduction to a new product was uncommonly well assisted.

Some participants reported that they had also asked a friend or sighted shopping assistant what

was new, or even more specifically, if there was a product out there that would meet their expressed need or desire.

4.2.2.2 *Advertisements on the Radio or Television*

Although all nine participants said that TV or radio advertisements were a means by which they discovered new foods, only two people were able to provide an example of a food product they had heard about through this medium. While listening to a radio talk show, Ken had heard about a natural meal replacement drink consisting of “greens”. Ken had not yet tried the product at the time of the interview but said he would like to. Mark said that he had heard about garlic tablets on a TV or radio talk show and had started taking them as a result.

4.2.2.3 *Store Employees*

Only two participants said that store employees had ever introduced them to new foods or food products. They both said that it had not happened frequently. Emily described her encounter with a particular store employee.

About five or six years ago there was a really, really, really good one that worked at the one Safeway I used to go to...He would sometimes give me suggestions...I know he got me into buying fresh garlic...I make a homemade spaghetti sauce...and when I first started making it I was using that powdered stuff and he said, “ oh, you should really use fresh garlic”. He said, “it makes it so much better”, and I had a hard time at first chopping it up, but I actually discovered a really cool way to do garlic.

The difficulty associated with using a new food or recipe was a recurring theme that was identified by several participants. It will be examined in *Section 4.3.3 Problems And Proficiencies*.

4.2.2.4 *Flyers*

Of the three participants who reported using flyers in their grocery shopping routine, two people said that they had been exposed to new products through the flyers. Both women said that a new

discovery was infrequent and usually just by chance because someone else would be reading the flyer out loud to them and deciding what to read and what not to read. Art explained why the flyers were not a means by which he would find out about new foods and food products.

Because it's my mom who's helping me do it...she'll go through the flyer and as I'm...noting down what I've run out of,...she'll ask questions about things that she's bought or thinks I should buy...We just read through the stuff that I normally buy, not looking for new products...I think knowing what's available in the stores, that's the biggest problem that... people with the same level of vision as me would face. Knowing what's actually in the store without actually going with someone who will read everything out to you.

4.2.2.5 Recipes

One participant identified recipes as a source of information about new foods, while another claimed that her lack of vision prevented her from easily accessing new recipes and trying new foods and dishes. Anne subscribed to a monthly braille magazine that contained fifty to sixty new recipes in each issue. Anne and her partner Ron shared an interest in reading about food. They exchanged information they had read about on a daily basis and Anne sometimes discovered new foods or food products in the process. "I love reading about food. It's a hobby of mine...I can do it for hours." This keen interest in reading about food was only expressed by Anne. She was also the only participant who reported subscribing to the braille magazine, *Cooking Light*. The impact of limited access to recipes will be examined in further detail in *Section 4.3.3 Problems And Proficiencies*.

4.2.3 DECIDING WHAT TO BUY

Consumer behavior is a large and complex body of knowledge. Experts have observed the decision making and purchasing patterns of consumers and have identified a host of factors which influence the decision to buy. Since the purpose of this study is to examine the food patterns of people who are visually impaired or blind, the decision making process will be viewed from the perspective of influencing factors which may be impacted by, or result from the state of being blind.

The same two steps in the process of deciding what to buy were identified by almost all of the participants. First of all, it was reported that the decision to buy most of the items had to be made before going to the grocery store. Secondly, eight participants felt that they tended to buy the same items all the time with one or two items different each time. Reasons given for the tendency to purchase the same items all of the time varied among participants. There were three other recurring factors which were identified as influencing the decision to purchase particular products. These factors were: lack of vision which prevented participants from being tempted to buy impulsively, prohibitive prices, and the difficulty associated with the preparation of certain foods.

4.2.3.1 Deciding what to Buy Ahead of Time

With the exception of Pat, the Internet shopper, all of the other participants either shopped for themselves with the assistance of a sighted helper, or sent someone else to do their shopping for them. Lin succinctly described the process of sending another person to do her shopping. "I give them a list of what I want and they write it down and go get it."

Phrases like, "you have to know ahead of time", and "I have a pretty good idea of what I want before I go", were uttered by every participant who described traveling to the grocery store to do their own shopping with the aid of an assistant. Explicit reasons for predetermining their purchases were not given.

4.2.3.2 Tendency to Purchase the Same Items Every Time

Eight of the nine participants reported that they tended to buy the same items all the time with the exception of one or two different items each time. One person stated that their tendency to purchase the same products all the time was related to the fact that they could not see the entire range of items that were available in the store. Emily said,

I think if I could see...I would experiment a bit more..I think I would because I would be able to cruise up and down the aisles and see what there is. See what there is

in the stores rather than just getting what I usually get because I know, OK I know that's there.

Another participant gave reasons other than his blindness, which he felt influenced his tendency to buy the same items all the time. Mark said,

Well it's funny...I don't know if it has to do with the fact that I'm not really interested in cooking all that much, like I don't mind it but it's not like a passion of mine, or it's being a bachelor, or if I'm just lazy, but I tend to eat the same things. So like, I guess I pretty much know what I like and I typically would get those every time I went shopping, plus just some extras, whatever I feel like.

Although Emily felt that she would purchase a wider variety of items if she had more complete knowledge of what was available in the store, Pat, who shopped on-line, and therefore had access to a complete list of available items, reported that he still purchased the same items every month and only "[added] an item here and there." Having access to a full list of available items does not appear to be the only factor which impacts the decision to purchase particular items. The difficulty associated with using new and unfamiliar foods and food products, as previously discussed in *Section 4.2.2: Finding Out About New Foods and New Food Products*, may contribute to the participants' tendency to purchase the same items all the time.

Anne was the only participant who did not explicitly state that she tended to purchase the same items all the time. It is important to note that Anne's partner Ron was almost exclusively responsible for cooking their meals. His love of cooking and their shared interest in reading about food could result in a tendency to shop for a wider selection of items. When Anne lived alone, the meals she reported preparing for herself appeared to range less in variety as compared to her diet while living with Ron. Anne said she did not particularly enjoy the food she prepared for herself when she lived alone but continued to prepare similar foods because,

I didn't have access to like recipes and stuff. Back then...I didn't have access to the Internet that much. I didn't have access to braille cookbooks so I just thought that's the way everyone cooked.

4.2.3.3 *No Temptations from Visual Stimuli*

Four participants said that their lack of vision prevented them from being tempted by visual stimuli and saved them from impulse buying. The general sense was that impulse buying was not a good thing, particularly because it usually involved succumbing to advertisements and buying sweets or “junk food”. Mark explained the situation.

One thing from being blind, you're not tempted by the extra things that are advertised and you don't catch anything out of the corner of your eye, tempting you to make this or giving you an idea.

Kim had a similar explanation. She said,

If you don't see something, I think that that's sometimes a blessing. Like in the store, when you're going to the store and buying groceries or whatever, and you know people can see something like there's a good, yummy chocolate cake on the shelf or whatever. You can pass that by because you don't see it, so sometimes that can be a blessing.

Anne's explanation went even further to suggest that the visual stimuli from advertisements was more powerful and influential than auditory stimuli.

I think I'm less likely to eat junk food because I don't see advertisements all the time and I don't like junk food and I think it's for that reason...that I don't get that stimulation from TV. I mean you hear about chips, sure whatever, but you don't have that visual stimuli.

Other participants however, reported that they loved sweets and “junk food”, consumed them in relatively large quantities, and did not mention that their lack of vision impeded them from purchasing such items.

4.2.3.4 Prohibitive Prices

Three participants stated that the expense of an item would often prevent them from purchasing it. Two of these people were unemployed and receiving a disability pension from the provincial government. Emily, who is living on a fixed government income, reported that she almost never bought fresh fruit and vegetables. When asked, "why not?", one of the reasons she gave was the cost.

Fruits and vegetables at Safeway are extremely expensive! You know, it's extremely expensive to buy fruits and vegetables. And also, if you go to the produce markets it's a lot better but then it's difficult for me to go there by myself you know, because I don't get the help that I get at Safeway.

4.2.3.5 Difficulty Associated with the Preparation of Particular Foods

All nine participants described foods, dishes, or steps in the preparation of a dish that they found difficult. Many of these difficulties were directly or indirectly related to the participants' lack of vision and resulted in them avoiding preparation of those foods if possible. Although this trend will be examined in more detail in *Section 4.3.3 Problems And Proficiencies*, it is also appropriate to mention it here due to the obvious link between foods prepared at home and foods purchased in the grocery store. For example, Kim said that although she loved lasagne she would never purchase the ingredients to make it at home because she felt it would be too difficult to prepare.

4.2.4 SHOPPING SUMMARY AND DISCUSSION

A variety of grocery shopping strategies were used by the participants. They included the Big Shop, the Small Shop, arranging for someone else to do the shopping, and shopping on-line. Each strategy presented certain obstacles to obtaining the types of products, at the appropriate prices, at a convenient time and location, and without excessive difficulty. The participants' primary method for finding out about new foods was through word of mouth, followed by advertisements on the radio or television, recommendations from store employees, flyers, and recipes. Unfortunately, these

methods provided the participants with a relatively limited amount of information when compared to the range of foods and products seen by sighted shoppers on the shelves of a grocery store, in print advertisements, and in recipe books. When deciding what to buy, five factors were identified as being related to the participants' blindness. The participants' reported making purchasing decisions before going to the store, purchasing the same things all the time, avoiding purchasing "junk food" as a result of not seeing advertisements and "junk food" displays, not being able to afford certain foods, and avoiding purchasing foods which they found difficult to prepare.

Lack of knowledgeable and reliable in-store assistance appeared to present the greatest barrier to achieving a successful shopping trip. The difficulty associated with shopping when visually impaired is evidenced elsewhere in the literature. In a survey that measured the activity limitations of visually impaired Canadians, 45% of the visually impaired people reported that they required assistance to do their grocery shopping (Statistics Canada, 1990). It is not surprising therefore that whenever a participant was partnered, the responsibility of grocery shopping was always transferred to the partner with full or better vision. Contrary to other Canadian data (Food and Consumer Products Manufacturers of Canada, 1997), the responsibility of shopping in this study was not associated with gender. Despite the apparent independence and convenience afforded by on-line grocery shopping, it was not a popular shopping strategy for these participants. Limited availability of accessible, Internet-ready computers may partially explain this tendency. In 1999 it was determined that 42% of Canadians use the Internet but only 28% of Canadians log on from home. Also, higher income household and those with more education were more likely to use the Internet (Dickinson, Ellison, and Sciadas, 2000). In 2000, 53% of Canadians over the age of 15 years, said that they used the Internet at home, work, or somewhere else in the last 12 months but non-users said that cost and access were the greatest barriers to Internet use (Dyburgh, 2001). No statistics are available on the Internet use of blind Canadians, however, the cost of acquiring an accessible computer would be considerably more expensive for a visually impaired or blind person due to the cost of specialized large print, braille, and speech programs.

Shopping without vision limited the participants' knowledge of available products and appeared to be associated with highly habitualized purchasing patterns. Purchases were often decided upon before arriving at the store, possibly because the participants could not see to choose from the array of products displayed on the shelves. When describing the impact of their blindness on their food choices, the most prominent theme mentioned by the participants was a positive consequence of shopping without vision; the avoidance of being tempted to buy "junk food".

Taken in sum, blindness may impact a person's grocery purchases and ultimate food intake by limiting the range of options available to that person. Blindness may limit the following grocery shopping related choices: the type and location of grocery store, the frequency of shopping episodes, the time available to spend in the store, access to affordable products, and knowledge of/access to the full range of products available in the store. The nutrition labeling and grocery store advertising and promotions known to impact the decisions of sighted shoppers (Winter Falk et al, 2001), may have little or no effect on the grocery choices of blind shoppers.

4.3 Food Preparation

In the context of this section, the term "cooking" refers to the preparation and cooking or baking of food. Discussions with the participants revealed many different issues surrounding the task of food preparation. These issues have been sorted into the following four sections: the participants' inclination towards cooking, food preparation instruction, problems and proficiencies in the kitchen, and common foods prepared and eaten at home. Although this section has been subdivided into four smaller sections, the associations between the sections, and their overall impact on the food choices of the participants, should be considered.

4.3.1 INCLINATION TOWARDS COOKING

Although eight out of nine participants reported that they liked or loved eating food (see section 4.1), all nine participants stated that they did not like or hated cooking. The three reasons given for

the participants' aversion to cooking were: a general disinterest in cooking, cooking for one, and cooking made more difficult by blindness.

4.3.1.1 A General Disinterest in Cooking

All nine participants expressed a general disinterest in cooking. Phrases like, "it just doesn't interest me", "I'm not a huge fan of cooking", and "It's OK but I'm not really into it", were used to describe the task of food preparation. Art went a step further to explain that his fear of cooking without vision was no longer the predominant factor that discouraged him from cooking. He said, "I'm not as concerned about trying things in the kitchen. Now it's even a question of, do I like it enough to even bother trying?" Anne was the only participant who identified reading about food and recipes as a hobby, however, she also claimed that she "hated" cooking and found it "time consuming" and "boring". None of the other participants identified reading about or preparing food as an enjoyed activity or hobby.

4.3.1.2 Cooking for One

Five of the participants said that they did not enjoy eating alone, or felt that their experience of cooking or eating at home would be different if they had someone to cook for or share meals with. Three of the five participants with partners however, did not dislike cooking any less after they began sharing meals with a partner. Anne described the disagreeable nature of cooking and eating alone.

When I was on my own it was so time consuming! When you cook something yourself and then eat it, it's like, "well I just took all this time and it somehow doesn't seem as good."...I think it's because you're eating by yourself. It's so lonely.

Emily had a similar explanation.

I had a real thing for a while where I hated cooking for myself. I didn't mind cooking if I had a boyfriend or somebody that I was kind of sharing things with, but as for cooking for myself, I wasn't much into that because I didn't really like eating on my own.

Lin explained that since her husband's death seven years ago, she hadn't been as motivated to cook for one. Although she was more motivated when her husband was alive, she still did not particularly enjoy cooking. Mark hoped that the frequency at which he ate at home would increase if he had a partner.

I think it is easier to eat out than it is to cook. I don't really like cooking too much and I know that [eating in restaurants as often as I do] is not the best for me but I do it anyway. I'm hoping that that will change at some point hopefully if, when I get a girlfriend who knows how to cook, or just a girlfriend period.

4.3.1.3 *Cooking Made More Difficult By Blindness*

Although all nine participants described challenges that they faced in the kitchen as a result of their blindness, only one participant linked their hatred or dislike of cooking to the difficulties. Ken said.

I hate cooking. Paula does the cooking...It just doesn't interest me. I tried it when I was younger but burnt myself, burnt other things and stuff like that because I couldn't see. No, it just doesn't interest me.

Most participants resisted "blaming" their aversion to cooking on their blindness, but some admitted that a blind person might face more barriers to cooking than a sighted person. The difficulties associated with cooking when blind will be discussed in further detail in *Section 4.3.3 Problems and Proficiencies*.

4.3.2 FOOD PREPARATION INSTRUCTION

The participants identified three sources of food preparation instruction. They were: guidance from their mother at home, home economics classes in highschool, and instruction from a CNIB (Canadian National Institute for the Blind) rehabilitation worker. Most participants had been exposed to at least two of these resources. Five participants claimed that a large portion of their cooking competency was self-taught.

4.3.2.1 Guidance At Home

Three participants were offered and accepted instruction from their mother while living at home. One of these people had assigned food preparation responsibilities while living at home, but the other two participants only received instruction immediately before moving out of the family home to live on their own. Emily explained that her mother had shown her how to do a range of tasks, particularly in the area of vegetable preparation, peeling potatoes for example. While discussing the fact that she rarely buys or cooks vegetables, she said,

When I was growing up it was my job to make salads and when I got to be eighteen or nineteen, I usually cooked dinner for the family. I'm fine with cutting, I'm just lazy. I find it time consuming but I'm actually good at cutting up vegetables

Mark received help from his mother just before moving out, but reported that he still called her for advice every now and then. He said,

When I knew I was going to be moving out I got my mom to spend some time showing me how to do various things...She'd tell me the way she did it and then I'd sort of have to figure out a way that I could adapt it if it needed to be adapted...I don't know if I always use the most effective ways [to adapt things] though.

One participant was offered instruction and encouraged to cook by his mother, but he was not interested at the time so did not learn until he had been living on his own for several years. Two other participants reported that their mothers either prohibited, or did not encourage them to perform tasks in the kitchen because of their blindness. Perhaps it is of no coincidence that these two participants were from families with eight and eleven children, where speed and efficiency in food preparation was probably paramount. Anne explained,

I never really cooked much at all until I moved out on my own. The only thing I ever really did in the kitchen was dishes and make toast or whatever. But no, my mom would not allow me in the kitchen cause for her it was so frustrating for me to learn to do it. It was easier for her to do it so when I got on my own I learned.

Lin and her mother were concerned about safety, and Lin felt that the family home was not a conducive learning environment for her. She said,

My folks had wood-coal for years, then they transferred to oil for which you still had to cook on an open flame, and I, being very chicken, was scared of fire, and my mother didn't see how I could do it either. And she usually had those cast iron frying pans with the handle that was super, super hot and you couldn't always hang onto it. And so I was never really encouraged to cook and the house was never the greatest orderly house. There was just so many of us....Everything was moving, moving, moving.

4.3.2.2 *Highschool Home Economics Classes*

Four participants indicated they had received cooking instruction in highschool home economics class. Kim, Anne, and Lin had taken classes at a residential school for blind people, although Anne had also taken classes as a student in the public school system. Mark and Lin felt that they had learned minimal skills via their experience because their instruction had only lasted a couple of months. Anne and Kim had taken home economics throughout high school and reported "loving" their classes. Surprisingly, both women indicated that they currently "hated" or "disliked" cooking and very rarely did so.

4.3.2.3 *Canadian National Institute for the Blind Rehabilitation Worker*

Six of the nine participants reported receiving cooking instruction from a rehabilitation worker from the Canadian National Institute for the Blind (CNIB). Only one participant indicated that the instruction made a significant difference in his cooking behaviour. Art had been anxious about accidents in the kitchen, but the instruction he received from the CNIB quelled his fears and enabled him to proceed in the kitchen with confidence.

Pat, who did not prepare food that required more than five minutes of his time, gave his opinion of the guidance he received from the CNIB.

...when I moved out and was coming down to [school]...I was getting orientation to Vancouver and...a few cooking lessons and what not...It was making burgers and some of the microwave stuff...which is still useful...but it was a pretty short little program so there wasn't a lot, but enough to get by.

Lin lived in school residences during her last two years of highschool and throughout her university education. During this time she received cooking instruction from the CNIB but found it difficult to practice her new skills. She said,

...the institutional way of doing things, you got a dorm so you're in a residence area where, from my point of view, there weren't cooking facilities except for a kettle...And so...I tried some courses at the CNIB, but when you've got nowhere to practice them you kind of lose the knack.

The complaint made by Andy was that the instruction provided him with skills to use the kitchen as a blind person, but he was not provided with recipes, food ideas, or nutrition information.

4.3.2.4 Self Taught

Five participants felt that a great deal of their food preparation skills were self taught. All five people reported that they were motivated to learn how to cook by their basic need to eat, two people were motivated by their desire to eat healthily, two people were motivated by the desire to prove to one's self that they were capable, and one person was motivated by the desire to eat ethnic food that was not available in local restaurants. Emily described an experience of intense learning.

A lot of it I just learned from trial and error. I remember...school was on strike and...this one week I decided I was going to cook dinner, and my brother was off doing whatever he did, and I was all alone and I just decided, "OK, I'm going to cook dinner every night." And if I had problems I had to solve them, and I did and it just became easier.

Lin was motivated by several factors.

...When I got married I really didn't want the guy to starve, nor did I want to starve, and I knew the income we were living on we couldn't eat out every day, plus I

wanted to prove to myself that, "hey I can do it". So I set out to do just that.

4.3.2.5 *Instruction Received and Range of Foods Prepared*

The information presented in Table 4.4 is a combination of data from *Section 4.3.2, Food Preparation Instruction*, and the upcoming *Section 4.3.4, Common Foods Prepared And Eaten At Home*. The foods commonly prepared and eaten at home by the participants were tallied to derive a number which illustrates the range of foods prepared at home by each participant. The largest possible range of foods prepared is twelve and includes the following items: toast or cereal, fresh fruits, salads or raw vegetables, sandwiches, prepared foods, meat and starch, meat-starch and vegetables, pasta with sauce, meat and vegetable stir-fry with rice, vegetarian dishes, microwave popcorn, and crackers and cheese. The largest range of foods prepared by one participant was eight and the smallest range was one. There is a "junk food" category in section 4.3.4, but it has been omitted from this table because the "junk foods" reported by the participants did not require preparation. Also, the Table 4.4 presents Anne's food preparation behaviour prior to moving in with her partner because her partner is now singularly responsible for their meal preparation.

Table 4.4 *Food preparation instruction and range of foods prepared at home*

	Anne	Emily	Kim	Lin	Andy	Art	Ken	Mark	Pat
Range of foods prepared at home*	7	6	5	8	3	7	1	8	2
Learned at home		●	●					●	
Home economics classes	●		●	●				●	
CNIB rehabilitation worker		●		●	●	●	●		●
Self - taught	●	●		●	●			●	

*"Range of Foods Prepared at Home" refers to *the number of different dishes* which the participant reported preparing at home on a regular basis

Four of the five participants who prepared the widest range of foods were also four of the five participants who reported that most of their food preparation skills had been self taught. Aside from the basic need to eat, the factors that motivated these individuals to learn how to cook were the desire to eat healthy and the desire to prove to one's self that they were capable of cooking. It appears as though personal beliefs about the importance of cooking or being able to cook are associated with the range of foods prepared by the participants in this study. These personal beliefs about the importance of cooking appear to supercede the participants' aversion to cooking. The interplay between education, life stage, partner status, and nutrition knowledge and the participants' food behaviour will also be examined, but only in the subsequent *Section of 4.6, Nutrition And Health*.

The three participants who prepared the smallest ranges of food were men, had received instruction from the CNIB, and tended to have fewer exposures to different types of food preparation instruction. It is not certain whether the men's previously reported disinterest in cooking deterred them from seeking instruction, or whether their lack of instruction inhibited their ability or tendency to cook. The fact that all three men had received instruction from the CNIB is probably more indicative of CNIB's pervasive rehabilitation services, rather than its impact on the food behaviour of individuals. However, given the perceived limited usefulness of the CNIB's instruction, as reported by all three men and previously presented in section 4.3.2.3, it appears as though the CNIB could customize their food preparation instruction to more effectively meet the needs of individuals in a range of life situations.

4.3.3 PROBLEMS AND PROFICIENCIES

All nine participants identified challenges that they encountered when cooking. Some tasks were identified as problematic by some participants, but not mentioned or identified as straight forward by others. The elements of cooking that were identified as problematic were: accessing recipes, organizing and locating items in the kitchen, detecting food that had gone bad, chopping,

measuring small amounts of liquid, setting dials, dealing with hot elements and food, cooking more than one thing at a time, frying and browning foods, determining doneness, and the extra time associated with cooking when blind. Two of the participants had relatively little to say on this topic because they did not cook very often or at all.

4.3.3.1 Accessing Recipes

Six participants discussed the topic of recipes or cooking directions. Two of these people said that they tended to cook without the use of recipes. The challenges associated with recipe use were: limited availability of braille cookbooks, difficulty accessing print based recipes and directions, and the challenge of learning a new skill when trying a new recipe.

Anne was the only participant who reported subscribing to *Cooking Light*, a braille magazine that contained fifty to sixty new recipes in each issue. She said that her knowledge of nutrition and her eating habits were much more limited before she had access to the magazine. The two other women who reported having braille recipe books both described the same two cookbooks, *Cooking Without Looking* and *Light In The Kitchen*. A review of the resources revealed that there are very few cookbooks commonly available in braille, and some of these books were published more than twenty years ago and do not contain current recipes. Two women, aged thirty-four and forty-six years, reported that they still use braille recipe books from high school home economics classes. Art described the process by which he accessed printed directions on food packages.

If it's packaged when I pick it up with somebody shopping, I'll get them to read the directions to me. But nine times out of ten I won't remember it unless I make some kind of notes. Sometimes the print is large enough that I can read it with my magnifying glass, but most of the time I depend on...someone else knowing how to do that.

If he could not remember the directions or read them himself, Art would phone a family member and ask them if they knew how to prepare the particular food item. As previously described in section 4.2.2.1, Emily also described the complex process of trying a new food product with an

unfamiliar set of instructions. In addition to converting the directions from print to braille, Emily also had to learn and adapt new food preparation skills (see *Section 4.3.3.5, Measuring Small Amounts Of Liquid*). Emily felt that she would be more experimental with her cooking and try new recipes more often, if she had vision. Two other participants described times when their friends or family had read aloud recipes to be transcribed into braille.

4.3.3.2 Organizing and Locating Items in the Kitchen

Four participants expressed the need to keep foods stored in an orderly fashion. Despite their best efforts however, all four people said that they occasionally open the wrong can or package, or were not able to find what they were looking for. Lin described her most recent mix up.

I buy a lot of canned things...Lately it's been getting difficult because I've had more soups than just mushroom soup...so that gets a bit of a mix up...Last week I went to open a can, thinking I would have something to drink, and it was a can of kidney beans.

Emily explained that she usually shakes the can or package and tries to identify the contents by the sound it makes. Emily also described a method of can identification that one of her blind friends used. The friend has magnetic strips with different braille labels on each strip. Upon returning from a shopping trip, her sighted assistant helps her stick the magnetic labels on the corresponding cans. When the cans are used, the strips are removed and stuck on the fridge to be used the next time cans are purchased. Emily said that she would love to employ this organizational method but doesn't have the support of a sighted shopping assistant.

Anne said that when she lived alone and cooked for herself she kept her cupboards more organized, but since she moved in with Ron, things had changed a little.

I try to [store things in an orderly way]...so that they're easily found but...it gets moved... I'm used to it now, I just go on a search and find it. [If not], Ron can find it. But the things that...[only I] eat, or that he doesn't eat,...[those] are all in a separate [cupboard space].

Kim said that she occasionally lost things in the kitchen. She explained that she enjoyed using her crock pot to prepare certain meals but hadn't used it lately because she couldn't find it. I noticed the misplaced crock pot sitting on a pile of books, boxes, and clothing in the corner of her living room.

4.3.3.3 *Detecting Food that had Gone Bad*

The participants said that they could detect food that had gone bad by smelling it, feeling it, or by the length of time it had been in the fridge. Most participants did not feel entirely comfortable relying on these methods of detection and took the extra precaution of freezing food that could be frozen (eg. bread). Lin explained that she was sometimes unable to detect spoiled fruit and vegetables.

I How can you tell if fruits and vegetables have spoiled?

L You can't always...I find myself wasting fruits and vegetables which is a drag...That [makes me] a little cautious about what I [buy].

4.3.3.4 *Chopping*

Five participants reported that chopping food, primarily vegetables, was very time consuming. Two of these people also had concerns about the safety of chopping with little or no vision. Emily felt that the reason she rarely prepared vegetables was because she was a lazy cook, however, she also said, "I have noticed how sighted people cut things, do things much quicker. [If I had vision] possibly I would eat more vegetables." At another point during the interview, Emily described using a food processor, "My mom had a food processor...and [that] really helped. It was great cause you didn't have to cut up stuff so I used the food processor a lot at home. I wish I had one here." Art described the difficulties he faced when chopping.

Chopping vegetables...it's not difficult but it's time consuming,...and I don't chop evenly so that's another thing...I [tend] to do things without vision so [I] do things more slowly because [I] want to be careful. A couple months after I moved out

I...cut myself quite badly, so now I tend to be more careful with knives...I don't try to chop vegetables [quickly].

4.3.3.5 *Measuring Small Amounts of Liquid*

Emily was the only participant who discussed the use of measuring spoons. When she was introduced to marinades, she encountered a new step in food preparation, "At first I would try and measure out the oil...oh man, I would get oil everywhere!" Later in the interview the measuring difficulty was mentioned again.

[Measuring] little things into teaspoons and tablespoons, I find that very difficult, like with oil or vinegar or something like that. I find it's just easier to dump some in, and hopefully I'm not dumping in too much.

4.3.3.6 *Setting Dials*

Three participants commented that they had the dials on their stove marked with tactile indicators, while one participant said that she found it easy to gage the settings on the stove without the use of tactile marks on the dials. Only one participant said that setting stove dials was problematic. It was one of the reasons why he preferred the use of alternative heating devices.

...the vertical grill comes in handy because the temperature is consistent. You're not dealing with a lot of dials where you wonder, "what's this set at?". You just turn it on...same with the microwave.

4.3.3.7 *Dealing with Hot Elements and Food*

Five participants reported burning themselves or a fear of burning themselves, as a result of not being able to see in the kitchen. Mark described how he feels food to test for doneness and commented, "I burn myself a lot when I cook but...I'm used to it so it's fine." Art explained how cooking instruction from a CNIB rehabilitation worker, partially alleviated his fear of burning himself.

[The instruction] definitely helped me as far as not to approach the stove let's say, and not be scared of the stove or the fact that, yes, there is heat there and whatever you're working with is going to get quite hot. They did show me how to deal with hot things and not worry about burning yourself...There are still some things that I don't like, grease is still the part that concerns me.

4.3.3.8 *Cooking More than One Thing at a Time*

Four participants identified that they found it difficult to cook more than one thing at a time. As a result, these people said that they preferred fixing dishes that could be prepared in one pot or dish without a lot of "fussing" over the stove. For example, casseroles, soups, meat and potato combinations, and crock pot cooking. Mark explained that serving multi-item meals was also difficult.

I find it difficult to cook more than one thing at once, so I typically will not...My meals will typically be one thing,...like a stir-fry or pasta where you can kinda throw some vegetables in...but it's all mushed into one big thing. You rarely would find that I'd have four or five separate things on a plate, all separated...like you would have at most normal people's houses...If I can't pile it all into one bowl or one plate, then typically I wouldn't make it. For me, arranging it on a plate would be sort of difficult too. Knowing how much to put on and keeping it separate from the rest of it, so it just all goes into a bowl.

4.3.3.9 *Frying and Browning Foods*

Four participants said that they found it difficult to fry and brown food without vision. Two reasons were identified. First of all, it was difficult to handle and evenly cook frying foods like pancakes, fried eggs, or meat that was supposed to be evenly browned. Lin explained that she preferred cooking food in the oven to preparing things on the stove top because of the difficulty associated with frying. She described the results of her efforts to fry foods, "Wouldn't you know it, you'd get some stuff that was almost burnt and other stuff that was raw, and I don't relish that idea." Lin also described why her husband became responsible for browning their meat.

Sure I could brown meat but some of it was brown and some of it was pink, and if

you're fussy and you really like it uniform, well then you're the sighted guy, you can do it. And he didn't argue.

The second problem associated with frying was the possibility of spilling hot food and grease. The participants said that this problem was nearly remedied by frying things in a deep pot instead of a frying pan, however, most participants still elected to broil things in the oven instead, if it was possible.

4.3.3.10 Determining Doneness

The participants reported that their main method of determining doneness was by timing. All of these people also described supporting techniques to more thoroughly ensure that, or assess whether the food was cooked. These techniques included: touching the food (two people), getting a sighted person to check for doneness (two people), overcooking meat to ensure that it was thoroughly cooked (three people), and one person wryly stated that the sounding of his fire alarm indicated that his food was cooked.

Despite the multiple procedures used to determine doneness when cooking, several participants explained that in some cases, it was hard to tell. Kim expressed her frustration,

I used to like making cookies, and loaves, and cakes, and things like that. Sometimes they didn't turn out too well. I don't know what happened. The cookies would be too well done or burnt...Other times they would turn out OK.

Kim said that she stopped baking because she could not ensure that the product of two or three hours of her labour would not burn.

4.3.3.11 Cooking Without Vision Takes More Time

Eight participants felt that one of the main factors that detracted from the task of food preparation was the amount of time it consumed. Seven of these people also felt that it takes blind people more time to cook than sighted people. Anne explained, "Cooking takes twice as long for

someone who can't see", and Mark said half jokingly, "I know it takes me a lot longer to cook than it does other people...Even boiling water seems to take me longer. I don't know why."

4.3.4 COMMON FOODS PREPARED AND EATEN AT HOME

The phrase, "common foods prepared and eaten at home" refers to an estimate of the foods prepared and eaten by the participants, one or more times, during the span of one to two "typical" weeks. This information is presented in chart form in Table 4.5. The numbers of commonly prepared and eaten foods were drawn from discussions around typical shopping trips, typical meals and meal patterns, difficulties in the kitchen, and typical patterns of eating out at restaurants. This study was not designed to determine specific or precise nutrient intakes.

The most striking aspect of Table 4.5 is the pattern of vegetable consumption. In several of the previous and subsequent sections, factors which deterred the participants from buying and using vegetables are discussed. They are: prohibitive pricing, concerns around spoiling, time and safety concerns associated with chopping, and lack of knowledge about the importance of vegetables in the diet. The various difficulties associated with vegetable use are reflected in the food preparation trends displayed in Table 4.5, Common Foods Prepared and Eaten at Home. Only three participants reported preparing salads or raw vegetables, one participant commonly prepared stir-fries containing vegetables, and one participant prepared vegetarian dishes. Five participants reported preparing meat and starch combinations with vegetables (eg. pork chops, potatoes, and carrots) but four of these people used canned or frozen vegetables as opposed to fresh vegetables. Mark, the participant who reported preparing the most vegetable containing dishes (salads, vegetable stir-fries, and meat, starch, and vegetable combinations), said that he did not eat vegetables on a daily basis and felt he should be eating vegetables more frequently. It is also interesting to note that this participant was one of the people who reported preparing the widest ranges of meals and dishes, but was the only participant who did not like or love food and eating.

Table 4.5 Common foods prepared and eaten at home

An estimate of the foods prepared and eaten by the participants, one or more times, during the span of one to two "typical" weeks. This chart is not an accurate depiction of nutrient intake. The ✓'s in Anne's column refer to the foods she commonly prepared when she lived alone. The X's indicate the foods that Anne has continued to prepare since moving in with her partner, Ron.

Name of Food or Meal / # of participants who prepare it	Anne	Emily	Kim	Lin	Andy	Art	Ken	Mark	Pat
toast or cereal / 7	X✓	✓	✓	✓		✓		✓	✓
fresh fruit / 4	X✓			✓		✓		✓	
salads or raw vegetables / 3	0			✓		✓		✓	
sandwiches / 6	X✓	✓	✓	✓		✓		✓	
prepared foods (meat pies, fish sticks, french fries, frozen chicken strips, wings, or nuggets, Kraft Dinner, Pizza Pops, hot dogs, nachos, canned soup) / 8	✓	✓	✓	✓	✓	✓		✓	✓
meat & starch (eg. chicken & rice) / 3		✓		✓	✓				
meat, starch, & vegetable combination / 5	0✓		✓	✓		✓	0	✓	
pasta with sauce / 6	0✓	✓	✓	✓		✓		✓	
meat & vegetable stir-fry with rice / 1	0							✓	
vegetarian dishes / 1	0✓								
"junk food" (chips, cookies, cakes etc.) / 6		✓		✓	✓	✓	✓		✓
microwave popcorn / 1							✓		
crackers & cheese / 2		✓			✓				

0 = common foods eaten at home but prepared by partner

Six participants said that they usually or always prepared “simple” or “basic” dishes as opposed to “elaborate” or multi-step meals. Two of the participants rarely or never cooked. When asked to identify foods that they found difficult to prepare, the participants reported: lasagne (two people), roast beef (two people), hamburgers from scratch (one person), and dishes that require a lot of vegetables to be chopped (two people). When viewed as a group, the tendency towards simple meals was evident in the participants’ commonly prepared meal patterns. The meals or foods that were commonly prepared by five or more participants were: toast or cereal, sandwiches, prepared foods, meat and starch combinations with or without vegetables, pasta with sauce, and “junk food”.

4.3.5 FOOD PREPARATION SUMMARY AND DISCUSSION

All nine participants had received food preparation instruction from one or more sources, such as their mothers, the CNIB, and high school cooking classes. Many of the participants reported teaching themselves a large portion of their cooking skills. They tended to prepare simple meals which required few steps and few ingredients. Eleven cooking related obstacles which resulted from cooking without vision were identified. All of the participants disliked or hated cooking although only one participant related their hatred of cooking to the difficulties they encountered in the kitchen.

When compared to the results from a survey of Canadian households, the participants in this study were much more likely to have an aversion to cooking (Canadian Foundation for Dietetic Research, 1997). This finding appeared in stark contrast to the participants’ overwhelming love or like of food and eating. The disagreeable nature of cooking for oneself was a prominent explanation for an aversion to cooking. Other research has shown that young singles derive the least pleasure from cooking while young couples derive the most (Food and Consumer Products Manufacturers of Canada, 1997). This study had a relatively large number of young singles (four people) and no young couples which may have impacted the overall negative attitude towards cooking.

A total of eleven cooking related obstacles were repeatedly identified by the participants. These obstacles were a direct result of cooking without vision and included difficulty accessing recipes,

organizing and locating items in the kitchen, detecting food that had gone bad, chopping, measuring small amounts of liquid, setting dials, dealing with hot elements and food, cooking more than one thing at a time, frying and browning foods, determining doneness, and the extra time associated with cooking when blind. The time required to cook without vision was the most commonly mentioned obstacle. Only one of the participants linked their hatred of cooking to the obstacles they faced as a result of their blindness. Eight of the nine participants were either male and/or living alone, conditions known to be associated with a low interest in and enjoyment of food preparation (Food and Consumer Products Manufacturers of Canada, 1997). Perhaps these conditions, as opposed to the participants' blindness, were more predominant contributing factors to their tendency to dislike or hate cooking.

The meals prepared by the participants appeared to remain quite simple with few steps in the preparation process and few required ingredients. In addition, the participants did not appear to prepare a large range of foods and meals. It is not known whether the types and frequency of foods prepared by the participants differ from the general Canadian population. Many popular Canadian meals identified in a recent survey of Canadian households were also prepared by the participants in this study. The survey found that 40% of Canadians have cereal for breakfast and 41% have toast, 37% of Canadian lunches include a sandwich, and for the evening meal, meat or dishes containing meat are served 83% of the time with vegetables, potatoes, and bread as the most popular side dishes (83%, 44%, and 37% respectively) (Food and Consumer Products Manufacturers of Canada, 1997).

A range of food preparation instruction was received by the participants. In general, the instruction received by the CNIB was not perceived as highly useful or applicable by most of the participants who received it. It did not appear as though the food preparation instruction given by the CNIB was able to identify and respond to the distinct needs of each individual. The perceived limited usefulness of the CNIB's instruction may also indicate that the food related barriers experienced by these participants reach beyond the scope of individual skill development and can not be dealt with effectively when informed only by an individualistic ideology (Travers, 1996). In

other words, visually impaired and blind people are unlikely to experience complete “food and nutrition accessibility” when lack of individual skill development is the only food related barrier that is addressed by the CNIB. CNIB clients may find food related skill development much more useful if it is coupled with external programs and systems of support (see section 5.4, *Implications for Practice and Research*, for examples).

Self directed learning, and not instruction received, was associated with the widest range of meals prepared by the participants. A personal belief in the importance of preparing one’s own food was a powerful motivator to home food preparation, and appeared to stimulate self directed learning and override an aversion to cooking.

In summary, blind people may dislike the task of food preparation. This may be a result of obstacles they encounter when cooking without vision. These obstacles can be minimized with good rehabilitation instruction and support, however, the blind person may still not find the task pleasurable as a result of the extra time and effort associated with cooking without vision. A strong personal conviction about the importance of cooking one’s own meals may act as a powerful motivating factor.

4.4 Meal Patterns

There were significant distinctions between the meal patterns of the participants who were employed versus those who were unemployed. Differences in food choices were also evident between the participants who had achieved higher levels of formal education versus the participants with less formal education.

4.4.1 THE UNEMPLOYED PARTICIPANTS

The three participants who were unemployed had the most erratic eating behavior. They

reported that they often only had one “big” or “main” meal each day which was supplemented by a series of one to two snacks before or after their main meal. The participants indicated that their main meal was not fixed to a particular time frame and could be consumed anytime between 5pm and 3am on any given day. The fluctuation in meal times appeared to depend on the other activities which the participant might be involved in. For example, Pat reported spending long hours at his computer as part of an ongoing project to develop his “home automation system”. Pat said,

[The time at which I eat] depends on what I’m doing...If [I’m working on] a big project it can be a non stop thing...Depending on the project, the food can sort of get pushed up. [My meal] can actually start moving around from time to time.

The unemployed participants also reported regularly sleeping in until 11am, 12noon, or 1pm and staying up until 1, 2, or even as late as 5am. All three participants identified themselves as a “night person” or a “night hawk”. The nocturnal tendencies of the unemployed participants appeared to be linked to their lack of routine and daytime responsibilities which are associated with many types of employment. With the exception of their weekends, none of the employed participants reported routine late nights or late mornings.

The interconnectedness of routine daytime responsibilities, sleep patterns, and eating behavior was revealed in Emily’s comparison of her lifestyle while attending and not attending school. Emily had not been regularly attending school for the five months prior to her interview.

If I’m going to school I usually get up at...8 or 9 in the morning...If I’m [at school] for 8:30 in the morning then I usually don’t have breakfast but at the half hour break I’ll...go in the cafeteria and grab...a muffin...or whatever...If I’ve made my lunch, then at break I’ll have something out of my lunch but, if not, then I’ll buy a lunch...Then I’ll come home and sometimes make a snack and wait a while, or have dinner right away. When I go to school I tend to be a lot more disciplined. I’ll actually cook almost every night and I’ll...actually buy groceries on a regular basis. When I’m not going to school, I tend not to be as disciplined...I’m a bit of a night person so I’ll stay up until 1 or 2 in the morning and then get up at 11 or 12 in the morning and then.[depending on] how much food I have in the cupboard, maybe not eat anything until the evening.

4.4.2 THE EMPLOYED PARTICIPANTS

In contrast to the unemployed participants, the participants who were employed scheduled their meals around their working hours and breaks with little or no variation in timing, except for the occasional “late” dinner meal. All of these people ate two to three meals per day and some reported having snacks as well. In all cases, the sleep patterns of these participants were also centered around their work responsibilities and involved getting up before 8am and going to bed by or before 11pm, with the exception of days off or weekends.

The meals of the employed participants tended to follow the traditional categories of breakfast, lunch, and dinner, with similarly traditional contents. For example, the employed participants who reported eating breakfast chose foods like eggs, cereal, toast, and coffee. This was in contrast to the unemployed participants who reported snacking on foods like cheese and crackers or left over fried chicken or pizza, which would constitute their first food intake of the day.

The individual food choices of each employed participant also tended to follow a routine pattern. For example, Mark explained that while at work, he tended to eat at the same four places and buy the same few items from each place; Ken always ate breakfast at Helen’s Grill and dinner at McDonald’s on his work days; and Lin always ate a granola bar during her morning break, ginger ale or V8 juice during her afternoon break, and an apple with her lunch on Mondays, Wednesdays, and Fridays, and an orange on Tuesdays and Thursdays.

4.4.3 EMPLOYMENT, EDUCATION, AND FOOD CHOICES

The participants’ awareness of nutrition recommendations and their conscious efforts to engage in healthful eating will be discussed in more detail in *Section 4.7 Nutrition and Health* however, certain eating patterns became evident and are appropriate to briefly discuss in this section. As summarized in Table 4.6 the unemployed participants and/or those with no education past high school (with the exception of Art who was both employed and had completed a college diploma)

tended to make less healthy food choices and chose food without considering the nutritional value of the food. In contrast, the employed group of participants with higher levels of formal education, were more likely to make healthy food choices and reported incorporating their nutrition knowledge when choosing food.

Table 4.6 Meal patterns

Employment Status & Meal Pattern	Participants' Name And Level Of Education		
Unemployed, erratic eating behavior, less healthy food choices	Emily 2 yrs university	Andy grade 5 or 6 elementary	Pat 2 yr technology institute (TI) diploma
Employed, routine eating patterns, less healthy food choices	Kim highschool graduate	Art 2 yr college diploma	Ken grade 10 secondary
Employed, routine eating patterns, more healthy food choices	Anne* (full-time student) B.A. & M.Ed	Lin B.A	Mark 2yr TI diploma & 1yr college certificate

* In this chart, Anne, a full time graduate student, has been placed in the category for employed participants because her schedule and behaviour is very similar to that of the other employed participants.

4.4.4 MEAL PATTERN SUMMARY AND DISCUSSION

The unemployment and lower levels of education experienced by some of the participants were associated with erratic, less healthful eating. In contrast, the employment and higher levels of education experienced by the other participants were associated with routine, more healthful eating. The lack of routine daytime responsibility which is associated with unemployment appeared to be

a strong contributing factor to erratic, less healthy patterns of eating. The association between lower levels of education and socio-economic status and less healthful patterns of eating has been cited elsewhere in the literature (Lappalainen et al, 1998; Milligan et al, 1998; Roos et al, 1998).

The unemployed participants tended to stay up late at night and sleep late into the morning, a pattern which contributed to unusual meal times. This pattern of wake and sleep may also have been part of a larger trend of sleep irregularities experienced by 80% of blind people (Lamberg, 1998). This trend is thought to be linked to blind people's inability to perceive light which allows their circadian rhythms to "run free" and become desynchronized. The extent to which circadian rhythm disturbances influence the daily routines of the participants in this study is not known.

Taken in sum, the high rates of unemployment and low levels of education experienced by blind Canadians (Statistics Canada, 1990) may put this community at an increased risk of less healthful patterns of eating. In addition, blind Canadians with no light perception may exhibit erratic meal patterns as a result of a circadian rhythm disturbance, a condition experienced by many totally blind people. However, Emily, Andy, and Pat, with erratic meal schedules, all had light perception, so unemployment may be more important.

4.5 Restaurants

When the participants described their experiences of eating in restaurants they discussed their reasons for eating in restaurants, their frequency of restaurant use, how they decided which restaurants to use, how they accessed information on the menus, and other factors which influenced their restaurant food choices.

4.5.1 MOTIVATION AND CONTRIBUTING FACTORS TO RESTAURANT USE

The two most frequently mentioned motivators for restaurant use were the social aspect of

eating and restaurant use as a means to avoid cooking. The less frequently mentioned factors that contributed to restaurant use were tiredness, being busy, and lack of food in the house.

4.5.1.1 *The Social Aspect of Eating*

Two participants voluntarily offered the hypothesis that food plays a large role in the social lives of blind people. All nine participants described social events with other blind people where the primary activity was eating. Only one participant reported preparing food to entertain company at her home. All the other descriptions of socializing around food took place in restaurants. For this reason, the social aspect of food has been placed in the *Restaurants* section. As previously reported in *Section 4.1, Participant Profile*, all but one participant said that they either loved or liked eating food. Mark, the participant who viewed eating as an “inconvenience” and an “expense”, did however describe several social traditions with his visually impaired and blind friends that were centered around restaurant eating. These included going to Pizza Hut every Monday and talking about computers with other like-minded people, and going out for brunch with his friends every Saturday morning. Mark said, “A big thing about going out to dinner is just socializing. That’s a lot of the reason why I’ll go to dinner, just cause it’s a chance to talk to whoever you’re going with.” When asked to describe the role of food in her life, Lin replied,

Well, as my friend Tracy commented, blind people do a lot of socializing around food. And I guess that’s true because you can’t always run around chasing hockey pucks and stuff like that, unless it’s adapted.

Anne also felt that food was a primary social event amongst blind people. When asked if she felt this trend was a consequence of being blind she replied,

I’m not sure, but I would suspect [it is something they do more because they are blind] because I mean, what do sighted people do for social events? Go to movies, or I don’t know, drive around in [their] car, or go for a walk around Stanley Park. You can’t take a bunch of blind people and go for a walk around Stanley Park. It’s not feasible, you got to get sighted guides...cause a lot of [blind people] just don’t feel comfortable walking with their cane or their dogs around the park. So, about

the only safe thing to do is go somewhere and eat because you're not about to take a whole bunch of people to a movie...It's not that blind people don't go to movies, but they're usually with somebody who is sighted who can tell [them] what's going on when [there's] no talking.

The difficulty of accessing a variety of social activities and a subsequent reliance on food as a social event, was described by Andy who moved from Montreal a year before his interview.

When I [came to] Vancouver I didn't have a lot of friends...and eating is getting [to be] a very big habit for me. Eating was still big [in Montreal] but not as big as it is here...I have another friend [who moved here from Montreal] and I think even him, eating has become...a big part of the day. We go to pizza, we go to Death By Chocolate...Sometimes I don't control myself [and I can] easily eat four [pieces] of cake.

4.5.1.2 *Avoiding Cooking*

As previously discussed in *Section 4.3.1, Inclination Towards Cooking*, all nine participants stated that they did not like or hated cooking. Five of these people explained that restaurant use was a method of avoiding having to cook. Mark, Pat, and Ken had identical opinions, "Why cook if you can pay someone else to do it for you?"

Kim reported that she usually ate breakfast and lunch in the cafeteria at her work. She said, "They have pretty good food in there so I like to have a big meal at lunch time so I don't have to cook too much at home. It's kind of nice that way."

4.5.1.3 *Too Tired or Busy to Cook*

Three participants stated that they tended to use restaurants when they were too tired to cook, and two participants said the same of being too busy to cook. The data presented in *Sections 4.3.1.3 Cooking Made More Difficult by Blindness* and *4.3.3, Problems and Proficiencies*, indicates that food preparation is entirely possible for blind people, but also suggests that blind people face a unique set of barriers to cooking. When combined with the obstacles associated with cooking

without vision, tiredness or being too busy may have a particularly strong impact on the tendency of blind people to use restaurants. For example, as reported in *Section 4.3.3.11, Cooking Without Vision Takes More Time*, seven participants felt that it takes blind people more time to cook than sighted people. Being too busy to cook therefore, would be a particularly strong deterrent to the already timely burden of food preparation, thus contributing to the use of restaurants.

4.5.1.4 No Food in the House

Four participants stated that they used restaurants if they hadn't shopped recently and there was no food in the house. Difficulties associated with shopping without vision, as presented in *Section 4.2, Shopping for Food*, may make restaurant use a more likely choice than a shopping trip for some blind people. One participant did say however, that although her trips to the grocery store were infrequent and unreliable, she was never stuck at home without food.

4.5.2 FREQUENCY OF RESTAURANT USE

Table 4.7, *Frequency of Restaurant Use*, expresses the approximate average number of restaurant meals eaten by each participant during a "typical" week. The number of restaurant and total meals were determined by: the participant's response to the question, "on average, how many times would you eat out or order in during a typical week?", and information surrounding daily routines and usual meal patterns. As previously reported in *Section 4.4 Meal Patterns*, the participants had distinct meal patterns from one another, and these patterns did not necessarily follow the traditional meal categories of breakfast, lunch and dinner. For these reasons, frequency of restaurant use has been expressed by traditional meal categories, as well as a ratio between the number of restaurant meals eaten during a typical week, and the total number of meals eaten during a typical week. In this way, the frequency of restaurant use is expressed in relation to the overall frequency of meal consumption. Some participants reported eating snacks. These intakes of food are not represented on the chart because while snacks may contribute substantial calories to their diets, snacks are usually small and simple to prepare, and would not therefore, be appropriate to

equate to a full meal.

Table 4.7 *Frequency of restaurant use*

Meal	Number Of Restaurant Meals per Week / Number Of Meals Eaten per Week								
	Anne	Emily	Kim	Lin	Andy	Art	Ken	Mark	Pat
b-fast	0/0	0/0	5-6/7	0/7	0/0	0/3	4/4	0/0	0/7
lunch	1-2/7	0/0	5/5	1-2/7	0/0	1-5/7	2-3/3	6/7	0/0
dinner	1/7	<1-6/7	2-4/7	1-2/7	2-7/7	1-3/7	5-7/7	3-4/7	2-4/7
total	2-3	<1-6	12-15	2-4	2-7	2-8	11-14	9-10	2-4
meals	/14	/7	/19	/21	/7	/17	/14	/14	/14

As illustrated by Table 4.7, during a “typical” week, five of the participants tended to eat at least one half of their total meals in or from a restaurant. Of the four participants who tended to eat less than half of their meals in restaurants, two were female and two were male. The tendency to use restaurants does not appear to follow the participants’ gender.

Two participants stated that the food they purchased from restaurants was sometimes more appealing than what they were capable of making at home. Two other participants said that home cooked meals were of higher quality. Ken, who tended to eat 11-14 restaurant meals / 14 weekly meals, said, “...when you get home cooked food of course, it’s so much more superior.” This statement suggests that Ken’s frequent restaurant use was not his optimal preference. Given his professed aversion to cooking which stemmed from the difficulty of cooking without vision, as previously discussed in *Section 4.3.1.3, Cooking Made More Difficult by Blindness*, it appears as though Ken’s blindness prevented him from eating the way he would like to.

4.5.3 DECIDING WHICH RESTAURANTS TO USE

When the participants discussed factors which influenced their decision to attend or order from a particular restaurant, accessible and convenient location, the availability of braille menus, and the acceptance of guide dogs were mentioned. The decision to attend a particular restaurant was also determined by the participant's craving for a specific type of food and their knowledge of the restaurant's existence.

4.5.3.1 Accessible and Convenient Location

All nine participants described choosing restaurants that were conveniently located at or near their place of work or in their neighbourhood. Four participants explained that the accessibility of the restaurant was also an important influencing factor. For example, Lin reported that she had started to use the cafeteria at work more often after a service had been implemented by which staff members could phone the cafeteria in the morning, listen to the lunch menu for that day, and place their order over the phone. Lin explained that she was the only blind employee at her place of work and the cafeteria was not "blind friendly". Prior to the implementation of the phone service, Lin said that going down to the cafeteria was a "big waste of time" because she didn't always like what was being served. When Lin began ordering from the staff cafeteria after the phone service was in place, she would send a sighted coworker to pick up her meal so as to avoid venturing into the awkward cafeteria layout.

Art explained that when he was by himself he decided where to go based on what he felt like eating and what was close by. He went on to explain that accessibility became a bigger factor in the choice of restaurant if he was going out with other blind people.

With [visually impaired or blind] friends it usually depends...We probably choose restaurants the same way other people would except with the provision,...is it close to a bus route, or is it easy to find once you get to the area?

Three other participants described the locations of frequently attended restaurants as being near certain sky-train stations. Kim complained that when she went out with her blind friends, they would

always go to the same restaurants. Things were different when she went out with a friend who drove a car. Kim said, "I go out with my other friend, Shelly that drives, not too often...but I have gone out with her...a few times. We [go] to different places and they're pretty good."

Emily explained that she and her boyfriend, who is also blind, usually ordered in. She confessed that although she enjoyed the convenience of ordering in, she wished that they would go out to restaurants more often. Emily lived in a suburban Burnaby neighbourhood that was not close to any restaurants. She said that going out to eat was sometimes a "hassle". Emily also said that they always went out to eat when she was in Gastown, the downtown neighbourhood where her boyfriend lived and where there were many restaurants close by.

4.5.3.2 Specific Food or Meal in Mind

Six participants said that they chose to use a particular restaurant based on what they felt like eating. Anne was one of these people.

Quite often I'll go to a restaurant with something in mind. It's a destination. Today I want Fa, Vietnamese soup, so I'll go here or here because it's what I have in mind. Or, today I want sushi. I don't know whether people make their decisions on restaurants in terms of what they want to eat. I don't know but that's how I do it.

4.5.3.3 Knowledge of a Restaurant's Existence

Four participants reported that finding out about restaurants required certain adaptive skills. Three participants said they tended to use the same restaurants all the time because they knew the restaurants existed and were familiar enough with the menu, that they did not have to refer to it when deciding what to order. The difficulty of accessing information from menus and its impact on the participant's food choices will be discussed in *Section 4.5.4, Accessing Information on the Menu*. When Kim was asked how she found out about restaurants she might want to attend she said, "Usually, I guess, it's from someone else, cause otherwise you might not even know it's there...unless you happen to be walking along and smell, oh what's that food?" Andy also described

receiving information from friends and using his sense of smell to locate new restaurants.

When I'm walking down the street with my friend [he will tell me about restaurants],...but in Gastown where I live it's easy...The smell, you can go [in] and check and ask them, what types of things do you have on the menu?

Lin had recently moved to a new neighbourhood and said that she was trying different restaurants in an attempt to get "the lay of the land". When asked how she knew that the restaurants existed Lin responded,

[My sighted friend] knows this area better than I do...And I know [my old neighbourhood] quite well from when I was married to Bruce. Well, at least I know there are restaurants there and I know where, well for the most part, where they might be.

Emily explained that she almost always ordered from the same four or five restaurants and described how she found out about each one. Most of the time she had been introduced to the restaurant through a friend. Emily also described times when she went to different restaurants.

E [My boyfriend] has a friend and he's taken us to different restaurants that I normally would never have gone to.

I Why wouldn't you normally go to them?

E Oh, just finding them, knowing that they even exist.

The information displayed in Table 4.8, *Names and Types of Restaurants Used*, was derived from conversations with the participants about their use of restaurants. All the participants who had access to them, used the cafeteria at their place of work or school. The use of well known chain restaurants, the tendency to return to a restaurant, and the use of restaurants that provide braille menus are influencing factors which should be considered when viewing the table.

Table 4.8 *Names and types of restaurants used*

Restaurant printed in *italics* indicate those which provide braille menus

Name and Type of Restaurant	# of participants who reported frequent use	# of frequent users who reported habitual weekly use
Cafeteria at work or school	5/5 who had cafeteria access	4/5 who had access
Chain Restaurants (not fast food)		
Bread Garden	1/9	
Earls	1/9	
Night & Day	1/9	
Pizza (various chains)	6/9	6/6
<i>Red Robin</i>	4/9	
<i>White Spot</i>	5/9	
Fast Food Restaurants		
A&W	4/9	
Burger King	2/9	1 /2
KFC	3/9	
McDonald's	6/9	3/6
Subway	1/9	1/1
Taco Time	1/9	
Wendy's	3/9	1/3
Other -independent & ethnic		
Chinese	3/9	1/3
Greek	4/9	1/4
Italian	1/9	
Japanese	2/9	
independent family style	6/9	4/6
other ethnicities	1/9	

The restaurants used by four or more participants on a weekly basis were A&W, McDonald's, independent family style restaurants, Greek restaurants, pizza restaurants, Red Robin, and White Spot. While the particular family style, Greek, and pizza restaurants varied among participants, each individual tended to use the same family style, Greek, or pizza restaurant all the time. It is also interesting to note that the two restaurants that offer braille menus in British Columbia's lower mainland (Red Robin and White Spot) were frequently used by a large proportion of the participants. Two thirds of the participants ate take-out pizza on a routine weekly basis. McDonald's and particular family style restaurants were used every week by at least one-third of the participants.

4.5.3.4 Availability of Braille Menus

Eight participants commented that their preferred method of accessing information from menus was to have access to a braille menu. This comment was almost always followed by the complaint that braille menus were very rarely available, only available in some large chain restaurants, or out of date. Two participants said that they sometimes chose restaurants based on the availability of braille menus, while one participant said that he never chose restaurants because of that factor. Emily was one of the participants who reported specifically choosing restaurants because of the availability of braille menus.

A lot of the restaurants I tend to go to are places that I go to regularly so I know what's on the menu...or I like going to places with braille menus if I can....If I go with my family...or out with a sighted friend,...then it doesn't matter,...then they read me the menu. But most of the time it's the [same places].

The difficulty of accessing information on menus and its impact on the participant's food choices will be presented in *Section 4.5.4, Accessing Information on the Menu*. Data presented in Table 4.8, *Name and Type of Restaurants Used*, indicates that seven participants regularly used restaurants that provided braille menus. This information does not necessarily indicate that the restaurants were chosen because of the availability of braille menus, however, it is interesting to note that only two restaurant chains in the region provide braille menus.

4.5.3.5 *Acceptance Of Guide Dogs*

Two participants described several situations in which they were told they could not have their guide dog in the restaurant. In all five incidences, the participants felt that the mistake was a result of the staff member's lack of knowledge about the use of guide dogs in North America. In many nations with very high population densities, guide dogs are not feasible, and therefore not available for use by blind people. Only one of the participants, Lin, indicated that she hesitated returning to the restaurants in which she encountered difficulty. Of one situation Lin said,

I used to go to [a particular place] when I lived [in my old neighbourhood] but one time when [I was] with my dog they said, "you can't do this", and I says, "oh, there is a law that says you have to allow it"...And she said, "OK, OK, I'll talk to my boss", and I waited for a minute...and I put my wallet down as if I was expecting...to be served. And she came back and boy, "What would you like?", it was a total turn around because I could hear...[the manager] say to her, "yes we have to, she is blind, [the dog] is her eyes, we could be in big trouble if we don't". And I just sat there and after that there was no trouble but I was very leery about going there any, too often.

4.5.4 ACCESSING INFORMATION ON THE MENU

Due to their inability to read print, the participants reported that in the process of placing an order, they had to use a variety of alternative methods to access the information on printed restaurant menus. Ken explained the situation in his own words.

Well first of all, I ask them what the hell they got...if you can't read a menu, sometimes you go into a place and there's a menu and you say, "well it's good for you but to hell, it's not good for me, so do ya wanna tell me what's on there!

The participants identified the following six different methods they used to access information on menus: asking the server to describe the entire menu, asking about the "special", asking a friend to read the menu, having previous knowledge of the choices available on the menu, listening to what other people order, and using braille menus.

4.5.4.1 *Ask the Server*

All nine participants reported asking the server to tell them what was on the menu or available in the restaurant. Eight of these participants complained that this method was uncomfortable, inconvenient, or an insufficient way of obtaining information. Art explained,

[It] can be a problem...when a group of blind people...go out together and then you have to depend on the server to read or tell you what's available, and the server will only tend to tell you what they like and then you kind of think, "what else does this place have?...How is it prepared?...or what is it served with?"...Cause sometimes they'll just tell you, "oh, we have hamburgers", or they'll come up to you [and say], "what do you want?", and that's...when you kind of wish that there was a way to read the menu.

Kim was another person who described the frustration of depending on the server to provide information.

If I'm by myself it can be a little bit more challenging because you can't always find out everything that there is...One time I asked them, "what do you have?" and they would kind of, "oh well, we have stir-fry",...they [didn't] really want to go through everything...so you have to go with whatever kind of information they want to give you. And I'll say, "oh, do you have this or that?", "No"...It's kind of frustrating cause you can't read the menu and you...have to make choices on a little amount of information.

Emily made a similar complaint about servers and explained that unless she was with a sighted friend or family member who was willing to read her the menu, she preferred to use the same restaurants where she was already familiar with the menu.

4.5.4.2 *What's the "Special"?*

Four participants reported that they would first ask the server about the special and if it appealed to them, they would order it. Given the unsatisfactory results associated with asking the server to relay the contents of the entire menu, described in the previous subsection, asking about the special may be a more "acceptable" way of trying to obtain some of the same information. Anne described

the frustration of dealing with unyielding servers, but felt that asking about the special was an unacceptable acquiescence on the part of blind people.

It's scary to think of. I mean, blind people go out and don't have menus read to them. They'll just go in and say, "OK...what's your special?"...I [hate] it, I [hate] it!...You go into a restaurant and my friends will say, "what's the special?", and they'll get told the special and they'll order something from the special, and I say, "well I don't want the special, what's on your menu?". And [they] say, "Oh, what do you want? What are you interested in? Soups, salads, what, what, what? Order. burgers, sandwiches, pastas?". I say, "I want to know what's on the menu!"..."Oh well, we don't have time to read the menu."...They may not necessarily say that, but that's what they're implying. "You should know what you want."...I don't see why I shouldn't have that information...Sighted people can go in and read the menu.

4.5.4.3 *Ask a Friend*

All nine participants described asking a sighted friend or family member to read them the menu. Two participants indicated that they felt uncomfortable asking friends to read them the menu because they felt they were being an inconvenience. Mark was one of these people.

If I haven't been there before I get [the sighted person I'm with] to read over and I'll just stop them when there's something I like...What ends up happening quite often is, if the menu is quite large, I sort of feel bad about getting them to read the whole thing so I'll tend to order something that's on the first page or something that's near the beginning of what they said...I just feel guilty about making them read the whole thing...I never suffer you know. I'll never order...a bowl of hot water over...a real meal or something.

The other participants did not express misgivings about relying on friends or family to read them the menu. Difficulties arose however, when the participants were by themselves or only in the company of other blind people.

4.5.4.4 *Previous Knowledge of the Choices Available*

Six participants described choosing a particular meal based on previous knowledge of what was available. The participant's knowledge of available food choices did not always appear to be

complete, but it appeared to be enough information for the participant to place an order. Only two participants reported choosing restaurants because of a preexisting knowledge of the menu, but as illustrated by Table 4.8, *Names And Types Of Restaurants Used*, many of the participants appeared to use the same restaurants all the time. Mark explained how his tendency to order what he was aware of resulted in his tendency to get the same things all the time.

I tend to get the same thing all the time and I think that's probably because I'm blind...I don't like to blame too many things on that...but often I think that's what it is because I'm not afraid to try new things...And in fact, I totally would if I knew what they had...I feel weird about asking people...so it's just easier to ask for something you know they have, and I think that's what I do.

Art outlined a similar process by which he decided what to order when he said, "If it's a restaurant that I know, then a lot of times I'll just say, "OK, I've had this before, I'll have that again." Kim described how she made a concerted effort to commit certain menus to memory. She said, "If I go to a place regularly...I try to remember...a lot of the things that are on the menu. That way I don't have to...get my friend to read it over and over."

4.5.4.5 Listen to Other People's Orders

Mark was the only participant who said that he sometimes listened to other people's orders as a means of learning what was available in the restaurant. He said that he would either order last if he was sitting with a group of people, or listen to the orders placed by people in the line in front of him. This method of accessing the contents of the menu did not appear to provide complete information.

A big way that I find out what a place has is by listening to what other people are ordering. You know, the guy in front of you. "Oh, they have that?", I mean, "I've been coming here for three years and they have that?"

4.5.4.6 Braille Menus

As previously described in *Section 4.5.3.4, Availability Of Braille Menus*, eight participants said

that having access to a braille menu was their most preferred way of accessing information from restaurant menus. Unfortunately, the participants reported that they only knew of two restaurant chains in the entire region that provided menus in this alternative format.

4.5.5 OTHER FACTORS THAT INFLUENCE RESTAURANT FOOD CHOICES

As discussed in previous sections 4.5.3.2 and 4.5.4, having a particular food in mind and the accessibility of the menu, are two factors which influenced the restaurant food choices of the participants. In addition, the avoidance of hard to handle or messy foods, the preference of finger foods, the company in attendance, and the tendency to order things that are not or can not be prepared at home, were identified as factors that also influenced the participants' food choices while eating in restaurants. These factors will be discussed in sequence. The impact of nutrition and health information, as well as the participants' attitudes towards health, and the food choices of the participants will be discussed in *Section 4.6, Nutrition and Health*.

4.5.5.1 The Avoidance of Hard to Handle or Messy Foods

Six participants indicated that they tended to avoid hard to handle or messy foods. The foods that were identified as messy or hard to handle by two or more participants were: barbequed ribs, spaghetti, chicken with bones, rice, and fajitas. Mark explained why he found it difficult to handle certain foods and confessed that he sometimes felt impeded by his decision to avoid messy or hard to handle foods.

M When I go to restaurants I'll often order things that I know...wouldn't be very messy to eat...Like, I would never order rice in a restaurant because it would probably end up all over the table,...and it's not that I don't like it, so sometimes I probably penalize myself and order something that...I wouldn't necessarily order if I didn't have to worry about stuff like that.

I What are some of the other types of things that you...wouldn't order in a restaurant?

M Things that are cut up into smaller bits...so like I said, rice dishes,...things like chicken fajitas...They can be kind of complicated to eat because there are so many different bowls...and piles of food that are in various places.

Art was another participant who reported avoiding messy and complicated foods.

I [try to avoid messy food] too...I don't like...foods in the restaurant that you have to...prepare, like a fajita or something. I wouldn't order a fajita...I am one that [thinks], "How messy is this?...Am I going to get it all over myself?" Like if I order ribs with the messy sauce or something...I always think, "If I order this how much of my dinner will I actually wear walking out of the restaurant?"

Some participants described techniques which they used when confronted with a hard to handle food. Kim described a technique she had developed to deal with rice, and two other participants explained that they sometimes asked the kitchen to cut up their meat for them if the meat had bones in it. Kim said,

I probably wouldn't order something that's too messy. Like if it's chicken [with] a whole bunch of sauce on it, if you can cut it that's OK, but when there's bones...it's harder to cut...I don't find rice too bad but I've got a trick that I use and it works pretty good for me...I'll eat my rice...and vegetables first and then I'll cut...my meat after...That way [I] don't have all this rice...when I'm trying to cut [my] meat...and the rice is going all over the table.

Lin explained that she used to get her husband to cut up her meat for her. After her husband died and she no longer had his assistance, she would sometimes request that the kitchen staff cut up her meat. Lin said that she did not like asking to be assisted in this way so she preferred to order "finger food".

4.5.5.2 The Preference of Finger Foods And Hand Use

Four participants said that they tended to avoid foods that required the use of a knife and fork, and preferred "finger foods" or things that were acceptable to eat with their hands. For example, Mark said, "If you're on a date or if you're with people who you're not wanting to look like an idiot in front of, it's much easier to order let's say, a hamburger, because it's acceptable to use your

hands.” The impact of certain company on restaurant food choices will be discussed subsequently in section 4.5.5.3. In addition, three of these participants said that they felt uncomfortable about using their hands to manage non-finger foods.

Three other participants however, indicated that they did not avoid foods that required the used of cutlery, but did not feel uncomfortable if they had to use their hands to manage their food. Anne was one of these people.

It doesn't [make me feel uncomfortable] when I use my hands cause...sometimes you have to, you can't avoid it. You have to check out what's on your plate. Does that chicken have bones in it or not?...[Using my hands to feel my food] doesn't bother me at all.

Anne went on to say that she felt many blind people relied on finger foods too often, or used their hands to eat their food even when it was inappropriate. Anne explained that because she was blind, she had been given specific instructions on how to use cutlery to manage her food. She felt that blind people's excessive and inappropriate hand use while eating, resulted from a lack of proper instruction and guidance. The concept of “appropriate” hand use was described by three other participants who indicated that using one's hands to manage non-finger foods was acceptable “within reason”. Lin, one of the participants who preferred ordering finger foods, explained that she did not feel uncomfortable about having to use her fingers when eating certain non-finger foods. She also indicated that there was a definite, acceptable limit to finger use.

Fingers were made before forks,...but if there's a meal that comes that definitely requires [cutlery], you can't eat mashed potatoes with your fingers, and if you did! You can't eat spaghetti or lasagne, don't be stupid, don't even try!

The participants did not appear to have identical views on the behavior that constituted an appropriate level of hand use. For example, Kim said that when eating in a restaurant, she tried to limit handling her food by cutting as much meat off the bone as she could, and then resorting to picking up the meat in her hands to eat the remaining flesh. Andy on the other hand, had no qualms

about picking up a whole pork chop with his hands while dining out in a restaurant.

4.5.5.3 *The Company in Attendance*

Six participants indicated that their restaurant food choices were sometimes influenced by the people they were sharing the meal with. Four participants indicated that they were more likely to avoid messy foods or order finger foods, if they were on a date or with people they didn't know very well. Kim explained,

[The food I order] depends too on who I'm with. Cause sometimes you don't know people too well and you're not sure whether people will mind if you pick [your food] up or not. I mean, if you're with people you know and know they can't see you...then you think, "oh well, it doesn't matter.", but when you're with somebody you don't really know...you're always a little bit...afraid to offend them...or you think you might offend them.

Mark and Andy both commented that they would not order messy food while on a date because they did not want to make a bad impression by spilling the food on the table or themselves. Two participants said that in order to avoid unwanted attention from their companions, they chose more simple or "conventional" foods, even though they felt capable of more complex food handling. Emily explained that although she felt competent using cutlery, she always ordered finger food when dining out with her family because they tended to "fuss" over her and would try to cut up her food for her. Anne also described making certain food related choices to avoid being hassled.

I would not use chop sticks in a Chinese restaurant if I'm with somebody I don't know because it's freaky for them to see a blind person using chop sticks...They say, "oh, ah here's a fork, it's much easier."...Many, many people [have reacted that way]...Maybe it's their fear of me using chop sticks, I don't know...I don't want to bother with the hassle...cause I feel that they'll...be uncomfortable for the whole time, and I'll be so uncomfortable too that they might be feeling that way, so I just don't bother.

Ken was the only participant who indicated that he was not influenced by the people he was eating with.

If I need to use my fingers to feel my way around I do it anyway, to hell with other people...I think that's their problem not mine. I'm gonna enjoy myself, that's the way I look at it. I mean within reason, if you're careful enough...But I mean if people are going to judge you on that, they got a problem...I'm gonna have what I wanta have. Last time I checked it was still a free country!

4.5.5.4 *The Availability of the Meal at Home*

Four participants reported that they purposefully ordered foods that they did not or could not prepare at home. Two of these people felt that this meant the food they ate in restaurants tended to be more healthy than the food they ate at home. Emily said,

I often eat healthier in restaurants than I eat at home cause at restaurants I'll order...like a stir-fry or a Caesar salad...or something fairly healthy because I don't have to make it,...cause I do enjoy eating healthy things, I just don't enjoy making them.

As previously discussed in section 4.3.3, Emily tended to avoid preparing vegetables at home because of their time consuming nature.

4.5.6 RESTAURANT SUMMARY AND DISCUSSION

The participants used restaurants to avoid cooking, as a social activity, when they were too tired or busy to cook, or when they had no food in the house. Although restaurants were used very frequently the participants tended to eat at well known chain restaurants and use the same restaurants most of the time. The accessibility and location of the restaurant, a craving for a particular food, the availability of braille menus, and the acceptance of guide dogs were factors that contributed to the choice of a particular restaurant. Participants were not always aware of the restaurants in the area. In the absence of a braille menu or a sighted person who was willing to read the menu aloud, the participants were often unaware of the full range of items available at the restaurant. A personal preference for easy to manage finger foods and an avoidance of "messy" foods also contributed to the food choices of the participants while eating at restaurants.

Avoiding cooking was the most common reason for restaurant use. Over half of the participants said that the main reason they used restaurants was to avoid cooking. This number was higher than the Canadian average even though the use of restaurants to avoid cooking increased in Canada from 1986 to 1996 (Canadian Foundation for Dietetic Research, 1997). A survey of Canadian households that did not include men living alone, indicated that only 10% of respondents "agreed completely" and 26% "agreed somewhat" that the main reason they used restaurants was to avoid cooking and cleaning up (Food and Consumer Products Manufacturers of Canada, 1997). Another study which had a more balanced representation of Canadians, found that 44% of Canadians who ate their evening meal away from home said they did so because they did not feel like cooking (Grocery Products Manufacturers of Canada, 1995). The participants' higher than average tendency to use restaurants as a means of avoiding cooking is not surprising since they also tended to be more likely to have an aversion to cooking.

Sharing a meal with friends at a restaurant was a predominant form of social activity for the participants. Several people felt that blindness limited the range of social activities available to blind people, leaving eating as one of the few accessible social activities. Although directly comparable studies do not exist, the literature does indicate that visually impaired Canadians spend a great deal of their leisure time in sedentary activities, a pattern which may indicate difficulty accessing a range of enjoyable leisure activities (Statistics Canada, 1990).

The participants in this study used restaurants much more frequently than the Canadian average. During a two week period two-thirds of the participants had five or more of their evening meals from restaurants and nearly one-half had seven or more meals prepared away from home. By contrast, a national survey found that only 13% of Canadian had five or more evening meals prepared away from home and only 6% had seven or more evening meals prepared away from home during a two week period (Grocery Products Manufacturers of Canada, 1995). Another study determined that on average, 12% of Canadians eat restaurant food for their evening meal (Food and Consumer Products Manufacturers of Canada, 1997). By comparison, 40% of the evening meals eaten by the

participants in this study appeared to come from restaurants.

The location and accessibility of the restaurant was an important factor in the choice of a particular restaurant. Participants were not always aware of the range of restaurants in the area. This appeared to result in the high use of well known chain restaurants and/or the use of the same restaurants all the time, even though many of the participants said they liked to try new foods. Anne, the only participant who reported having regular access to a broad range of information about local restaurants, was also the only participant who did not attend chain restaurants and reported frequently trying new restaurants. The availability of braille menus attracted some participants to particular restaurants and the refusal of a guide dog by uninformed restaurant employees deterred one participant from certain restaurants.

Participants used creative alternatives to access information on printed menus. If the participants were not accompanied to the restaurant by a sighted friend or family member who could read the menu aloud, they often decided upon an order without having full knowledge of the range of choices available on the menu. This was because the printed menus were inaccessible to them and braille menus were not available, the server resisted reading the entire menu aloud, and/or the participant felt uncomfortable about asking their server to read the menu to them.

Some participants ordered food that was appropriate to be eaten with their hands because they found it difficult to use cutlery and wanted to avoid feeling embarrassed about having to use their hands to eat. Other participants reported no difficulty using cutlery. While eating in restaurants, many participants avoided "messy foods" altogether.

In summary, cooking without vision may make food preparation unpleasant for many blind people. This may lead to frequent restaurant use by the blind community. Blind people may use a limited number and type of restaurants because they can not see the range of restaurants located in the area. While eating at a restaurant may be a popular and enjoyable social activity for many blind people, it also presents a number of obstacles. Menus are rarely available in an accessible formats,

servers may be unwilling to read the full range of information on the menu, some uninformed restaurant employees may hassle blind customers about the presence of their guide dog, and some blind people may feel uncomfortable about having to use their hands to eat or anxious about making a mess.

4.6 Nutrition And Health

The section on nutrition and health has been divided into five subsections which address accessing nutrition information, understanding of nutrition, sense of control over one's health, and participation in healthful and unhealthful activities. This research project was not designed to demonstrate cause and effect relationships between the various elements discussed in this section, however, connections between the five subsections should be observed. For example, the participants appeared to have difficulty accessing nutrition information. This limited access to information may have had a subsequent impact on the participants' concept of the word "nutrition" and influenced the other areas discussed in this section.

4.6.1 ACCESSING NUTRITION INFORMATION

The participants identified six sources from which they gleaned nutrition information. The sources are listed in order from the most to the least commonly mentioned and will be discussed as such. They are: the media, family and friends, health related organizations, school, the Internet, and nutrition publications. All of the participants reported accessing information from at least two of these sources, but only three people indicated that they had deliberately sought nutrition information. Three participants said that they did not trust their sources of information and two others expressed the opinion that most blind people have very limited access to nutrition information.

4.6.1.1 *The Media*

Seven participants identified radio and TV news or programs as a source of their nutrition

information. Three of the participants who mentioned TV and radio expressed the frustration that the information they received via these sources was unreliable or unbelievable because it appeared to be contradictory. Despite their dissatisfaction, these participants did not deliberately seek alternative sources of information. Emily reported that her main source of nutrition information was TV and radio news clips, but explained why she didn't trust those sources.

I hear a little bit about what they say...Some things I agree with and some things I really disagree with even though I don't know as much as I should about nutrition. Some things that they come up with that I hear on TV,...like the whole butter thing...It just seems like they flip-flop a lot...Sometimes [they] say,..."Don't eat butter anymore. It's bad for you. Margarine is better."...and then,..."no, butter probably is better for you in moderation." And now the whole thing with eggs, like eggs aren't as bad for you as they once thought either...I don't really pay a lot of attention to a lot of what I hear.

Pat said that he had never sought out nutrition information but would sometimes hear things on TV. When commenting on the type of information he perceived to hear he said, "Fruits and vegetables are supposedly healthy for you, all the junk food is not supposed to be healthy for you...Then again, those facts tend to change around from day to day so it's hard to say." Pat went on to explain that nutrition had never factored into his decision making around food.

The four other participants who reported the media as a source of nutrition information did not complain about the type of information they received. Two of these people however, described following up on information they had heard on the radio, with more thorough research on the Internet.

4.6.1.2 *Friends and Family*

Five participants reported that they received nutrition information from conversations with family and friends, or had been exposed to their family's fundamental concepts of healthy eating while they were growing up. When describing his exposure to nutrition information Mark said,

I guess I've been pretty lucky,...[a certain visually impaired athlete] was my roommate for two years so she was big into nutrition obviously from doing so much [competing]...If I'd go shopping with her...she was big into [nutrition] so I learned a lot from her and then the friend I go shopping with now, he used to be really into track so he knows a lot of that stuff too.

Art's description of one of his sources of nutrition information was similar to Mark's in two ways. Art also had access to someone who had a heightened knowledge of nutrition, and he too felt that his access to nutrition information was somewhat serendipitous. Art said,

My brother's wife is good for the information about food and nutrition. She's a nurse so she's pretty good about...passing on...anything that she's heard through work or whatever...But it's mostly sort of by accident, hearing about something.

When asked about their sources of nutrition information, Kim and Lin explained that their knowledge of nutrition had been informed in part by concepts they had learned from their families. Kim said, "At home my mom would always try to, you should eat vegetables and fruits and things like that." Lin explained how her family's piety informed her basic approach to healthy eating.

I grew up on the Bible [and] I grew up on the balanced diet through the school in health, and there's a passage in Corinthians that says, "all things in moderation" so you put it to whatever it is you're going to do in life, period...Do it in moderation, don't overdo it because you could have too much of a good thing. So if you're gonna have too much of a good thing,...the same applies to food. You can have too much of this, you can have too much of that.

4.6.1.3 Health Related Organizations

Three participants reported accessing nutrition information from various health related organizations they were a member of, or had been involved in. Unfortunately, all three participants faced barriers, particularly financial, to adhering to their organizations' nutrition recommendations. Ken was part of an activist organization that he described as a "community watch dog" that promoted "everything natural". As informed by this group, Ken felt that "most of the stuff that's out there is not healthy because of the soil it's growing in." To avoid toxins and achieve good health,

the organization recommended that its members only consume organic products. At a different point in his interview, Ken explained that his personal definition of the word “nutrition” was “organic”, but lamented that he was unable to afford organic food. When asked if he ever incorporated the organization’s nutrition recommendations into his eating habits, Ken said, “Well I guess it’s just for awareness,...it’s good to know, that’s for sure.”

Emily had also received nutrition information from a health related organization, but she too faced barriers to following their recommendations. She said, “I used to go to Weight Watchers...[At] Weight Watchers they say how you’re really supposed to eat...So I know how I’m supposed to eat, I just don’t.” When asked why she did not follow Weight Watchers’ guidelines for healthy eating, Emily explained that she had been able to do so when she was living at home and her mother was preparing most of her meals. Weight Watchers encouraged the frequent consumption of fresh and cooked vegetables, a task which Emily had previously deemed somewhat challenging (see *Section 4.3.3, Problems and Proficiencies*). Emily went on to say that she also found fruits and vegetables prohibitively expensive.

Kim had recently become a “consultant” for a network marketing company that sold a variety of nutritional supplements. This was the second company of its sort to which Kim had belonged. She explained that although she had not yet sold any products, she was following the company’s recommended regimen of vitamin and mineral supplements and various other nutritional products, a practice which cost her over \$100 per month. Earlier in the interview, Kim had mentioned that her money was “tight” so she had not been eating out as often as usual.

4.6.1.4 School

Three participants felt that they had received a large portion of their nutrition knowledge from elementary or secondary school. Kim and Lin, ages 46 and 50 respectively, reported that high school home economics and health classes had provided them with nutrition information. Andy,

who had stopped attending school in grade 5 or 6, felt that he too had received a substantial part of his nutrition knowledge at school.

4.6.1.5 *The Internet*

Two participants reported using the Internet to find nutrition information. Art recalled a single occasion when he used the Internet to follow up on some concerning “rumors” he had heard about artificial sweeteners. Anne on the other hand, reported frequently using the Internet as a source of nutrition information. Anne was the only participant who reported reading about food as a hobby. She said, “I love surfing the recipes on the Internet and so you hear about stuff, what the trends are in nutrition. I love reading about food, it’s a hobby of mine.” Anne went on to say that she considered herself to be exceptionally motivated to learn about nutrition, and the Internet did not necessarily guarantee blind people’s exposure to nutrition information. She said,

A lot of [blind] people have access to the Internet but they just don’t,...it’s not something they’d bother to do. Where as...sighted people...have nutritional information in their face generally because it’s in the paper,...it’s in print, it’s pamphlets, whatever.

Anne’s idea was reinforced by a statement that Pat made.

Can’t say I’ve ever really gone out of my way to look for it or anything...but now, accessing nutrition information with...the net, it wouldn’t be that hard if you actually wanted to look. That’s where you can find out more than you ever wanted to know...well, depends on what you find I guess. Sometimes...you might not want to know...When you’re eating some things, it’s better not to know.

4.6.1.6 *Nutrition Publications*

Anne was the only participant in this study who reported accessing nutrition information from nutrition publications. She said that prior to having access to *Cooking Light*, a braille magazine that contained healthy recipes and articles on nutrition, she was frustrated and unsatisfied with the amount of nutrition information she had access to and the “less healthy” food she prepared.

Art, the only participant who was able to read print, explained that he never accessed nutrition information from printed material. He said,

I never read about [nutrition] cause I don't have access to printed material about food...It's usually...someone saying, "well, have you tried this yet?" or "you really should eat this instead of that" or things like that.

When the participants' sources of nutrition information are viewed collectively, it appears as though they rely on auditory sources as opposed to print sources, but as reported in the next section, this is not necessarily by choice.

4.6.1.7 A Need for Accessible Nutrition Information

Two participants, both of whom were involved in blind advocacy groups, felt that most blind people faced barriers to accessing nutrition information, thus limiting their ability to make healthy food choices. Anne said,

There has to be more nutritional information made available in accessible format because I think a lot of blind people have no idea. They think, "oh well, I'll go out and eat a meal at a restaurant, greasy spoon joint, and it's healthy food."...So I see that as a real big problem.

Art used his own experiences as an example.

I don't know what to go look for. Like I couldn't go to a medical journal and look up the latest health information because I wouldn't even know where to find that information...If I hear health information it's usually by accident, so it's not like someone that's sighted that can go into a library and pick up a medical journal and purposely look for health information. I can't do that...If I'm sitting at my....general physician's office, I couldn't just pick up the flyers off the magazine rack and read them...That just doesn't happen.

Later on, Art suggested that simply having access to nutrition information in alternative formats might not be enough.

The Canada Food Guide is probably available on audio cassette if it's a federal publication, so people could request it,...but people probably don't realize they could do that, or do people even want to be bothered to take the time to [read] the food guide or not?

None of the seven other participants expressed the concern that they did not have enough nutrition information, and Mark actually commented that he was satisfied with his knowledge of nutrition. He said, "I think I have enough information, enough that I know the proper choices."

4.6.2 CONCEPT OF THE WORD "NUTRITION"

There were two distinct understandings of the word "nutrition". Six people described nutrition as avoiding or consuming particular foods. Two participants had a more general definition of the word which meant variety and moderation. One participant felt that the word "nutrition" represented both societal and personal control of which he was "scared."

4.6.2.1 Avoiding or Consuming Specific Foods

When asked to describe their concept of the word "nutrition", six participants gave specific examples of foods which they felt should be consumed or avoided. Three people said fruit and vegetables should be consumed and "junk food" should be avoided. Two people said "no fat" and "low fat" foods should be consumed and fattening foods, "like take out", should be avoided, and one person felt that the word "nutrition" meant the consumption of organic foods. Several of these participants supplemented their initial response with phrases such as "just healthy", "a healthy diet", and "foods that are good for you". Only two of the six participants reported consistently attempting to translate their concept of the word "nutrition" into their daily food choices.

4.6.2.2 Variety and Moderation

Two participants indicated that their concept of nutrition involved a variety of all foods in moderation. Lin explained why she felt all foods fit. "I guess there's a time and place for unhealthy

foods because if your system has nothing to fight, it'll fight itself, and you don't need that, let me tell you!" Although Emily's definition of the word "nutrition" involved variety and moderation, she had previously complained about the "sameness" of her diet as well as her tendency to occasionally buy "healthy" food but then not eat it.

4.6.2.3 *Personal and Social Control*

For Andy, the word "nutrition" had a negative meaning and referred to various types of control. It represented personal control by which people, particularly women, tried to control their food intakes. It also meant a type of control imposed on individuals by "society". Andy said,

When I say control it means to answer to what the society requires. It means thin [people]. It's kind of a religion and I don't like it. I'm always scared because people have been repressed by the Catholic Church or the Anglican Church, trying to control [their] minds. I think society views nutrition as something that is good or not good, to be controlled and to be determined, and that is why I am always scared of this word, nutrition.

Andy's personal history provides some context for this comment. After losing his vision at the age of two as a result of malnutrition, Andy, who was born in Haiti, was adopted by a Canadian Roman Catholic nun who left Haiti with him and returned to Montreal where he was raised. Over the years, Andy developed a keen interest in politics which was informed and influenced by the politics of his place of birth, as well as the politics of French speaking Quebec.

4.6.3 SENSE OF CONTROL OVER ONE'S OWN HEALTH

Two opposing opinions emerged in response to the question, "How much control do you feel you have over your health?" The majority of participants, seven people, felt that their health was entirely their responsibility and virtually entirely within their control, to the extent of the strength of their will power. One participant implied that he felt people are not capable of controlling their own health. One participant was not asked this question because on the day after her interview she would be receiving the results of a biopsy which had been performed on a tumor that had been found

behind her ovary during exploratory surgery. The participant was very anxious about receiving the news and the interviewer felt that this particular interview question was both inappropriate and probably invalid under the circumstances.

4.6.3.1 Complete Control

Seven of the eight participants felt that they were the only person or force that had control over their own health. Emily's response was similar to the six other responses.

I figure I have...full control over my health, it's just up to me...I have the control whether or not I want to be healthy or not. Whether or not I choose to exert that control is completely up to me.

Three of the seven participants qualified their response by indicating that their sometimes limited "will power" could thwart their desire to avoid eating behaviors which they felt were less healthy. Despite numerous descriptions of food and nutrition related barriers which they faced as a result of their blindness (*Sections 4.2 Shopping for Food, 4.3.3 Problems and Proficiencies, 4.5.4 Accessing Information on the Menu, and 4.7.1 Accessing Nutrition Information*), the participants did not mention their blindness in response to this question, or were resistant to the idea that their blindness impeded their control over their health. Mark said,

I know that I'm the only one who really has control over [my health]...I feel that I don't always make the right decisions but I know that I'm in control of it...I think I'd have just as much of an opportunity to be as healthy as I'd want to be as other people. I may have to be...a little more inventive or do different things, but I know that if I'm not how I exactly want to be, I know that that's because I'm lazy, and not because of my blindness or anything like that.

Art's initial response to the question was, "I guess I control how good or bad [my health] is...I think I have complete control over it so if I choose to keep my health bad then I do." When asked to consider his response in relation to the complaint he had previously lodged about the difficulty of accessing nutrition information, Art said,

If you don't know what's there that could improve your health then I guess you could say, "no, I'm not in control."...But I think I'm in control within the limits of what I do know about my health.

4.6.3.2 *No Control*

Pat was the only participant whose answer was contrary to the seven other participants, and implied the belief that people are not capable of being in control of their health. He said,

Is anyone really in control of [their health]? It just seems to be...It's never really been a problem so I've never really had to worry about it really, which I guess is good, I won't question it!

4.6.4 CONSCIOUS EFFORTS TO PARTICIPATE IN HEALTH PROMOTING BEHAVIOUR

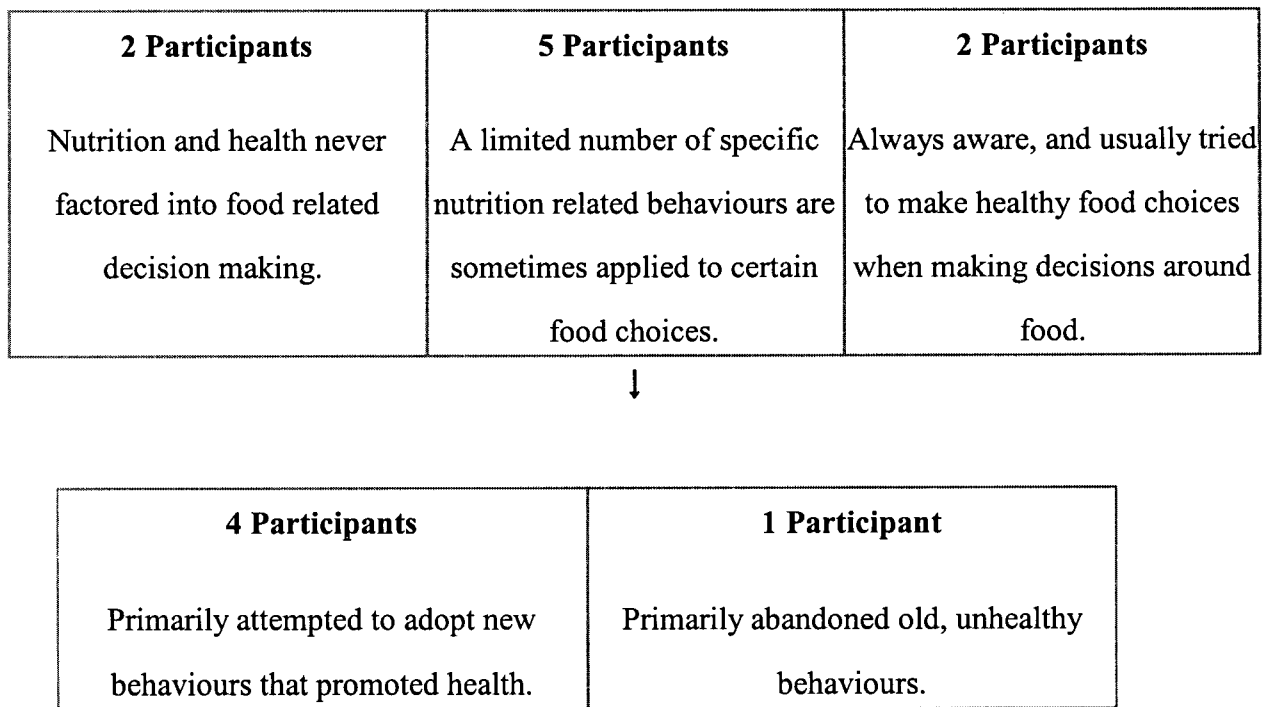
The participants reported purposefully participating in health promoting behaviors that involved food and beverage consumption, as well as behaviors that were not food or nutrition related. Pat was the only participant who felt that he did not do anything that made him more or less healthy. As described in the previous section (4.7.3.2 - *No Control*), Pat was also the only participant who felt that people were not really capable of being in control of their health.

4.6.4.1 *Nutrition Related Health Behaviour*

Three distinct patterns became evident within the category of nutrition related health behavior. Two participants, Pat and Kim, felt that nutrition and health never factored into their food related decision making. In contrast, five participants listed a limited number of specific food related choices they tried to make in an attempt to be more healthy. For four of these participants, "healthy food related behavior" primarily involved adopting new behaviors like broiling instead of frying or other measures to reduce fat intake, and trying to eat more fruits and vegetables. For the fifth participant in this group, "healthy food related behavior" primarily involved abandoning old, unhealthy behaviors that included pop drinking, coffee drinking, alcohol and drug abuse, smoking, and frequent consumption of sweets. The third pattern was evident with two participants, Mark and

Anne, who felt that although they didn't always follow through, they were always aware of "healthy food choices" and generally tried to make healthy decisions around food. These participants gave examples of the types of decisions they tended to make and in both cases these lists were much more extensive than the lists of behaviors identified by the participants in the previous category. These two particularly health conscious participants, were also among those with the most post secondary education. Interest in, or enjoyment of food did not appear to influence nutrition related health consciousness as Mark, one of the most health conscious participants, reported receiving the least enjoyment from eating. The three distinct patterns of Nutrition Related Health Behaviour are illustrated in Figure 4.1.

Figure 4.1 *Nutrition related health behaviour*



4.6.4.2 *Non-Nutrition Health Behaviours*

Six participants reported purposefully participating in health promoting behavior that was not nutrition related. The only behavior that was identified by more than one participant was the acquisition and use of a guide dog. The three participants who identified guide dog use as a health promoting behavior also provided three reasons why they felt this was so. First of all, using a guide dog allowed them to walk more briskly which provided them with a better opportunity to achieve physical fitness; secondly, using a guide dog required more frequent walking for the purpose of exercising the dog; and thirdly, using a guide dog gave them more confidence while navigating busy city streets. Lin explained,

The fact that I finally got a guide dog which allowed me to walk faster and I felt braver by going on the streets because I was getting to the point where I was just terrified to cross any heavy crossings, and of course that...brings you down a peg or two.

Four of the nine participants had guide dogs at the time of their interview.

4.6.5 AWARENESS OF PARTICIPATION IN ACTIVITIES THAT MAKE ONE LESS HEALTHY

All of the participants, except Pat, reported conscious participation in activities which they felt made them less healthy. Two distinct attitudes towards “unhealthy” behaviour emerged. Three participants regretted that although they wanted to avoid certain behaviors they felt were unhealthy, their “will power” or “self control” was sometimes limited and their resolve gave way to unhealthy activities. Five other participants reported conscious participation in behavior which they felt was unhealthy, but said they were not willing, ready, or did not feel it was necessary to abandon these behaviors.

4.6.5.1 *Intention to Avoid Certain Behaviours*

Andy was one of the three participants who identified participating in behavior which he felt

was “unhealthy”, but felt that he continued to do so because of a lack of control on his part. He said,

At Death By Chocolate...if I don't control myself, sometimes I don't control myself and I can [easily] eat four pieces of cake. I don't think it's a good thing to do but I still do it. Because I'm already [over] weight.

4.6.5.2 Unwillingness to Avoid Certain Behaviours

Five participants identified conscious participation in activities which they felt were “unhealthy”, but indicated that they were not willing to give up these activities. The activities deemed “unhealthy” included; drinking “a fair amount” of alcohol, smoking, eating desserts and other high fat or processed foods, and not exercising enough. For example, Emily said, “I sit too much, I smoke, eat too much cheese, too much chocolate probably, but I won't ever give up that!”. Mark felt that eating in restaurants as frequently as he did was an “unhealthy” behavior but said,

I don't see that I'd even not eat out as much because there's nothing keeping me from doing that. Maybe if I got a cholesterol check or something like that I might, but I'm not doing that!

As previously described in *Section 4.7.1.3, Health Related Organizations*, Ken was a member of an activist health organization. The strong opinion of the organization was that vegetarianism was more healthy than a diet that included meat. When asked whether he participated in activities which he felt made him less healthy, Ken replied,

I do have certain vices and well, I'm not ready to give'em all up, that's for sure...I guess you could say I'm a burger connoisseur, I like my burgers, and there ain't no bloody way I'm given that up!

Contrary to the belief held by some of the participants, public health experts view lifestyle and health related behaviour as individual choices as well as behaviour that is influenced by social, economic, and cultural factors (Statistics Canada, 2001). The extent to which the lifestyle and health related behaviour of the blind community differs from the behaviour of sighted Canadians is not known. However, the distinct social, cultural, and economic profile of the blind community lends

credit to the possibility that initiatives geared to reduce modifiable health risks for this population should consider customized content and delivery.

4.6.6 NUTRITION AND HEALTH SUMMARY AND DISCUSSION

Participants in this study received their nutrition information from the media, family and friends, health related organizations, school, the Internet, and nutrition publications. The participants' definitions of "nutrition" included avoiding or consuming particular foods, variety and moderation, and personal and social control. Most participants reported making an effort to participate in both nutrition and non-nutrition related health promoting behaviours. Similarly, most participants also reported participating in activities which made them less healthy. Most of these people said they were not ready or not willing to stop participating in their less healthy behaviours. Almost all of the participants had a very strong sense of control over their personal health.

When compared to the results of a National Population Health Survey (NPHS) conducted in 1994-95 (Statistics Canada, 1996), the participants in this study relied more heavily on TV, radio, family, and friends as sources of nutrition information. Contrary to the most popular sources of nutrition information for other Canadians, the participants in this study relied on auditory rather than visual sources. Table 4.9, *Important Sources of Nutrition Information*, illustrates the differences between the Canadian average and the study participants.

Table 4.9 *Important sources of nutrition information*

Source of Nutrition Information	% of Canadians aged 25-44 who use this source	# of Participants who use this source
books, pamphlets, magazine	50%	1/9 (11.1%)
TV, radio, newspaper	31%	7/9 (77.8%) (TV & radio only)
family	22%	5/9 (55.6%)
friends	13%	

(Statistics Canada, 1996)

The Internet was mentioned by two participants as a source of nutrition information, a relatively small number considering how much information is accessible to blind people through the Internet as a result of adaptive computer programs. The reason for low Internet use as a source of nutrition information may lie partially in one participant's statement, "I wouldn't know where to look". Sighted people can use the Internet to perform a follow-up search on information presented to them in pamphlets, magazine and newspaper articles, product labels, and nutrition campaign posters. Blind people have little or no access to these initial sources of information, thus, follow-up searches are not generated.

Despite concerns about the trustworthiness of the nutrition information heard on TV, participants did not seek alternative sources, a trend which may be indicative of indifference, limited information sources to choose from, or both. Nutrition campaigns designed to reach people without sight, and not just sheer information (even if it was available in alternative formats), might be capable of expanding blind people's options to nutrition information as well as combating indifference, as is the case with campaigns targeted at sighted people.

Some of the participants had definitions of the word "nutrition" that were similar to the results of a study by Winter Falk et al (2001) that investigated the management of "healthy eating".

Common definitions included organic/natural, low fat, and variety and moderation/balance. In a manner similar to the literature (Winter Falk et al, 2001), foods were classified as either healthy or unhealthy according to the participants' definition of nutrition. For example, participants concerned with fat classified low fat foods as healthy and fatty foods as unhealthy. Despite the fact that seven participants reported making conscious efforts to eat more healthfully, only two people said that they routinely attempted to translate their definition of nutrition into their actual eating habits. Such a trend suggests that the participants may have had difficulty translating their nutrition knowledge into action. Several factors may have contributed to this trend. Firstly, the participants may simply have limited will power or commitment, perhaps especially if the healthy eating strategy is aimed at weight loss (see *Section 4.7.2, Body Satisfaction*). Secondly, factors related to the participants' blindness may thwart their ability to choose foods they consider healthy. For example, the participant might not know what healthier foods are available when they go shopping, they might face barriers in the preparation of healthier foods (eg. chopping vegetables), and if they are in a restaurant, they might feel uncomfortable trying to handle certain "messy" foods which happen to be healthier.

All but one participant indicated with resounding confidence that they were in complete control of their health. Some people did feel however, that their limited self control or will power weakened their grasp on total control and some participants made a point of saying that their blindness had absolutely no impact on their control over their health. The only participant with a voice of dissent felt that no person is capable of being in control of their health. It is not known whether most Canadians have such a strong locus of control as it relates to their personal health.

On the whole then, a blind person's access to a variety of sources of nutrition information may be limited by their inability to read print. Although the Internet is a virtually unlimited source of information for blind people who have access to adapted computers, its usefulness as a nutrition information tool may be confined by a blind person's lack of initial exposure to nutrition issues prominent in print media. Blind people may have particular difficulty translating their definition of

nutritious eating into action as a result of blindness related obstacles.

4.7 Body Weight and Satisfaction

This section investigates the issues of body weight and body satisfaction in relation to the experience of being blind.

4.7.1 BODY WEIGHT

Two participants reported their body weight with certainty. The seven other participants either estimated a weight range which they believed they fit into, or made an estimation based on the weight they had been the last time they were weighed. In some cases, participants indicated that it had been several years since they were last weighed. In order to weigh themselves, the participants would need access to a talking scale, a relatively expensive piece of equipment. Only one participant indicated that he was weighed during examinations by his physician. The design of this study is unable to determine whether there is a difference between sighted people and blind people in terms of their ability to accurately provide their body weight.

Body mass index (BMI) is a ratio between weight in kilograms and height in meters squared (weight in kg/ height in m².) Epidemiological research has revealed that certain health risks are associated with BMIs that fall below 20 or above 25. For this reason, it is currently recommended that individuals try to maintain a body mass index between 20 and 25 (Statistics Canada, 1996).

Participants were asked to report their height and weight which was then used to determine their BMI. Of the nine participants, only one was within the recommended BMI range of 20-25 kg/m². One person was below the range at 17 kg/m², and one person was above 40 kg/m², and would therefore be considered "severely obese". The six other participants ranged from 26 to 31. The participants' estimated BMI's are illustrated in Table 4.10, located at the end of *Section 4.7.2, Body Satisfaction*. Health risks associated with obesity begin in the range of 25-30 kg/m². Given the

uncertainty with which many participants reported their body weight however, these BMI calculations can not be considered unquestionably accurate. The large number of participants who appear to be outside of the recommended BMI range however, indicates the need for further research in the area of blindness and weight management.

4.7.2 BODY SATISFACTION

In response to the question, "Are you satisfied with your body shape?", seven participants indicated that they were and two participants indicated that they were not. Five of the seven participants who reported being satisfied with their body shape qualified their response by saying that they thought they "should" lose some weight. Three of these people reported that when their clothes started feeling too tight or no longer fit, it was an indication to them that it was time to lose weight. The two participants who reported being satisfied with their body shape but did not think they needed to lose or gain weight, had the lowest BMIs (17 and 24). Factors that were mentioned as motivators to lose weight were: not wanting to have to buy a whole new size of clothing, the belief that it was easier to find "nice" clothing in a few sizes down, the desire to be able to fit back into some clothes that had become too tight, and health reasons.

Of the two participants that were not satisfied with their body shape, Anne wanted to lose 30 lbs because she felt she was overweight, and Mark felt that his "tummy" was fat and in need of toning. Mark explained that his previous body shape indicated to him that his stomach was too big. While discussing what his body felt like when he was involved in sports and was physically fit he said, "I know what I should be and I know what I'm not."

Appearance or weight relative to other people was not mentioned as a motivating factor to lose weight. A comment made by Emily (estimated BMI 29-31) suggested why appearance did not present itself as a motivating factor to lose weight. "I really don't think too much either way about [how my body looks]...It isn't that big of a deal since I can't look in the mirror and can't really get any satisfaction about how I look". Emily went on to describe an ongoing battle with her sighted

mother who was “always” pushing her to lose weight.

[The way my body looks in terms of my weight] really doesn't matter to me... It doesn't matter to me! I am the way I am and...as far as health wise, OK sure, I should probably lose a bit of weight, but as far as whether it's going to improve how I feel about myself and my body, I don't really think so. It'll make me feel a little better about myself just because thinking, “OK yeah, I've done something that will improve my health and I've accomplished...a goal.” It'll make me feel better in that way but not in any other way. Which...my mother finds incomprehensible, she can't understand that. She can't understand that...it doesn't make a whole lot of difference to me...And that just...really floors her...And I've tried to explain it over and over again and she just doesn't understand that, it just doesn't mean the same thing to me as it does to her.

Table 4.10 illustrates the participants' estimated BMI, satisfaction with their body shape, and attitude towards weight loss. The data suggest that blindness may diminish the importance of appearance, thereby alleviating body dissatisfaction even when the participant feels they should lose weight.

4.7.3 BODY WEIGHT AND SATISFACTION SUMMARY AND DISCUSSION

The participants in this study tended to be uncertain about how much they actually weighed and most were also outside the recommended range for Body Mass Index. While most people were satisfied with their body shape, many also felt that they ought to lose some weight. The reasons for losing weight included health and the desire to continue wearing current clothes, resume wearing old clothes, or begin wearing smaller clothes that were perceived to be nicer and easier to find. Participants knew they had gained weight when their clothes began feeling tighter or their bodies felt different than they had in the past. Physical appearance was not mentioned as a motivating factor to lose weight.

When compared to the Canadian average, the participants in this study appeared to be more likely to have BMIs outside the recommended BMI range of 20 to 25 kg/m². Only one of the nine participants was within the recommended BMI range. In a 1994-95 National Health Survey, it was

Table 4.10 BMI, body shape satisfaction, and weight loss attitudes

Name	Estimated BMI	Satisfied w/Body Shape	Attitude Towards Weight Loss
Anne	30*	no	would like to lose 30 lbs
Emily	29-31*	yes	should lose weight for health reasons & easier to find nice clothes in a few sizes down
Kim	28*	yes	should lose weight so can fit back into some of her old clothes
Lin	24	yes	not too big or too small, "I'm built for comfort, not for speed."
Andy	46*	yes	should lose weight for health reasons but doesn't like society's criterion for thin people
Art	30	yes	should lose weight for health reasons
Ken	27-28*	yes	should lose weight because don't want to go up an entire size in clothing & the extra pounds are "hard on the old ticker"
Mark	26*	no	don't need to lose weight but feels his "tummy" is too big and would like to tone it
Pat	17*	yes	"It would be more trouble than it's worth to worry about that sort of thing"

* = uncertain about precise body weight

determined that 42.7% of Canadians between the ages of twenty and sixty-four were within the recommended BMI range. Thirty percent of Canadians were "overweight" (BMI > 27.0) and 7.7% were "underweight" (BMI < 20). The remaining 19.3% of Canadians had BMIs between 25.0 and 27.0 and were considered "possibly overweight". In 1994-95, 58.8% of Canadian men and 40.3% of women between the ages of 20 and 64 were "overweight" or "possibly overweight" (Statistics Canada, 1996).

The participants' inability to see themselves decreased the importance of their appearance as

it related to their body weight. This in turn, diminished their body dissatisfaction even when the participant felt they should lose weight. The absence of vision and its corresponding impact on body satisfaction was investigated in a 1998 study and revealed a trend similar to the one observed in this study. Questionnaires which measured body dissatisfaction and eating attitudes were completed by sixty women, twenty congenitally blind, twenty blinded later in life, and twenty sighted. The congenitally blind women had the lowest body dissatisfaction scores and the most positive eating attitudes, while the sighted women had the highest body dissatisfaction scores and the most negative eating attitudes. The authors suggested that the results testified to the impact of the visual media, which promotes unrealistic images of thinness and beauty, on body dissatisfaction and abnormal eating attitudes in Western societies (Baker et al, 1998).

Most of the participants were unsure about their actual body weight. Although it is not known whether the participants differed from sighted people in their ability to provide an accurate body weight, two factors may have predisposed them to their uncertainty. These factors are a lack of concern about body weight in terms of its effect on appearance, and difficulty monitoring one's own weight in the absence of an adapted set of scales that reads the weight aloud. Given today's preoccupation with weight, the vagueness surrounding self perceived weight was refreshing, however, it may indicate that the usefulness of current recommendations to maintain a particular weight range is limited for some blind people.

Taken together these data suggest that blind people may be at an increased risk of having a BMI that is higher than the recommended range, less likely to be dissatisfied with their body shape even when they believe they should lose weight, and likely to be uncertain about their actual body weight. The factors that indicate to a blind person that their weight has changed are likely to be tactile rather than visual, and the factors that motivate blind people to lose weight may not include a desire for change in their physical appearance.

4.8 Physical Activity

Walking appeared to be the dominant form of physical activity for the participants in this study. Two other themes which became apparent were: the important role of sport programs for blind people, and the difficulty of accessing safe and enjoyable physical activity.

4.8.1 WALKING

Eight participants indicated that walking was their main source of physical activity. For six of these people, walking was also their only source of physical activity. As previously described in *Section 4.6.4.2, Non-Nutrition Health Behaviours*, three of the four participants who owned a guide dog said that walking had become more pleasurable, easier, and allowed them to walk faster than when they used a white cane. Due to their inability to drive vehicles, blind people may be more likely to walk than sighted people. It is not known whether there is a difference between blind people and sighted people in terms of their walking frequency and walking intensity.

4.8.2 THE ROLE OF SPORT PROGRAMS FOR PEOPLE WHO ARE BLIND

All nine participants had been exposed to physical activities other than walking and eight of these people had received their initial or entire exposure through activities organized specifically for blind or physically disabled people. The programs and organizations identified by the participants were: the BC Blind Sports Association, Sons of Norway cross country skiing for the blind, a blind skating program run by the Optimist club, a Burnaby Parks & Recreation Board program for high school students with disabilities, and sporting activities at a residential school for the blind.

Unfortunately many of these programs were no longer running or the participants were no longer eligible to participate. Although the BC Blind Sport Association is still in full operation, all three participants who had been involved in the organization indicated that they no longer wished to participate in competitive sports as a form of physical activity.

4.8.3 DIFFICULTY ACCESSING SAFE AND ENJOYABLE PHYSICAL ACTIVITY

Four participants said that they were not satisfied with the amount of physical activity they had access to, and eight participants indicated they had difficulty finding activities they enjoyed. This difficulty appeared to result from limited access to both sport and fitness programs for blind people, and the sighted guide they needed to participate in a particular activity: a sighted pilot for tandem cycling, a person to go hiking with, a sighted person to go swimming with. For example, Mark said that he found it “boring” to workout in a gym. He explained that he preferred to do activities “with a purpose” and especially enjoyed being outdoors. Like three other participants, Mark also explained that the majority, or all of his friends were also visually impaired or blind. This made it difficult to find the sighted people he needed to do the activities he most enjoyed. Mark said,

I'd prefer to do more [exercise]. It's tough because like, I really like nature and I can do a lot of things...but no matter how easy I find typical travel, walking through the forest is not as easy...So that gets to be a little more challenging...I think a lot of that I wouldn't do because of my vision and I wish that, if I had more people that would do that I think I totally would.

Emily and Lin both enjoyed swimming but did not feel comfortable going to the pool without a sighted guide. Emily said, “I have gone public swimming...with other blind people...but I tend to always be scared and I hate walking around the pool area with my cane.”

Four participants mentioned that they had tried going to the gym as a form of exercise, but were no longer doing so at the time of the interview. Two of these people indicated that they found the gym boring, and the two others indicated that they found it difficult to use the gym without the assistance of a sighted friend or helper. Anne explained that she had previously been able to afford the services of a personal trainer, but without that assistance, she was no longer able to read the digital displays on the machines she enjoyed using.

Two participants had their own tandem bicycles, a piece of equipment which was reported to cost about \$3,000. Both of these people said that they did not go cycling very often because it was

difficult for them to find a sighted pilot to ride with. Despite the barriers they reported facing, all of the participants who expressed a dissatisfaction with the amount of exercise they were getting felt that their “laziness” or limited “motivation” or “will power”, and not their blindness, was the main reason for their inactivity. For example, to lose weight around his mid-section, Mark described running up and down the empty staircase at his high-rise apartment building since his blindness prevented him from jogging outdoors. Mark said that although he might have to do things “differently” or be a little more “inventive, his opportunities for health were the same as everyone elses. As previously quoted in section 4.6.3, *Sense of control over one’s own health*, he said, “If I’m not how I exactly want to be, I know that that’s because I’m lazy, and not because of my blindness or anything like that.” This strong sense of personal agency was consistent with the participants’ strong feelings of control over their health, previously reported in section 4.6.3.

Comments previously quoted in *Section 4.5.1.1, The Social Aspect of Eating*, indicate that eating may be used as a substitute for physical activity which is made difficult by blindness. Anne said, “...a lot of [blind people] just don’t feel comfortable walking with their cane or their dogs around the park. So, about the only safe thing to do is go somewhere and eat...”

Table 4.11 depicts the participants’ previous and present participation in physical activity as well as their satisfaction with their current level of physical activity.

Table 4.11 *Previous and present participation in physical activity*

Name	Previous Exposure	Present Participation	Expressed Dissatisfaction
Anne	BC Blind Sports-swim workout at the gym* paid personal trainer	frequent walking with guide dog	not satisfied
Emily	Sons of Norway-blind cross country skiing hiking*	occasional walking	not satisfied
Kim	Sons of Norway-blind cross country skiing Optimist Club-blind skating tandem cycling*	Sons of Norway - blind cross country ski ing frequent walking with guide dog	not satisfied
Lin	residential school for the blind-skate & swim swimming*, skating*	frequent walking with guide dog	
Andy	workout at the gym*	walking-summer only	
Art	Parks & Rec program for disabled kids-swim tandem cycling* workout at the gym	frequent walking with guide dog	
Ken	residential school for the blind-various sports	frequent walking	
Mark	hockey for the blind BC Blind Sports-track goal-ball for the blind hiking* workout at the gym	hockey for the blind frequent walking	not satisfied
Pat	hockey for the blind BC Blind Sports-track	hockey for the blind	

* = activities which required the one-on-one assistance of a sighted guide.

4.8.4 PHYSICAL ACTIVITY SUMMARY AND DISCUSSION

Walking was the main source of physical activity for most of the participants. It was also the only source of activity for over half of the participants even though all nine people had been exposed to activities other than walking. The participants with guide dogs felt that their dogs made walking more enjoyable and allowed them to walk faster. Almost all of the participants' exposure to activities other than walking had occurred with the support of activity programs specifically for blind or disabled people. Most of these adapted programs were no longer available or suitable for the participants, a situation which made it difficult for most participants to access safe and enjoyable physical activity. Almost half of the participants were not satisfied with their current level of physical activity, and all participants blamed their "laziness" or "limited will power", and not their blindness, for their inactivity.

It is not certain whether the participants in this study had physical activity profiles which differed from the Canadian average. In a 1998-99 National Population Health Survey (NPHS), both men and women rated walking as their number one leisure-time physical activity. Women reported 11 walking sessions per month while men reported eight (Statistics Canada, 2000). No easily comparable statistics for blind Canadians exist. It is known however, that 55% of visually impaired Canadians between the ages of 30 and 64 engage in physical activity three or more times per week, while only 5% engage less than once a month. Despite these figures for physical activity, sedentary leisure activity was very prominent. Ninety-five percent of visually impaired adults between the ages of 30 and 64 reported listening to the radio, reading, and watching TV as a leisure activity. This level of participation was equally as high for individuals in the 12 to 29 and 65+ age groups. In addition, less than 25% of visually impaired Canadians reported attending sports events, movies, or concerts, and only 17% reported visiting parklands. (Statistics Canada, 1990).

Differences in the non-leisure activity levels of sighted versus blind Canadians may also exist. Although 25% of Canadians reported that "sitting" best described their daily non-leisure activity,

50% said that their non-leisure time was spent standing or walking and 20% said that their daily non-leisure activity involved lifting and carrying light loads. No directly comparable statistics exist for the visually impaired population, however, the activity limitations survey, conducted by Statistics Canada in 1986, revealed that visual impairment impeded some common non-leisure activities. For example, 59% of visually impaired Canadians reported that they required assistance to do heavy housework, 45% required assistance to do their shopping, 41% needed help with housework, and 28% had assistance with meal preparation (Statistics Canada, 1990). The restrictions in non-leisure physical activity which result from visual impairment may contribute to substantial overall differences between the physical activity levels of sighted and visually impaired Canadians.

The number of participants in this study who were dissatisfied with their current level of physical activity was consistent with other data on blind Canadians, however, the participants' reasons for non-participation differed from other research. Canadian statistics indicate that 41% of the visually impaired population would like to participate in more physical activity. The most common reasons given for not participating in physical activity were perceived physical inability (61%), and prohibitive cost (26%) (Statistics Canada, 1990). The authors of the Statistics Canada report suggested that the survey respondents may not have actually been physically incapable of activity, but believed that their limited vision made them incapable. By contrast, the participants in this study knew that they were physically capable of a variety of activities, although they identified barriers that resulted from their blindness and limited their access to these activities. Despite the identification of barriers, the participants blamed their laziness or limited will power, and not their blindness, for their inactivity.

Taken in sum, walking is likely the main source of physical activity for most blind people. Easy access to a variety of other safe and enjoyable physical activities may be difficult for many blind people. This limited access may make it difficult for many blind people to maintain a healthy level of physical fitness and a healthy body weight. Physical activity programs which address the specific needs of blind people may greatly increase this population's options for physical activity.

4.9 Personal Insights

At this point in my thesis I feel it is important to discuss a hypothesis which is not solidly evidenced within the research data, but whose implications are significant enough to necessitate examination. I arrived at this hypothesis through the integration of my past experiences as a blind person, my interactions with the research participants and research data, as well as my examination of works by Michalko (2002) and Titchkosky (2001). The theory which I am about to present was not shared with the research participants so they may not agree with my interpretation of their experiences.

In section 2.1.4, Perceptions of Blindness, I presented works by Michalko (2002) and Titchkosky (2001) which proposed that North American society currently understands disability as an asocial, apolitical, individual medical problem that must be dealt with through management and/or correction. This understanding of disability is housed within the “people-first” ideology and corresponding phraseology. Within this ideology, disability is “a troublesome condition that is arbitrarily attached to some people...people *with* a disability” (Titchkosky, 2001, pg. 2). Conversely, within the people-first ideology, disability is not valued for its difference and it is not seen as an “essentializing feature” (Michalko, 2002, pg. 153) of one’s identity or a category of social identity. In this way, Michalko explains that, “the “battle” for the inclusion of disabled people becomes the battle for ordinariness, a sense of “seeing past a disability” to the ordinary person” (Michalko, 2002, pg. 153). The people-first ideology emphasizes the importance of managing one’s disability since disability is an individual physical condition. In addition, while the use of the phrase, “person with a disability” was intended to emphasize the dignity that personhood deserves, it simultaneously continues to discriminate against disability. Michalko asserts that the person-first discrimination against disability continues to foster many disabled people’s quest for “normalcy”, a quest that does not allow the “voice” of disability to speak.

As visible as some disability is, it is very often denied. Denying and ignoring one’s

own disability in the face of the collective...“world of the normal”...is nothing other than the process of normalization, or fitting in, and many disabled people do it extremely well. But fitting in is possible only when the “voice of disability” is silenced (Michalko, 2002, pg. 69).

The pattern I believe I observed throughout the interviews with the participants, was one of “fitting in” and denial. I do not mean to say that the participants were “in denial” of their blindness or that they were denying me the truth, rather, I believe that the participants’ full understanding of the impact of their blindness on their experiences was being denied by the people-first requirement to “fit in” and be “normal”.

The following examples are three distinct threads of the same pattern. First of all, despite the numerous food and nutrition related obstacles identified by the participants and presented in Chapter Four (Results), only two participants, Anne and Art who were both active in advocacy groups for blind people, occasionally expressed the opinion that things could or ought to be different so as to accommodate the needs of blind people. The rest of the time I heard phrases such as, “I don’t think I eat differently from sighted people”, “I don’t like to blame too many things on my blindness”, “I’m used to it (the difficulties I face while cooking)”, and “it (the inconvenience of not having accessible menus) doesn’t bother me”; phrases that spoke of fitting in while necessitating the voice of disability to remain silent.

Secondly, eleven cooking related obstacles were identified by the participants as resulting from their blindness. The participants generally liked or loved food and eating but they all disliked or hated cooking. Only one participant related his hatred of cooking to the obstacles he faced as a result of his blindness. Seven of the nine participants were either single, younger, and/or male, characteristics which have been associated with a decreased interest in and enjoyment of cooking (Food and Consumer Products Manufacturers of Canada, 1997). However, even the older female participants who were or had been partnered indicated that they did not enjoy cooking. Although this study can not determine the extent to which blindness contributed to the participants’ dislike or

hatred of cooking, the possibility that blindness was not perceived by the participants as an acceptable or possible reason for an aversion to cooking, has implication which are worth examining.

Within the people-first ideology, the individual is expected to cope with and manage *their* "problem". Successful coping and management occurs to the extent to which the impact of the problem on the individual's life can be minimized, so as to live as "normally" as possible. As a result, a blindness related aversion to cooking is not perceived as a phenomenon in the blind population that results from inaccessibility, but is seen as an individual's failure to manage their blindness. While the quest to live as normally as possible denies the perception of the difference of blindness, Travers (1996) also warns that the "victims of nutritional inequity" can be blamed and made to feel guilty for not living up to nutrition professionals' expectations, when social and physical nutritional inequities are perceived as individual deficiencies.

The third thread of the pattern became evident in the discussion surrounding physical activity. Many of the participants indicated that their blindness made it difficult for them to access safe and enjoyable physical activity, and that they were not satisfied with their current level of physical activity. However, laziness and limited willpower, and not their blindness, was always given as the reason for their inactivity. Many of the participants had been more physically active in the past when they were involved in sport and fitness programs specifically designed for disabled or blind people, programs which were either no longer available or appropriate for them. The trend from activity to inactivity which was associated with the decrease in opportunities for accessible sport and fitness programs, indicates that blindness may have been a deterrent to the participants' physical activity. Although this study is not capable of determining the extent to which laziness or blindness lead to the participants' inactivity, the possibility that blindness was not perceived by the participants as a possible or acceptable explanation for their inactivity warrants further examination. The requirement to fit in and be a normal person, as promoted by the people first ideology, may have denied the participants' the ability to perceive their limited access to physical activity as resulting from the social and physical organization of systems which are suitable only for sighted people. As a result,

the participants saw their inactivity as resulting from their own failures (laziness and limited willpower).

The participants in this study were not asked if they described themselves as a “person who is blind” or a “blind person”, nor were they asked if they were consciously aware of, or had opinions about the opposing perceptions of blindness as a strictly individual physical condition versus a collective social identity. However, given the fact that the perception of disability as a worthy category of social identity is so recent, and the “difference” of disability has traditionally been perceived as problematic by society (Michalko, 2002), it is likely that the participants were influenced by the traditionally negative views of disability that create the desire to be normal. Even Michalko, who firmly believes in the valuable “difference that disability makes”, claims that he occasionally slips into the traditionally negative way of perceiving disability and his own blindness. Elsewhere in the literature, members of other recognized social groups (such as ethnic minorities and the gay and lesbian community) have been shown to internalize the negative attitudes society has towards them (Tastsoglou, 2002; Williamson, 2000). For example, “...the...mainstream...belief and value systems of...”heterosexism” see heterosexuality as the “natural/normal/acceptable or superior form of sexuality” (Williams, 2000, pg. 97). As a result, many lesbians and gay men are reported to experience “internalized homophobia” which has been defined as, “The gay person’s direction of negative social attitudes toward the self, leading to the devaluation of the self and resultant internal conflict and poor self-regard” (Williams, 2000, pg. 97). The pattern of fitting in or normalizing and the denial of the participants’ full understanding of the impact of their blindness on their experiences of food and eating, may have been related to the internalization of society’s negative attitudes towards disability; negative attitudes which are not resolved by the people-first ideology.

4.10 Limitations of the Research

The limitations of the study arose from the sample size and the sampling technique as well as the limited availability of recent statistics on the Canadian blind population. Firstly, although strong

themes and patterns emerged from the data, the sample was not large enough to achieve saturation in some categories. A larger sample size would have promoted saturation of categories, thus improving the reliability of the generated data. Secondly, despite the range of blind organizations that were contacted and my membership in the blind community, response to the recruiting campaigns was low and the people who did agree to participate did not form a sample that was representative of Canada's blind population. The participants in this study tended to have higher levels of education and were more likely to be employed than the Canadian average for the visually impaired population. Also, the ages of the male participants were concentrated in the 25 to 30 age range, while the four female participants were either in their early 30's or 50 years of age. A more selective sampling technique would have created a more representative sample, thus increasing the transferability of the generated data to the Canadian blind community. In addition, because the research was conducted in urban British Columbia, it is not known how the food experiences of blind people in other regions of Canada may differ from the experiences of the participants in this study. Lastly, the most recent Canadian statistics on blind people were generated from data collected in 1985. Since recent statistical information on blind Canadians is lacking, the extent to which the participants represented the current blind community is uncertain.

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

5.1 Conclusions

The goals of this research project were to:

- View the food experiences and eating patterns of blind people from their perspective
- Identify factors which influenced these experiences and patterns
- Detect the possible existence of some unmet nutrition needs of the participants.

A variety of interview questioning techniques were used to investigate both specific topics within the area of food and eating, as well as the more general culture within which the blind participants experienced food and eating (Rubin & Rubin, 1995).

Shared experiences and patterns of behaviour, as well as their influencing factors emerged from the data. The participants identified numerous, specific blindness related inconveniences and obstacles during encounters with grocery shopping, food preparation, restaurant use, nutrition information acquisition, and physical activity. Lack of vision limited the participants' knowledge of available products resulting in the tendency to purchase the same things all the time. The assistance of a sighted person was required to locate desired grocery items in the store, but many participants faced a lack of knowledgeable and reliable in-store assistance. The participants shared many difficulties when preparing food. Although most of the participants liked or loved eating food, they all disliked or hated cooking. This trend appeared to result in a higher than average use of restaurants as well as a higher than average tendency to use restaurants to avoid cooking. The low availability of menus in accessible formats often forced the participants to order without complete knowledge of the items available on the menu. Print forms of nutrition information were also inaccessible to the participants, a situation which necessitated a higher than average reliance on

auditory sources of information. These sources were not always perceived to be reliable or satisfactory. The participants were less likely to translate their definitions of nutritious eating into action, a trend which was likely related to more limited food choices as a result of obstacles incurred by blindness. The participants had a higher than average tendency to be outside the recommended BMI range, and although some participants felt that they needed to lose some weight, physical appearance was never mentioned as a motivating factor. Sport and fitness programs designed specifically for blind and disabled people provided the participants with most of their exposure to activities other than walking but unfortunately, many of these programs were no longer available or in operation. Some participants were unsatisfied with the low amount of physical activity they participated in. Lastly, the higher levels of unemployment and lower levels of education experienced by the blind Canadian population, may put this community at an increased risk of the less healthful eating patterns associated with lower levels of education and socio-economic status.

The unmet needs of the participants include any situation in which the participants' nutritional health and/or experience of food could be negatively impacted by any limitation of options resulting from their blindness. These unmet needs will be discussed in more detail in section 5.4, Implications for Practice and Research.

Taken in sum, specific experiences and patterns of behaviour related to food and eating were identified as commonly shared by the participants and resulting from their blindness. These experiences and patterns indicate the need for intervention by nutrition and blindness professionals to promote positive experiences with food and good nutritional health.

5.2 Implications for Practice and Research

As indicated by the findings of this research, it is likely that blind people share a common set of food experiences and eating patterns that result from their blindness. Some of these experiences and patterns include obstacles to shopping, food preparation, accessing nutrition information,

healthy food choices, and a diet containing a variety of foods. These potential food and nutrition related obstacles may stem from the deficient skill level of the blind individual as well as barriers inherent in the social and physical organization of food and nutrition in Canadian society. Nutrition and blindness professionals must acknowledge and address both the individual and social/physical nature of the food and nutrition concerns of blind people.

Since the CNIB is committed to helping blind and visually impaired people “achieve the lifestyle they want, both at home and in the community” (CNIB Pamphlets and Publications, 2002), the CNIB has an obvious role in meeting the unique food and nutrition needs of the sight impaired community. Table 5.1 describes specific examples of the unmet food and nutrition needs of the participants and suggests appropriate areas for CNIB and nutrition and blindness professional intervention.

Table 5.1 *The unmet food and nutrition needs of the participants as identified by this research project*

Area of Need	There is a specific need for:
Shopping	<ul style="list-style-type: none"> - Consistent and reliable assistance with in-store grocery shopping - Internet instruction for individuals who are interested in learning how to grocery shop on-line - Co-operative efforts to ensure the accessibility of on-line grocery shopping web sites
Food Preparation	<ul style="list-style-type: none"> - Food preparation instruction that provides realistic, client centred support for individuals in a variety of life situations, with a range of resources, interests, and abilities, for example, the unique dietary patterns of unemployed individuals who are blind. - A convenient medium by which blind individuals can choose to become familiarized with new foods, products, and recipes which accommodate a variety of needs, interests, appetites, and food preparation abilities. The familiarization process could range from a brief description of a potentially useful food product, to making the new product instructions accessible, to facilitating the skill development necessary to prepare the new food product or recipe.
Restaurant Use	<ul style="list-style-type: none"> - Instruction for individuals on how to use restaurants as a healthy alternative to eating at home - A convenient medium by which blind individuals can choose to find out about restaurants in their city or town - The co-operative development and implementation of a training module for restaurant servers to enable them to confidently and effectively serve customers who are blind - Advocacy directed towards the appropriate powers to encourage the provision of accessible menus for visually impaired and blind customers - The development of tactics and skills for blind individuals by which they can confidently acquire the information on "inaccessible" restaurant menus

Health and Nutrition Programs	<ul style="list-style-type: none"> - A convenient medium by which blind individuals can access reliable nutrition and health information - Nutrition and health campaigns which target the visually impaired and blind community and take into account the unique characteristics of this community - The co-operative development of opportunities for safe and enjoyable physical activity for visually impaired and blind Canadians of all ages, interests, and abilities
--------------------------------------	---

With regards to future research, several endeavors within this newly emerging field of study would produce particularly useful information. Firstly, a large quantitative study, designed to compare the food practices, nutrient intakes, and health status of blind versus sighted populations, would help to uncover the food and nutrition profile of the blind community. The data generated from such a study would be more transferable to the entire blind community in Canada. Secondly, this study only examined the experiences of people with little or no usable vision. The majority of visually impaired Canadians have usable vision (Statistics Canada, 1990), and the proportion of visually impaired people with usable vision will continue to increase as the Canadian population ages (CNIB News & Media, 2002). This is due to the fact that most age-related vision loss does not result in complete blindness, but only partial vision loss (CNIB Pamphlets & Publications, 2002). It would be very useful to design a study that would be capable of examining the impact of various degrees of vision loss on people's food experiences, eating patterns, and nutrient intakes. This information would enable nutrition and blindness professionals to more accurately predict and address the food and nutrition concern of an individual or group based on their visual acuity. Lastly, an individual's perception of blindness is likely to have a tremendous influence on the way they live their life as a blind person. Research that examine the impact of popular disability ideologies, like the "people-first" ideology, on both the individual and collective identity, would provide substantial insight into the experiences and behaviour of blind people.

REFERENCES

- Alleyne, G. (2001). Health and the quality of life. *American Journal of Public Health*. 9(1), 1-6.
- Americans with Disabilities Act. (2001). Guide for Places of Lodging: Serving Guests who are Blind or who have Low Vision. *U.S. Department of Justice, Civil Rights Division, Disability Rights Section*.
- Baker, D., Sivyer, R., & Towell, T. (1998). Body image dissatisfaction and eating attitudes in visually impaired women. *International Journal of Eating Disorders*. 24, 319-322.
- Bell, M. (1976). *It isn't always easy....but it's possible: a booklet that describes how to teach food preparation skills to blind people*. Englewood Cliffs, NJ: Thomas J. Lipton Inc.
- Bouma, G., & Atkinson G. (1995). *A handbook of social science research: A comprehensive and practical guide for students*. Oxford, NY: Oxford University Press Inc.
- Bryans, W. (1996). *In search of freedom: How persons with disabilities have been disenfranchised from the mainstream of American Society*. Springfield Ill: Charles C Thomas Publisher Inc.
- Burstrom, K., Johannesson, M., & Diderichsen, F. (2001). Health-related quality of life by disease and socio-economic group in the general population in Sweden. *Health Policy*. 55, 51-69.
- Canadian Foundation for Dietetic Research, Dietitians of Canada, and Kraft Canada Inc. (1997). *Speaking of Food and Eating: A Consumer Perspective*.
- Chapman, G., & Maclean, H. (1993). "Junk food" and "healthy food": Meanings of food in adolescent women's culture. *Journal of Nutrition Education*. 25, 108-113.
- CNIB News and Media. (2002, March 23, 2002). Client Profile. (1), [Website]. Canadian National Institute for the Blind. Available: http://www.cnib.ca/eng/about/news/journalists/client_profile.htm [May 24, 2002].

- CNIB Pamphlets and Publications. (2002, January 11, 2002). National Consultation in the Crisis of Vision Loss. (2), [Website]. Canadian National Institute for the Blind. Available: http://www.cnib.ca/pamphlets_publications/nccv1/chapter2.htm [May 24, 2002].
- Connors, M., Bisogni, C.A., Sobal, J., & Devine, C.M. (2001). Managing values in personal food systems. *Appetite*. 36, 189-200.
- Devine, C., Connors, M., Bosogni, C.A., & Sobal, J. (1998). Life-course influences on fruit and vegetable trajectories: Qualitative analysis of food choices. *Journal of Nutrition Education*. 30(6), 361-370.
- Dickinson, P., Ellison, J., Sciadas, G. (2000). Plunging in: the increase of household Internet use continues into 1999 (Connectedness series). *Connectedness Series, Statistics Canada*. 1(1), catalogue number 56F0004MIE.
- Dyburgh, H. (2001). Changing our ways: why and how Canadians use the Internet. Housing, Family, and Social Statistics Division, *Statistics Canada*. Catalogue number 56F0006XIE.
- Food and Consumer Products Manufacturers of Canada. (1997). The Home CEO: Household Management in the 90's.
- Furst, T., Connors, M., Bisogni, C.A., Sobal, J., & Winter Falk, L. (1996). Food choices: A conceptual model of the process. *Appetite*. 26, 247-266.
- Garrett, P. (1985). Teaching visually impaired diabetics. *Journal of Nutrition Education*. 17(3), 288.
- Gerrior, S.A., Guthrie, J.F., Fox, J.J., Lutz, S.M., Keane, T.P., & Basiotis, P.P. (1995). Differences in the dietary quality of adults living in single versus multi-person households. *Journal of Nutrition Education*. 27, 113-119.
- Glanz, K., Basil, M., Maibach, E., Goldberg, J., & Snyder, D. (1998). Why Americans eat what they do: Taste, nutrition cost, convenience, and weight control concerns as influences on food consumption. *Journal of the American Dietetic Association*. 98(10), 1118-1126.

- Greater Pittsburgh Guild for the Blind. (1977). *Techniques of daily living*. Pittsburgh PA: Davis & Warde Inc.
- Grocery Products Manufacturers of Canada. (1995). *Grocery Attitudes of Canadians 1995*.
- Kemmer, D., Anderson, A.S., & Marshall, D.W. (1998). Living together and eating together: Changes in food choice and eating habits during the transition from single to married/cohabiting. *The Sociological Review*. 46(1), 48-72.
- Kent, D. (1983). Finding a way through the rough years: How blind girls survive adolescence. *Journal of Visual Impairment and Blindness*. 77(6), 247-250.
- Kinsbourne, M., & Lempert, H. (1990). Human figure representation by blind children. *Journal of General Psychology*. 102, 33-37.
- Kirchner, C., Schmeidler, E., Todorov, A. (1999). *Looking at employment through a life-span telescope: Age, health, and employment status of people with serious visual impairment*. Mississippi State, MS: Rehabilitation Research and Training Center on Blindness and Low Vision.
- Lamberg, L. (1998). Blind people often sleep poorly: Research shines light on therapy. *Journal of the American Medical Association*. 280(13), 1123-1126.
- Lappalainen, R., Saba, A., Holm, L., Mykkanen, H., & Gibney, M.J. (1997). Difficulties in trying to eat healthier: Descriptive analysis of perceived barriers for healthy eating. *European Journal of Clinical Nutrition*. 51 Supplement 2, S36- S40.
- Lappalainen, R., Koikkalainen, M., Julkunen, J., Saarinen, T., & Mykkanen, H. (1998). Association of sociodemographic factors with the barriers reported by patients receiving nutrition counseling as part of cardiac rehabilitation. *Journal of the American Dietetic Association*. 98(9), 1026-1029.
- Li Wang, V., & Bricker, J. (1970). A team approach to teaching blind homemakers: Home economist as a member of the health team. *American Journal of Public Health*. 60(10), 1910-1915.

- Lincoln, Y. & Guba, E. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *Naturalistic Evaluation*. 30, 73-83.
- Lindeman, A.K. (1999). Quest for ideal weight: Costs and consequences. *Medicine & Science in Sports & Exercise*. 31(8), 1135-1140.
- Magarrell, G. (1990). Services for visually impaired adults in Canada. *Journal of Visual Impairment and Blindness*. June, 283-286.
- Mangold, P. (1980). *The pleasure of eating for those who are visually impaired*. Castro Valley, CA: Exceptional Teaching Aids.
- Mangold, S., & Mangold, P. (1983). The adolescent visually impaired female. *Journal of Visual Impairment and Blindness*. 77(6), 250-255.
- Michalko, R. (1998). *The mystery of the eye and the shadow of blindness*. Toronto ON: University of Toronto Press Inc.
- Michalko, R. (2002). *The difference that disability makes*. Philadelphia: Temple University Press.
- Milligan, R.A., Burke, V., & Beilin, L.J. (1998). Influence of gender and socio-economic status on dietary patterns and nutrient intakes in 18-year-old Australians. *Australian and New Zealand Journal of Public Health*. 22(4), 485-493.
- Oaks, M.E., & Slotterback, C.S. (2001). Gender differences in perceptions of the healthfulness of foods. *Psychology and Health*. 16, 57-65.
- Patton, MQ. (1990). *Qualitative evaluation and research methods 2nd edition*. Newbury Park: Sage Publications.
- Read, R. (1981). *When the cook can't look: A cooking handbook for the blind and visually impaired*. New York, NY: Continuum Publishing Co.

- RNIB Campaign Reports. (2001, June 26, 2001). Blind in Britain: the employment challenge. (1), [Website]. Royal National Institute for the Blind. Available: <http://www.rnib.org.uk/campaign/blindinbrit.htm> [2002, May 24].
- Rogers, B. (1984). *Cookbook mate for the blind and sighted*. Springfield, Ill: Charles C. Thomas Publisher.
- Roos, E., Lahelma, E., Virtanen, M., Ppattala, R., & Pietinen, P. (1998). Gender, socio-economic status and family status as determinants of food behaviour. *Social Science of Medicine*. 46(12), 1519-1529.
- Rubin, H.J., & Rubin, I.S. (1995). *Qualitative Interviewing: the art of hearing data*. Thousand Oaks, CA. Sage Publications.
- Slesinger, D.P., McDivitt, M., and O'Donnell, F.M. (1980). Food patterns in an urban population: Age and socio-demographic correlates. *Journal of Gerontology*. 35(3), 432-441.
- Spradley, J.P. (1979). *The ethnographic interview*. Toronto ON: Holt, Rinehart, and Winston.
- Statistics Canada. (1996). Report on the 1994-1995 National Population Health Survey. *Health Reports, Health Statistics Branch*. 10(1), 11-32.
- Statistics Canada. (2001). Taking Risks/Taking Care: Report on the 1998-99 National Population Health Survey. *Health Reports, Health Statistics Branch*. 12(3), 11-20.
- Statistics Canada. (1990). The Health and Activity Limitation Survey: Blindness and Visual Impairment in Canada.
- Tastsoglou, E. (2002). Race and the politics of personal relationships: focus on black Canadian women. *Affilia*. 17(1), 93-111.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*. Basingtoke, Hampshire. The Falmer Press.

- Titchkosky, T. (2001). A rose by any other name? "People-first" language in Canadian Society. *Canadian Review of Sociology and Anthropology*. 38(2), 125-141.
- Travers, K.D. (1996). The social organization of nutritional inequities. *Social Science of Medicine*. 43(4), 543-553.
- Vandereycken, W. (1986). Anorexia nervosa and visual impairment. *Comprehensive Psychiatry*. 27(6), 545-548.
- Williamson, I.R. (2000). Internalized homophobia and health issues affecting lesbians and gay men. *Health Education Research*. 15(1), 97-107.
- Winter Falk, L., Sobal, J., Bisogni, C.A., Connors, M., & Devine, C. (2001). Managing healthy eating: Definitions, classifications, and strategies. *Health Education & Behavior*. 28(4), 425-439.
- Wolfe, W., Olson, C., Kendell, A., & Frongillo, E. (1996). Understanding food insecurity in the elderly: a conceptual framework. *Journal of Nutrition Education*. 28, 92-100.
- Yeadon, A., & Newman, L. (1980). *House keeping skills: Self study course*. New York, NY: Center for Independent Living.
- Young, L., & Nestle, M. (1998). Variation in perceptions of 'medium' food portion: Implications for dietary guidance. *Journal of the American Dietetic Association*. 98(4), 453-454.

As a participant your identity will be kept confidential. All records in my possession will be coded (your actual name will be replaced by a code name), kept in a locked filing cabinet, and stored under a secret password in my computer hard drive.

Involvement in this study will require approximately 4 ½ hours of your time.

You will not receive monetary compensation for your participation. However, refreshments will be made available to you before and after the interview sessions.

I, Marie Claire Bilyk, will be more than happy to answer any questions about the procedures to ensure that you fully understand what will happen to you during the study.

If you have any concerns about your rights or treatment as a research subject, you may contact Dr. Richard Spratley, Director of the UBC Office of Research Services and Administration at 822-8598.

You have a right to refuse to participate or withdraw from the study at any time. Refusal to participate or withdrawal will not jeopardize your potential future involvement with the University of British Columbia.

You, the participant, have received a copy of the consent form for your own records.

I (name of participant) _____ agree to participate in this study.

Signature of Participant _____ Date _____

APPENDIX B: PARTICIPANT FACE SHEET

Date _____ Code Name _____

Name _____ Female _____ Male _____

Address _____

Telephone _____ e-mail _____

Occupation _____

Volunteer Work _____

Education _____

Enjoyed Activities/Hobbies _____

Date of Birth (y/m/d) _____ Height _____ Weight _____

Name of eye condition _____ Visual acuity _____

Description of eye condition _____

Age at onset of eye condition_____

Percentage of daily meals prepared or purchased ready to eat by participant_____%

Use of adaptive devices_____

Use guide dog (yes/no)_____ Use white cane (yes/no)_____

Preferred form of correspondence: Braille_____ Large Print_____ Audio Cassette_____

Married or its equivalent_____ Single or its equivalent_____

Comments:_____

APPENDIX C: PRELIMINARY INTERVIEW GUIDE

The interviews will be semi-structured and the direction of any given interview will be guided by the responses of the participant. The following are examples of the types of questions that will be used to encourage the participant to discuss his/her daily food and eating experiences.

Meals

Describe a typical day; job, volunteer work, school, socializing, activities, rest, entertainment.

Describe the first time you eat on a typical day - surroundings, how you choose the foods you eat

When would you eat again after that.....and so on.

Do you eat out? How often?

Shopping

Tell me about a time when you went grocery shopping, a typical example.

How do you do your grocery shopping?

How do you get to the grocery store?

Does someone assist you? Describe *how* they assist you?

How do you decide what to buy?

Food

What types of foods do you buy / use / eat most often? Why?

What types of foods do you dislike buying / using / eating? Why?

Are there foods that you like but do not buy / use / eat ? Why?

Describe how you find out about new foods.

Describe the last time you found out about a new food. What was it?

Food Preparation Skills

How do you check to see if a food is good / bad / ripe / rotten / safe / cooked / done?

Do you have any concerns regarding food storage?

Describe the types of food preparation techniques you find difficult if any.

Have you ever received instructions on how to prepare certain foods? Describe.

Health & Nutrition

What comes to mind when you hear the word “nutrition”?

Have you learned about nutrition? How?

Do you incorporate knowledge about nutrition into your eating habits? How? or Why not?

Describe what you know about supplements (vitamins). What are they?

Do you use supplements? Why or Why not?

How do you feel about your body shape?

How much control do you feel you have over your health?

What kinds of things do you do to be more healthy / less healthy?

Umbrella Questions

What is the role of food in your life?

How much pleasure do you get from food and eating?

Describe the aspects of food and eating that you find pleasurable / not pleasurable. Explain why.

Is there anything else you would like to tell me?