

THE EXPERIENCES OF WOMEN PARTICIPANTS AND
RESOURCE MOTHERS WITH THE HEALTHY BABY
CLUB MODEL OF PRENATAL SUPPORT

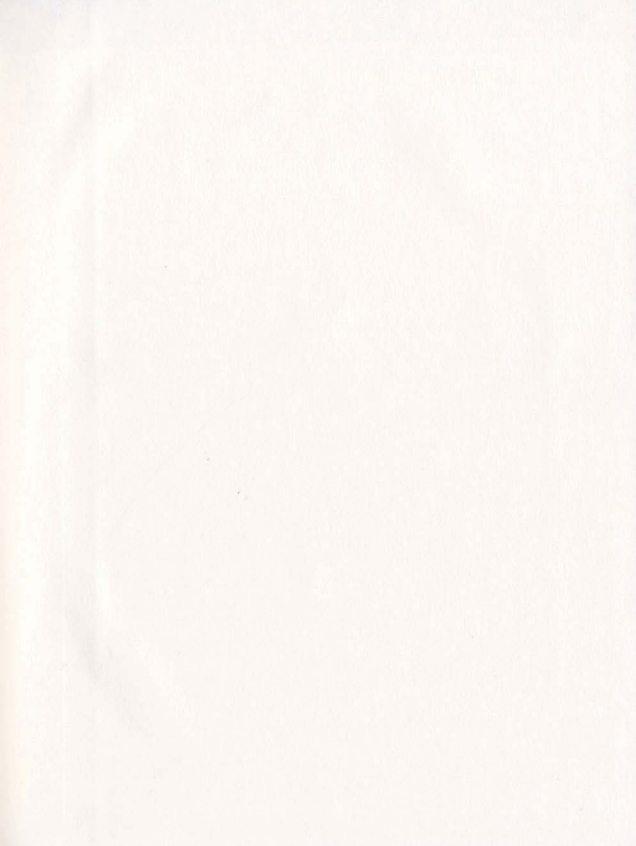
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**THE EXPERIENCES OF WOMEN PARTICIPANTS AND RESOURCE
MOTHERS WITH THE HEALTHY BABY CLUB MODEL
OF PRENATAL SUPPORT**

BY

© PATRICIA M. (MERCER) NUGENT, B.N. R.N.

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES IN PARTIAL
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NEWFOUNDLAND

Dedication

*To my children Jilian and Tommy and my husband, Tom,
whose constant love and support guided me through this undertaking.
Also, to my parents, Maud and Harold (deceased) Mercer, whose
inspiration remains with me throughout my life.*

ABSTRACT

Background Low birth weight (LBW) is a major public health issue and challenge today; The Canadian Institute of Child Health (1993) indicates that 17% of all infants born worldwide are of low birth weight. In 1995 Canada reported that 5.7% of all births were of LBW while Newfoundland and Labrador's rate was 5.5%. The cause of LBW is multi-factorial and some contributing factors for example smoking and nutrition are modifiable. Early entry and length of participation in prenatal programs are also key factors. Traditional prenatal programs have failed to meet the needs of vulnerable women and their families. The Healthy Baby Club Model of Prenatal Support was developed and implemented in Newfoundland and Labrador to meet the identified needs of these vulnerable pregnant women, to increase the length of prenatal care by reducing barriers to participation and, ultimately, to reduce the rate of LBW.

Aim Satisfying experiences of women participants in the program will likely increase compliance with both prenatal and postnatal care. This study was undertaken to describe the experiences of women participants and resource mothers with the Healthy Baby Clubs in Newfoundland based on an integration of health promotion and population health theoretical frameworks.

Methods This was a descriptive study using 48 women participants and 11 resource mothers for the study period yielding a total of 59 participants. Data collection took place between December 1997 and June 1998 and involved site visits to the nine Healthy Baby Clubs across the Province of Newfoundland and Labrador. Two structured interview questionnaires were developed by the investigator: (1) Survey of Women

Participants in the HBC which consisted of 41 questions and, (2) Survey of Resource Mothers in the HBC that included 37 questions. Each questionnaire took approximately 35 minutes to administer and captured both quantitative and qualitative data. Personal interviews were carried out with the women participants (n=48) who participated in the Healthy Baby Club during pregnancy and the resource mothers (n=11) who supported these women. Transcripts from the interviews were analyzed for frequencies, proportions and recurrent themes.

Results The personal “face-to-face” interviews with resource mothers and the women participants of the Healthy Baby Club Prenatal Support Program revealed that being in the program was an enjoyable and satisfying experience. For both groups there were many benefits both personally and for the community through “spin-offs” of this program. These included enhanced self-esteem and self-confidence, improved decision making and assertiveness skills, as well as increased knowledge and empowerment.

Conclusion This community-based, holistic model of prenatal support, the Healthy Baby Club using the resource mother concept, has many positive aspects which include the promotion of healthier pregnancies through improved lifestyle practices which result in healthier babies, improved access to prenatal services, community engagement and greater self-esteem and self-confidence of participants.

Key Words low birth weight, vulnerable, prenatal, prevention, health promotion, population health, modifiable risk factors, community-based interventions, prenatal support, Healthy Baby Club Model, resource mother

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LIST OF ABBREVIATIONS

BURPS	Baby's Growth and Development, Understanding Role Changes, Resources, Parenting Issues, Support
CAPC	Community Action Program For Children
CICH	Canadian Institute of Child Health
CI	Confidence Interval; indicates 95% Confidence Interval
CPNP	Canada Prenatal Nutrition Program
HBC	Healthy Baby Club
LBW	Low Birth Weight
MUN	Memorial University of Newfoundland
OR	Odds Ratio
PEPS	Program for Early Parenting Support
SD	Standard Deviation
USA	United States of America
WHO	World Health Organization

DEFINITIONS

Brighter Futures This term refers to the Federal Government's response to the 1990 United Nations Convention on the Rights of the Child. The leaders of 71 countries drafted a declaration and a long-term plan of action to focus worldwide efforts on child survival, development and protection. As a result of this initiative a series of steps was implemented such as the Community Action Program for Children and the Canada Prenatal Nutrition Program.

Canada Prenatal Nutrition Program This program was initiated by the Federal Government in 1994. It is designed to assist communities to develop or enhance programs for vulnerable pregnant women in order to improve birth outcomes. CPNP provides the resources for community-based projects to offer food supplementation, nutrition counselling, support, education, referral and counselling on such lifestyle issues as alcohol use, stress and family violence. This is not a universal program, but is targeted at those pregnant women most likely to have unhealthy babies because of inadequate resources to meet their nutritional and other needs during pregnancy.

Community Action Program for Children This was one of the steps taken by the Federal Government in response to the 1990 United Nations Convention on the Rights of the Child. Funding is provided to community coalitions to establish and deliver services. This initiative which commenced in 1992 is designed to expand successful programs and to develop strategies for prevention, protection, promotion and community action that address the developmental needs of vulnerable children from birth to six years of age and their parents.

Community Kitchens and Community Gardens These are strategies whereby people can collectively pool their resources and increase their access to food.

Food Security The World Food Declaration in Rome, 1996, stated food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active healthy life.

Health Services These are services performed by health care professionals, or by others under their direction, for the purpose of promoting, maintaining, or restoring health. In addition to personal health care, health services include measures for health protection, health promotion and disease prevention (Last, 1995).

Healthy Baby Club Initially conceived by the Daybreak Parent Child Center in St. John's, Newfoundland, this model was adopted in 1994 as the prototype for all the CPNP projects in Newfoundland and Labrador. This program offers a community-based,

holistic approach for prenatal support to vulnerable women and their families. The goal of the program is the reduction of low birth weight. The “key” component of the model is the resource mother.

Intrauterine Growth The growth of the fetus within the uterus.

Intrauterine Growth Restriction There is no standard definition of intrauterine growth restriction. This is commonly referred to as “small for gestational age”, “small for dates”, birth weight less than the 10th (or 5th) percentile for gestational age, birth weight less than 2,500 grams and gestational age greater than or equal to 37 weeks; or birth weight less than two standard deviations below the mean value for gestational age (Kramer, 1987).

Low Birth Weight An infant whose birth weight is less than 2,500 grams (WHO).

Preterm/Premature A description of an infant whose gestation period is less than 37 weeks regardless of weight (WHO).

Priority Support The literature describes this as the care, support, nurturing and intervention required for vulnerable women and their families.

Poverty Line Poverty is measured using Statistics Canada’s low-income cutoffs. Each year, Statistics Canada produces a series of income cutoffs that mark the level of gross income below which families must spend disproportionate amounts of income on food, clothing and shelter. The cutoffs -- commonly referred to as poverty lines -- are adjusted for family size and size of community in order to reflect differences in basic expenditures. Statistics Canada considers those whose incomes fall below these lines to be living “in straightened circumstances.” A poor child is defined as one who lives in a family whose total income is below the low-income cutoff.

Resource Mother A lay person who is trained to assist pregnant women and their families with the non-medical dimensions of pregnancy and child care.

Very Low Birth Weight An infant whose birth weight is less than 1,500 grams (WHO).

Vulnerable Women Disadvantaged women who require priority support and intervention.

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CHAPTER I

INTRODUCTION

"When a woman becomes pregnant, all the experiences of her past join with those of the present to lay the foundations of a new life whose potential, in turn, will influence the welfare of generations to come"
(Worthington-Roberts and Williams, 1993)

Birth weight is an important indicator of the health status of the population. In fact, outcomes of the prenatal period are often used as measures of social and economic development among nations throughout the world. Healthy birth weight is considered to be between 2,500 and 4,000 - 4,500 grams or five pounds eight ounces and eight pounds thirteen ounces to nine pounds fifteen ounces. Low birth weight, because of its severe consequences on population health, is a major public health issue and challenge today. The Canadian Institute of Child Health (1993) indicates the following are potential effects of low birth weight (LBW):

- neuro-developmental disabilities such as mental retardation, cerebral palsy
- vision and hearing impairment
- learning disabilities
- increased susceptibility to illness, especially respiratory disease or illness
- higher infant mortality rates
- shorter life span
- long-term effects on health, quality of life and use of health, social, education and justice services

Furthermore, with this wide range of sequelae, the effects of this birth outcome on the family and society are immense. These babies of low birth weight are forty times more likely to die during their first year compared to babies of normal birth weight. Two thirds of babies who die in the first year of life are of low birth weight (CICH, 1993; Perinatal Education Program of Eastern Ontario, 1998). Those who survive are at increased risk of medical and psychosocial problems. The Canadian Institute of Child Health (1994) has identified the prevention of LBW as the single greatest health concern during the prenatal period. "Low birth weight" is defined by the World Health Organization as a weight of less than 2,500 grams (five pounds eight ounces) at birth and "very low birth weight" as less than 1,500 grams (three pounds five ounces). However, some sources have included babies of 2,500 grams in their definition and statistical data regarding low birth weight. The two primary factors determining birth weight are gestational age at birth and intrauterine growth. Strategies, which are effective in improving these factors, should help to reduce the incidence of LBW. Such strategies must be effective in recruiting women, maintaining their participation and, in the long-term, be sustainable in the community.

1.1 Background of the Problem

The Canadian Institute of Child Health (1993) indicates that 17% of all infants born worldwide are of LBW. The primary causes leading to low birth weight are intrauterine growth restriction -- commonly referred to as "small for dates"-- and preterm birth defined as the delivery of the baby prior to 37 weeks gestation. In Canada 404,486

babies were born alive in 1990. Of these births 21,963 (5.4%) weighed less than 2,500 grams. When compared to other countries, as shown in Figure 1.1, Canada's rate is higher than that of Norway, Finland, Sweden, France and Switzerland and it is similar to that of Japan, Denmark, Belgium and Australia (CICH, 1994).

FIGURE 1.1
LOW BIRTH WEIGHT DISTRIBUTION
SELECTED COUNTRIES, 1990

Note. From The Health of Canada's Children – A CICH Profile, (2nd ed.). (p. 28) by the Canadian Institute of Child Health, 1994, Ottawa, Ontario.

The 1999 USA report on *America's Children: Key National Indicators of Well-Being* stated that the percentage of infants born with LBW continues to rise in the USA.

In 1997, this percentage was the highest in over 20 years, at 7.5%. This increase in LBW is thought to be partly due to the rising number of twin and other multiple births since these are much more likely than singleton infants to be of LBW. In Canada, rates have been lower. During the 1970s the rate dropped approximately 25% but since the mid-1980s it has not changed appreciably: 5.8% in 1980, 5.5% in 1991 and 5.7% in 1995 (CICH, 1994; Statistics Canada, 1991; Newfoundland and Labrador Center for Health Information, 1998). The percentage of live births less than 2,500 grams for Newfoundland and Labrador from 1990 to 1995 ranged from 5.8% to 5.5% respectively; they are "on average" slightly higher than the national average (refer Table 1.1).

TABLE 1.1

BIRTH WEIGHT DISTRIBUTION Canada and Newfoundland and Labrador Percentage of Low Birth Weight 1990 to 1995		
Year	Canada	NF and Labrador
1990	5.4%	5.8%
1991	5.5%	5.7%
1992	5.5%	5.7%
1993	5.5%	5.9%
1994	5.6%	6.4%
1995	5.7%	5.5%
Note. Newfoundland and Labrador Center for Health Information, 1998.		

There is growing evidence that birth weight is a predictor of future health and that the adverse consequences of low weight at birth continue throughout the life cycle reflected in health, social problems, disability, chronic disease and decreased years of life. For example, in the study done by Barker, Winter, Osmond, Margetts & Simmonds (1989) in Britain using longitudinal data for men born between 1911 and 1930, those with the lowest weights at birth and at one year of age had the highest premature death rates from ischemic heart disease. Birth weight is also inversely related to adult blood pressure and can therefore be linked with hypertension. There are mounting supporting data that sudden infant death syndrome, epilepsy, diabetes and other metabolic disorders are related to low birth weight (CICH, 1992, 1993). This pregnancy outcome also adversely affects the life span since prematurity, which is frequently linked with LBW, is a leading cause of years of potential life lost before sixty-five years of age (Kleigman, Rottman & Behrman, 1990; Statistics Canada, 1994a and b).

To date, some risk factors for LBW such as diabetes and hypertension in the mother have been treated medically and babies born of LBW have been supported and treated in high technological intensive care units, thus reducing infant mortality; but these efforts have not been successful in reducing LBW.

Many experts now propose that our energies should be focused on prevention; confirmed by the research of Walsh (1994); Lia-Hoagberg et al. (1990); York and Brooten (1992) and the results of several demonstration projects. Strategies to reduce LBW should target modifiable risk factors such as smoking, alcohol and other drugs,

nutrition, poverty, stress, social support, work, exercise and prenatal care; other influencing factors include education, age, reproductive and family history. Many of these factors are amenable to change if identified early; furthermore, if the appropriate interventions are initiated, these should also result in the reduction of LBW.

The 1996 *Report on the Health of Canadians* prepared by the Federal, Provincial and Territorial Advisory Committee on Population Health stated that mothers living in poverty, with low educational levels and without social supports are at increased risk of having babies of LBW. Kliegman et al. (1990) also noted that these women were likely to receive little or no prenatal care. Researchers have concluded that traditional prenatal education programs have failed to meet the needs of disadvantaged women and their families (Woodard & Edouard, 1992; Machala & Miner, 1991). Therefore, various strategies have been proposed to reduce the barriers for participation in prenatal care and ultimately to enhance the health of these women and children. One such approach, implemented in the Province of Newfoundland and Labrador, is the Healthy Baby Club (HBC) Prenatal Support Model. The title reflects the principle of social support and friendship offered in this program for vulnerable women and their families. The target groups include:

- pregnant women living in poverty
- single pregnant women
- pregnant adolescents

- pregnant women who use alcohol and other substances
- pregnant women living in violent situations

Statistics confirm that the incidence of LBW is higher in these target groups compared to the general population (Guy, 1997; Health Canada, 1993a and b). It has been estimated by the Canada Prenatal Nutrition Program, through the research of Health Canada (1993a and b) and the Newfoundland Healthy Baby Clubs that 20 to 25% of low birth weight babies are born to these specific target groups in Newfoundland and Labrador. This is higher than the 5.5 to 6.4% rate for the total population (CICH, 1993; Newfoundland and Labrador Center for Health Information, 1998). Additionally, Health Canada (1993a and b) reported poor children are 40 to 50% more likely to be born too small or too soon or with growth restriction and twice as likely to suffer long-term health problems as a result, compared to children from wealthier families.

The ultimate goal of the HBC program is the prevention or reduction of LBW. Other goals focus on key concerns such as nurturing women to prepare them for the labour and delivery experience as well as to support them from early pregnancy through the postpartum period. The HBC also attempts to link mothers with other community-based programs such as "Baby's Growth and Development, Understanding Role Changes, Resources, Parenting Issues, Support" (BURPS); "Moms and Tots"; "Program for Early Parenting Support" (PEPS); and "Loving and Learning". These programs are offered to these families to ease the transition to parenthood and to offer anticipatory guidance -- education and counselling which prepares individuals for future experiences -

- and support. One of the keys to the success of these programs is attracting women into these programs and maintaining their participation. Another important element of the HBC program is food supplementation which provides milk, eggs, oranges as well as nutrition counselling for the women participants.

1.2 Rationale for the Study

Previous studies have explored the effectiveness of various approaches that have provided pregnancy support for vulnerable women (Billingham, 1989; Bryce, Stanley & Garner, 1991; CICH, 1992, 1993; Giblin, Poland & Ager, 1990; Health Canada, 1993a and b; Heins, Nance & Ferguson, 1987; Kliegman et al. 1990; Lapierre, Perreault & Goulet, 1995; McLaughlin et al. 1992; Oakley, Rajah, & Grant, 1990; Villar et al. (1992); Woodard & Edouard, 1992) which has occasionally provided contradictory results for the individual components such as social support, food supplementation and other aspects of care during pregnancy.

For example, one of the best known and evaluated programs in Canada is the “Montreal Diet Dispensary”. This program was developed by Agnes Higgins in the 1960s and has demonstrated positive results with regards to LBW. Similarly in the United States, the “Women, Infants and Children Program” (WIC) has also demonstrated positive effects such as decreased LBW rates. Appendix A provides an overview of selected prenatal support programs offered in Canada and the USA. However, there is little research into a holistic, comprehensive, community-based model such as the HBC

which encompasses lay mentors, food supplements, community health nurse home visits, nutrition consultation, a multi-disciplinary approach, long-term follow up and community engagement to effect healthier pregnancies and improve birth outcomes. Therefore, it is important to assess all aspects of the Healthy Baby Club Model.

Nutbeam, Smith and Catford's (1990) critical review of the progress, possibilities and problems in health education evaluation, points out that it is rare to see published evaluation reports which have taken the views and experiences of program recipients into account. They considered feedback from the targeted audience as vital to determine whether the program is meeting its goals and the needs of the audience. This study has taken this approach given the paucity of research in this area. The information obtained in this research study provides detailed descriptions of the experiences of the participants in the HBC Program as well as comments and suggestions for changes and improvements.

The HBC Model, as it has been implemented in the province, is seen as one way to overcome the deficiencies, obstacles and barriers to prenatal education and support through the provision of an accessible program offering incentives in a non-threatening environment. The program offers a community-based and holistic approach using existing resources in the community such as personnel -- community health nurse, nutritionist -- in a location that is convenient, accessible and acceptable to program participants. Thus, this program is more likely to be sustainable since it "taps into"

readily available resources from the local community with greater probability of engaging the community's interest and commitment to deal with prenatal care issues. Previous to this study, there were some anecdotal reports regarding the HBC strategy that suggested that, in addition to providing pregnant women with an educational support program, some clients and resource mothers were "empowered" to take on other activities, programs and initiatives in the community. Indicators of client satisfaction are assessed in this research since satisfaction is a key factor in both "marketing" the program and increasing the compliance of those participating. As well, satisfaction is also considered an important outcome of the delivery of health care services as well as providing one measure of its quality (Avis, Bond & Arthur, 1995; Handler, Raube, Kelley & Glachello, 1996).

The umbrella Community Action Program for Children (CAPC) was evaluated in 1997 drawing primarily on the participants' perspective. The investigators conducted personal interviews and focus groups with program participants and program facilitators. They concluded that the CAPC projects contributed to the well-being of parents, children and families by directly addressing many of the major determinants of health (Health Canada, 1997a).

The Canada Prenatal Nutrition Program (CPNP) underwent a national evaluation in 1997 by the Barrington Research Group, a contracted independent evaluator. All provinces provided the required statistical data. The evaluator collated retrospective information recorded on program entrants as well as selected outcome data such as birth

weight and breastfeeding status. This information was retrieved through chart audits and summary reports completed by project staff. Program participants were not actively involved in this evaluation process. The evaluator concluded that the CPNP is a worthwhile investment to assist vulnerable pregnant women and their families (Barrington, 1997).

Then in 1998, Way, Grainger and Bungay of Memorial University of Newfoundland conducted an evaluation of the Newfoundland Healthy Baby Clubs for the CPNP. The purposes of this evaluation were: (1) to develop a descriptive profile of key variables of interest to program providers, (2) to investigate possible factors influencing pregnancy outcomes, (3) to make recommendations for streamlining the information gathering process, and (4) to produce a computerized program that could serve as an informational database to ensure ongoing evaluation of the Healthy Baby Clubs in the province. They examined key variables using a retrospective chart review. Problems with missing data prevented a full analysis. They found two variables which were significantly correlated: the relationship between the pregnancy weight gain of the woman and the number of weeks the pregnant woman took the food supplements (Way et al. 1998). This study also found that there are factors affecting the decision to breastfeed these included a positive attitude towards breastfeeding and a prior decision to breastfeed. As well, the factors influencing the primary outcome of infant birth weight included: cigarette use, pre-pregnancy weight, pregnancy weight gain, weeks gestation at delivery and age and parity of the mother.

The current study and the earlier CAPC evaluation research have focused on participant participation – a key element in the success of programs. The CPNP national evaluation and the HBC provincial study used administrative data. These differing methodologies have provided varied information for analysis and evaluation purposes.

1.3 Objectives of the Study

In order for prenatal and postnatal programs to be effective for vulnerable women it is important to know what participants like – what will bring them into the program and keep them there. Thus, this study focused on the experiences of women participants and resource mothers in the Healthy Baby Club Program. Specifically the objectives of the study include:

1. To describe the experiences of women participants and resource mothers in the Healthy Baby Club (HBC) Program.
2. To assess the indicators of satisfaction of the women participants with the HBC Program.
3. To determine whether there were longer-term benefits and “spin off” effects for women participants and resource mothers that resulted from this program.

1.4 Potential Significance of the Study

Health Canada's 1997(a and b) national studies and Newfoundland and Labrador's 1998 study evaluated only selected components of the HBC Program. This study focuses on other aspects of the program such as the clients' satisfaction and the short and long-term effects of participation – both important factors in attracting women into the program and increasing their duration of participation – using both quantitative data and analysis of open-ended questions for recurrent themes yielding qualitative information. This type of knowledge will strengthen the quantitative data gathered to date and is essential in capturing the full essence of the Healthy Baby Club in the Province of Newfoundland and Labrador. As well, the previous studies did not include the resource mother who is incorporated in this study as an essential component in a full assessment of the model, particularly in terms of client satisfaction and long-term impact.

This study will add to the body of research knowledge and, thus, contribute to evidence-based practice of prenatal support to improve birth outcomes. For outcomes to be improved, vulnerable women must be recruited and retained in effective prenatal programs. The results of this study should also be useful for future planning and for the development of policies and programs. This study contributes to the impetus for future studies to investigate similar needs in other populations, explore different intervention approaches and evaluate outcomes of various modes of program and service delivery.

CHAPTER 2

REVIEW OF THE LITERATURE

The problem of low birth weight, its causes and the importance of adequate prenatal care and support, have been studied by many researchers such as Goldenberg (1994); Kogan (1995); and McLaughlin et al. (1992). The Canadian Institute of Child Health published comprehensive literature reviews in 1992 and 1993; the Perinatal Education Program of Eastern Ontario released its overview in 1998. As part of this study, the investigator also conducted an extensive review of the literature and published reports regarding these topics with additional sources obtained from the references of the primary articles. The emphasis in this study is on client recruitment and maintaining participation in prenatal programming; both essential to a prevention program.

The following literature review is subdivided into the following areas:

- the burden of low birth weight
- causes of LBW; modifiable and influencing risk factors
- client recruitment and duration of participation
- client satisfaction
- theoretical framework

2.1 The Burden of Low Birth Weight

The cost of children born too early and/or with problems is high. Moutquin, Milot-Roy and Irion (1996) state

A conservative estimate based on Canadian data shows that the lifetime cost for *every* surviving preterm infant with a birth weight of less than 2,500 grams averages more than \$600,000. This estimate takes into account the use of neonatal intensive care, rehospitalization during the first year, and averaged lifetime cost of handicapped survivors (p. 571-588).

As previously mentioned, LBW babies are more susceptible to ill health and are predisposed to developing serious lifelong disability. In fact, the risk of developmental problems extends throughout the entire spectrum of low birth weight although the risk increases as birth weight decreases (McCarton, Wallace & Bennett, 1995). Very low birth weight infants have a three-fold increased risk of death compared with infants weighing greater than 2,500 grams at birth (Kleigman et al. 1990). The burden of LBW places significant demands on the ever-strained health care and social services budgets, not to mention the immense impact on personal lives. We know this problem has a significant long-term impact on families, the health care system, the education system and society in general. Hack et al.'s (1994) comparison of the school age developmental outcomes in children in relationship to birth weight is insightful. These researchers analyzed cognitive function, academic skills, visual motor function, gross motor function and adaptive function, in relation to babies born at term ($\geq 1,500$ grams), 750-1,499 grams and less than 750 grams. Hack et al. concluded that "children with birth weights

under 750 grams who survive represent a subgroup of very low birth weight who are at high risk for neurobehavioural dysfunction and poor school performance” (Hack et al., 1994, p. 753). Figure 2.1 illustrates their analysis.

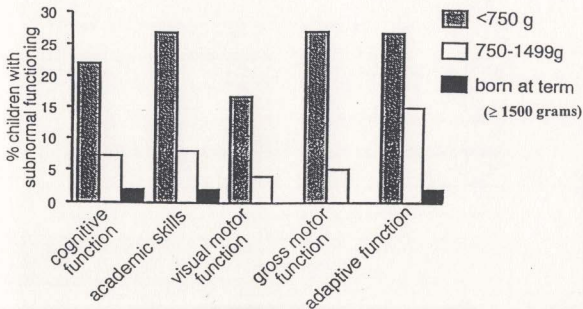


FIGURE 2.1

SCHOOL-AGE DEVELOPMENTAL OUTCOMES IN CHILDREN BY
BIRTH WEIGHT

Note. Adapted from "School-age outcomes in children with birth weights under 750 g" by M. Hack et al., 1994, *New England Journal of Medicine*, 331 (September), pp. 753-759.

The Canadian Council on Children and Youth in 1992 determined that for every one-dollar spent in prenatal care, the government could save \$3.38 in the cost of care for babies of LBW (Health Canada, 1993a and b). Lia-Hoagberg et al. (1990) and Norwood (1994) reiterated that prenatal care not only saves infants' lives but it is also cost-effective and has the potential to improve pregnancy outcomes among all segments of the population. Thus, the prevention of babies of LBW is important and is more cost-effective than treating sick premature infants in expensive hospital intensive care units.

For example, a critical appraisal of the cost-benefits of the HBC intervention reveals that the lifetime health care cost of a LBW baby average \$600,000 (Moutquin et al. 1996). In comparison, it costs only \$960 to provide food supplements and other services to one mother who participates in the HBC Prenatal Support Program (resource mothers, personal communication, December 1997 to June 1998). Thus, there is a potential positive benefit.

Also inherent in the HBC Model is a home visiting component by the resource mother, community health nurse and sometimes the nutritionist. The cost-effectiveness of long-term family outcomes associated with home visitation has been studied by varied researchers such as Deal (1994), Donaldson (1991), Larson (1980), Olds & Kitzman (1990), Olds et al. (1997), and Poland, Giblin, Waller & Hankin (1992) revealing positive outcomes for maternal and child health and overall functioning.

The study by Olds and Kitzman (1990) provided a review of 19 randomized trials of prenatal and infancy home visitation programs for socially disadvantaged women and

children. They found the more effective programs employed nurses who began home visiting during pregnancy, who visited frequently and long enough to establish a therapeutic alliance with families, and who addressed the systems of behavioural and psychosocial factors that influence maternal and child outcomes.

An interesting and creative framework for appraising the needs, benefits, costs and effectiveness of health interventions to reduce the burden of disease called the “measurement iterative loop” has been proposed by Tugwell, Bennett, Sackett and Haynes (1985). The framework organizes health services data in a logical way leading to population-based decisions and strategies. Frequently, many initiatives promoted in this approach are outside the medical paradigm. When the framework is applied to the global problem of LBW and the proposed Healthy Baby Club intervention, this strategy would include:

- an assessment to determine the burden or impact of the LBW problem using health status indicators
- a review of the etiology of LBW to identify and assess its possible causes
- a review of interventions to estimate potential reductions in LBW if successful
- an assessment to determine the efficiency of relationships between costs and effects of options within and across programs
- a synthesis of this information in order to make recommendations for the design and implementation of the intervention, in this case, the HBC
- ongoing monitoring of the final revision of the HBC program using outcome indicators
- re-assessment to determine whether the burden of the LBW problem has been reduced

The “loop” format emphasizes the importance of ongoing monitoring to determine whether the planned reduction in the burden of the problem is attained. This process is iterative since in almost all health care issues the burden is only reduced by small increments over a substantial period of time; repeated cycles of the “loop” are needed to demonstrate and assess the effectiveness of strategies and interventions.

2.2 Causes of Low Birth Weight; Modifiable and Influencing Risk Factors

What causes low birth weight infants? This question has concerned researchers, medical experts and other interested parties for some time. Hamilton & Bhatti (1996) explain that there are elements, often behavior patterns, which tend to predispose people to risk conditions and general circumstances over which they have little or no control, that are known to affect health status. With respect to the problem of LBW, it is known that no *one* variable can be cited as the absolute cause of this birth outcome. However, researchers such as Goldenberg (1994); Ketterlinus, Henderson & Lamb (1990); Kliegman et al. (1990); Kramer (1987) and York & Brooten (1992) have concluded that many of the contributing factors are complex, multi-factorial and interrelated. While some factors have been identified, the exact nature of the etiological process remains a puzzle and this presents a major obstacle in the prevention of the problem. We know that intrauterine growth restriction and preterm birth are contributors to low birth weight but their “root” causes are not fully known although many theories have been postulated to provide explanations.

A social development approach has been used by many researchers to study the issue of LBW and its causes. A key paper in the evolution of this approach was that of Kramer who in 1987 in the Bulletin of the World Health Organization documented a thorough review and “meta-analysis” -- the process of using statistical methods to combine the results of different studies -- of risk factors for LBW. He conducted a review and critical assessment of the English and French language medical literature published from 1970 to 1984. He identified 43 potential determinants or causes of LBW and grouped these according to the following categories:

- genetic and constitutional
- demographic and psychosocial
- obstetric
- nutritional
- maternal morbidity during pregnancy
- toxic exposures
- antenatal care

Kramer concluded that factors in each of these categories have an impact on birth outcomes which can affect LBW. As a result, he stressed that the focus should be aimed at modifiable risk factors. Last (1995) has pointed out that one of the greatest drawbacks of using meta-analysis is the sometimes simplistic combining of results from multiple studies that may not have used similar designs and techniques. Data and analyses may not be comparable without appropriate assessment and weighting and there may be a

tendency to exclude negative studies due to publication bias. However, Kramer used rigorous methods in his investigation and his study does not elicit these concerns. He was careful in his analysis to use various sources such as the print Index Medicus, the MEDLINE database and the incorporation of a "snowball" procedure. With this procedure, the references cited in each article or book chapter located were scrutinized for further reports published since 1970 and each of these was further examined for relevant references and so on. Kramer reviewed a total of 895 publications.

Ericson, Eriksson, Kallen and Zetterstrom (1993) and Kogan (1995) attempted to delineate the causes by studying the broad determinants of health. Ericson et al. (1993) used time trends to study the effect of socio-economic factors on low birth weight, stillbirth, perinatal and infant deaths and general mortality using the birth registry linked to census information from 1975, 1980 and 1985 in Sweden. For each census year, delivery outcomes of the following year were studied. Two socio-economically different groups of women were studied -- one privileged and one under-privileged group. A difference in birth weight distribution was found between the two groups which is only partly explained by different smoking habits in early pregnancy and which did not substantially change during the ten year observation period. In 1976, there was virtually no difference in infant mortality between the two groups. By 1981 and 1986, infant mortality had decreased in both groups but more strongly so in the privileged group, and a difference between the groups therefore appeared. The researchers summarized:

Actually, a social difference has emerged which could not be identified in 1976. It is not possible to say if this results from differences in general living conditions including work protection of the pregnant woman, life style, or medical attendance, but whatever the reason, it appears that the privileged group has prospered from the progress more efficiently or at least earlier than the underprivileged group (p.16).

The determinants of health, or as some refer to them, “the things that make and keep people healthy” (Federal, Provincial and Territorial Advisory Committee on Population Health, 1996, p. 9) are potential contributors to LBW; they include: socioeconomic status, education, gender, social support, access to appropriate health services, the beliefs and values of society, behavioural factors such as smoking, alcohol and other substance use, nutrition, work, biological and genetic factors and, of course, age factors associated with very young or older mothers. Most of these factors are intertwined as pointed out in Figure 2.3 revealing a complex “web of causation” (CICH, 1993, p. 10). The following review will focus on the social determinants of health and specifically the *modifiable* risk factors of low birth weight:

- poverty
- smoking
- nutrition
- stress and social support
- alcohol and other substances
- work

- prenatal care

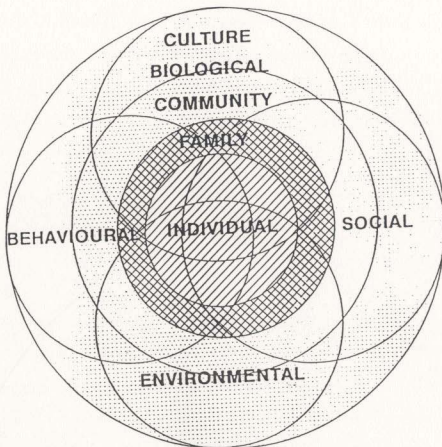


FIGURE 2.2

THE MULTIFACETED INTERACTIVE NATURE OF LOW BIRTH WEIGHT

Note. From *Best Start – Community Action for Healthy Babies. Prevention of Low Birth Weight in Canada: Literature Review and Strategies*, (p. 10) by the Canadian Institute of Child Health, 1993, Ottawa, Ontario: Health Promotion Branch.

2.2.1 Poverty

Socioeconomic status is the greatest risk factor for low birth weight; in fact, it is believed to override all other factors. This relationship is complex and has intersecting difficulties including lack of education, money, food and shelter. People with low-incomes often have less control over factors in their daily lives, higher stress and less social support than people with higher incomes. They also have the fewest resources with which to care for low birth weight infants.

Canada has one of the highest rates of child poverty among industrialized countries. Only the United States's rate is higher (Guy, 1997; Schorr & Schorr, 1988). In 1990, Newfoundland and Labrador had the third highest poverty rate among Canadian provinces for children of two parent families. At that time, 21,000 of the province's children lived in poverty. The most common measure of poverty is Statistics Canada's low-income cutoff line -- commonly referred to as the poverty line. The Canadian provinces have different poverty line incomes; these reflect gross incomes. In Newfoundland, Nova Scotia, Saskatchewan and New Brunswick, the poverty line income in 1996 for a single person was \$14,107. For a couple with two children, it was \$27,982 (Statistics Canada, 1996a and b). It has been reported that over 75% of children of single parent mothers in Canada are living below the poverty line. Roughly this equates to one out of every five children under the age of 18 (Guy, 1997). Indeed, social assistance incomes in Newfoundland and Labrador are almost 30% below the provincial poverty

line (Neville, Buehler, James & Edwards, 1994). Even more significant is the fact that in 1996 there were approximately 54 food banks operating in Newfoundland and Labrador assisting approximately 45,000 people of whom nearly 40% were children (Community Health – St. John's Region, 1996).

The Canadian Institute of Child Health released the second edition of *The Health of Canada's Children* in 1994. This document revealed that child poverty in Canada is reaching crisis proportions. By 1996 more than 1.5 million or 20.9% of Canadian children lived in poverty (National Council of Welfare, 1997). Poverty, single status, and female-headed families are frequently synonymous. Understandably, this affects the overall health status of the pregnant woman and the outcome of the pregnancy. The 1997 *Healthy Parents, Healthy Babies Report* of the National Council of Welfare compared the percentage of LBW babies delivered by household income level. This report cited a study completed by Wilkins, Sherman & Best (1991) which reported the frequency of unfavourable birth outcomes such as LBW by neighborhood income. Of the babies born in 1986 in Canada's 25 largest cities, these researchers found that birth weights under 2,500 grams occurred in 6.9% of births in the poorest neighborhoods as compared to 4.9% in the wealthiest neighborhoods -- a difference of two percentage points. Health outcomes at birth are related to the family's socioeconomic status; poor and middle income families in Canada are at higher risk of having a LBW baby than wealthier families (Guy, 1997). Poverty is also linked with low levels of education, poor self-esteem and violence. These interrelated factors frequently precipitate a poverty cycle

since low education can result in no job and low self-esteem -- one leads to the other. Until society can find ways to break this cycle, LBW babies will continue to be born. Marmot & Smith (1989) observed that the Japanese growth in wealth and subsequent decrease in poverty has resulted in improved birth outcomes, such as low birth weight -- a goal which Canada must strive to achieve if the overall health status is to improve.

Efforts must be concentrated on programs that access and recruit vulnerable pregnant women (Health Canada, 1998). These include pregnant women living in poverty who more often have poor diets, are smokers or substance users, receive inadequate prenatal care, have poor reproductive and family histories, and are very young.

The problem of low income is particularly apparent in Newfoundland and Labrador. Since LBW has been associated with low income, it is thought that implementing such programs as the HBC can effect change through the provision of education, food supplements and supportive environments.

2.2.2 Smoking

Guy (1997) observes that in Canada "one in four pregnant women smoke" (p. 155). Similar statistics show that the prevalence of smoking during pregnancy is highest among women who are 20 years of age or younger (Health Canada, 1995a and b). *Newfoundland and Labrador's Adult Health Survey* (1995) completed by Segovia, Edwards & Bartlett documented the prevalence of smoking among women of childbearing years -- 15 to 44 years -- revealing that 19.2% of females aged 20-34 years

and 27.2% of females aged 35 - 49 years smoke. It is assumed that smoking patterns for pregnant women are reflected in trends for women of childbearing age in the general population (Health Canada, 1995a and b).

On the other hand, studies done by Edwards, Sims-Jones and Hotz in 1994a for the Ottawa-Carleton Region of Ontario revealed that prevalence rates for smoking during pregnancy decreased from 28.5% in 1983 to 18.7% in 1992. This paralleled a similar pattern of decline in women's smoking rates before pregnancy -- from 37.4% to 26.4% -- with a significant increase in the number of women quitting in early pregnancy -- from about 24% to 29% in 1992.

Research findings have confirmed that the relationship between smoking and LBW is direct and causal. The chemicals in tobacco smoke, primarily nicotine and carbon monoxide, cause chronic fetal hypoxia and, therefore, decreased growth. Even exposure to "second hand smoke" has been hypothesized to cause respiratory complications, growth restriction and may be associated with sudden infant death syndrome (CICH, 1994; Edwards et al. 1994b; Haddow, Knight, Kloza, Palomak & Wald, 1991; Hebel, Fox & Sexton, 1988; Kramer, 1987; Martin & Bracken, 1986; Sexton & Hebel, 1984; Walsh, 1994). In 1980, the United States Department of Health and Human Services reported that babies born to mothers who smoked during pregnancy weighed approximately 200 grams less, on average, than those born to non-smokers. Likewise, Goldenberg (1994) emphasized that women who stopped or reduced smoking,

even as late as the second trimester, had significantly fewer LBW infants than those who did not smoke. Kramer's meta-analysis (1987) of studies regarding the causes of LBW estimated that 14.1% of LBW babies could be attributed to cigarette smoking.

Stewart et al. (1996) interviewed 386 vulnerable women -- disadvantaged women who required "priority support" and intervention -- who stated that their smoking was intimately linked with their life situation of poverty, isolation and care giving. The literature describes priority support as the care, support, nurturing and intervention required for vulnerable women and their families (Stewart et al. 1996). Smoking was a mechanism for coping with the stress of their lives and the associated fear, anxiety and anger. Smoking was also used as a reward and for pleasure and to achieve some sense of "control" for those living in disadvantaged circumstances. Stewart et al. recommended that smoking cessation programs address the broader social and economic context of women's lives, not just the use of tobacco. Smoking is an addiction and it is more common among poor, unmarried teenaged women and those who have less education. The inverse relationship between smoking and income has been linked to the role of higher levels of stress among lower socioeconomic groups (Oakley et al. 1990). Additionally, it is frequently reported that smoking is used as a weight control tool by many, especially younger females (CICH, 1992, 1993).

In keeping with the position expressed by many authors, the Canadian Institute of Child Health (1993) highlights that of all the known risks of LBW, smoking is not only a major contributor but it is also the most amenable to prevention. Haddow et al. (1991) in

a randomized controlled trial, assessed the integration of a smoking intervention program into routine prenatal screening. The study took place in Maine, USA at 139 physician offices and clinic sites which provided prenatal care. The study group involved 2,848 pregnant women who smoked ten or more cigarettes daily. They enrolled in the research study at between 15 and 20 weeks gestation, from a population base of approximately 18,000 pregnancies during 1984 to 1987. Pregnancy outcome data were available for 97% of the study population, including birth weights for 2,700 singleton live births. The smoking intervention program led to an overall 66-gram increase in mean birth weight ($p = 0.03$; CI 9 - 123). There was a 30% reduction in the rate of low birth weight in the pregnancies managed by the 70 physicians who secured the highest proportion of repeat cotinine measurements in their practice sample. Among the remaining 69 physician practices, the intervention had no detectable effect on birth weight. Haddow et al. summarized that this intervention led to a significant and cost-effective reduction in the number of low birth weight babies and theorized that “probably no other single simple measure [smoking cessation] can achieve as much in the prevention of LBW” (Haddow et al., 1991, p. 864).

Smoking is more likely to begin at a young age; it is more prevalent among the poor and it is frequently used as a means of “control.” Smoking prevention programs work. These program appear to be a strategy that could also be effective with pregnant women.

2.2.3 Nutrition

Good maternal nutrition provides the best possible start to a healthy baby. The 1988 *USA Surgeon General's Report on Nutrition and Health* noted that the effect of maternal nutrition on the developing fetus' health is one of the gaps in our knowledge of nutrition and recommended future research and surveillance. Since that time, more conclusive evidence has confirmed that the mother's nutritional intake and nutritional status can significantly affect the baby during pregnancy. If essential nutrients are not provided in adequate amounts the likelihood of a LBW baby is increased (Worthington-Roberts & Williams, 1993).

There are two indicators of nutritional status that have shown consistent associations with birth weight. These are maternal body size -- stature and pre-pregnancy weight -- and the amount of weight gained by the mother during pregnancy. Barker et al. (1989) noted that birth weight is strongly influenced by maternal height. Maternal height is determined by growth in early childhood. Females of less than five feet in stature are at increased risk of delivering a baby of LBW; this is theorized to be related to malnourishment as well as familial factors. Also, adequate weight gain by the mother is important in pregnancy. Women who do not gain the currently recommended range of weight gain (based on their pre-pregnancy weight status) during pregnancy are two to three times more likely to have a baby of LBW. Guy (1997) proposes that there are two groups of women most at risk for inadequate weight gain during pregnancy: the poor and

teenagers. The poor frequently cannot afford to buy nutritious foods and women living in poverty and teenagers may not have the skills required to budget, to prepare and to cook food.

Other situations can affect the growth needs of a baby. For example, Plouffe & White (1996) discussed adolescents who are still maturing themselves. They cite the work of Scholl et al. (1995) where pregnant teenagers who were still in their growth phase were compared with “fully grown” adolescents. The authors were able to confirm the competition for nutrients between the mother and the fetus, showing reduced levels of ferritin and folate in the cord blood as well as lower birth weights. Naturally, multiple births create increased demands and can pose a risk for nutritional deficiency. Other issues to consider are society’s expectation and the emphasis on the “ideal body figure” which can lead to a mother restricting her weight gain. There is also a myth that smaller babies are easier to deliver at birth; this may result in some females trying to limit the growth of the unborn child by food restriction.

Studies examining the effects of nutritional supplementation during pregnancy include a review of such programs as the Montreal Diet Dispensary Program in Canada and the Women, Infants and Children (WIC) Program in the United States and others.

The Montreal Diet Dispensary Program is a pioneer of this type of program. It has been in operation since 1963 and is one of the best evaluated perinatal outreach programs in Canada (CICH, 1992). This program targets women who are at risk for delivering a low birth weight baby because of poverty, family violence, depression,

psychiatric history or health and nutritional problems. Higgins, Moxley & Pencharz (1989) examined the impact of the Montreal Diet Dispensary Program on birth weight using a within-mother analysis of 552 mothers. Using sibling pairs, the study measured the effects of individual nutrition assessment and rehabilitation on pregnancy outcomes in a group of low-income women who had a child without any prenatal intervention and subsequently had a child while enrolled in the program. The evaluation of program effectiveness revealed that after controlling for parity and sex, birth weights of the intervention infants averaged 107 grams higher than those of their non-intervention siblings ($p < .01$). The average birth weight was highest in the case of mothers who had been classified either as undernourished or under stress. Similarly, Kramer (1987) examined caloric supplementation during pregnancy in his meta-analysis and he, as well, found that this strategy had the greatest impact in women who were most undernourished. The cost of the Montreal Diet Dispensary Program in 1990 was estimated at \$357 for each pregnant woman served in an urban setting and \$383 for each woman in a rural setting (CICH, 1993). The estimated cost of providing services to some 17,000 low-income pregnant women in Quebec in 1990 would have been in the order of \$6.1 million a year in 1990. If the program cut the rate of LBW by 50% in the high risk group (which is a conservative estimate), the savings on caring for the babies during the first year of life would amount to about \$5.2 million. However, the savings on the cost of institutional and non-institutional care *after* the first year for life would amount to about

\$45 million for a total savings of \$50.2 million over a lifetime of this cohort (CICH, 1993).

The Women, Infants and Children (WIC) Program has been in operation since 1974 in the USA. Over the years, WIC grew from a handful of locally run programs to a national network of 9,000 clinics serving more than six million women. Owen & Owen's (1997) review of "twenty years of WIC" reported a decrease of 25% in the incidence of LBW and 44% for very low birth weight in the WIC group. Kotelchuk (1984) also showed a dose-related effect on birth weight linked to the duration of participation in the WIC program; longer duration resulted in a decreased rate of LBW. The cost of the program was \$296 million in 1990 but there was an estimated savings of \$853 million in health-related expenditures for the babies helped for the first year of life alone (CICH, 1993).

Good nutrition in pregnancy is a well-established factor in the prevention of LBW. Food supplements and education regarding their use in programs such as the Montreal Diet Dispensary and WIC have been shown to have a positive impact.

2.2.4 Stress and Social Support

Health Canada carried out a *Health Promotion Survey* in 1990. The results documented that:

- 8% of all women aged 15-24 years found their lives very stressful
- 15% of women aged 25-44 years found their lives very stressful
- 33% of women of childbearing age reported that they have cared for another person in the last month which sometimes added to their burden of stress

- 25% reported one to two sources of job stress and 12% reported three to five sources of job stress

Stress is a contributing factor to adverse birth outcome -- such as LBW -- and the provision of social support has been documented as an effective intervention. Social support is viewed by Hubbard, Munlenkamp & Brown (1984) as "a multidimensional construct consisting of people as interpersonal resources who provide gratification of basic human needs in relationships" (p. 267).

Overall, the results of studies examining the effects of stress and social support during pregnancy have been inconclusive. Some studies have indicated that social support for pregnant women may not always improve birth weight while others report social support enhances coping skills, reduces stress, improves the mother's emotional well-being and, in turn, the baby's health including birth weight (CICH, 1994; Poland et al. 1992; Turner, Grindstaff & Phillips, 1990; Hodnett, 1993; Villar et al. 1992).

In 1994, Higgins, Murray and Williams carried out a case control study regarding aspects of prenatal care such as social support, with 193 low-risk women. The sample population was categorized into two groups: one group had received adequate prenatal care and another had received inadequate care. Adequate prenatal care was defined as "care which began in the first trimester and included nine or more visits during the pregnancy"; whereas, inadequate prenatal care meant "care which began in the third trimester of pregnancy or fewer than four visits" (Higgins et al. 1994, p. 26). Significant differences were found in self-esteem -- defined as a personal judgment of worthiness that is expressed in the attitudes the individual holds towards herself -- social support and satisfaction between the two groups. The authors concluded that social support from prenatal caregivers is beneficial in increasing maternal feelings of well-being during pregnancy and childbirth. Also noteworthy, was the authors' conclusion that health

caregivers had not been effective in the past in enhancing self-esteem and social support. Despite the limitations of the case control design, the results further emphasize the potential need for social support to improve pregnancy outcomes.

Group and individual social support, lay mentoring and mutual aid are encouraged. A variety of models exist, some focusing on specific target groups such as teens, others offering support through differing mechanisms including both professional and non-professional resources. For example, in Norfolk, Virginia a pregnancy support program known as the Resource Mothers Program was developed in 1985 using a “modeling” or “mentoring” approach with a lay resource mother who would share similar socioeconomic characteristics of the adolescents’ families (Julnes, Konefal, Pindur & Kim, 1994). The program evaluation compared the effects of this community-based lay home visiting initiative for pregnant adolescents (n = 49) with the effects of a more traditional clinic-based program (n = 46) along with a no-prenatal-care comparison group (n = 29). These were a sample of all births to women 19 years old and younger during a 12-month period in the Norfolk area. The results of the study revealed that the Resource Mothers Program reached a higher percentage of high risk adolescents (75.5% versus 45.6% of clients with the clinic-based program for clients aged 17 years old or under), promoted a higher level of prenatal care (53.1% with the Resource Mothers Program versus 32.6% with the clinic-based program clients beginning prenatal care before the fourth month of pregnancy) and resulted in pregnancy outcomes that favoured the clinic-based program but were comparable; 89.8% of infants in the Resource Mothers Program

versus 93.5% in the clinic-based program were over 2,500 grams at birth. These are significant findings since these vulnerable groups generally do not avail of or participate in formal prenatal education.

Lapierre, Perreault and Goulet (1995) proposed a theoretical framework of prenatal peer counselling to address the psychosocial variables associated with pregnancy outcome such as anxiety, social support and self-esteem for those working with low-income families. They suggested these factors could be positively influenced through the peer counselling approach. In contrast Villar et al. (1992) found differing results in a randomized trial to evaluate a program of home visits designed to provide psychosocial support during pregnancy. The study group included 2,235 pregnant women in four Latin American countries who were at higher-than-average risk for delivering a low birth weight baby. The results showed the women who received the home visits as well as routine prenatal care had outcomes that differed little from those of the women who received only routine care. The risk of low birth weight (odds ratio for the intervention group as compared with the control group, 0.93; CI 0.68 - 1.28), preterm delivery (OR 0.88; CI 0.67 - 1.16), and intrauterine growth retardation (OR 1.08; CI 0.83 - 1.40) were similar in the two groups. There was no evidence that the intervention had any significant effect on the type of delivery, the length of hospital stay, infant birth weight, perinatal mortality, or neonatal morbidity in the first 40 days. There was no protective effect of the psychosocial support program even among the mothers at highest risk. However, Hodnett (1993), in her rebuttal to Villar et al.'s publication, stated that other

factors should be taken into consideration. Low birth weight is not the only important outcome of such interventions; the length and type of psychosocial interventions must be taken into consideration when assessing outcome and effects. Villar et al.'s study is one of the few studies which has provided inconclusive evidence to validate social support as an important component of prenatal care. Overall, social support has been confirmed by most investigations as an integral and essential component of comprehensive prenatal care (Billingham, 1989; Giblin et al. 1990; Heins et al. 1987; Higgins et al. 1994; Oakley et al. 1990). It is likely that providing social support increases recruitment to prenatal programs and there is clear evidence that the longer the duration of participation in these programs results in improved birth outcomes (Kotelchuck, 1984; Way et al. 1998).

Social support for women who are victims of abuse is also essential since these women are the least likely to seek early and regular prenatal care. The CICH (1992) literature review referenced unpublished data from the *Violence Against Women Survey* which revealed that more than half a million (21%) Canadian women over the age of sixteen have experienced violence by a partner during pregnancy. Research validates pregnancy as a frequent trigger for violence. Campbell, Poland, Waller & Ager (1992), Friedman (1986) and McFarlane (1992) in their discussion of this topic acknowledged that pregnancy requires a major adjustment and transition in relationships and, for some people, this can result in a crisis precipitating violence. It is also known that battering can cause spontaneous abortion, premature labor or stillbirth. McFarlane (1992) noted from her extensive research that "on average one in 12 pregnant women experiences

battering during pregnancy....battered women are four times more likely to deliver a low birth weight infant” (p. 205). To determine if an association exists between battering before or during pregnancy and infant birth weight, 589 postpartum women at private and public USA hospitals were randomly selected and asked if they had been physically abused (Bullock & McFarlane, 1989). Of the battered women 12.5% delivered a low birth weight infant compared to only 6.6% of the non-battered women.

Because of today’s changing family structures, many women do not have the resources and support of the traditional nuclear and extended family. As well, women frequently carry out “dual” roles as provider and caregiver as increasing numbers of females are in the work force or head families alone resulting in increased stress levels.

A significant number of women in their childbearing years find their lives stressful due to various reasons such as poverty, care giving responsibilities and violence. It has been demonstrated that social support decreases stress. Thus, programs such as the HBC which offer social support from a peer group and the resource mother can be an effective intervention.

2.2.5 Alcohol and Other Substances

Alcohol has been shown to have negative effects on birth outcomes. The major impact is fetal alcohol syndrome which is currently estimated to occur in one in 1,000 live births (CICH, 1994). However, the effects of alcohol on pregnancy are often difficult to assess due to confounding variables such as smoking, poor nutrition and unreliability

of self-report. Kramer (1987) concluded from his meta-analysis that heavy drinking, defined as two to four drinks per day, is associated with poor neonatal outcomes such as LBW and fetal alcohol syndrome, and the effects are probably dose-related.

Dow-Clarke, MacCalder and Hessel (1994) surveyed lifestyle behaviours of pregnant women in Fort McMurray, Alberta and documented in the *Baby Vision* report that “almost half (48.8%) of the women stated they had consumed alcoholic beverages since learning of their pregnancy” (p.33). An unfortunate limitation of the study was the fact that the amount of alcohol consumed was not determined.

More and more studies are documenting an increase in the use of alcohol and other substances during the reproductive years. *The National Longitudinal Survey of Children and Youth* (Statistics Canada, 1996b) asked mothers about alcohol consumption during pregnancy. The results revealed that although the mothers of 82.6% of children aged zero to one year reported that they did not drink at all during pregnancy, 7.1% reported they drank throughout the pregnancy and 2.8% reported they drank only during the first trimester.

An essential part of prenatal care is the effective screening of pregnant women. Screening tools such as brief questionnaires including the T-ACE (Tolerance, Annoyed, Cut Down, Eye Opener); or TWEAK --Tolerance, Worried, Eye Opener, Amnesia, Cut (K) Down -- have been developed to identify at-risk drinkers among pregnant women (Russell, 1994). The T-ACE has been determined to have a sensitivity of 76%, a specificity of 79% and a positive predictive value of 14% in the general population. The

TWEAK tool was developed specifically for use with females. This instrument has a sensitivity of 79% and a specificity of 77%. Tools such as these can assist prenatal caregivers in screening for problem drinkers and can serve as a point of discussion for counselling or referral, when appropriate.

With respect to other potentially abusive substances, the 1993 CICH review states that caffeine does not appear to have untoward effects on the growing baby. Likewise, marijuana has not been proven to affect birth weight adversely. However, most narcotics do cross the placenta to the baby and these have been associated with negative effects on the developing and growing fetus. Cocaine, for instance, not only inhibits a child's growth, but causes other devastating consequences for the neonate such as addiction, malformations and/or damage to vital body organs.

Because of the serious effects of alcohol and other substances on the fetus, education regarding fetal alcohol syndrome, fetal alcohol effects, the consequences of the use of other substances and the provision of support are facets of the HBC program.

2.2.6 Education

Education is a proxy measure of poverty since those with less education often have no job or a job which is poorly paid. In 1991, 37% of Canadian children under seven years of age lived in a family headed by a parent who had less than high school education and lived in poverty (Statistics Canada, 1991). Kliegman et al. (1990) critically reviewed what is known about LBW in relation to education and reported that women with fewer than eight years of education have two to three times the risk of infant

death than those with greater than 18 years of education. It has been found that many women are unaware of the detrimental effects of lifestyle practices such as smoking and poor nutrition on the overall health of their unborn child. As well, many women who do have this knowledge do not understand the potential effects of their behaviour. This demonstrates the need for increased public awareness and education. Life skills training and other educational opportunities have been suggested as appropriate interventions but to date these have not been both systematically developed and evaluated. The HBC Program has incorporated a life skills training and education approach which will require further evaluation.

2.2.7 Age

“Low birth weight outcomes in Canada are concentrated among very young and older mothers” (Federal, Provincial and Territorial Advisory Committee on Population Health, 1999, p. 76). Young maternal age itself is not a determinant of poor birth outcomes; rather, it is possibly a marker of social disadvantage and increased risk. Variables such as socioeconomic status and race in conjunction with young age appear to be contributing factors to LBW (Ketterlinus et al. 1990; Kliegman et al. 1990; Kogan, 1995). For example, adolescent pregnancies are usually unplanned and often occur in situations of poverty and single parenthood. The *Healthy Children-Healthy Society Report* (1994), completed by MUN, Health Research Unit, Division of Community Medicine documents 4.8% more pregnancies on average to women between 15 to 19 years of age in Newfoundland and Labrador compared to Canada during 1991-1992.

This is despite the fact that the number of pregnancies over all age groups in this province has decreased over 20% between 1987 and 1992.

It is important to note that mothers over age 45 are more likely to experience medical complications that could affect birth weight (Federal, Provincial and Territorial Advisory Committee on Population Health, 1999).

Educational approaches which incorporate information regarding relationships, sexuality, decision making and assertiveness skills, and birth control can be crucial in delaying pregnancy and thus, potentially the number of LBW babies (CICH, 1993). The HBC incorporates an educational approach which is directed towards young single women.

2.2.8 Work

Various researchers have explored the effect of work on pregnancy. Schramm, Stockbauer & Hoffman (1996) carried out secondary data analyses from the *Missouri Maternal and Infant Health Survey* and found no significant increased risk of adverse pregnancy outcomes associated with employment during pregnancy. However, Kramer (1987) theorized that some types of work which require prolonged standing and physical exertion may increase the risk of LBW due to blood flow restriction to the developing fetus. An interesting review of community preventive strategies was conducted in 1990 by Moutquin & Papiernik examining the issue of preterm birth which frequently is a

predisposing factor for LBW. In France a population health prevention strategy was implemented that included education, communication and specific physical examination requirements for *all* pregnant women in France. The strategy raised national awareness and personal responsibility. As well, political action was taken enforcing work leave eight to ten weeks before the expected date of delivery. In high traffic areas of cities working hours were shortened by 30 minutes in the morning and afternoon for pregnant women to avoid rush hours. These measures demonstrated impressive results -- a 30% reduction in the rate of preterm delivery and 50% reduction of delivery before 34 weeks; very low birth weight deliveries were reduced by 50%. Also, with reference to the work environment, the CICH (1993) recommends that the workplace should be safe, free of toxins and excessive stress.

Awareness of the impact of work on pregnancy is important particularly in rural Newfoundland and Labrador where opportunities for employment would probably include more physically demanding work.

2.2.9 Prenatal Care

The prenatal period provides a “window of opportunity” or a critical time to provide intervention since the outcome of pregnancy can effect a child’s entire future. The importance and effectiveness of adequate prenatal care in producing a healthy mother and baby has been documented extensively in the literature (Giblin et al. 1990; Health

Canada 1993a and b; Health Canada, 1995c; Higgins et al. 1994; Perinatal Education Program of Eastern Ontario, 1998).

The Newfoundland and Labrador Center for Health Information reveals that in 1998 there were a total of 5,008 births in the province; of these, 91.2% of women attended prenatal care in the first trimester of their pregnancy. This indicates their first visit for medical care. In the 15 to 19 age grouping, 78.2% received prenatal care commencing in the first trimester; thus, 1,092 or 21.8% of this age group did not initiate care until later in pregnancy.

In 1996 the Newfoundland and Labrador Department of Health revised the Provincial Prenatal Record to include information related to lifestyle and behavioural factors and other related data. One purpose of this revision was to increase awareness about the significance of these factors and promote referrals to Health and Community Services. However, the desired results are not being achieved. For example, in 1996, only 11 referrals of a total 1,863 births in the St. John's Region, were forwarded to Health and Community Services' staff by doctors which indicates a need for further education of physicians and other health professionals.

The content of the routine prenatal visit bears review. Historically, the system of promoting regular prenatal visits to health personnel began when maternal and perinatal mortality rates were exceedingly high. Causes of mortality at that time included hypertension, eclampsia, hemorrhage, infection and anemia. Just as many problems in

public health have improved with increased knowledge and technology, so have the challenges related to pregnancy. However, the custom of the regular prenatal visit remains reflective of this earlier era. Today, the emphasis should be on the actual determinants of a successful pregnancy and less on pregnancy as a potential disease process. Education, assessment of compliance with behaviour modification and access to support are essential, together with the free exchange of information about diet, exercise, rest, breastfeeding and infant care. Good prenatal care should result in the prevention and/or reduction of LBW. The 1994 *Canadian Task Force on the Periodic Health Examination* outlines graded recommendations for maneuvers for which the medical evidence documents that benefits outweigh potential harm. These guidelines also outline screening and counselling for the asymptomatic individual that should be offered in a clinical setting by physicians, nurses or associated health care workers. The evidence to support these strategies was assessed separately. Specific to LBW, these are:

- smoking cessation interventions have an “A” recommendation; indicative of good evidence to be specifically considered in the periodic health examination
- diet supplementation in the prenatal period in pregnant women at high risk for undernutrition has a “C” recommendation as there is poor evidence regarding the inclusion or exclusion but recommendations may be made on other grounds
- programs consisting exclusively of social support have a “D” recommendation indicating fair evidence that this maneuver be excluded from the periodic health examination

However, comprehensive prenatal care programming which includes all of these components has not been assessed.

Early intervention is guided by early prenatal assessment. Integral to any prenatal assessment is determining reproductive risk as provided by the mother's history of previous abortion, fetal or neonatal death, a previous LBW baby, and/or medical conditions and family history. Any of these factors could predispose an individual to adverse birth outcomes in a subsequent pregnancy. A short interval between pregnancies can also have untoward effects since the mother's body does not have adequate time to replenish after the previous pregnancy.

The precise content or quantity of prenatal care necessary to reduce LBW has not been determined. Researchers in the Institute of Medicine, USA, (1985), as cited by York & Broton (1992), estimated that if this care commenced in the first trimester and continued until delivery it could reduce LBW by 15% in whites and 12% in blacks in the United States population.

Traditional approaches to prenatal care, education and support however, have been unable to meet the needs of vulnerable women and to improve LBW rates in this population (Lapierre et al. 1995; Lia-Hoagberg et al. 1990). Many of these women are socially disadvantaged. Often they do not have partners, or they live in abusive relationships and they are socially isolated from family and friends. Frequently they perceive barriers to prenatal care since most programs have been aimed at the traditional two parent family. Teenagers are another group who frequently seek care later in pregnancy and therefore attend fewer prenatal visits (Plouffe & White, 1996).

Stress is another significant barrier to prenatal care. For instance, women who have many stressors in their lives do not view prenatal care as a priority (Health Canada, 1993a; Kliegman et al. 1990; Kogan, 1995; Oakley et al. 1990; Stewart et al. 1996). Often there is a “day to day” orientation to life and a feeling of ambivalence to the long-time commitment to pregnancy. Thus, they do not engage in “healthful” behaviours which will enhance the outcome of pregnancy. Poor education, lack of awareness, denial, intimidation and fear, especially if abuse is involved, also influence the mother’s decision to engage in prenatal care (Lia-Hoagberg et al. 1990; Oakley et al. 1990).

Barriers identified by the *Health Canada Prenatal Health Promotion Project* (1993a) included:

- structural and social barriers -- transportation, child care, lack of awareness of other services, isolation
- mistrust and conflicting values and beliefs -- cultural differences, feelings of powerlessness and hopelessness
- low priority of preventative health care among vulnerable families

Prenatal programs that reduce barriers for participation are essential. Kliegman et al. (1990) singled out Sweden’s successful model which included reproductive education, acceptance of early prenatal care and provision of neighborhood health centers. A randomized trial conducted by Poland et al. in 1992 assessed the impact of paraprofessional services on the amount of prenatal care obtained and resulting birth weights using a sample of 111 low-income women subdivided into two groups. The study demonstrated that women accompanied by a paraprofessional -- another mother or

a trained lay person -- were likely to attend more prenatal appointments and delivered higher birth weight babies in contrast to the comparison group. Women who were assigned a paraprofessional kept more prenatal appointments (8.0 versus 6.5 visits; $p \leq .05$) and delivered infants with higher average birth weights (3,273grams) than the comparison group (3,125 grams). Rajan & Oakley (1990), of the University of London, surveyed a post-natal group of 467 mothers of LBW babies living in London and summarized that the main needs identified by this group of disadvantaged women were "more reassurance and information, recognition of economic hardships and more attention to their feelings and opinions" (p. 73).

The Vancouver's Healthiest Babies Possible Program began in 1976. This program serves approximately 380 pregnant women annually. This is a community-based, multicultural prenatal outreach model for women at risk of having a LBW baby or a baby affected by alcohol or drug use and incorporates a food supplementation program. The program reported a reduction in LBW and has documented positive lifestyle changes in these pregnant women (National Council of Welfare, 1997; Jeannie Dickie, Program Coordinator, personal communication, August 1999).

These studies support the observation that prenatal care frequently requires adaptation to meet the specific needs particularly of teenagers, ethnic and vulnerable groups.

The 1994 *Canadian Institute of Child Health Report* recommended that efforts be directed toward the reduction of low birth weight since it has such an impact on child

health. Progress to date has been slow since strategies have focused more on medical care interventions and technology to save small babies rather than on prevention. Strategies to address the issue of LBW must be guided by a population health approach. The 1994 *Strategies for Population Health – Investing in the Health of Canadians* stated that “population health concerns itself with the living and working environments that affect people’s health, the conditions that enable and support people in making healthy choices and the services that promote and maintain health” (Health Canada, 1994, p. 9). This approach addresses factors that enhance the health and well-being of the overall population rather than targeting a specific subgroup. Subsequently, this approach would ultimately shift the entire population to a lower level of risk. Such a strategy was reported by Moutquin & Papiernik (1990) who reviewed a total population intervention used in France over a ten year period which effected a 30% reduction in prematurity and a 50% reduction in very low birth weight births.

Population health and prenatal health promotion strategies complement each other. Prenatal health promotion enables women and their families to take control over and improve their health before, during and after pregnancy. If programs are directed only at selected women with easily identifiable risk factors and not at the whole population, most of the LBW babies will be missed. This happens because there is no *one* specific risk factor common in the population but rather a combination of risk factors. For example, many mothers of LBW babies experience poverty, smoking, poor nutrition and low education level. Programs targeted to a specific risk factor may reduce the risk

within a small subgroup of the population, but they will have little impact on the reduction of LBW in the population as a whole. A community-wide approach is needed to accomplish this goal. This approach of involving existing organizations ensures that the program or interventions will become embedded in the community system framework, thus making it more relevant and hopefully sustainable. The 1998 *Prevention of Low Birth Weight in Canada: Literature Review and Strategies* document produced by the Perinatal Education Program of Eastern Ontario highlights two community demonstration programs – the Community Action for Healthy Babies Program (Ontario Ministry of Health) and the Ottawa-Carleton Preterm Birth Prevention Program – that have adopted this population health focus. The projects were implemented for a five-year period (1992 to 1998) and are presently in an evaluation process (Ann Sprague, personal communication, August 1999). Their aim is to reduce the risk of LBW and to influence the distribution of risk factors in the community so that fewer people are in the highest risk group.

Although the Healthy Baby Club Model of Prenatal Support uses a targeted approach in that it focuses specifically on low-income pregnant women it integrates a population health philosophy. This model addresses many of the determinants of health, mobilizes a wide variety of resources, and promotes the development of personal skills, empowerment and community engagement and sustainability. It has been supported by funding from the CAPC and CPNP initiatives. The Canadian Institute of Child Health (1993) endorsed the approach adopted by the HBC with this recommendation “the

reduction of LBW rates will only be accomplished through multifaceted programs and creative partnerships between medical care and community health promotion” (p. 5). Therefore, the targeted approach adopted by the HBC Program is justified as a complement to other strategies within a broad population health model.

2.3 Client Recruitment and Duration of Participation

One of the greatest challenges in the prevention of low birth weight is recruitment, specifically of vulnerable pregnant women, to access and participate in early prenatal care. “Women at greatest risk for LBW are most likely to receive little or no prenatal care” (Kliegman et al. 1990, p. 1075). What motivates people to seek prenatal care? What services satisfy participants? How do we access those women who live in disadvantaged circumstances such as poverty and violence? Some successful approaches and strategies have been demonstrated; these must be shared and enhanced (CICH, 1992, 1993; Deal, 1994; Health Canada, 1993b; Higgins et al. 1994; Julnes et al. 1994; Lia-Hoagberg et al. 1990; Moutquin & Papiernik, 1990; Perinatal Education Program of Eastern Ontario, 1998; Poland et al. 1992; Williams, 1994). For example, The Special Delivery Club, a Kingston, Ontario program for young, single pregnant women, has become a model for some 95 organizations across the country. The Club uses participatory learning techniques and games to teach life skills. Peer facilitation and leadership are effective components of the program. Program evaluation to date has demonstrated positive outcomes (Health Canada, 1993b). Rediscovering the Traditional

Mother is another program which offers First Nations women an opportunity to learn prenatal health care from their elders in Whitehorse, Yukon. Traditional circles are used to give presentations, encourage the sharing of stories and promote discussion and questions about women and pregnancy. Resources such as videos and handouts are provided in the native language. An evaluation completed by participants resulted in a recommendation that this type of teaching continue to be provided to First Nations people (Health Canada, 1993b).

The theories of adult learning and motivation offer relevant and essential principles to be incorporated in successful strategies to promote vulnerable women's greater use of prenatal care. Motivation and learning are directly correlated as people learn only what they want or feel they need or are motivated to learn. Learning is more effective when there are activities that involve active participation and demonstration of new skills. It is also important to incorporate the participants' experiences as these are a rich resource of knowledge which increases the relevancy of the material. People learn best about those

areas that are related to their identified problems. As pointed out by educational theorists, if the learner does not recognize a need for information, a significant amount of learning is unlikely to occur (Knowles, 1973; Cross, 1982; Morton, 1991). This is why the identification of self-perceived health care needs is so important; the educator/facilitator can seize the opportunity to address these when motivation for learning is high. For example, the majority of pregnant women identified their greatest

information deficit centered around labour and delivery. This should not be unexpected considering all these women were fast approaching this stage of their pregnancy and a significant number of them for the first time. Thus, this need can best be met when its relevancy is greatest (Howard and Sater, 1985).

As York and Brooten (1992), Lia-Hoagberg et al. (1990), Oakley et al. (1990) and Stewart et al. (1996) stress, not all women value prenatal care and see it as important. Higgins et al. (1994) note that psychosocial factors such as self-esteem can influence prenatal care seeking behaviour. Thus, strategies which enhance an individual's self-esteem can increase the duration and participation in prenatal care. Psychosocial, structural, and socio-demographic factors were identified by Lia-Hoagberg et al. (1990) as major barriers to prenatal care, while the pregnant woman's beliefs and support from others were important motivators. These researchers affirmed the complexity of prenatal care participation behaviour among vulnerable women and the dominant influence of psychosocial factors. They concluded that comprehensive, coordinated and multi-disciplinary outreach and services which address psychosocial and structural barriers are needed to improve prenatal care for these women.

In fact, it has been recognized by most researchers that the amount of prenatal care is the best predictor of pregnancy outcomes (McLaughlin et al. 1992; Machala & Miner, 1991; York & Brooten, 1992). Therefore, early recruitment and retention of vulnerable women for prenatal care is core to effecting healthier pregnancies.

2.4 Client Satisfaction

Client satisfaction occurs when the product and services delivered by the providers equal or exceed client expectations. To be able to satisfy consumers, it is vital to know them, their wants and their preferences (Public Service Commission, 1997). This is usually obtained through client consultation, a process that permits and promotes the two-way flow of information between the providers and the users of the service. One example of this could be a client survey to assess their experiences and level of satisfaction. Handler et al. (1996) indicate that client satisfaction is considered, together with health status, to be an outcome of the delivery of health care services as well as a measure of its quality. The strength of client satisfaction surveys lies in providing opportunity for consumer feedback and allowing clients to express their values (Avis et al. 1995; Carr-Hill, 1992; Hsieh & Kagle, 1991). Although there are inherent weaknesses in the research of client satisfaction as clients may fear loss of services, the strength lies in offering clients participation in such activities.

Studies by Dennis, Flynn and Martin, (1995); Handler et al. (1996); Zweig, Kruse and LeFevre, (1986) and Brown, (1994) have all demonstrated the relationship between satisfaction and use of care. Davis & Bush (1995) reference the early work of Donabedian who in 1966 proposed consumer satisfaction as one method of assessing outcome and quality of care. It is important to know what characteristics of prenatal care do and do not make a difference to women's use of prenatal services. Handler et al. (1996) found that women want respect, concern, communication, treatment as

individuals, and technical competency in a pleasant and clean environment. The need for further research to clarify those factors which influence feelings of satisfaction with prenatal care was also identified by Higgins et al. (1994). Their study of 193 women in New Mexico found that women who received adequate prenatal care had significantly higher self-esteem, had significantly more social support and were significantly more satisfied with prenatal care than women who had inadequate care. Women who have satisfying experiences with prenatal care delivery tell other women; this “word of mouth” transmission is a very effective mode of communication and a key mechanism in attracting others into programs.

There is limited literature or research available in the area of consumer satisfaction in the community setting since the primary focus has been in the health care institutional sector. Therefore, research such as this current study will contribute increased knowledge of the characteristics of pregnant women and their utilization of prenatal care interventions as well as important information related to the peer counselling model -- the resource mother. The research can provide direction and help shape policy for the continuation and expansion of the delivery of prenatal services which can ultimately improve the health of families.

2.5 THEORETICAL FRAMEWORK

The theoretical framework adopted for this study was guided by an integration of several health promotion and population health models that have evolved over the past

few decades: *Achieving Health for All: A Framework for Health Promotion* (1986), *Ottawa Charter for Health Promotion* (1986), and the *Circle of Health – Prince Edward Island’s Health Promotion Framework* (1996). Although not a perfect fit for the Healthy Baby Club strategy these frameworks encompass the basis of this program.

Health promotion was defined by the WHO in 1986 as “the process of enabling people to increase control over and improve their health.” Marc Lalonde’s classic document *A New Perspective on the Health of Canadians* (1974) pioneered the thrust that factors other than health care organizations contribute to the health of a population. Then in 1986 the WHO released the *Achieving Health for All: A Framework for Health Promotion* document which called attention to three key health promotion challenges: reducing inequities in health; increasing the prevention of disease; and enhancing the capacity to cope with chronic disease and disability. This *Framework* also proposed health promotion mechanisms which included self-care, mutual aid and creation of healthy environments, and strategies such as fostering public participation, strengthening community health services, and coordinating healthy public policy, in order to address challenges.

In 1986 the *Ottawa Charter for Health Promotion* was released. This charter took a comprehensive view of health determinants, referring to them as prerequisites for health. It defined these prerequisites as peace, shelter, education, food, income, a stable eco-system, sustainable resource, social justice and equity. It also recognized that access to these prerequisites cannot be ensured by the health sector alone. Instead, coordinated

and collaborative action is required among all concerned, including governments -- health and other social and economic sectors -- non-governmental organizations, industry and the media. The challenges put forward in this document are many but the most important has been the need to show how action directed at the underlying prerequisites or determinants can affect health. Strategic directions for national action were outlined in the *Strategies for Population Health – Investing in the Health of Canadians* (1994):

- strengthen public understanding about the broad determinants of health, and public support for and involvement in actions to improve the health of the overall population and reduce health status disparities experienced by some groups
- build understanding about the determinants of health and support for the population health approach among government partners in sectors among health
- develop comprehensive intersectoral population health initiatives for a few key priorities that have the potential to significantly impact population health (for example, low birth weight)

In 1996 the Province of Prince Edward Island produced its visionary document the *Circle of Health – Prince Edward Island’s Health Promotion Framework*. This framework was designed to promote a common understanding of health promotion, to assist people to locate links, relationships and contributions in health promotion work and to provide direction for strategic planning for health promotion. Figure 2.4 depicts this model. This *Circle of Health* is actually a blending of prior models and provides an appropriate framework for this study since it combines an integrated and comprehensive approach.

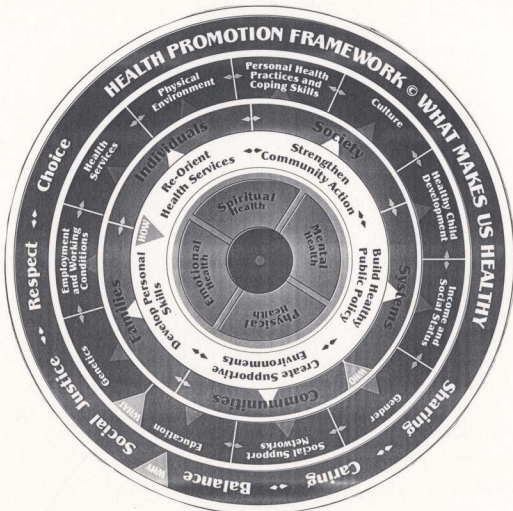


FIGURE 2.3
CIRCLE OF HEALTH

PRINCE EDWARD ISLAND'S HEALTH PROMOTION FRAMEWORK

Note. From Prince Edward Island's Health Promotion Framework – Learning Guide (p. 2) by the Health and Community Services Agency, 1996, Charlottetown: Prince Edward Island Health and Community Services System.

The five health promotion strategies previously identified and incorporated in the *Ottawa Charter for Health Promotion* and the *Circle of Health Framework* were applied by Dr. Véronique Déry in 1991 in building a comprehensive theoretical framework to address the problem of cardiovascular disease within a community intervention program. Inspired by the theoretical model of the Pawtucket Heart Health Program, this provides a flexible basis to address the challenge of the reduction of LBW infants.

As an example, the identified strategies:

- building healthy public policy
- creating supportive environments
- strengthening community action
- developing personal skills
- reorientation of health services

have been applied here to the previously cited risk factors for LBW babies in various settings such as schools, workplaces, health clinics, neighborhood centers and the general community. This interrelationship of risk factors, strategies and settings is illustrated in Figure 2.5 and is further elaborated on in the following discussion.

STRATEGIES

	Build healthy public policy	Create supportive environments	Strengthen community action	Develop personal skills	Reorient health services
Smoking					
Alcohol & Other Drugs					
Nutrition					
Poverty					
Stress & Social Support					
Education					
Maternal Age					
Work & Experience					
Prenatal Care					

FIGURE 2.4
REDUCTION OF LOW BIRTH WEIGHT

Note. Adapted from Community Intervention Programs: Implementation of Dietary Guidelines in Optimizing Heart Health: The Diet Connection (p. 49) by V. Déry, 1991, Toronto: University of Toronto.

2.5.1 Building Healthy Public Policy

Healthy public policy combines diverse but complementary approaches including legislation, taxation and organizational change. Ideally, it is coordinated action that leads to health, income and social policies that foster greater equity. Or, as Hanrahan (1994) states, healthy public policy includes decisions or actions intended to have a positive effect on the health of people. Milio (1988) described healthy public policy as ecological in perspective, multisectoral in scope, participatory in strategy and generally focused on issues of equity in health.

As discussed earlier, poverty is a major factor affecting overall birth outcomes.

Recommended policies to address this issue include:

- an equitable distribution of income
- pay equity for females in the work force
- compulsory maternity leave with substantial monetary and leave benefits -- such as in the Province of Quebec
- income support programs or social assistance which will put recipients above the poverty line
- a universal health care system which provides coverage for pregnancy costs such as prescription drugs, vitamins, dental care and travel to clinics

Other countries have implemented healthy public policies such as Sweden's creation of their Intersectoral Health Council, Norway's comprehensive nutrition policy, and Japan's dedication of specific budget funding to prevention and health promotion initiatives (Milio, 1988).

Since smoking has demonstrated such a negative effect on newborns, advocates recommend a more vigorous approach to the revision of government policy and legislation such as:

- banning media promotion of smoking and other harmful lifestyle practices
- offering smoking cessation programs in workplaces, schools and community settings
- channeling tax monies gained from cigarettes into research
- providing public places which are smoke free

Healthy public policy can be implemented in relation to nutrition, as well.

Initiatives such as the School Lunch Program and breastfeeding promotion reinforce the health nutrition message. Since strategies initiated during pregnancy may be too late to prevent poor pregnancy outcomes, preparation for pregnancy should begin in the school years and be complemented by family and public education efforts. Additionally, enhanced food labeling can offer opportunities to inform people about the nutrient content of foods and facilitate dietary choices which are most conducive to health (USA Surgeon General, 1988). As well, public policy is developing around food security. Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences (WHO, 1996). Since the 1980s communities have attempted to address the issue of food security by implementing policies related to food security (Canada's Action Plan for Food Security, 1998).

Since the 1990 United Nations Convention on the Rights of the Child, Canada has taken some initial steps to implement healthy policies and strategies related particularly to children. Examples are the Brighter Futures Initiatives (1992), the Child Tax Benefit (1992) which is a selective federal tax credit on behalf of children under the age of 18 years to help low-income families provide clothing, food, opportunities for education and other necessities for their children, the Community Action Program for Children (1992), the Canada Prenatal Nutrition Program (1994) and the National Child Benefit initiative (1996). This series of initiatives was designed to develop areas of prevention, protection, promotion and community action for vulnerable children zero to six years and their parents. However, it is still too early to determine the long-term effects on LBW.

The HBC Prenatal Support Program is an example of a primary prevention strategy that incorporates healthy public policy to address the issue of LBW. In order to prevent this problem, healthy public policies must be implemented by government, employers and the community to address the role, status and stressors placed on women in society. Specific areas include employment, violence, the double job of women in the labor force and at home, the traditional caregiver role of women, and the value of women, pregnancy and families in society (CICH, 1993; Health Canada, 1998).

2.5.2 Creating Supportive Environments

Supportive environments are those usually provided by family, friends, peers, support groups, work places, churches, and general networking through the community. Community-based support programs are also important. For example, "Community

Kitchens” and “Community Gardens” are programs which offer a creative model of community support by which affordable, nutritious food can be prepared and provided for participants by collectively pooling their resources and assets and increasing their access to food. Others include women’s centers that offer a safe and secure place for many women who are disadvantaged or experience isolation, violence or lack coping skills. Stewart et al. (1996) suggests that women’s centers should expand beyond these services to include such services as smoking cessation support.

Supportive community-based prenatal programs which are culturally sensitive and address health, legal, housing, food and other needs or deficits are an asset to any community. Examples include “De Madres a Madres” and “Health for 2”. De Madres a Madres is a prenatal outreach and education intervention program for low-income, Hispanic women in three migrant and seasonal farm worker communities in Arizona, USA. The program includes three major elements: a Spanish language prenatal curriculum, a group of mature Hispanic women recruited from the target communities and trained as “Comienzo Sano” (healthy beginnings) Promotoras (health promoters), and the organization of a support network of local health professionals (Mahon, McFarlane & Golden, 1991). The Health for 2 is a collaborative program involving several agencies and is designed to serve low-income pregnant women in inner city Edmonton, Alberta. Milk coupons, a low literacy manual and caring attitudes encourage poor women to identify themselves early in pregnancy and to maintain contact with community agencies. Improvements have been seen in birth weight and lifestyle behaviours. See Appendix A

for selected detailed descriptions of these and selected other community-based outreach programs. These programs have been successful in improving overall pregnancy outcomes by including strategies to reduce low birth weight, decrease the rate of smoking and increase the initiation and duration rates of breastfeeding (CICH, 1992; Health Canada, 1993b). However, these programs are plagued by unstable and inadequate funding.

Most of these programs are intended to continue beyond the prenatal period to provide long-term follow up of the mother and baby and these have shown to be quite effective. For example, home visiting by community health nurses has been generally evaluated as a successful and cost-effective intervention in providing support and anticipatory guidance to new mothers (Olds & Kitzman, 1990; Poland et al. 1992).

Resource centers, schools and libraries have been creatively used to offer alternate avenues for those who wish to access materials (videos, texts, journals, pamphlets, brochures and the Internet) related to various topics and this should be encouraged as these institutions are underutilized at present.

The physical environment is also important. Smoke free environments are encouraged as smoking and exposure to passive smoke have such a negative impact. Family-friendly policies in the workplace are also promoted. Many parents, especially women, are under stress because of the competing demands of work and home responsibilities. Potential workplace initiatives encompass both policy and supportive environments and include flexible work hours, benefits for part-time employees, extended

parental leave, family responsibility leave and employer-sponsored child care (Health Canada, 1993b, 1998). Obviously, in the workplace a pregnant woman should not be exposed to hazardous substances -- radioactive products, X-rays, toxins, animal waste or excessive stress (CICH, 1993).

2.5.3 Strengthening Community Action

Communities which have a strong support base have the capacity to set priorities and make decisions on issues which affect them. Community development and empowerment theories are built around these themes. Citizen action makes a positive contribution in preserving, maintaining and enhancing our health. In Newfoundland and Labrador some communities have started Community Kitchens and Community Gardens -- these are initiatives whereby people can collectively pool their resources and thereby increase their access to food; they are examples of both community action and supportive environments.

Community action to deal with the problem of LBW, as cited by the CICH (1993), could include:

- campaigns for healthy life style in workplaces, schools, families and communities focusing on nutrition, exercise, rest and stress management, anti-smoking, drugs, sexually transmitted disease prevention and healthy pregnancy
- family life education from preschool to school, premarital and pre-pregnancy sessions covering a variety of topics such as family planning, relationships, sexuality, decision making, self-esteem building and parenting
- social policy reform towards poverty solutions such as re-balancing our resources, job training, income support, community rehabilitation, paid pregnancy and maternity leaves

2.5.4 Developing Personal Skills

Personal health practices and coping skills enable people to have the knowledge and skills to meet life's challenges and to contribute to society. Developing and enhancing peoples' personal skills can have an impact on LBW. Smoking, alcohol and other substance use, stress, poor nutrition, work, lack of exercise and lack of prenatal care are all factors previously discussed as affecting an unborn child's health. In order to effect change, supports such as smoking cessation, care giver support groups, breast feeding support, recreational programs must be put in place to assist with lifestyle modification. For instance, initiatives to prevent smoking initiation and encourage cessation could be offered in schools since smoking often begins at this age and peer support is readily available in this captive audience. Life skills, employment training and education opportunities are required to break the dependency cycle of poverty and abuse in order to build self-esteem and self-sufficiency among vulnerable families. Having the ability to make informed decisions is essential, especially, the ability to plan pregnancy.

Billingham (1989) described a center where health visitors and parents work together. She found that group sessions offer a great source of confidence building since the parent's skills and experiences are recognized and valued and used for the benefit of others. "It is this way of working together with parents that empowers them and makes them better able to meet the needs of their children" (p. 10).

Rabin, Seltzer and Pollack's (1991) study described the long-term benefits of a comprehensive teenage pregnancy program. This program was founded in 1982 to provide adolescents living in Long Island, New York with prenatal and family planning care. The evaluation of this program examined the subsequent maternal and infant health of the patients attending the program compared to a control group. Four hundred ninety-eight adolescents and their newborns attending the program's mother-baby family planning clinic from 1982 to 1989 (subject group) were compared to 91 adolescents and their newborns receiving postpartum family planning at pediatrics clinics from 1980 through 1989 (control group). Seventy-five percent of the subject group regularly attended mother-baby clinics, compared to 18% of the control group attending family planning and pediatric clinics ($p \leq .0001$). The subject group experienced less maternal and infant morbidity, greater school attendance and graduation, more employment, and higher contraceptive use than the control group ($p \leq .0001$). Many parameters improved with each program year indicating continued wide acceptance of the program by area adolescents.

2.5.5 Reorientation of Health Services

Health services are those services that are performed by health care professionals or by others under their direction, for the purpose of promoting, maintaining or restoring health. In addition to personal health care, health services include measures for health protection, health promotion and disease prevention (Last, 1995). Rachlis & Kushner (1994), who have written insightful critiques of Canada's health care system, have stated

that a dose of “strong medicine” is required to cure the “ills” of our present health services structure. They, too, espouse the need for more emphasis on prevention versus treatment. Furthermore, they stress that we must aspire to create a system that acknowledges the needs of the whole person so we can invite a true partnership among the providers and the users of the system. In order to meet the challenge of LBW all of the factors that have an effect on this problem, not only prenatal health care, must be addressed. As Kliegman et al. (1990) assert “some health problems will be responsive as much to social change as to medical intervention” (p. 1073). Structural and organizational changes will be required in the community in order to meet these needs. Government departments such as Health and Community Services, Education, Justice and other community support services must work more collaboratively and in close communication to achieve mutual goals.

Most prevention programs have been judged ineffective in achieving their goals. Therefore, new approaches must be implemented. The community must be actively involved in its own care and in program planning which will lead to “ownership”, responsibility, self-care and sustainability. Present risk assessment techniques require good sensitivity and specificity to identify those women who are likely to deliver LBW infants. Screening protocols are seldom used in practice and therefore have not been evaluated.

Health Canada’s *Prenatal Health Promotion Project Report* (1993a) provided a literature review of innovative and successful health promotion approaches and programs

to deal with the challenge of LBW. Indeed these reflect a reorientation of health services to the overall needs of the community. The following positive characteristics were identified:

- a strong outreach component
- flexibility, sensitivity and culturally appropriate
- a collaborative effort
- support for basic needs
- a community development approach
- a comprehensive approach to a continuum of services
- social support
- inclusion of behavioural and lifestyle issues including tobacco, alcohol and other substance abuse
- a mix of educational strategies and use of an adult education approach
- strong, empathetic leadership
- health promotion and marketing
- respect for pregnant women
- referral and follow up
- a multi-disciplinary approach with an integration of lay people
- incentives to reduce inequities and increase participation

The Government of Newfoundland and Labrador released its *Strategic Social Plan* in 1996 and while this is not a reality at present, there is a “vision” that

A sharing society which balances its economic and social interests cares for those in need, celebrates its quality of life and traditional values of individual respect and community responsibility, and provides the opportunities we all need for a better tomorrow.

Such a program such as the HBC is one strategy which could be used in “building community capacity”.

Summary

As indicated in the literature review, the problem of low birth weight in infancy is complex and therefore the potential solutions are complex as well. Even though there are numerous reports of attempts to isolate the causes of LBW; how factors interact is not well known. To date most measures dealing with the LBW challenge have been medical but as this literature review has highlighted, future efforts should be invested in prevention with a focus on the modifiable risk factors from a population health and health promotion perspective.

CHAPTER 3

A DESCRIPTION OF THE HEALTHY BABY CLUB PRENATAL SUPPORT PROGRAM

Introduction

The Healthy Baby Club (HBC) Prenatal Support Program is funded under the Canada Prenatal Nutrition Program (CPNP). The CPNP is operated in Newfoundland and Labrador through the various Brighter Futures' initiatives and projects of the Community Action Program for Children (CAPC). The following will provide clarification, background knowledge and a better understanding of these varied initiatives before the methodology of this research is presented.

Brighter Futures refers to the Federal Government's response to the 1990 United Nations Convention on the Rights of the Child where the leaders of 71 countries drafted a declaration and a long-term plan of action to focus worldwide efforts on child survival, development and protection. As a result of this initiative a series of steps were implemented such as the Community Action Program for Children and the Canada Prenatal Nutrition Program.

Community Action Program for Children (CAPC) was one of the steps taken by the Federal Government in response to the 1990 United Nations Convention on the Rights of the child. Funding is provided to community coalitions to establish and deliver services. For 1996-97 Newfoundland and Labrador received a budget of \$2,070,000 from

CAPC sources. This initiative commenced in 1992 and is designed to expand current successful programs. The CAPC will develop strategies of prevention, protection, promotion and community action that address the developmental needs of vulnerable children from birth to six years of age and their parents. Examples include programs in parenting, literacy, nutrition education and recreation.

Canada Prenatal Nutrition Program (CPNP) was initiated by the Federal Government in 1994. This program assists communities to develop or enhance programs for vulnerable pregnant women in order to improve birth outcomes. CPNP provides the resources for community-based projects to offer food supplementation, nutrition counselling, support, education, referral and counselling on such lifestyle issues as alcohol use, stress and family violence. This is not a universal program, but is targeted at those pregnant women most likely to have unhealthy babies because of inadequate resources to meet their nutritional and other needs during pregnancy.

The Healthy Baby Club (HBC) Prenatal Support Program began in 1990 at the Daybreak Parent Child Center in St. John's, Newfoundland. This is a community-based outreach prenatal program which targets vulnerable women and their families. In 1994 the model expanded to support pregnant teens in a low-income housing area of St. John's. In 1995 this model became the prototype for all CPNP projects in Newfoundland and Labrador.

The primary goal of the Healthy Baby Club is the prevention and/or reduction of the incidence of low birth weight. By providing pregnant women with the tools to take

better care of themselves and the new lives growing within them, this program aims to reduce the incidence of and the risks associated with LBW. Other objectives include:

- reducing or eliminating the barriers for participation in prenatal care and education
- fostering support systems
- promoting informed decision making
- engaging the community in the sustainability of the program

The HBC Model was conceived in the spring of 1990 by Melba Rabinowitz, Director of Daybreak Parent Child Center in St. John's, Newfoundland and developed in consultation with a community advisory committee including representation from consumers, community health, the university and advocates. It is an adaptation of the Montreal Diet Dispensary (Higgins et al. 1989) and the Elmira, New York "model mother" programs (Julnes et al. 1994). Initially the program was operational only at the Daybreak Parent Child Center in St. John's and was funded by the Kiwanis Club. When CPNP dollars were made available additional Healthy Baby Clubs were established through the existing CAPC projects. Presently there are a total of nine Healthy Baby Clubs around the province. In St. John's the project operates in more than one location – Buckmaster's Circle Community Center, MacMorran Community Center and Bell Island Brighter Futures Family Resource Center (recently developed). Daybreak Parent Child Center has an affiliation agreement with the St. John's site in exchange for ongoing mentoring and support. Further expansion is planned pending increased funding through the National Child Benefit dollars announced to sustain existing initiatives. The National

Child Benefit was initiated in 1996 and will expand and enhance the \$7 billion that governments currently provide in income support for families with children.

For clarification, the following time line and overview is provided:

1990 Brighter Futures

1992 CAPC

1994 CPNP and Provincial HBC

1996 National Child Benefit

The HBC Model is quite adaptable for use in Newfoundland and Labrador considering the province's widely dispersed population, its culture and poor economy because it draws on resources available in most communities.

The province's economic situation, as released by Statistics Canada (1995) and the Newfoundland and Labrador Center for Health Information (1998), were staggering with an unemployment rate of 17%, a poverty rate of 17.2%, and the lowest average household income in Canada. In addition, this province offers limited prenatal nutrition programs and services. These services are currently offered primarily through the institutional sector or by district community health nurses in the community and in

schools. As well, the province's breastfeeding rate is of concern. MacLean (1998) reported that in 1997 Newfoundland and Labrador had the second lowest breastfeeding initiation rate in Canada -- 52.5% in Newfoundland and Labrador versus 73.0% in Canada.

Data released by the Newfoundland Center for Health Information (1998) reveal that one in four women are living in poverty in this province; 20-25% of pregnant women are estimated by the CPNP and the Newfoundland Healthy Baby Clubs to be living in vulnerable circumstances. Characteristics of this vulnerable population include nutritional inadequacies, smoking before and/or during pregnancy, substance use, inadequate health care, reproductive risk based on young or older age. In 1996, the St. John's Region of Health and Community Services had approximately 1,730 births; 450 plus were estimated to be women of vulnerable circumstances. The CPNP funding for 1996 allowed the three St. John's locations to provide support to only 27 pregnant women -- leaving a large gap of disadvantaged women for that year who met the admission criteria but could not be accommodated in the program. St. John's has the largest population and therefore the largest number of eligible women. Some rural sites have been able to enroll almost 100% of the eligible pregnant women in their region but other sites have not, again, due to inadequate program funding. Limited funding has also meant that no active marketing is conducted, even by community health nurses, for the Healthy Baby Club Program.

Target Groups for the Healthy Baby Club

The Healthy Baby Club uses a targeted approach to deliver comprehensive prenatal education and support to vulnerable women, as per the CPNP criteria. These target groups include pregnant women who: (1) live in poverty, (2) are single, (3) are adolescents, (4) use alcohol and other substances, and (5) live in violent situations.

Program Criteria

Only two restrictions are placed on program participants; they are expected to attend at least one group session per month and accept the regular contact of the resource mother.

Features of the Healthy Baby Club

Incorporated in the Healthy Baby Club Model are a variety of resources and strategies such as:

- an experienced resource mother
- peer support
- multi-disciplinary team approach -- community health nurse, nutritionist
- home visits by the resource mother and community health nurse, as necessary
- comprehensive programming which includes support, counselling, education, consultation and referral
- referrals to appropriate sources e.g. doctor, social worker, counsellor, church group
- weekly food supplements of one dozen eggs, seven litres of milk and one dozen oranges
- breastfeeding support

- standardized program tools such as food history, weight and height charts, exit interviews, monitoring of birth outcomes
- provincial and regional advisory committees and a support network which meets regularly via teleconference
- small incentives such as gifts for participants, “celebrations” of special events, games with prizes

Variations of Program Delivery

The Healthy Baby Club uses two variations of program delivery. The CAPC Program provides for program coordinators in HBC sites. These coordinators manage many programs such as those in parenting, literacy and first aid. They also manage the HBC. In most rural sites, the HBC is coordinated by a paid resource mother who fills both coordinator and resource mother roles; however, the St. John’s locations use volunteer resource mothers and a salaried resource mother coordinator. Volunteer resource mothers in this region receive a stipend of \$30 per assigned pregnant woman and \$10 for attendance at each group session plus provision of childcare and transportation. Rural resource mothers are paid staff members. The 11 resource mothers in this study population have worked with a total of 318 pregnant women since they started in their roles.

Prenatal Education and Support

Prenatal education and support in the HBC Program are offered in a variety of ways and draw on many resources. Participants take part in group sessions organized by the resource mother which generally take place once every two weeks; one-to-one

sessions are held with individual pregnant women on alternate weeks and at additional times, if needed or requested.

Transportation and Childcare

An integral component of the HBC is the provision of transportation and childcare to reduce barriers to participation in the program. Transportation becomes a greater problem in more rural parts of the province, as some projects are responsible for large geographic areas with multiple communities.

The “Resource Mother”

The most important or key element in the HBC program is the resource mother. It is essential that all resource mothers have a warm and nurturing personality, parenting experience and knowledge of the local community. Generally, she is a lay person who is trained as a “model” mother or mentor to assist pregnant women and their families with the non-medical dimensions of pregnancy and childcare. Other prerequisites include: being a non-professional, dependable, open to breastfeeding, commitment, motivated to learn, a non-smoker or someone trying to reduce smoking, and essentially a “role model”. Ideally, she develops a friendly and trusting relationship with the pregnant woman, reinforces, counsels, provides support and reinforces the knowledge and skills offered to these women by health professionals involved in their care. These characteristics were described in studies by Heins et al. (1987); Julnes et al. (1994); Lapierre et al. (1995) and Perino (1992) who investigated various models and approaches of providing support to vulnerable pregnant women. Interventions are personalized or “tailor made” to meet the

individual needs of the participants in the HBC. For example, one rural community had several pregnant teenagers attending school so the resource mother arranged Healthy Baby Club sessions – individual and group – at the students’ school to meet their unique needs. More importantly, by mentoring the pregnant mother, the resource mother, provides nurturing experiences which many of these women would not have had in their own families. The primary roles of the resource mother include: (1) care, (2) support, (3) friend, (4) helper, (5) role model, and (6) advocate.

Recruitment and training for the role of resource mother generally includes intensive education of one to three weeks provided by professionals, experienced resource mothers, CAPC coordinators and other resource persons such as a breastfeeding mother, nutritionist, child health coordinator or community health nurse. The resource mother is taught to encourage all pregnant women to keep a daily log of their food intake, activity level, issues and concerns and other relevant information which the resource mother reviews regularly and consults with others, when appropriate. Ideally, training focuses on a mentoring approach to learning and while some formal training is provided learning opportunities are frequent and ongoing. Varied methods are used in this training such as lectures, demonstrations, role playing, audio visual aids, written materials, shadowing and field trips. Ongoing support and education to the resource mother is provided through monthly teleconference sessions, annual networking meetings and other opportunities for professional development such as seminars on “suicide intervention”, the “Nobody’s Perfect” Parenting Program and breastfeeding.

Partnership With Other Health Professionals

The HBC is a holistic, community-based program which draws on multi-disciplinary resources from the community. For example, the community health nurse plays a vital role in the HBC Model. She works closely with the resource mother and the pregnant woman, acting as a resource, consultant, educator and advocate. A major component of the nurse's role is the support she provides to the resource mother around issues relating to a woman's pregnancy, health concerns, childbirth education, breastfeeding and parenting needs. Other health professionals such as the nutritionist, family doctor, lactation consultant, social worker also participate in the program.

The regional nutritionist also performs an important function in this pregnancy support program. The nutritionist provides nutrition expertise in the form of consultation, education and support. The nutritionist reviews and assesses with the resource mother the daily logs kept by the pregnant women and provides suggestions to the resource mothers for follow up on the individual needs of participants. The nutritionist provides support to the resource mothers on these issues. Significant emphasis is put on the promotion of breastfeeding by the nutritionist, community health nurse and the resource mother.

"Labour and delivery room" tours are offered regularly at the local maternity hospital. These are coordinated by the community health nurse, resource mother and hospital personnel. This exposure decreases the pregnant woman's stress or anxiety related to the "unknown" hospital experience and provides an opportunity to observe and

ask questions. Frequently the resource mother and community health nurse will visit the “new” mother in the hospital to bridge the transition from hospital to home and to provide support, particularly breastfeeding support, if required.

Healthy Baby Club sessions provided by the community health nurse and other health professionals are informal and based on the needs to the mother. Lifestyle issues and self-empowerment strategies such as smoking reduction and/or cessation support and enhancing decision making skills are integrated in non-traditional activities such as games, role playing and demonstrations. Adult learning principles are incorporated as the basis of the program, as well as, novel and creative strategies for facilitating learning through interactive games such as “Preggie Pursuit” and other activities in the “Special Delivery Club Box” (Special Delivery Club, North Kingston Community Health Center, 1994) and other resources. These activities use participatory techniques to teach life skills with a focus on the “teachable moment” (Knowles, 1973; Morton, 1991).

Food Supplements

Another major advantage and incentive of the HBC is the provision of food supplements. Each mother who meets the criteria for admission to the program is given (free of charge) seven litres of milk, one dozen oranges and one dozen eggs per week throughout her pregnancy. To encourage the pregnant woman to consume these supplements this food is marked “baby food”. The supplements are distributed in various ways throughout the nine projects. In some sites the food is picked up by the mothers

when they attend the group sessions of the HBC, in others it is delivered to their homes while other sites provide food vouchers. Active demonstrations on ways to use the food supplements are incorporated in the HBC Program through participatory cooking sessions. The group shares recipes and ideas on how to prepare simple, healthy meals with the resource mother and each other. These practical activities also provide opportunities for learning how eating habits affect the growth of the fetus. In the 1993a *Prenatal Health Promotion Project Report*, Rabinowitz emphasized that “nutritional supplementation is an investment because it costs 13 times more to put a pound of weight on a child after it is born than it does during pregnancy” (p. 98).

CHAPTER 4

METHODS

This chapter contains an overview of the methods used in this study under the following headings: design, setting, preparatory meetings, participants, sample size, development of instrument, pretest, ethical considerations, reliability, data collection, personal interviews and data analysis.

4.1 Design

This was a descriptive study that included 59 participants over the study time period. The main objective of the descriptive approach is to increase our knowledge by providing an accurate and comprehensive portrayal of the characteristics of the persons, situations, or groups involved with certain phenomena. Descriptive studies are also useful to assess the impact of the phenomena from the participant's point of view or frame of reference (Brink & Wood, 1998; Munball, 1993). This was the case in this study. The positive features of descriptive study designs have been described by Brink & Wood (1998) and Munball (1993). These include the stimulation of more powerful investigations since they often generate hypotheses and further research. They provide a practical alternative when other study designs are not feasible or ethical. As well, descriptive designs are relatively inexpensive to implement, often can be conducted in a relatively short period of time and generally pose low risk of harm to participants.

This approach ideally suited the purposes of this study: to describe the experiences of the participants and to assess indicators of their satisfaction with the program; to determine perceptions of any long-term benefits of the program and to contribute to the overall evaluation of the program. Structured interviews were the primary means of collecting data. As well, the resource mother provided some relevant demographic data and birth outcome information from client files. Data collection commenced in December 1997 and was completed in June 1998 and involved visits to the nine Healthy Baby Club sites across the province. A total of 59 personal interviews were carried out; 48 (81.4%) with the women who participated in the Healthy Baby Club Prenatal Support Program during pregnancy and 11 (18.6%) with the resource mothers who supported these women during pregnancy.

Polit and Hungler (1983) emphasize that "...the most powerful method of securing survey information is through personal interviews....because of the depth and quantity of the information they yield....adds a perspective that the numbers alone could not provide" (pp. 191-192; 469). As well, the "face to face" personal interview method was chosen in order to retrieve the detailed data necessary to clarify questions, expand on key issues and to increase the likelihood of a good response rate. This approach ensured that the client herself actually answered the questions and it is also useful for respondents who might have trouble reading.

4.2 Setting

The Province of Newfoundland and Labrador is located in the North Atlantic Ocean off Canada's east coast. Its population as of January 1999 was estimated to be 541,400 (Newfoundland and Labrador Center for Health Information, 1999). The province was mainly settled by fishermen who migrated to coastal communities to carry on their livelihood; thus many settlements are isolated or accessibility is difficult. There are many small communities around the province with an average population of 500 to 1,000 people. Approximately twenty percent of the total population of the province lives in the capital city of St. John's. The province's vast and rugged geography and widely distributed population continually poses challenges to offering programs and services. As well, Newfoundland and Labrador faces many barriers such as its high cost of living, high rate of poverty, low literacy rates, high unemployment rate and the lowest average household income in Canada (Newfoundland and Labrador Center for Health Information, 1998; Statistics Canada, 1995).

This study was conducted at the nine Healthy Baby Club (HBC) project sites which include 11 locations situated around the province in both rural and urban settings. Urban included larger communities, in Newfoundland and Labrador terms, such as St. John's, Corner Brook, Botwood/Grand Falls, Marystown, Carbonear which expanded into surrounding rural areas such as Wing's Point, Belleoram, Meadows and Piccadilly. The sites, by Health and Community Services Regions (refer Figure 4.1), include:

St. John's Region:*

1. St. John's (one site with three different locations):

- MacMorran Community Center
- Buckmaster's Circle Community Center
- Bell Island (recently developed)

*an affiliation exists with the Daybreak Parent and Child Center

Eastern Region:

2. Carbonear
3. Marystown

Central Region:

4. Wing's Point, Gander Bay
5. Botwood/ Grand Falls
6. Belleoram

Western Region:

7. Corner Brook
8. Meadows, Bay of Islands
9. Piccadilly, Port au Port

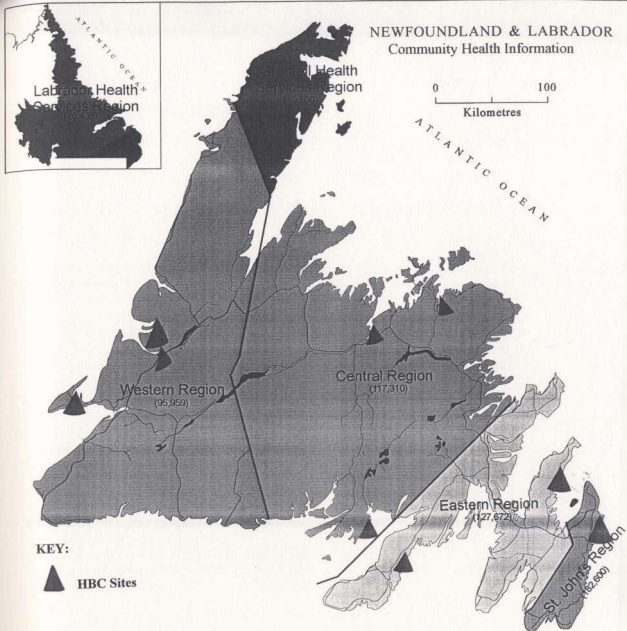


FIGURE 4.1

MAP OF NEWFOUNDLAND AND LABRADOR

Note. Health and Community Services Regional Subdivisions and Healthy Baby Club sites which include St. John's, Carbonear, Marystown, Botwood/Grand Falls, Wing's Point, Belleoram, Corner Brook, Meadows and Piccadilly, 1998.

4.3 Preparatory Meetings

A preliminary study was conducted by the investigator in February 1997 involving coordinators and resource mothers of the HBC Prenatal Support Program to determine the proposed project's acceptability, value and feasibility. The investigator arranged to speak to the group while they were gathered for an annual networking meeting to inform them of the research and to seek their interest, suggestions and participation. A sample from this group provided a preliminary pretest of the two structured interview questionnaires. None of these women took part in the final study.

Based on the results of the preliminary pretest as well as discussions with the key informants – Provincial Prenatal Nutrition Advisory Committee and community center coordinators -- and a meeting with the supervisor, the researcher decided at this point that it would be more informative to include along with the resource mothers the women participants of the HBC program *rather* than coordinators as the focus of the study. These two groups -- the women participants and the resource mothers -- are essentially the core of the Healthy Baby Club Prenatal Support Program while the coordinators may have little direct HBC contact. The relationship is essentially between the resource mother and the women participants. Thus, the research protocol and instruments were revised to include these two target groups.

A pretest with a small sample of the target groups (three resource mothers and five women participants) was carried out during November 1997. All Chairpersons of the CAPC projects were informed of the research. As well, teleconference sessions were

offered to coordinators, resource mothers and community health nurses involved with the HBC Program to explain the project and to get their preliminary approval. This was followed by written correspondence (see Appendices G and H).

4.4 Participants: Inclusion/exclusion criteria

The study population included all women who participated in the HBC from December 1997 to June 1998 as well as resource mothers. Women participants will refer to all women who agreed to participate in the study. Thus, there were two groups of respondents:

Group 1:

- 48 women participants

(a minimum of 5 per site were desired; $5 \times 9 = 45$)

Group 2:

- 11 resource mothers (a minimum of one per site was desired; $1 \times 9 = 9$)

Final inclusion criteria stipulated:

- Women participants of the HBC who were two to nine months postpartum at the time of interview
- Women with a minimum of six months experience in their roles as resource mothers at the time of interview

Initially, only women participants of the HBC who were four to six months postpartum at the time of interview were to be included. However, due to lower numbers in the program than initially estimated, these inclusion criteria for the women participants

proved to be too stringent and, after discussion with the Supervisory Committee, those who were two to nine months postpartum were included.

The estimated number of potential women participants for this study consisted of all eligible women participants of the HBC Program from December 1997 to June 1998 from projections of the resource mothers. This pool was estimated to include 102 women participants and 12 resource mothers (Appendix B). The actual numbers of participants fell short of projections. Fifty-nine women participants and all 12 resource mothers met the inclusion criteria for the study. Ineligible women participants included those who were less than two months or beyond nine months postpartum. One resource mother was not available (visiting relatives out of province) at the time of the interview. Table 4.1 portrays the number of women participants who were members of the HBC Program and their months postpartum at the time of the interview. Table 4.2 outlines the length of experience of each resource mother in the HBC Program as of the date of the interview. Sites have been coded to protect their identity.

TABLE 4.1

MONTHS POSTPARTUM OF WOMEN PARTICIPANTS OF THE HBC N=48									
	# MONTHS POSTPARTUM								
<i>Sites by Code</i>	2	3	4	5	6	7	8	9	Total
A			1	3	1				5
B			2	1		3			6
C			1		3	1			5
D	1	2	1	1					5
E		2	1	2	1				6
F		1	1	1		3			6
G				1	1	1		2	5
H				3	2				5
I	1	1	1		1	1			5
TOTAL	2	6	8	12	9	9	0	2	48

TABLE 4.2

LENGTH OF EXPERIENCE OF RESOURCE MOTHERS OF THE HBC N = 11					
	# MONTHS OF EXPERIENCE AS A RESOURCE MOTHER				
<i>Sites By Code</i>	6 Months	12 Months	18 Months	24 Months	Total
A			1	2	3
B				1	1
C				1	1
D				1	1
E				1	1
F	1				1
G				1	1
H				1	1
I		1			1
TOTAL	1	1	1	8	11

4.5 Sample Size

The study population included 59 women participants and 12 resource mothers.

4.6 Development of Instrument

Two structured interview questionnaires were developed by the investigator:

- Survey of Women Participants in the Healthy Baby Club (Appendix I)
- Survey of Resource Mothers in the Healthy Baby Club (Appendix J)

These underwent several revisions during the preliminary project (November 1997) and the pretest (January 1998) just prior to the formal study. Although a literature search was conducted to locate a pre-tested and validated instrument, nothing completely appropriate to this study's purpose was found. Thus, the researcher developed these tools based upon knowledge gleaned from the literature, the HBC program materials, consultations with content experts in relevant fields of parent and child health care, nutrition, research, statistics and the researcher's personal work experience as a community health nurse. As well, some questions were borrowed, with permission, from Health Canada's (1997b) *Canada Prenatal Nutrition Program (CPNP) 1997 Evaluation Study* -- these specific questions are designated with an asterisk (*) in the questionnaire schedule (see Appendices I and J).

The instruments captured both qualitative and quantitative data. Both tools gathered demographic data including participant's age, education level, income level and source, marital status and number of dependents. Questions included both closed and

open-ended format. The closed-ended questions retrieved primarily demographic information, past community experiences and program activities. The open-ended style elicited qualitative data and permitted the respondents' freedom to express their own perceptions including thoughts, beliefs, observations and experiences. Probes, including scripted silence, were used when appropriate to encourage the participants to verbalize their ideas completely.

The format of the questionnaires was designed by the investigator to be quickly, easily and accurately completed. This was enhanced through the use of tick boxes for replies to questions with multiple options.

Questionnaire to Survey Women Participants of the Healthy Baby Club

This tool consisted of 41 questions which took approximately 35 to 45 minutes to complete. Information was elicited regarding how women participants became aware of the HBC, at what gestational stage they entered the program, what type of information and experiences they were exposed to in the HBC and in what ways they participated. They were asked how they felt about their experiences and whether they were satisfied with the program and its components. All respondents were also requested to provide their opinions on weaknesses, strengths and recommendations regarding their experiences in the HBC Program.

Questionnaire to Survey Resource Mothers of the Healthy Baby Club

This questionnaire consisted of 37 questions; the average length of the interview was 30 to 40 minutes. Some questions attempted to assess the respondent's previous experience with community programs, specifically pregnancy support, and acting as a volunteer. Questions were designed to collect information about the resource mothers' perceptions of their roles and responsibilities working as volunteers or paid employees in urban and rural parts of the province. During the interview the resource mothers were asked about their work with other professionals and the general community. The final set of questions related to challenges, frustrations and their recommendations for improvement of the HBC Program.

4.6.1 Pretest

The pretest served as a small case test of the study's methods and procedures to demonstrate their feasibility and to identify any problems with content, wording or the interview format. This was the initial step of the formal study which began with the pre-testing of the two questionnaires at a center offering the HBC Prenatal Program. Refer to Appendix C for a detailed time line for this study. This center was not included in the final study since they were used as the pretest site. A group of five women who had participated in the HBC Program during their pregnancies and three resource mothers agreed to participate and the questionnaires were administered and comments on the questionnaire were solicited. Upon completion of the pretest, some refinements of the

interview schedules were made. For example, for questions that required a selection of choices or a ranking of responses, “flash” cards were developed by the investigator to facilitate active participation and decision making by the respondents. Participants were provided with these “flash” cards and requested to select or rank their responses. Additionally, some changes in wording were incorporated to make the tools more readable.

4.6.2 Ethical Considerations

Ethical considerations in research include ensuring informed consent, voluntary participation and protecting the privacy of the participants while recognizing and minimizing any possible negative effects on the participants created by the research methods. Each participant, prior to being interviewed, was requested to sign an “informed consent” (Appendix D). Three separate signatures were required on this consent form for permission to: (1) interview, (2) audio tape, and (3) access information in the HBC file.

The study requested and received approval for implementation from three groups. The proposal for this study was submitted to and approved by the Human Investigation Committee, Faculty of Medicine, Memorial University of Newfoundland, St. John's, Newfoundland (Appendix D and E). Permission to conduct the research was also received from the Provincial Prenatal Nutrition Advisory Committee of the Canada Prenatal Nutrition Program (CPNP) – Appendix F; the researcher spoke to all members

of this committee via teleconference to inform them of the research and its goals. Each of the projects of the Canada Action Program for Children (CAPC) is administered by a board. The researcher wrote each CAPC Project Chairperson to explain the study and obtained their support and cooperation (Appendix G).

An additional teleconference presentation was provided to coordinators, resource mothers and community health nurses involved with the HBC projects across the Province of Newfoundland and Labrador to explain the study, its objectives and the process to be followed. As well, each presentation was followed up with mailed form letters (Appendix H).

The purpose of the study was explained to each participant during the first telephone contact and again at the individual meeting time. As well, the participants were informed they could refuse to answer any questions or withdraw from the study at any time. The initial contact was made by the CAPC coordinator and by the resource mother. Subsequent contact was made by the investigator to explain the study, seek their permission to participate and to make arrangements for their personal interviews. All participants were made aware that their participation in the research was strictly voluntary.

Privacy and confidentiality of the subjects were assured by using codes. Each participant was assigned an individual code and a corresponding site code. These codes, rather than other identifiers, were used on the paper research forms. The names and

corresponding codes were known and accessible only to the researcher. The completed questionnaires, tapes and transcripts were held in a locked filing cabinet in the investigator's home.

There were no known risks to the participants. The greatest inconvenience to the respondents was the time required for the interview which ranged from 35 to 45 minutes.

Every participant was provided with a personalized thank you card or letter by the investigator (Appendix L provides an example of a letter to a resource mother). As well, a report and a summary of the study will be made available to the participants and agencies involved.

4.6.3 Reliability

To establish content validity of the instruments, a comprehensive literature search was conducted in the relevant areas of prenatal health, health promotion and prevention, prenatal nutrition, peer counselling, and community development to ensure question content was appropriate. The researcher attempted to increase reliability of the tools by first conducting a preliminary project with a small sample and then a pretest with a sample of women from the target groups. This provided an opportunity to test the methods and evaluate the instruments for readability, timing, comprehension, content and format. Upon completion, recommended revisions were incorporated. The interview tools were also examined by experts in the field of research and statistics. With

permission from the CPNP and the Provincial Prenatal Nutrition Advisory Committee, some of the questions from the 1997 *Canada Prenatal Nutrition Evaluation Study* were included to observe for consistency and reliability of results.

4.7 Data Collection

Data collection took place over a period of seven months -- December 1997 to June 1998 -- and involved visits to the nine Healthy Baby Club projects across the Province of Newfoundland and Labrador. Several steps were used in data collection as outlined in the following discussion. The researcher was the primary collector of data. Women participants of the program were observed in activities during site visits and these observations were supported by information obtained through the personal interviews. Personal interviews were carried out with the women participants of the HBC Program (n=48) and resource mothers (n=11) who supported these women. Fifty-two interviews were completed "face to face" using a structured questionnaire. Each interview lasted approximately 45 minutes. Probes, especially silence, were used by the researcher when appropriate to encourage the participants to verbalize their complete ideas. With the client's permission, the interview was audio taped mainly for the purpose of comprehensiveness and accuracy. Four of those interviewed refused audio taping. However, these women participants were not excluded from the study as the researcher relied on the written statements. Respondents who did not want to be audio taped stated they were too embarrassed or they would be uncomfortable while being interviewed. In

one particular case, the investigator decided not to audio tape as there were children running around; thus the setting was too noisy. Seven interviews were conducted by telephone since, at the last minute, the individuals did not make the appointment time. Also, 11 women participants who initially consented to participate did not carry through. Of these 11, six were unable to keep the appointment after the researcher had arrived and five were not at home when the researcher visited and phoned and appointments could not be rescheduled.

4.7.1 Personal Interviews

The investigator contacted the CAPC coordinator in the rural sites and the resource mother coordinator in the urban site, as first contact, to seek approval for the resource mothers to participate in the study. The investigator then contacted the resource mother at each of the nine sites by telephone and requested their preliminary verbal consent to participate. Next, the resource mothers were requested by the researcher to obtain initial verbal consent from the women who had participated in the HBC -- and were now between two and nine months postpartum -- for permission to release their names to the investigator. The researcher then made telephone contact with each woman participant who had given verbal consent and appointments were set for "face to face" taped interviews.

This process of first contact was adopted as the coordinators for the resource mothers and the resource mothers for the women participants had a rapport with these

women and could bridge the contact by the researcher. Ethical approval was dependent on first contact being made by someone known to the participant and someone other than the researcher.

A good response rate was sought by making an initial telephone contact with the participant to set up a convenient appointment time. Then all appointments were re-confirmed by the researcher one to two days prior to the meeting and again on the researcher's arrival at the HBC location. The investigator traveled across the province to each of the nine sites to conduct the personal interviews.

Each participant was offered their choice about the most convenient time and place -- home, community/resource center, work or other -- to conduct their individual interview. All but one of the 11 resource mothers stated the most convenient place for their interview was their place of work, the community/resource center. One resource mother preferred to be interviewed in her own home as she had a new baby. With regards to the women participant's group, 30 of the 48 (62.5%) were interviewed in their private home; while the remainder were interviewed at the local community center, the school or by telephone.

A total of 59 interviews were conducted. Forty-eight were personal interviews and seven were by telephone. Telephone interviews were the exception. They were done in seven instances for various reasons. For example, in two cases the woman participant's child was ill; the remaining five women could not make it to the location at the appointment time for a variety of reasons but they were agreeable to a telephone

interview. Considering the study population, this was not unexpected to the researcher. The telephone interviews were considered to provide equally detailed data in comparison with the personal interview information.

Table 4.3 outlines the type and number of interviews with women participants and resource mothers. In addition, Table 4.4 provides a breakdown of where the interviews took place.

TABLE 4.3

TYPE AND NUMBER OF INTERVIEWS WITH WOMEN PARTICIPANTS AND RESOURCE MOTHERS OF THE HBC N=59	
<i>TYPE</i>	<i>NUMBER</i>
Face to Face	52
Telephone	7
TOTAL	59

TABLE 4.4

SITE OF PERSONAL INTERVIEWS WITH HBC PARTICIPANTS N=59				
PLACE	<i>Women Participants</i>		<i>Resource Mothers</i>	
	Frequency	Percent	Frequency	Percent
Private Home	30	62.5	1	9.1
Community/Resource Center	9	18.8	10	90.9
School	2	4.2	0	0
Telephone	7	14.6	0	0
TOTAL	48	100.1	11	100.0
*Total is greater than 100% due to rounding.				

4.8 Data Analysis

The 59 personal interviews yielded a large amount of detailed information. Data collected were initially in the form of hand written notes taken by the investigator as the structured interview took place. In addition, the interviews were audio taped to permit later review for accuracy of content by the researcher. Forty-eight (81.4%) of the respondents gave permission for the interviews to be audio taped. The quantitative data provided demographic information, information related to community experience and program activities. The qualitative information provided more detailed descriptions about the participants' life events and experiences.

All interviews were then transcribed into typed format using Microsoft Access, 1997 Software Program and quantitative data were subsequently entered into a database using the EPI INFO, Version 6.04 A, 1996 Software Program and analyzed for frequencies and proportions. Transcripts and notes from all open-ended questions were carefully reviewed for similarities, differences and recurrent themes.

The analysis of open-ended questions captured "rich" and insightful qualitative material regarding the experiences of women participants and resource mothers. Comments such as *"I never thought about breastfeeding before [entry into the HBC] with my previous babies...it's so nice to have someone to talk to... you don't feel so alone"* reflect their thoughts. The qualitative data retrieved from the open-ended questions were clustered into categories and themes. The extracted themes were then carefully reviewed for consistency and credibility (Brink & Wood, 1998; Munball, 1993). Some direct quotes of the respondents were retained; these appear in italics. These quotes allow the participants' own words to reflect the reality of their experiences (Rew, Bechtel & Sapp, 1993). Shearer (1983) also points out the ratings of participant's satisfaction with care is more likely to be understood when researchers give verbatim accounts than when they

superimpose a scale (for example 0 to 10) on satisfaction, and subject the numbers to statistical analysis.

CHAPTER 5

RESULTS

Following are the findings of this descriptive study. Since there were two groups of respondents, the results for each group will be presented separately: first, the women participant's group (n=48) this included the members of the Healthy Baby Club Prenatal Support Program during pregnancy and second, the resource mothers who supported these women (n=11). Also, there were 11 women and one resource mother who initially agreed but did not participate in the study.

The results will be presented under two main headings:

- characteristics of the women participants
- themes emerging from the experiences of the women participants

5.1 Group 1 -- Characteristics of the Women Who Participated in the HBC Prenatal Support Program (n=48)

Selected demographic data related to the women who participated in the HBC Prenatal Support Program during pregnancy are outlined in Table 5.1. As well, Figures 5.1 and 5.2 provides grids, mapping the characteristics of the women participants of the HBC. The 48 women ranged in age from 17 to 32 years. Five (10.4%) were 15 to 19 years of age and ten (20.8%) were 21 and 22 years of age. The largest number, 19 (39.6%), were in the 20 to 24 age grouping. Seventeen (35.4%) were 25 to 29 years of age and seven (14.6%) were 30 to 34 years of age. Sixteen (33.3 %) were single/never

married the rest were married or living in common-law relationships. Although the Healthy Baby Club targets single women the program will accept women with low-income partners. Twenty-two (45.8%) of the respondents had one child; 14 (29.2%) had two children; seven (14.6%) had three children while five (10.4%) had four children. The number of dependents included the expected baby during the HBC experience. The demographics for individual project sites were similar to the overall pattern for all sites.

Education levels of the women participants ranged from completion of some elementary (Grade VIII), to completion of Grade XII to attainment of some post secondary school. Specifically, three (6.3%) had completed up to Grade VIII; 24 (50.0%) graduated with Grade XII. Four (8.3%) had completed some post secondary education which included beauty culture, office administration and some individual university courses.

Unexpectedly, all of the women participants were quite willing to discuss their source of income. Almost three-quarters of the women participants relied on social assistance as their only source of income. This reflected the program eligibility criteria. Due to different distributions of HBC Program funding under CPNP, some rural projects have the ability to accept women of low-income or under special considerations those who are not on social assistance. Eight (16.7%) women participants were employed but in low-income jobs – waitress, childcare provider, personal care attendant. Others (12.5%) received income through maternity leave benefits, employment insurance

sources such as TAGS -- an income support program for fisher persons who are unable to work due to the cod moratorium. The average household income (after taxes) for nearly half of the women participants ranged from \$600 to \$1,000 per month. Certainly, for the majority of the study group, income was below the poverty line. Six women participants all married or in a common-law relationship did not know their household income.

Information regarding the reproductive history of the women participants was also elicited. For 22 (45.8%) this was their first pregnancy (Table 5.2). Twelve women participants (25.0%) had experienced complications with previous pregnancies -- prior to the HBC pregnancy. These complications included miscarriages primarily and two babies diagnosed with a birth defect -- spina bifida. The most common medical conditions encountered by the women participants during this pregnancy included: gestational diabetes, hypertension and anemia.

The mean birth weight of the infants born was 3,544 grams; birth weights ranged from 2,693 grams to 4,805.5 grams; (SD 524 grams); all 48 babies were of healthy birth weight. Gestational age at delivery ranged from 31 weeks to 42 weeks with a mean of 39.8 weeks.

Table 5.1

CHARACTERISTICS OF WOMEN PARTICIPANTS OF THE HBC N=48		
Characteristic	Frequency	Percent
Age Groups:		
15-19	5	10.4
20-24	19	39.6
25-29	17	35.4
30-34	7	14.6
Education:		
Completed Grade VIII	3	6.3
Completed Grade XII	24	50.0
Completed Some Post Secondary	4	8.3
Marital Status:		
Married	15	31.3
Common-law	16	33.3
Single/Never Married	16	33.3
Divorced	1	2.1
Income Source:		
Employment	8	16.7
Social Assistance	34	70.8
Other	6	12.5
Average Monthly Household Income:		
No income – students	2	4.2
Under \$600	9	18.8
\$600 - \$1,000	20	41.7
\$1,001 - \$1,300	6	12.5
\$1,301 - \$1,600	3	6.3
\$1,601 - \$1,900	0	0
Over \$1,900	2	4.2
Don't know	6	12.5
Dependents:		
One	22	45.8
Two	14	29.2
Three	7	14.6
Four	5	10.4

Characteristics of Women Participants of the Healthy Baby Club-Part A																										
#	Age (range) years				Education			Marital Status				Income Source			Average Monthly Household Income					# Pregnancies						
	15-19	20-24	25-29	30-34	< Grade XII	Grade XII	Some Post Sec.	M	CL	S	D	Emp	Spousal Aid	Other	No Income	Under 600	\$600 - 1,000	\$1,001 - 1,500	\$1,501 - 1,900	Over 1,900	Don't Know	1	2	3	4	
1																										
2																										
3																										
4																										
5																										
6																										
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45																										
46																										

KEY:

Marital Status: M = Married CL = Common Law S = Single D = Divorced

FIGURE 5.1

CHARACTERISTICS OF WOMEN PARTICIPANTS OF THE HBC - PART A

#	Characteristics of Women Participants of the Healthy Baby Club – Part B							
	Birth Outcomes		Breastfeeding Status		Smoker on Entry to HBC	Smoking Status		Quit Smoking during Pregnancy
Gestational age <37 weeks	Gestational age ≥ 37 weeks	Birth weight ≥2500 grams	Initiated Breastfeeding	Breastfeeding ≥2 months		Decreased Smoking during Pregnancy		
1		X	X	X	X	X		
2		X	X	X		X	X	
3		X	X	X		X	X	
4		X	X	X		X	X	
5		X	X	X		X	X	
6		X	X	X		X	X	
7		X	X	X		X	X	
8		X	X	X		X	X	
9		X	X	X		X	X	
10		X	X	X		X	X	
11		X	X	X	X	X	X	
12		X	X	X	X	X	X	
13		X	X	X	X	X	X	
14		X	X	X	X	X	X	
15		X	X	X	X	X	X	
16		X	X	X	X	X	X	
17		X	X	X	X	X	X	
18		X	X	X	X	X	X	
19		X	X	X	X	X	X	
20		X	X	X	X	X	X	
21		X	X	X	X	X	X	
22		X	X	X	X	X	X	
23		X	X	X	X	X	X	
24		X	X	X	X	X	X	
25		X	X	X	X	X	X	
26		X	X	X	X	X	X	
27		X	X	X	X	X	X	
28		X	X	X	X	X	X	
29		X	X	X	X	X	X	
30		X	X	X	X	X	X	
31		X	X	X	X	X	X	
32		X	X	X	X	X	X	
33		X	X	X	X	X	X	
34		X	X	X	X	X	X	
35		X	X	X	X	X	X	
36		X	X	X	X	X	X	
37		X	X	X	X	X	X	
38		X	X	X	X	X	X	
39		X	X	X	X	X	X	
40		X	X	X	X	X	X	
41		X	X	X	X	X	X	
42		X	X	X	X	X	X	
43		X	X	X	X	X	X	
44		X	X	X	X	X	X	
45		X	X	X	X	X	X	
46		X	X	X	X	X	X	
47		X	X	X	X	X	X	
48		X	X	X	X	X	X	
Total	1	47	48	31	17	26	21	8
Gestational diabetic delivered at 31 weeks; healthy birth weight								

† Gestational diabetic delivered at 31 weeks; healthy birth weight

FIGURE 5.2

CHARACTERISTICS OF WOMEN PARTICIPANTS OF THE HEALTHY BABY CLUB - PART B

TABLE 5.2

STATUS AND REPRODUCTIVE HISTORY OF WOMEN PARTICIPANTS OF THE HBC N=48		
NUMBER OF PREGNANCIES – Includes the HBC pregnancy	FREQUENCY	PERCENT
First	22	45.8
Second	14	29.2
Third	7	14.6
Fourth	5	10.4
BIRTH COMPLICATIONS IN PREVIOUS PREGNANCIES		
Still Born	0	0
<2500 grams	0	0
Premature	4	8.3
Miscarriage	6	12.5
Defects (spina bifida)	2	4.2

5.2 Themes -- Women Who Participated in the HBC Prenatal Support Program

The results of the personal interviews with the women participants are best summarized by examining the broad categories or “common threads” that emerged from the data as they related to the objectives. Respondents’ comments are provided in *italics*.

For the group of women participants of the HBC these themes have been condensed and categorized in the following areas:

- Women Participants -- Experiences With the HBC
- Women Participants -- Indicators of Their Satisfaction With the HBC
- Women Participants -- Spin Offs and Benefits of the HBC

5.2.1 Women Participants – Experiences With the HBC

Awareness of the HBC Program

Women participants of the HBC became aware of the HBC program through various sources. These are summarized in Table 5.3. Most, twenty-three (47.9%), heard of the program by “word of mouth” through another HBC participant as the primary source. The majority of others also heard about the program from informal sources, for example, family (22.9%) or friends (20.8%).

TABLE 5.3

SOURCE OF AWARENESS OF THE HBC		
N=48		
SOURCE	FREQUENCY	PERCENT
Another HBC participant	23	47.9
Family member	11	22.9
Friend	10	20.8
Doctor/flyer at Dr.'s office	6	12.5
Community health nurse	5	10.4
Other (community center, hospital, school)	7	14.6
*Totals are greater than 100% due to more than one response from some respondents.		

When Did Women Participants Join the HBC and With Whom Did They Have Contact?

Twenty-six women of the study group had prior pregnancies. Three of these (6.3%) women participants were members of the HBC with a prior pregnancy. This was the first pregnancy for 22 (45.8%) of the women participants. Nearly two-thirds of the women participants (64.6%) were in their first trimester of pregnancy (two to three months gestation) when they joined the HBC Program. At least one-third of the women participants did not start in the HBC Program until after the first three months of their pregnancy. The join time for the study group ranged from the first to the eighth month of their pregnancies.

Interactions at the HBC always involved the resource mother, almost always the community health nurse, sometimes the CAPC and/or resource mother coordinators and sometimes the nutritionist. Guests sometimes attended sessions of the HBC; named specifically were the lactation consultant, family doctor, hospital staff, or a breastfeeding mother.

Percentage Participating

The average number of group sessions attended per individual was 16.6, while one-to-one sessions averaged 12.0. However, there was quite a wide range of number of sessions per individual, both group and individual, from a low of two to a high of 40. Attendance rates naturally were higher for those women participants who joined the program early. Attendance of women participants in major sites compared to rural areas did not differ. Health Canada's 1997 *CPNP Report* which presented evaluation results from across Canada documented that the average number of prenatal contacts across the country was six to eight per client. The attendance in the Newfoundland and Labrador Healthy Baby Clubs was obviously much higher.

Other Resources Provided

Transportation and childcare were provided routinely. On occasion, a couple of women participants could not attend group activities due to illness; individual home visits and telephone calls were provided for these women by the resource mother, community health nurse and the nutritionist. One woman lived in an isolated community accessible only by ferry; when feasible the whole group – women participants and the resource mother – visited her to do some group work and provide support.

Thirty-one women participants (64.6%) took part in the hospital maternity unit tour offered. This is usually conducted at the local hospital by hospital staff, the resource mother or the community health nurse who “walk” the women participants through the hospital areas that they would be exposed to during the labour and delivery process. Most found this very enlightening in bridging the transition from home to hospital when their time for delivery of the baby arrived. As one participant commented “*I learned what to expect [in the hospital] and I wasn't so afraid.*”

Grocery tours provide creative opportunities to learn about nutritious food, food labeling, food choices, food preparation and budgeting. Women participants enjoyed this experience and felt it provided a great learning environment. However, grocery tours were taken by only 12.5% of this study population. Many small communities within the six Health and Community Services Regions of the province lack a large shopping center which would provide an increased selection of food choices. Many HBC projects do not have a nutritionist who is easily accessible since there is only one nutritionist in each of the six regions. These tours provide creative opportunities to learn about nutritious food, food labeling, food choices, food preparation and budgeting.

Three women participants, along with the resource mother, visited one of the other HBC sites. They described this trip as beneficial to observe and experience what others were doing in another community.

What is the Essential Component in the HBC?

During the interview, women participants were given a prepared list (see Appendix J, question #13) on an index card and they were requested to choose from this list what they considered to be the *one* essential component of the HBC. Table 5.4 outlines the information received. Respondents articulated this was a difficult choice to make and, in fact, one woman participant stated she couldn't and chose two -- the resource mother and food supplements. Emphatically, the resource mother came out "the leader" or as first choice of 17 (35.4%) respondents. The reason reported for their choice was the support and nurturing provided by the resource mother. Food supplements emerged as the second essential with 12 (25.0%) of respondents choosing this response.

TABLE 5.4

ESSENTIAL COMPONENTS OF THE HBC		
N=48		
COMPONENT	FREQUENCY	PERCENT
Resource mother	17	35.4
Food supplements	12	25.0
Childcare	8	16.7
Group with community health nurse	7	14.6
Group with the nutritionist	3	6.3
Other (information/resources, group sessions, home visits)	4	8.3
*Total is greater than 100% since one of the respondents provided two responses.		

Referrals Initiated by the HBC

Thirty-three referrals were made by the resource mother and all were carried through by the women participants. These included referrals to parenting programs (19 or 39.6%); breastfeeding support groups (eight or 16.7%); clothing/equipment banks (two or 4.2%) and other services (four or 8.3%) such as child care, transportation and breastfeeding supplies (brassiere, breast pump). Similar frequencies and types of referrals were seen in Health Canada's *CPNP Evaluation Report* (1997). Women participants were also asked about their ability to initiate a referral themselves, particularly since their involvement with the HBC. All but one person said they would be able to initiate a referral if they required a service or support.

Incorporation of the Food Supplements in the Diet

One dozen eggs, seven litres of milk and one dozen oranges are provided weekly, free of charge, to all women participants. As part of the HBC the women participants and the resource mother frequently shared and developed recipes and menus which incorporated the food supplements and other nutritious ingredients. In fact, these recipes were collected and collated in a book and provided to members throughout the province. During one home visit, an interviewee showed the investigator her recipe book that she uses and enjoys in preparing meals for her family. The women participants stated they had not been taught to cook before and they found this initiative interesting and worthwhile. Thirty-four (70.8%) of women participants reported trying some of the new recipes of the HBC and most provided examples of recipes which they have continued to use themselves and with their families. Some favourite examples included: mini pizzas, macaroni and cheese, meat and vegetable casserole, fruit punch, stir fry, quiche, varied salads, French toast, etc. The examples covered all essential food groups.

5.2.2 Women Participants – Indicators of Their Satisfaction With the HBC

Observations were made and several questions were posed by the researcher to assess indicators of the women participant's satisfaction with the HBC. The actual experience and the expectations of participants are factors of satisfaction (Hsieh & Kagle, 1991). There were no questions asked in the survey to directly measure satisfaction. However, one expects that in answering questions, participants' expectations consciously or unconsciously weighed in their responses.

For instance, respondents were asked what activities they *liked best*. Overwhelmingly, (99%) the group stated the activities/sessions which included cooking, games, outings, discussions, presentations, etc.

- *I really enjoyed it and looked forward to it -- getting together with a group of friends every week*
- *I can't believe how much I miss it*
- *I enjoyed just talking together about our pregnancies and experiences*
- *We learned and enjoyed the second time moms, too*
- *Knowing there are others there who are going through the same things I am and feel the same way as I do helps; I don't feel so alone*

Further, women participants were requested to rank by level of interest -- from the most to the least -- the information and participatory activities provided in the program. The findings are shown in Table 5.5. Also, there were many other positive comments:

- *I liked it all; it's difficult to pick [rank] these*
- *Even though I was pregnant before I didn't understand labour and delivery; I was so uptight -- but this time I understood they explained it all, we watched videos and we discussed things; the nurse and resource mother answered all our questions*
- *I was nervous about taking care of the baby since I never had much experience with young babies before but we did things like bathing the doll and one of the other mothers brought in her baby and we held him, asked questions and discussed concerns*
- *We had a great time cooking -- it was so informal; we all got to know each other better and then we sat down and ate*

TABLE 5.5

TOPICS OF MOST INTEREST TO WOMEN PARTICIPANTS OF THE HBC		
N=48		
TOPICS	FREQUENCY	PERCENT
Labour & delivery information	19	39.6
Baby care	11	22.9
Cooking sessions	8	16.7
Other:	10	20.8
Relaxation sessions		
Exercise		
Hospital tour		
Smoking information		
Drug and alcohol information		
Money management		
*Total is greater than 100% due to more than one response from some respondents.		

When women participants were asked if they were comfortable with the contacts, sessions and activities, 47 or 97.9% said yes; one person who was very shy chose not to respond. Further information was elicited as to what things should be included to ensure pregnant women feel comfortable. The following list highlights the suggestions of various women participants:

- A warm welcome – *The first one-to-one meeting with the resource mother was nice and made it more personal; the warm up exercises were good, too, before we jumped into the session*
- Environment – *Comfortable furniture; easy to get [access] resources such as written materials, audio visual aids, and our own cooking facilities and supplies are*

important; it is important that the program is offered in the local community since it is easy to get to; people know each other; we learned more about the resources – things and people – which were available to meet our needs

- *Informal and non-threatening atmosphere – Nice and friendly; I was very shy at first but after awhile I got used to the people and could talk openly; I felt comfortable because everyone shared their ideas, thoughts and experiences; I didn't expect everyone to be so open; it was like we were all sisters who couldn't wait for the babies to be born; often we just sat around the table and talked*
- *The resource mother – She makes it comfortable; she was very outgoing; nice to be around; friendly; always there for you; kind; knowledgeable; she made it fun; no one was ever left out I always felt included and that I had something to offer as well; we felt at ease discussing everything from cooking to money matters, to how to talk to the doctor and finding and seeking out community resources*

Comfort With Facilitators

The respondents were asked to rank by numbers with 1= most comfortable and 4 = least comfortable, the facilitators of the HBC -- resource mother, nutritionist, community health nurse, or other -- with whom they were most comfortable. Forty-one (85.4%) ranked the resource mother as number one while the remainder ranked the community health nurse as number one. Half of the group felt both were really equal and found it difficult to place one above the other. Women participants did not provide a ranking for the nutritionist as they felt their contact was too infrequent to classify. Women participants qualified their selections of the nurse and resource mother with these comments:

- *They were both very helpful*
- *I had more time and contact with her*[resource mother]
- *She was a friend* [resource mother]
- *She was there for me*[community health nurse]
- *I felt included and comfortable; just something I felt – I was more comfortable with her* [resource mother]
- *The resource mother was open and friendly and easy to talk to – she listened*
- *Informative* [community health nurse]
- *The resource mother was the same age as me; I felt closer to her*

Long-Term Follow Up/Contact

That forty-seven (97.9%) of the women participants have continued to maintain contact with the HBC is indicative of the participants valuing and satisfaction with the program. This contact is primarily with the resource mother (93.8%), or through participation in follow up parenting and literacy programs at the community/resource center. These programs include BURPS (Baby's Growth and Development, Understanding Role Changes, Resources, Parenting Issues, Support), "Moms and Tots", PEPS (Program for Early Parenting Support), "Loving and Learning", breastfeeding support groups or home and/or telephone visits, or just "drop in." visits. Forty-two (87.5%) reported contact with the community health nurse since delivery either at the child health clinic or through home or telephone visiting. Four (8.3%) have maintained contact with the nutritionist mainly for nutrition counselling for themselves or for the baby. As well, approximately 80% participate in activities with the other graduates of

the HBC Program at the community/resource center (play time, crafts, recreation) or other activities of their children, families, church, school or general community.

The greatest regional difference is contact with the nutritionist as this resource is limited in rural areas of the province -- one per region.

Overall. What Did You Like About the HBC?

Women participants of the HBC were asked what they *liked* overall about the Healthy Baby Club. The following categorized summary of their input is provided:

- Resource Mother -- *She was there for me; helpful, especially in times of crisis; guided my way through pregnancy; a friend; the more I talked to her the more I could confide in her; she was there when I needed someone to talk to and I could discuss things with her and no one else; very knowledgeable and experienced; if she didn't know she would dig until she got the answers; I wasn't feeling well so the resource mother came to my home and she showed a sense of caring, appreciation and respect [for me]; she has a knack of bringing people out of their shell; the resource mother made me feel good about myself; I gained confidence and self-esteem; she praises you especially if you are feeling down about yourself; provided a sense of security -- someone there for you; through the resource mother you learn to look after yourself and the baby; reassuring, calming attitude and effect; she made a lot of things fun that otherwise wouldn't have been; I enjoyed her; she encouraged me to breastfeed and even came to the hospital after I had the baby to help me; when I started at the HBC I never even thought about breastfeeding (four respondents); I was very emotional all the time and I was not sure if I could take care of a baby the way I should -- the resource mother helped me.*

- Knowledge – *I learned a lot of things I didn't know; the resource mother answered all my questions or if she didn't know she found out; learn what to expect; puts your mind at ease and decreased my worries; you learn how to keep your baby alive and healthy while it's inside of you; chance to learn new things and new ways of doing things; I learned a lot especially about labour and delivery from the nurse and resource mother – I was scared and afraid; place to go for questions and answers; even though it wasn't my first pregnancy I still learned a lot – we learned from each other; learn all about good nutrition and eating habits from the nutritionist and resource mother; I was diabetic and the nutritionist taught me what I should and shouldn't eat and what's good for you and the baby; child care; I wouldn't have considered breastfeeding otherwise.*
- Socialization -- *Someone to confide in; getting together with others; the "social" aspect; getting out with other people --I don't get out much with four other kids; sharing experiences with other mothers – knowing I'm not alone; the support you get - especially if you don't have it [support]; benefits from the group; meeting, talking and cooking with others; talking with others who share similar problems; It's nice to sit and discuss things – I thought I knew a lot but now I realize what I didn't know; it just feels good to know there's someone there who cares besides your family; makes you feel good about yourself.*
- Food Supplements -- *These were great – I would not be able to buy these things regularly.*

All of the women participants agreed that they would strongly recommend the HBC to other pregnant women -- and some already had -- recalling many of the previously stated benefits and reasons. *"This program [HBC] is a wonderful idea, in fact the program should be open to everyone."*

Changes/Improvements to the HBC Suggested by HBC Participants

Specifically, two questions of the interview schedule were designed to give respondents the opportunity for greater feedback and to provide recommendations for improvement of the HBC Program. Sixteen of the women participants provided input. This is a gratifying number considering the fact that vulnerable women traditionally are not assertive (Oakley et al. 1990; Stewart et al. 1996). Two thirds of respondents stated nothing needed to be changed -- it was a wonderful program and they wouldn't change a thing. There were isolated negative comments mentioned by only two people. One of the women participants stated that she felt shy and on occasion was "put on the spot" to answer questions posed by the resource mother *"I never warmed up to this -- I always felt shy."* Another said that she didn't get along with the group and the resource mother tended to have "favourites"; one teenager commented *"the older women felt we knew nothing"* [thus, a separate teen group was formed]; and another person felt there was too much emphasis on breastfeeding, so much so, that she felt guilty that she had let the group down when she didn't successfully breastfeed her baby. In addition, ten participants of the HBC Program made some suggestions for changes or improvement. These individual responses which were provided are outlined in Table 5.6.

TABLE 5.6

WOMEN PARTICIPANTS' SUGGESTIONS FOR CHANGES/IMPROVEMENT TO THE HBC N=48	
Changes/Improvement	Frequency
Increased emphasis on:	
Breathing techniques	2
Labour & delivery	2
Safety, first-aid	1
Exercise (outings)	2
Scheduling:	
Resource mother should be punctual and " <i>quicker to do Things</i> "	1
More one-to-one sessions	1
Shorter sessions	2
Use HBC time wisely	2
Encourage better attendance; especially at group sessions	1
Resources and information:	
Should be applicable to the audience	1
Videos on labour & delivery should be more selective; " <i>some videos were gross</i> "	1
Community health nurse positions should be filled at all times through active recruitment (one position vacant)	1
More liberal admission criteria for HBC Program " <i>this program should be open to everyone</i> "	1

Women participants offered suggestions regarding program emphasis, format and flexibility. It was also reported that it is essential to have a community health nurse in all designated areas/districts in order to provide comprehensive prenatal education. One rural community health nursing district position was vacant due to difficulties in recruitment and retention of personnel. Women participants felt strongly that the HBC Program should be open to everyone with no eligibility criteria since it offers so many

benefits to pregnant women. *“This is a great program; it should never be taken away and everyone should be able to attend.”*

5.2.3 Women Participants – Spin Offs and Benefits of the HBC

During the course of the interview many women participants made comments regarding their personal “growth” – knowledge/skills, self-esteem, empowerment -- which they gained as a result of being involved with the HBC Program. The following summarizes this information.

Self-Esteem/Self-Confidence/Empowerment

Almost half of the women participants of the HBC Program commented that their self-esteem and confidence had been raised since they joined the HBC. One young mother said *“My confidence level has gone through the roof...I was so different [so shy] when I started with the HBC.”* This same woman, as well as others (approximately 10), have gone on to complete high school, enter post secondary education or the workforce. Regarding lifestyle, one mother stated *“Even though I was an ex-smoker, I didn’t know about second hand smoke until we learned about this at the HBC. Then I didn’t know how to tell people not to smoke in my home -- so the community health nurse gave me signs to hang up around the house.”* A tribute to the program is the fact that only one individual stated she perceived she would still be unable to initiate a referral or seek help on her own.

About 60% of women participants expressed an interest in or have become active in the community. Two women participants, who were previous members of the HBC, have become resource mothers and commented that they find this role very satisfying. Some women now participate in parenting programs, literacy programs, crafts programs,

exercise courses and other recreational activities and nutrition programs such as the Basic Shelf Nutrition Course, Community Kitchens, Community Gardens and clothing/equipment bank. Some activities involve both the women and their children. Respondents indicated that since their involvement with the HBC, the resource mother and, in many instances, the community/resource center, they have gained increased knowledge and exposure regarding the availability of programs, services and resources. This experience has also increased their comfort level with new initiatives.

The essence of the HBC is the relationship which develops between the woman participant and the resource mother which is exemplified in these comments "*She was there for me; I could talk to her and no one else; she listened when I told her my problems, concerns and fears.*" This rapport and connection led to enhanced self-esteem and confidence in the mother and thus her empowerment to take greater control of her own life.

See Appendix L for a brief synopsis of a "success story" of one woman who participated in the Healthy Baby Club.

Learning - Infant Feeding Practices

There is a lot of emphasis put on the importance and benefits of breastfeeding while participants are in the HBC. It has been shown that women who live in poverty and have low education are less likely to breastfeed (MacLean, 1998; Matthews et al. 1995). From this study population of 48 women participants, thirty-one (64.6%) breastfed their baby following delivery. In 1997 the provincial breastfeeding initiation rate was 52.5% (MacLean, 1998). At the time of the interview when the women participants of the HBC ranged from two to nine months postpartum 14 (45.2%) of the original 31 were still breastfeeding; one mother continued up to six months. This rate is

“better than average” for this subgroup of the population. See Table 5.7 for specific details. The reasons for discontinuing were not covered in this study. Encouragingly, three multiparous women who had never breastfed before did so this time. Some comments received *“I never even thought about breastfeeding before I joined the HBC; I’m sorry I never tried it with my other three babies; the resource mother and the nurse encouraged me to breastfeed.”*

TABLE 5.7

BREASTFEEDING STATUS		
N = 48		
Women Participants	Frequency	Percent
Initiated breastfeeding	31	64.5%
Continued breastfeeding beyond two months postpartum	17/31	54.8%
Breastfeeding at time of interview	14/31	45.2%
* Total is greater than 100% since the groups overlap.		

Learning - Lifestyle Changes

Smoking and eating habits were the only lifestyle factors explored in this study. However, other lifestyle practices such as alcohol, other substance use and stress are important contributors to LBW. The smoking behaviour of women participants is depicted in Table 5.8.

TABLE 5.8

SMOKING BEHAVIOR OF WOMEN PARTICIPANTS		
N=48		
SMOKING BEHAVIOUR	FREQUENCY	PERCENT
Smoker upon entry to HBC	26/48	54.2
Decreased during pregnancy	21/26	80.8
Stopped during pregnancy	5/26	19.2
*Totals are greater than 100% due to overlapping of the groups.		

Women participants revealed that they were able to continue with their changed smoking status – 80.8% decreased and 19.2% quit -- primarily because they didn't want the baby exposed to second hand smoke. They also implemented alternate strategies to smoking to keep themselves busy such as chewing gum, eating more, and taking fewer cigarettes with them when they went out, and two were supporting their partners who had also quit and as a result they did not smoke.

Eating habits also improved. Over half the study group commented that they used their increased knowledge and skills regarding food selection and preparation with their children and other family members. This improvement was facilitated through the provision of food supplements and the ongoing reinforcement by the resource mother, community health nurse and nutritionist of the importance of healthy eating. Practical activities such as the grocery store tour and cooking sessions were described by the women participants as enjoyable, worthwhile and informative. But, they also remarked that the cost of food, especially milk and fresh fruit is prohibitive, therefore the provision of food supplements became particularly important.

5.3 Group 2 – Characteristics of Resource Mothers (n=11)

Resource mothers made up the second group of participants in this study.

The results of the personal interviews with this group will also be presented under the two main headings:

- characteristics of the resource mothers
- themes emerging from the resource mothers' experiences

Table 5.9 details the characteristics of the 11 resource mothers who participated in the study. Half of the resource mothers ranged in age from 25 to 34 years of age. The majority of the sample (63.6%) was married. All had dependents, with an average of two to three children.

All but one resource mother had completed high school and 36.4% had completed a degree or diploma program such as Early Childhood Education, Beauty Culture, Business Administration or a university degree. Approximately 46% had completed some post secondary education mainly individual miscellaneous courses. Eight (72.7%) of the resource mothers had worked in their roles as resource mothers for over twenty-four months, one for over eighteen months, one for twelve months and another for more than six months.

Table 5.10 provides the details related to the resource mothers' volunteer or paid status. Two of the volunteer urban resource mothers relied on Social Assistance as their only source of income plus a small stipend from the Healthy Baby Club. The stipend included childcare (if necessary), transportation and \$30 per month for each pregnant woman for whom they had been assigned responsibility and \$10 for each group session attended. Another volunteer urban resource mother relied on her spouse's employment income which was less than \$600 monthly. However, *all* eight rural resource mothers

were paid employees. Four (36.4%) resource mothers reported their average monthly household income was over \$1,900 per month and three (27.3%) stated it was \$1,301-\$1,600. In contrast, the two volunteer resource mothers who were receiving social assistance had an average household income of \$600-\$1,000 per month; even with their stipends their incomes were below the poverty line.

TABLE 5.9

CHARACTERISTICS OF RESOURCE MOTHERS N=11		
CHARACTERISTIC	FREQUENCY	PERCENT
Age Group:		
25-29	3	27.3
30-34	3	27.3
35-39	0	0
40-44	2	18.2
45-49	1	9.1
50 or older	2	18.2
Education:		
Less than Grade XII	1	9.1
Completed Grade XII	10	90.9
Some Post-Secondary	5	45.5
Completed Post-Secondary	4	36.4
Marital Status:		
Married	7	63.6
Single (never married)	1	9.1
Common-law	2	18.2
Divorced	1	9.1
Income Source:		
Employment -- as resource mothers	8	72.7
Dependent on husband's income + HBC stipend	1	9.1
Social Assistance + HBC stipend	2	18.2
Average Monthly Household Income:		
Under \$600	1	9.1
\$600 - \$1,000	2	18.2
\$1,001 - \$1,300	1	9.1
\$1,301 - \$1,600	3	27.3
\$1,601 - \$1,900	0	0
Over \$1,900	4	36.4
Dependents:		
One	3	27.3
Two	4	36.4
Three	4	36.4
Experience as a Resource Mother:		
Twenty-four months	8	72.7
Eighteen months	1	9.1
Twelve months	1	9.1
Six months	1	9.1

TABLE 5.10

CLASSIFICATION OF RESOURCE MOTHERS N=11		
CLASSIFICATION	FREQUENCY	PERCENT
Volunteer	3	27.3%
Paid Employee	8	72.7%

5.4 Themes

For the second group of participants in the study, the 11 resource mothers, the themes extracted from the “face-to-face” interviews were condensed and categorized within the following topics:

- Resource Mothers – Experiences With the HBC
- Resource Mothers – Spin Offs and Benefits of the HBC

5.4.1 Resource Mothers – Experiences With the HBC

The whole key to the Healthy Baby Club is the “resource mother.” The resource mother is intended to be a role model, a mentor, and a peer counsellor. She develops a friendly trusting relationship, reinforces the teaching, explores ways to support healthy eating and lifestyle behaviour and provides general ongoing support to the mother during the pregnancy to the postpartum period.

Recruitment of Resource Mothers

Resource mothers were asked about the recruitment to their roles. Nine (81.8%) responded to an advertisement and had a formal interview for the position. Two (18.2%) of the urban volunteer resource mothers had been participants in the HBC Program

themselves and went on to become resource mothers. Six of these women had been involved in some type of community volunteer work previously such as fundraising for charities and schools, Beaver/Brownie leaders, parent and school activities or church groups. Only two people had any previous experience working with pregnant women. These included one resource mother who was a nurse and another who previously operated a private day care center.

The three urban resource mothers were recruited as volunteers, while the eight rural resource mothers were paid employees.

Roles and Responsibilities

These participants viewed their responsibilities of resource mother as varied and encompassing the roles of coordinator, liaison, support, educator, friend, information provider, facilitator, fundraiser, resource, trainer, counsellor, role model, health promoter and clerical recorder. Integral to the role was gaining the expectant woman's trust and thus building her self-confidence as she prepared for motherhood. However, the most important or primary role reported by the resource mothers was "*Being there for support for the pregnant woman*" to listen, and provide support as the "nurturing other." One resource mother captured it as "*A friend, a shoulder to lean on*".

The resource mothers reported this support is provided through regular home visiting, telephone visits and group meetings. Food supplements are distributed at the group's meeting time or through home delivery by the resource mother. Cooking sessions are used to incorporate novel ways of using the food supplements. Daily logs of the pregnant mothers' food intake are also monitored by the resource mother who further consults with the nutritionist. She coordinates transportation and childcare, as needed. Required items such as infant car seats, maternity clothes, baby's layette and breast pumps are provided as much as possible through program funding, fund raising or local

donations. Upon delivery of the baby, the resource mother visits the new mother in the hospital providing continued support. Frequently, resource mothers take pictures or sometimes a video of the mother and baby as a keepsake for the family. Follow up is a very important role provided by the resource mother. Generally the family is followed for a minimum of six weeks post delivery, and longer if breastfeeding, through home and telephone visits and breastfeeding support groups. Then, the mother and baby are encouraged to enter a program usually offered at the community/resource center where parenting skills are reinforced, anticipatory guidance is offered and, again, group support is readily available.

Reasons for Becoming a Resource Mother

Resource mothers stated they had a special interest in assisting pregnant women as the main reason they wanted to become a resource mother. They considered themselves responsible and trustworthy and thought they could enjoy this worthwhile role. They also felt they had something to offer and one resource mother, who had participated in the HBC herself both as a pregnant mother and as a resource mother commented *"I wanted to give someone else the opportunity I had and I also wanted to offer myself to others"*. Another resource mother expressed that being in this role provided an opportunity for learning for herself and her family. Another emphasized *"I wish they had this program when I was pregnant with mine [my children]."*

Throughout the interviews, the commitment and satisfaction with the role of resource mother were very evident. It appears the role provides a sense of worth, fulfillment, a level of prestige in the community and personal learning for the resource mother. This was indicated through such varied comments as *"The moms [graduates] still come by to see me with pictures of their children; there is nothing like the delivery of a*

healthy, good weight baby; one of the mothers I had in my group quit smoking – the only one; it is so satisfying to see the mothers breastfeeding.”

There has been little turn over of resource mothers in their positions. Those that have left were due to family relocation, illness, family commitments, pregnancy, or to return to school or employment. Five of the 11 resource mothers have worked in their roles and at the same site since the HBC began.

Roles Enjoyed The Most – by frequency of ranking

Resource mothers were asked to rank from the most to the least the activities which they enjoyed in their roles. In order of priority, they noted:

- home visits and telephone calls
- group sessions and activities
- cooking sessions
- hospital tour
- follow up of breastfeeding mothers
- recruitment
- food histories and diet follow up
- record keeping

During discussion of this question, the resource mothers made the following insightful comments:

- *I like it all so much it is difficult to rank these*
- *I love doing home visits, I make them as informal as possible*
- *Usually we sit around the kitchen table and talk*

- *The moms really open up and we discuss everything – something they bring up, or maybe their diet, smoking or other topics*
- *The cooking sessions are much more than cooking, everything comes out*
- *We discuss much more than nutrition during cooking; it's social chit-chat; it's sharing our experiences; it's question and answer time; and it's fun*

Although record keeping was viewed as a tedious and time consuming chore by resource mothers, its value in tracking clients, their progress and outcomes and general accountability was also recognized.

Adequacy of Training of Resource Mothers

Resource mothers were asked two questions to assess their preparation and adequacy of training. For most, this consisted of a one to three week period which incorporated various training methods such as lectures, seminars, workshops, previews of visual aids, manuals and other resources, and job shadowing. Resources include written and audio visual materials and access to professionals. Intensive training seminars have been provided primarily using resources of the Federal Government and the Provincial Department of Health including the “Nobody's Perfect” Parenting Program, suicide intervention, smoking cessation, breastfeeding support and promotion modules and various written and audio visual materials. As well, regional, provincial and community professionals such as the lactation consultant, CAPC coordinator, resource mother coordinator, social worker, family doctor, teacher, or an experienced breastfeeding mother are called upon to provide education.

All resource mothers stated that ongoing educational opportunities are provided regularly and resources are readily available. As well, annual networking seminars are offered which most highlighted as extremely beneficial; these provide an opportunity for information sharing and collaboration between peers. Ten resource mothers thought the training was adequate but one felt it was too much information compacted in a short period of time and somewhat overwhelming. This resource mother's comment spoke volumes:

I haven't been in school for a long time and the day that I came home from a full day of training I had such a headache – it was too much. They don't do it that way anymore; now it is broken down into smaller sections.

About half of the group felt there was not enough time to review and read resources “*the books, manuals, videos, pamphlets and things are great, if only I had the time to study all of them.*”

The following educational needs were identified by the resource mothers:

- bereavement/grief/loss counselling skills
- time management
- facilitation skills
- breastfeeding support

Bereavement/Grief/Loss Counselling Skills A third of the resource mothers felt inadequately prepared to deal with bereavement/grief/loss issues, particularly in dealing

with women who had suffered the “loss” of a baby through such events as miscarriage, stillbirth or a baby with a congenital anomaly. *“I felt ill-prepared to deal with this mother who was now grieving the loss of the stillborn baby from a previous pregnancy; yet she needed my support, so I did the best I could.”* Basically, this resource mother explained that she frequently sat with the mother and listened. She listened and acknowledged her feelings of loss, guilt, denial, helplessness and continued to support the mother through the various stages of bereavement. Gradually, she encouraged the mother to reach out to others, friends or other parents who had similar experiences. However, since the mother came from a small and rather isolated community, local support groups were not and still are not readily available.

Time Management Time management is a priority for all resource mothers. Although, caseloads of the resource mothers varied considerably among sites from a low of two clients to a high of twenty-two, all resource mothers saw the need to use their time wisely. Generally, the volunteer resource mothers in the St. John’s locations were responsible in conjunction with the resource mother coordinator for fewer women compared to the paid resource mothers in rural sites. Difficulties experienced included being responsible for vast geographical areas which included multiple communities, for transportation of clients and for contacting clients without telephones *“There’s just not enough time to do everything.”*

Facilitation Skills None of the resource mothers had ever before been responsible for leading or facilitating group sessions themselves. This “new arena” posed challenges for them in dealing with group dynamics, staying on topic and generally incorporating adult learning principles. Issues identified included *“Sometimes one person dominates the group and it’s difficult to handle, at times; we often get off the topic; with experience I’m getting better though.”* One resource mother stated she kept

reinforcing the message with the pregnant women that she was not there to teach but to assist, support and facilitate their learning.

Breastfeeding Support All resource mothers had a basic preparation in breastfeeding knowledge and promotion. However, some felt “weak” in the provision of support to the breastfeeding mothers, particularly, when the mother experienced problems or met with conflicting information from relatives and friends. An example cited:

The young teenagers, in particular, need a lot of support to continue with breastfeeding but they want to give up when problems arise and many do not get the support or encouragement from their families or friends to persist.

Characteristics of Women Participants as Reported by Resource Mothers

Resource mothers were asked about the characteristics of the women participants for whom they were responsible. Was the intended target group accessing the program? Did they feel they were meeting the objectives of the HBC Program? All resource mothers were quite firm in articulating their responses commenting that the women and their families were living in poverty, were frequently isolated and many were single or had few significant supports and resources available to them. Some of the teenagers were living alone or with boyfriends in labile relationships, others were at home with parents and attending school while others had dropped out of school. For one group of pregnant teenagers [students] at a rural site a special group was formed at their school to meet their unique needs.

Some pregnant women disclosed to the resource mother that they had used or were using alcohol and drugs during pregnancy while others did not admit use but the

resource mother had concerns of such behaviour. Violence was also a factor in some home environments, sometimes disclosed and at other times only suspected.

Some pregnant women presented with medical problems such as diabetes, hypertension and anemia. Other women seen by the resource mothers were mentally challenged or had physical disabilities.

Resource Mothers' Comments on Client Participation

Resource mothers were asked, "If pregnant women dropped out of the HBC prior to delivery of the baby what were their reasons?" This group of resource mothers worked with a total of 318 women. The most common reason reported by resource mothers was miscarriage; the woman moved out of the area, the woman did not want the service, the pregnant woman felt she was too sick or too tired to participate in the program or employment prohibited her participation were the next most common reasons.

Resource mothers noted that by far the majority of women who joined the HBC stayed until they delivered their baby. However, in isolated cases some pregnant women ultimately did not want the service. One example provided was a university student who felt that she didn't meet the criteria for admission into the program although the resource mother clarified to the client that she had several of the program criteria – young age, low-income, few available supports. Some women stated they were too sick (medical problems related to hypertension, diabetes) or too tired to attend the HBC sessions. Home visits were offered with encouragement to come to the group support meetings but in some cases this offer did not persuade the mother to accept the program. At the time of interview, however, resource mothers documented a dropout rate of less than 2.0% during the whole period of time they had worked in their roles.

Interventions to Keep Women Participants in the Program

The resource mothers described various strategies which they have implemented with women participants to keep them actively involved. One resource mother said *"With one young mother I would go to her home each time we had a group session and we would walk together to the center; some of them need that extra little boost."*

Transportation and childcare were routinely provided at all HBC locations. As well, nutritious lunches and snacks were provided by the CPNP. All requirements for cooking and meal preparation are readily available to the HBC group. Frequently, incentives such as small gifts – baby's layette, toiletries for the mother -- or special celebrations of birthdays or special occasions were offered to women participants. Regularly, the resource mother, nurse and sometimes the nutritionist (where available) made home visits and telephone calls to all the women participants in their group to monitor their progress and to provide support. As well, all women participants were strongly encouraged to attend the group sessions to build that special network of friends and to link with a buddy who would provide increased support by accompanying her in her activities if she wished. Significant others -- husbands, partners, parents, grandparents and friends -- were also welcome to come to the HBC with the woman participant.

5.4.2 HBC – Limitations Identified by Resource Mothers

Issues Identified and Strategies Implemented by Resource Mothers

The resource mothers were asked a number of questions about the limitations of the HBC Program and the strategies which they implemented to cope with these, as well as, the challenges they face in their roles as resource mothers.

The limitations included transportation, inaccessibility of clients, behavioural and attitudinal change, special group for specific needs, attendance at group sessions, space, role conflict, time, inadequate program funding, paper work, waiting lists, over-dependence on resource mother, limited community resources and lack of exposure to breastfeeding.

The topic most consistently discussed by all interviewees was the need for increased funding for the program. This would permit increased enrollment of women meeting the criteria and would eliminate waiting lists -- which exist in most sites. Also, it would permit the expansion of the program throughout urban and rural areas of the province.

Study participants were asked in particular how they had tried to overcome the identified limitations. Examples illustrate the resourcefulness and adaptability of those associated with the program. Resource mothers noted that “teens” prefer their own group where they feel comfortable and where they can share and answer common needs – this was provided in a small group at their local school. Creation of a warm, safe,

comfortable and welcoming environment which is receptive to women of vulnerable circumstances and promotes ease of communication is very important if the HBC Program is to be effective. Most (47.9%) of the women participants became aware of the program through another HBC member. This indicates the power of “word of mouth” communication and the ripple effect this strategy can produce. Table 5.11 outlines some strategies used by the resource mothers to address these limitations.

TABLE 5.11

ISSUES IDENTIFIED AND SPECIFIC STRATEGIES IMPLEMENTED BY RESOURCE MOTHERS IN THE HBC	
ISSUES	STRATEGIES
Transportation	<ul style="list-style-type: none"> • Purchase of CAPC/HBC vans for transportation; hiring aides as drivers. • Car pools or local taxis; some resource mothers act as drivers. • Payment of a stipend to women participants to provide transportation.
Inaccessibility of clients (no telephones)	<ul style="list-style-type: none"> • Provide schedules or calendars. • Home visits. • Reminders with delivery of food. • Notes left in the mailbox. • Messages left with relatives or friends.

ISSUES	STRATEGIES
Behavioural and attitudinal change	<ul style="list-style-type: none"> • Resource mothers lead by example or modeling. • Cooking sessions which incorporate the food supplements in a nutritious meal. • Visiting women participants provide demonstrations and network with the prenatal group. • Resource mothers act as advocates for the prevention of LBW in the community. • Resource mothers encourage schools to incorporate lifestyle education in their curriculum. • Communities encouraged to offer more smoke-free and breastfeeding friendly environments.
Special group	<ul style="list-style-type: none"> • Subgroup of students in a local school where several were pregnant.
Attendance at group sessions	<ul style="list-style-type: none"> • Resource mothers reinforce the message that a member's presence is missed by the group. • Resource mother or "significant other" accompanies the woman participant to the session. • Women participants are linked with a "buddy" to enhance the level of comfort. • Incentives – childcare, transportation, small gifts and celebrations are provided.

ISSUES	STRATEGIES
Space	<ul style="list-style-type: none"> • Functional, multipurpose furniture (e.g. sectional sofa) which allows for variation of seating and can be shared among other programs. • Collaboration with the community – churches, schools, municipal councils, community centers, Newfoundland and Labrador Housing Corporation to provide the necessary space.
Role conflict: resource mothers/coordinators	<ul style="list-style-type: none"> • Development of job descriptions. • Establish clear communications.
Time	<ul style="list-style-type: none"> • Recommend education re time management skills. • Use alternate resources for some duties (transportation, clerical work).
Inadequate program funding	<ul style="list-style-type: none"> • Recommend broader eligibility. • Recommend additional funding to allow all those eligible. • Recommend exploration of other funding options. • Demonstrate the cost-effectiveness of the program.
Paper work	<ul style="list-style-type: none"> • Recommend streamlining this task by reviewing all present forms. • Implementation of computerization in administration duties.
Waiting lists	<ul style="list-style-type: none"> • Recommend increased funding for the program.
Over-dependence on resource mother	<ul style="list-style-type: none"> • Encourage independence, self-sufficiency and networking. • Partner woman with “buddy” in the group. • Introduce women participants to other resources eg. experienced breastfeeding mother.

ISSUES	STRATEGIES
Limited community resources to meet client needs	<ul style="list-style-type: none"> • Resource mothers frequently link with other communities. • Dietitian from the local hospital acts as a consultant in one rural site. • Resource mothers advocate for increased community resources.
Lack of exposure to breastfeeding	<ul style="list-style-type: none"> • Women participants of the HBC who have successfully breastfed are invited to come to group sessions. • Breastfeeding friendly environments are promoted in the community. • Breastfeeding support groups are in place in all HBC sites.

Challenges Faced by the Resource Mothers in Their Role

Resource mothers were asked about the daily challenges in carrying out their roles in the Healthy Baby Club Prenatal Support Program. Their responses ranged from poverty which was the issue of greatest concern, to isolation, to attitudes and to social stigmatization, to lack of awareness of breastfeeding, to lack of personal skills, to lack of experience with public education and facilitation skills, to women participants with special needs. These are discussed in order from those which elicited the most frequent comments to the least.

Poverty The issue of poverty overshadows everything else. The resource mothers repeatedly described this as their major challenge in working with vulnerable pregnant women. Comments of the resource mothers included:

- *Most of the women participants come from very poor circumstances*
- *Finances are very tight – they barely have enough money to put food on the table*
- *The tangible and non-tangible benefits offered by the HBC are so important*
- *I admire them tremendously; what resiliency they have*

Isolation The resource mothers determined that many of the women participants were isolated. This was particularly true for teenagers, as the pregnancy may not have been accepted by the family, their partner or friends. In other situations, their partner had to leave home to find work. While some women participants are the single head of the household with social assistance as their only income, others find themselves living away from family and friends during pregnancy. They lack a supportive environment which is important to the mother and baby during pregnancy. Thus, some women may resort to behaviours such as smoking, use of alcohol and other substances to cope with their stressful circumstances. Some families were unable to cope which could result in violence, abuse and neglect in some situations.

Attitudes and Social Stigmatization One resource mother spoke of the different strata of society that exist in the local community. For example, the difference between social assistance recipients and wage earners is evident. Frequently, she stated those “*on welfare*” (social assistance) are stigmatized which increases their isolation and poses barriers to participation in prenatal care. This resource mother partnered one woman with

another woman participant who was a very open and accepting individual. As well, group work helped in overcoming these attitudes and social stigmatization.

Lack of Awareness of Breastfeeding Resource mothers spoke of the lack of awareness of the benefits of breastfeeding. Since many of the previous generation did not breastfeed most women had never been exposed to breastfeeding. Three women participants expressed negative comments about breastfeeding such as *“it is gross.... I think it is embarrassing.... I couldn't do that.”* Resource mothers found that one of the best strategies was having a successful breastfeeding mother come to the group session and relate her experience.

Lack of Personal Skills Resource mothers said women participants from the target populations frequently lacked knowledge and skills particularly in the areas of parenting, nutrition, cooking and budgeting. Many women participants had low reading skills and most do not have books in their homes. Also, many women were not exposed to favourable environments during their own growing up and as a result did not gain the skills which are particularly important during pregnancy. For example, most women did not know how to use recipes, to prepare or plan meals.

Lack of Experience with Public Education and Facilitation Skills A normal part of the role of resource mother is to lead the group sessions and facilitate discussion. All resource mothers emphasized that this was a “new” expectation of them and one that they found very challenging. As one resource mother said *“Breaking the ice”* was the most difficult *“I find the first session difficult but after that it gets easier as we all get to*

know each other better and feel more comfortable.” Frequently, ice breaking techniques are incorporated such as introductory stories, trivia or a simple game to set a tone of comfort.

Women Participants with Special Needs Some of the special needs identified in women participants included women with low intelligence, medical problems e.g. hypertension, diabetes and a disabled individual requiring more individualized care and support. Sometimes, because of their limitations, these women participants were unable to fully participate in the group sessions; thus, they missed this support network as well. The resource mother felt it was impossible to devote the required individual attention to these women participant, as she would like, because of the demands on her time due to large groups and vast geographical areas of responsibility.

Strengths of the HBC for the Women Participants as Stated by Resource Mothers

Resource mothers identified the following strengths of the HBC Program. These are presented in order of the most frequent comment:

- Supporting the development of a healthy weight baby was quite satisfying. The birth weight of the babies born to the 48 women in the study ranged from 2,552 grams to 4,805.5 grams with the average birth weight being 3,544 grams. The gestational age at delivery ranged from 31 to 42 weeks with a mean of 39.8 weeks.
- Providing support. The resource mothers viewed their primary role as one of support to the pregnant women; a strength confirmed by the women participants.
- Dietary supplements. The nutritional supplementation provided by the HBC was perceived to enhance the mother’s and baby’s well-being.

- **Breastfeeding promotion.** The HBC promotion of breastfeeding is beginning to “bear fruit” as resource mothers observed over time more women participants initiated breastfeeding and continued to breastfeed for longer periods.
- **Lifestyles changes.** Some positive lifestyle behavioural changes occurred. For example, smoking cessation or reduction, improved eating habits, enhanced cooking skills, improved money management, enhanced decision making skills.
- **Friendships.** Both resource mothers as well as the women participants of the program highlighted the friendships which were made and maintained as a positive effect of the HBC. This resulted in an increased network of support.
- **Empowerment.** Also, noteworthy were the reported increased self-esteem, self-respect and general self-confidence by the women participants and the mentors of the program.
- **Access to resources.** The HBC Program provided access to services through a multi-disciplinary approach as well as provided for the women participants’ basic needs.
- **Increased awareness.** Through program participants and community engagement there has been an increased awareness of the problem of LBW, the need for adequate prenatal care within the community and the role of women and children in society.
- **Volunteerism.** Volunteer participation has been promoted in this model through involvement of all participants and the general community.
- **Incentives.** Provision of incentives, for example stipends, small gifts for women participants and celebrations of special events such as birthdays, Christmas, etc. to encourage and maintain participation of vulnerable women in prenatal care.

5.4.3 Resource Mothers – Spin Offs and Benefits of the HBC

All resource mothers said they enjoyed and felt very satisfied with their role in the Healthy Baby Club. This was reiterated in their comments regarding the benefits to themselves and others. Resource mothers believe this model is flexible, adaptable and sustainable to use anywhere in the province since it draws on many resources which are readily available in most communities such as housing, community health nurse, hospital, doctor. As well, it could easily be incorporated in any setting such as schools, churches, community centers or even private homes. Resource mothers were asked two questions

about the impact of the program on themselves, women participants and the community. A brief summary of their comments follows (the categorized responses were approximately of equal frequency):

Personal/Professional Growth The gains both personally and professionally were significant:

- The value of making and enhancing friendships was emphasized *"I'm so lucky I've gained a whole group of contacts and friends."*
- All resource mothers identified many strengths exhibited by the women participants *"What resiliency they have – how they cope in difficult circumstances is a lesson to be learned."*
- Resource mothers expressed a sense of accomplishment, satisfaction and prestige through their role in the HBC *"When you see that healthy baby it makes it all worthwhile; I have the opportunity to watch a whole new generation grow up and to be part of it; I still see the children of the HBC as their moms often come by my house or the center and leave pictures."*
- Through their training and experience resource mothers have gained increased self-confidence and self-esteem *"I now have enough courage to go back to school; I know I can help these mothers, especially the young teens."* Many are encouraged to become actively involved with other community initiatives related to literacy, parenting and food security.
- With the experience of working with others in a multi-disciplinary fashion and with the community, resource mothers felt they learned "new" ways of doing things and of drawing on the resources available. In fact, they are active participants in community development/capacity building and, in particular, sustainability of the HBC Program.
- Most of the HBC sites are located in small communities across the Province of Newfoundland and Labrador. Many of these communities offer limited opportunities for employment and particularly for those without qualifications. The HBC resource mother role provided an employment opportunity. This role acknowledged their personal traits and strengths, provided education and employment and provided incentive to try new challenges such as further education or new jobs.
- Resource mothers frequently expressed the theme that this role has been a real "eye-opener" for them. Prior to this, they had some exposure to the situations of poverty, isolation, violence and abuse which some women and families endure on a daily

basis. They gained an increased awareness of the problems of LBW, poverty, the status of women and children in society and the need for community involvement.

Knowledge All resource mothers of the HBC expressed their satisfaction with the wealth of knowledge they had gained as part of the HBC experience:

- The training and education provided by the HBC program increased their access to information and resources for their professional and personal use.
- The resource mothers gained knowledge for their professional and personal benefit in parenting, nutrition, cooking, money management, breastfeeding, adult education and facilitation skills.

Activities In Which Resource Mothers Are Now Involved That They Were Not Involved In Previously

Six of the 11 resource mothers had been actively involved in volunteering or participating in community activities prior to their role as a resource mother. However, for the other five, this was completely new and something that they had not attempted previously. These five women commented that they now had enough self-confidence to take on roles such as the resource mother in other settings and that they knew they too, could make a worthwhile contribution. The other six women also voiced how this role had a positive impact. Some results of this empowerment included being able to take part in:

- literacy programs
- breastfeeding promotion, education and support
- parenting programs
- coordination of clothing/equipment banks
- nutrition initiatives such as Community Gardens, Community Kitchens

- community leadership -- CAPC board member, library board, church group, school PTA, Brownie/Guides, fundraising
- professional development -- completion of high school, post secondary education, public speaking skills and entry or re-entry into the work force

The foregoing reveals quite an array of findings related to the unique experiences of the women participants and resource mothers of the HBC Prenatal Support Program. These results will be discussed in the following chapter.

CHAPTER 6

DISCUSSION

The findings of the study will be discussed in relation to the objectives with reference to the existing literature and the health promotion theoretical framework outlined in both *The Ottawa Charter for Health Promotion* and *The Circle of Health – Prince Edward Island's Health Promotion Framework*. The framework includes reference to (1) building healthy public policy, (2) creating supportive environments, (3) strengthening community action, (4) developing personal skills, and (5) reorientation of health services. The discussion will be presented under the following headings:

- Characteristics of Women Participants of the HBC
- Characteristics of Resource Mothers
- Women Participants and Resource Mothers – Experiences With the HBC
- Women Participants – Indicators of Their Satisfaction With the HBC
- Women Participants and Resource Mothers – Spin Offs and Benefits of the HBC

The detailed experiences of the women participants and resource mothers with the Healthy Baby Club Model of Prenatal Support are provided in this study from the participants' points of view. This information can help our understanding of what elements are important to satisfaction with prenatal programming; what can motivate women to seek prenatal care; what supports are important to vulnerable pregnant women

during their pregnancy; what barriers and obstacles may exist to seeking prenatal care; and what longer-term benefits or spin offs, other than the primary program focus – reduction of low birth weight, occur as a result of this type of community-based collaborative approach. Where programs have demonstrated a positive impact on low birth weight, it is important to note the characteristics of those programs and the perceptions of those involved in order to expand these services in different areas. The focus of this study was to determine the components of the Healthy Baby Club Prenatal Support Program which were important to the women participants and helped keep them in the program and thus contributed to the program's success -- a reduced rate of LBW.

6.1 Characteristics of the 48 Women Who Participated in the HBC

Specific target groups included in the Healthy Baby Club Program criteria include: (1) pregnant adolescents, (2) single pregnant women, (3) pregnant women who use alcohol and other substances, (4) pregnant women living in violent situations and, (5) pregnant women living in poverty. The profiles of the women participants of this study group indicate that the Healthy Baby Program has been only moderately successful in reaching its targeted audience. Most of the women participants were relatively young; 85.4% were between 20 to 29 years of age. Five (10.4%) were in the 15 to 19 year age grouping. For 1998, the Newfoundland Center for Health Information stated that in the St. John's Region 89 (5.7%) of live births were to 15 to 19 year olds. Many researchers such as Howard & Sater (1985), Plouffe & White (1996), Rabin et al. (1991) and York &

Brooten (1992) assert that teenagers are an especially vulnerable group at risk for delivering babies of low birth weight. This particular group has unique needs and presents many challenges in improving pregnancy outcomes (Perino, 1992).

Although the program targets single women, others are accepted based on individual assessment and program funding. For example, only 16 (33.3%) of this study population were single; the remainder were married (31.3%) or living common-law (33.3%) and one woman was divorced. This indicates that poverty exists within all marital status groups. Although resource mothers indicated in the personal interviews that they felt some of the women participants were users of alcohol or other substances and living in situations of abuse, no firm evidence was available and no such information was disclosed to the investigator by the participants.

The program has succeeded in reaching low-income women; nearly three-quarters (70.8%) were social assistance recipients. The average household income (after taxes) for nearly half of the women ranged from \$600 to \$1,000 per month – this is below the poverty line as per Statistics Canada's guidelines. Of interest is the fact that six of the women participants, all married or in a common-law relationship did not know their household income which raises the question of "control" and lack of empowerment. Twenty (41.7%) had less than high school education. These facts corroborate the socio-demographic characteristics of many vulnerable pregnant women as described by Ketterlinus (1990), Kleigman (1990), Kogan (1995) and Kramer (1987). In this study population the following criteria were estimated to be evident:

TABLE 6.1

HEALTHY BABY CLUB CRITERIA		
N = 48		
CRITERIA	FREQUENCY	PERCENT
Pregnant adolescents	5	10.4%
Pregnant women living in poverty	40	83.4%
Single pregnant women	16	33.3%
Pregnant women who use alcohol and other substances	no data available	
Pregnant women living in violent situations	no data available	

Refer back to Figure 5.1 which displays the individual and global picture of women participants as well as the over-lapping of characteristics.

Ketterlinus et al. (1990) suggests that priority should be assigned to ameliorative efforts, primarily education concerning prenatal and perinatal health directed, first, toward very young adolescents and second, towards all women of lower socio-economic status and of reproductive age; these priorities underlie the basis of the HBC. Although the program thus far has not fully succeeded in recruiting young pregnant adolescents perhaps because of lack of referral and promotion by doctors and the lateness of adolescents seeking confirmation of their pregnancies. Further efforts are required towards recruitment of young adolescents. More emphasis may be needed to attract

adolescents by offering prenatal programming or Healthy Baby Clubs through schools, teen centers or recreational sites.

6.2 Characteristics of the 11 Resource Mothers

The study group of resource mothers had varied levels of experience in their roles with the Healthy Baby Club, ranging from a minimum of six months to two or more years. Specifically, 72.7% had worked for two years or more as a resource mother. All were 25 years of age or older. The majority (81.9%) had completed or partially completed some post secondary education. The group included a teacher, a nurse and others who had diplomas or courses in early childhood education, business administration, beauty culture and other miscellaneous courses. All were quite familiar with their assigned communities; for many this area was their place of birth. Above all, these individuals were reported to demonstrate warm and nurturing characteristics and an ability to carry out their assigned roles.

It is believed that trained lay workers may be more effective as providers of prenatal support because they are more likely than professionals to share the culture and values of the client particularly if recruited locally (Julnes 1994; Lapierre et al. 1995; Mahon et al. 1991; Howard & Sater, 1985). The majority of this study group of resource mothers had completed post secondary education and some were professionals (one health professional); the three volunteers were graduates of the HBC. While the non-professional may be the ideal lay facilitator, these resource mothers were generally well accepted by the

group and demonstrated the required characteristics and abilities to carry out their roles effectively. For initial implementation of Healthy Baby Clubs professionals may be the first to come forward in the early years for the role of facilitator but over time program graduates may be willing to participate. One site has been very successful with this strategy.

Some financial variation occurred in the employment status of resource mothers – three were volunteers (urban) and eight were paid (rural) employees. The researcher felt the numbers were too small in the paid and volunteer groups to draw meaningful comparisons. However, graduates from both urban and rural sites and, indeed, the resource mothers themselves, described equally satisfying experiences even though different methods of remuneration were used. Several rural sites are now considering using volunteers instead of or to supplement paid staff. One of the positive aspects of remuneration was the provision of a paid job particularly in rural Newfoundland and Labrador where employment opportunities are scant. Traditionally, volunteers come from people who are relatively financially independent and of middle and upper class.

6.3 Characteristics of the 11 Non-Participants

The characteristics of the 11 non-participants who had agreed to participate but, for a variety of reasons did not were reviewed. These women had attended the HBC in seven of the 11 sites. Using the study definition of urban and rural the non-participants were equally distributed geographically. They ranged in age from 17 to 22 years; all were

primiparous. Regarding marital status, seven were single, two were married and two were living common-law. All were recipients of social assistance. All 11 women delivered babies with birth weights greater than 2500 grams. The one resource mother who did not participate was visiting relatives out of the province at the time of the interview. She lived in a rural setting and was an experienced resource mother of one year. In summary, the 11 subjects who were eligible but did not participate in the study were similar in demographics and birth outcomes to the participant group.

6.4 Women Participants and Resource Mothers – Experiences With the HBC

Awareness and Access

Most (47.9%) of the women participants became aware of the program through another HBC member. This is indicative of the power of “word of mouth” communication and the ripple effect this strategy can produce. It is also reflective of the participants’ level of satisfaction and a tribute to the program that members would believe it worthwhile for others to become part of such a learning experience and recommend this opportunity (Handler et al. 1996; Hsieh & Kagle, 1991). As one woman participant said *“I think everyone should have this chance [to be a member of the HBC]; it’s so good; I tell all my relatives and friends and encourage them to come.”* A resource mother commented *“I wish I had the opportunity [to participate in the HBC] when I had mine [my children].”*

Efforts to recruit women earlier are essential if strategies are to be effective in improving birth outcomes such as low birth weight (Plouffe & White, 1995; York & Brooten, 1992). In the HBC population only 31(64.6%) of the women participants were in their first trimester of pregnancy when they registered for the HBC Program. The remaining 17 (35.4%) women participants were more advanced in their pregnancy for a range of four to six months; one was in her eighth month when she joined the HBC.

As mentioned previously, the number of prenatal referrals from family doctors and other professionals is very low; therefore accessing and recruiting the women to the HBC is problematic. The Newfoundland Center for Health Information (1998) reported that the majority of pregnant women in Newfoundland and Labrador seek medical prenatal care, the beginning of care being recorded as their first visit to the doctor. However, in 1998 approximately 21% of women were beyond the first trimester when this medical care was initiated.

Traditionally, the majority of women who access prenatal care are of middle and upper income levels and with higher education. As highlighted by Higgins et al. (1994), Julnes et al. (1994), Lia-Hoagberg et al. (1990) and York & Brooten (1992), there has been a problem in getting vulnerable women and young teenagers to access and continue to participate in traditional prenatal education and care. The Canadian Institute of Child Health (1993), Guy (1997), Kogan (1995) and the Perinatal Education Program of Eastern Ontario (1998) point out that vulnerable women are less likely to seek prenatal care early in pregnancy. This results in a “missed opportunity” to make a difference. The

literature abounds with studies confirming that the earlier mothers starts prenatal care the better and the more likely one is to decrease morbidity and mortality and generally improve birth outcomes (Julnes et al. 1994; Kliegman et al. 1990; Mahon et al. 1991; Perinatal Education Program of Eastern Ontario, 1998). Health Canada's *Turning Points* (1995) document emphasized that:

A key time to support families is during pregnancy and early infancy.
The health of the mother is the most important factor in the health of the baby. A good start in life can have lifelong positive effects on the health of children (p. 10).

Strategies to reduce the barriers to participation and increased efforts towards recruitment are required as well as comprehensive, coordinated and multi-disciplinary outreach and services (Lia-Hoagberg et al. 1990). Recruitment to date has occurred primarily through "word of mouth" with no marketing strategies used because of the limitations imposed by funding.

Participation

As well as recruitment early in pregnancy, being involved in the HBC Program throughout the gestation period is crucial to the success of prenatal care. The HBC encourages the long-term participation of pregnant women, ideally from the first month of pregnancy through to delivery. This long-term period provides opportunities for repetition and a variety of ways to incorporate prenatal care messages through group discussions, presentation of key concepts by guest speakers, attendance at breastfeeding

support groups and visual aids (Ketterlinus et al. 1990; Way et al. 1998). Participation rates of members of the Newfoundland Healthy Baby Clubs averaged 16.6 sessions per woman for group sessions and 12.0 for individual sessions. These figures were substantially higher than the national range of six to eight group sessions per client documented in Health Canada's *Canada Prenatal Nutrition Evaluation* (1997). Both Ketterlinus et al. (1990) and Way et al. (1998) documented a positive correlation between pregnancy weight gain and the period of time spent in comprehensive prenatal programming which included food supplementation, nutrition counselling, food preparation and support. All the women of the HBC delivered babies of $\geq 2,500$ grams. Thus, it appears the length of participation did not affect birth weight in this group of subjects; all babies were of healthy birth weights.

Incentives to Recruit Women Participants and Encourage Continued Participation in Prenatal Care

The HBC Program provides incentives such as stipends, food, celebrations of significant events and small gifts, since it is recognized that the women participants come from disadvantaged backgrounds. These incentives can be as basic as a taxi to a health appointment or a layette for the baby but they meet the families' needs and they are felt to be important in building their trust. Women participants of the HBC were positive about the use of incentives particularly the availability of transportation and child care as core

elements in the program and, judging by the responses, food supplements as well. *"It's wonderful you know; they come pick me and my little one up in the van every week for the HBC session. While I'm in my group she [child] goes to the play session."* Additionally, HBC members stated the accessibility of the service in their own community was an extremely positive factor. Also, knowing the members of the HBC group added to the comfortable and satisfying atmosphere. *"We [the pregnant mothers of the community] would meet at the community center once a week with the resource mother and we do things together; I really like it."* Other HBC components which women participants noted had enhanced and encouraged participation included the use of a peer counsellor, a comfortable, welcoming and informal atmosphere, flexible and adaptable programming to meet the needs of individual pregnant women, opportunities for networking, respect for clients and also important to women participants was the openness to include significant others, such as partners and family in the program.

During the personal interviews, the women participants were requested to rank what they thought were the most important elements of the HBC Program. The resource mother was ranked first by 35.4% of women participants and food supplements as second by 25.0%. Also, the amenities of the program have proven beneficial to the women participants and the resource mothers themselves. As one resource mother commented *"I've learned so much through the training, resources and the pregnant women themselves."*

Incentives have been frequently used to increase participation and generally to enhance motivation to learn. They can also serve as an attraction to seek and continue with prenatal care (Moutquin & Papiernik, 1990; Williams, 1994). However, it appears payment of money is not a primary motivator; as other elements such as support and nurturing are valued more by the women participants (Giblin et al. 1990; McLaughlin et al. 1992; Machala & Miner, 1991; Oakley et al. 1990; Lapierre et al. 1995; Rabin et al. 1991). Incentives incorporated in non-traditional comprehensive prenatal care are an example of a creative way to entice women to enter and maintain participation in prenatal programming for longer periods of time. Such a comprehensive approach to prenatal programming reduces barriers to participation such as those identified by the Health Canada *Prenatal Health Promotion Project* (1993a); Higgins et al. (1994) and Lia-Hoagberg et al. (1990) which included structural, psychosocial socio-demographic barriers.

In some European countries, for example, France, Norway and Sweden (Williams, 1994; Moutquin & Papiernik, 1990) broad population-based initiatives have been made available. Women typically register for benefits when they begin prenatal care. The incentives consist of transportation privileges, exclusion from work involving strenuous activity and night shift, paid leaves from employment to obtain care and priority for housing benefits. Pregnant women in France who adhere to the recommended schedule of prenatal visits receive a monthly cash payment of roughly \$170 (USA funds). These healthy public policies which are enforced by regulation and legislation have been

successful in achieving positive results such as reduced low birth weight rates (Moutquin & Papiernik, 1990). They warrant further exploration regarding their adaptability or duplication in this country. First steps could include an incentive to prenatal women under the National Child Benefit initiative and workplace enhancements such as parental leave or a reduced work week.

Impact of Comprehensive Prenatal Care

Traditional approaches to prenatal education and support have often not been successful (Higgins et al. 1994; Lapierre et al. 1995; Lia-Hoagberg et al. 1990). The HBC offers a unique and creative model to increase and maintain participation in comprehensive prenatal care which has proven to be effective (Way et al. 1998; Melba Rabinowitz, personal communication, December, 1997). In comparison, the agenda of formal traditional prenatal classes was predetermined, primarily by nurses, using an established schedule. For example, breastfeeding would be a prenatal class topic of 1½ hour duration taught only once. In the HBC approach breastfeeding information is provided over the length of the women's stay in the program; the format is quite informal, flexible and designed to meet the needs of the individual woman.

Some of the most significant successes of the Healthy Baby Club Program to date include:

- The rate of LBW was reduced. This is evident from ongoing program monitoring of client outcomes. For instance, none of the 48 mothers in this research study delivered babies of low birth weight – less than 2,500 grams. However, two of these women delivered babies of LBW in previous pregnancies. The mean birth weight

was 3,402 grams and the mean gestational age was 39.8 weeks. The 1998 Newfoundland Healthy Baby Club evaluation completed by Way et al. which included a population of 333, confirmed improved birth weight outcomes with the HBC Program “The average birth weight was 7.4 pounds [3,289 grams] with a range from 1.1[482 grams] to 10.6 pounds [4,706 grams]...birth weight was greater than 5.5 pounds [2,410 grams] for 94.1% of the babies...a significant number of participants (62.5%) had babies that weighed between 6.5 [2,863 grams] and 8.5 pounds [3,771 grams])” (p. 22).

- Lifestyle changes were evident. For example, positive changes in smoking behaviour for most women participants were demonstrated in this investigation – 21 of the women participants decreased smoking during pregnancy and five women quit smoking. Similar findings were reported by Way et al. (1998). Nutrition knowledge was increased and food preparation skills were enhanced as women participants reported using the recipe books which they had developed with their families and provided examples to the investigator. *“My kids love French toast which I learned to make at one of the cooking sessions and sometimes I make other things from the recipe book [the HBC] too – soup, salad, muffins.”*
- Breastfeeding rates improved. Breastfeeding initiation rates increased in this specific population group compared with Matthew et al.’s study in the general population. Of the 48 women participants of the HBC, 31 (64.5%) initiated breastfeeding and 17 (54.8%) women continued to breastfeed beyond two months postpartum compared to Matthews et al.’s findings of an initiation rate of 42.9% which declined to 17.4% at six months in their sample in the general population of 912 mothers. Further efforts are required to increase breastfeeding duration rates.
- Increased awareness of the problem of low birth weight. The HBC Program has heightened the awareness of the problem of LBW and the need to invest in preventive strategies to address this issue and its determinants by involving the community and drawing on its resources. By focusing on this global problem, the program has increased the emphasis on the value of women and children in society and has developed appropriate interventions such as the use of lay facilitators, incentives and provision of transportation and childcare.

Support, education, flexibility, accessibility and respect for participants are essential elements of comprehensive prenatal care. With the exception of smoking cessation, the evidence for strategies to reduce LBW was considered inconclusive when evaluated by the *Canadian Task Force on the Periodic Health Examination* (1994). In

this resource, maneuvers are given graded (A, B, C, D and E) recommendations based on medical evidence which documents potential benefits and harm. For example, smoking cessation interventions have an “A” recommendation – meaning there is good evidence to recommend smoking cessation interventions for all pregnant women who smoke. The recommendations regarding nutritional supplementation programs for women at high-risk of undernutrition to prevent LBW is inconclusive (“C” recommendation) since there is poor evidence regarding the inclusion or exclusion of such programs. Social support alone has not been shown to be effective in improving pregnancy outcome with regard to birth weight or gestational age at delivery, in high risk patient populations. Therefore, these programs were given a “D” recommendation since there is only fair evidence available for their support. However the evidence for each component, nutritional supplementation, social support and smoking cessation was assessed independently and exclusive of the others.

The success of the HBC Model may be due to the interaction of the combined components as well as the integration of community engagement, intersectoral coordination and collaboration. As Health Canada’s *Prenatal Health Promotion Project Report* (1993a); Higgins et al. (1994) and Lia-Hoagberg et al. (1990) report, a comprehensive approach such as the HBC attempts to reduce barriers to prenatal care and provides a “better chance of a healthy beginning” for the pregnant woman and baby. Resource mothers frequently voiced “*Pregnant women can join this program and obtain so many benefits – it’s all inclusive really.*” Likewise, women participants stated “*We all*

go [to the HBC] every week and we do everything there -- we talk, we get our questions answered, we learn and we wait for our babies."

Reorienting Provision of Prenatal Care

There are nine Healthy Baby Club sites located around the Province of Newfoundland and Labrador -- St. John's, Carbonear, Marystown, Botwood/ Grand Falls, Wing's Point, Belleoram, Corner Brook, Meadows and Piccadilly and future sites are planned for the Southern Shore and the Central, South and West Coast areas of the province. Historically, health services have been centralized in an institutional setting managed by health care professionals. Today, through increased knowledge and research of what actually determines health, many have come to realize that our health services need to be reoriented since "health care cannot compensate for the ill effects imposed by adverse social, economic, and environmental conditions" (Rachlis & Kushner, 1994, p. 15). Various researchers (Ericson et al. 1993; Goldenberg, 1994; Hack et al. 1994; Ketterlinus et al. 1990; Kramer, 1987; Perinatal Education Program of Eastern Ontario, 1998; York & Broton, 1992) have identified a causal relationship between specific determinants of health and LBW infants. The early identification and subsequent early intervention of modifiable characteristics such as poverty, smoking, nutrition, stress and social support, alcohol and other substances, work and prenatal care have been shown to improve birth outcomes and contribute to a decreased incidence of LBW (CICH, 1993, Haddow et al. 1991; Kliegman et al. 1990). Community-based outreach programs, versus traditional clinic-based programs, have been the focus of many studies which have

demonstrated the effectiveness of this approach (Deal, 1994; Julnes et al. 1994; McLaughlin et al. 1992; York & Broton, 1992). Access to the community-based Healthy Baby Club Prenatal Support Program was indirectly assessed in this study by reviewing the program criteria, the characteristics of the women participants and through interview questions regarding barriers and incentives. The individualized broad-based approach to prenatal care may be difficult to provide in an institutional setting. However, the full implementation of the program in the community setting will require increased resources.

Use of Non-Professionals for Prenatal Support

The most important component of the HBC Model, as identified by 17 (35.4%) of the women participants, is the resource mother – the mentor and role model. The recruitment of resource mothers is very concise. To enhance the relationship between the woman participant and mentor only women who display nurturing qualities and knowledge of the local area are to be selected as resource mothers. Studies such as those of Perino (1992), Julnes et al. (1994) and Lapierre et al. (1995) described many of the desirable characteristics of a mentor or peer counsellor. The 11 resource mothers in the study population were reported to be warm, interested and skilled in their mentoring role. *“She was there for me”; “I don’t know; it was just something I could talk to her and no one else [resource mother].”*

Nine of the 11 resource mothers worked in communities where they were born and grew up themselves. These preferred characteristics could increase trust and/or

reduce the likelihood of conflicting values and beliefs between women participants and mentors of the program. However, it is possible the “wrong” local person may be selected which could have untoward effects on the women participants and the program; one woman participant in this study felt the resource mother was showing favouritism with participants indicating a possible personality clash or tension. The HBC Program offers women participants an opportunity to build over time a relationship with others of similar circumstances and with the resource mother, which encourages ongoing participation in preventive prenatal care. Comments such as these demonstrate this relationship *“We were like sisters; we couldn’t wait for each others babies to be born.”* *“I couldn’t believe how people opened up and talked.”* Many of the women participants spoke of the bond and the camaraderie that had developed between themselves and the resource mother *“She was there for me.”* As well, the resource mother provided the encouragement and positive feedback which ultimately enhanced their self-esteem. The program also provides an opportunity to address the broader needs of women participants, frequently psychosocial ones – anxiety, fear, intimidation, isolation, low self-esteem. In this study and as Rajan & Oakley (1990) also discovered, participants wanted “more attention to their feelings and opinions” (p. 73). The HBC allows this individualized attention. As one woman participant reported *“It just feels good to know there’s someone there who cares and this makes you feel good about yourself.”*

Peer counselling had its “roots” in the 1960s in the area of mental health where lay counsellors developed a helping relationship with their clients (Lapierre et al. 1995).

Likewise, in the education field, peer counsellors bridged the gap between teachers and students. In the prenatal care and support arena, this approach can address most problems encountered when the traditional prenatal programs fail to meet the specific needs of women (Lapierre et al. 1995; Heins et al. 1987; Julnes et al. 1994; Mahon et al. 1991; Perino, 1992). The research of Heins et al. (1987), Higgins et al. (1994), Perino (1992) also showed that psychosocial variables associated with pregnancy such as anxiety and self-esteem as well as social support were influenced positively through a prenatal peer counselling program. The participatory approach as encouraged by Howard & Sater (1985) and used by the resource mother in the HBC means the women participants are actively involved in program activities. The resource mother acts as a facilitator rather than as a teacher or director; thus promoting the “growth” of the participants. The lay peer counsellor approach is an example of an intervention to reorient health services, as promoted by Epp (1986), where community resources are “tapped into”, reinforced through training and education and thereby increasing commitment and encouraging sustainability.

Nutrition and Provision of Food Supplements

Good maternal nutrition provides the basis for a healthy pregnancy and baby. Food supplementation during pregnancy in low-income populations has the potential to decrease low birth weight in the developing fetus (Kramer, 1987; Rabinowitz, 1993); Worthington-Roberts & Williams, 1993). However, a comprehensive approach versus

food supplementation alone has been confirmed as a superior strategy to improving pregnancy outcomes (CICH, 1993; Owen & Owen, 1997; Higgins et al. 1989).

All babies born to the 48 women of this study population were of healthy birth weight ($\geq 2,500$ grams). However, this study examined only women participants of the HBC who were two to nine months postpartum at the time of the personal interview. It is possible that other women participants of the program – those more than nine months or less than two months postpartum – delivered babies of low birth weight.

The provision of nutritional supplements was identified by women participants as the second most important component of the HBC surpassed only by the resource mother. The fact that the women participants themselves highlighted the significance of food supplementation emphasizes the point that vulnerable women are often unable, due to financial limitations, to routinely provide nutritious foods in their diet. As one woman participant emphasized, *"I would not be able to buy these foods [supplements] on a regular basis."*

The effects of food supplementation are also enhanced by the length of time the pregnant woman takes these during pregnancy (Kotelchuck, 1984; Way et al. 1998). Therefore the benefits are limited for those individuals who commence the program late in pregnancy.

Two birth anomalies – spina bifida – occurred in this small cohort of women in prior pregnancies which may be linked to nutritional deficiency, specifically folic acid. No anomalies occurred in the births of this study population.

The success of such programs as the Montreal Diet Dispensary and the Women, Infants and Children (WIC) attests to the effectiveness of food supplementation. An evaluation of the Montreal Diet Dispensary Program using a comparison of weights of babies born before and after they started participating in the program showed the rate of low birth weight was cut in half (Higgins et al. 1989). Similarly, the WIC Program demonstrated a decrease of 25% in the incidence of LBW and 44% for very low birth weight (Owen & Owen, 1997).

Food security is a major issue for families in poverty which needs to be addressed. Ideally this should be done through public policy and community initiatives such as Community Gardens and Community Kitchens which can assist vulnerable groups in accessing healthy food (Canada's Action Plan for Food Security, 1998; Hanrahan, 1994; Health Canada, 1998; Milio, 1988).

Individual and Group Support

The resource mother was singled out for the ongoing support she provided, as was the community health nurse. The favourite activity identified by the women participants was the group sessions which provided a mechanism for sharing experiences. For example, the cooking sessions with the group and the resource mother provided a

practical and participatory experience to learn ways to select and prepare food and they frequently facilitated rapport within the group. Women participants described these sessions as much more than cooking since they provided an informal communication mechanism, a means of sharing their knowledge and experiences and a networking forum. *"Often we cooked, talked and then we sat down and ate...I really enjoyed the cooking sessions,"* thus, demonstrating the value these women participants attributed to the support networks and supportive environment created in the club.

Actually the resource mother was identified as the key component who links and brings all things together. The relationship she develops with the women participants is vital to the overall program's success. This was evidenced in the respondents' replies to such questions about what they liked best about the HBC; what components should be included to ensure pregnant women feel comfortable; the extent they were comfortable with those involved with the HBC; and the most essential elements of the HBC. Emphatically, the women participants of the HBC "sang the praises" of the resource mother and emphasized how crucial she is to the success of this program *"She listened to me and I could talk to her and no one else...I felt close to her [resource mother]"; "She made it fun."* The resource mothers in this study had built a level of trust and rapport with the vulnerable women participants that enabled the women to grow, develop and participate fully in their own care with the emphasis on the non-medical aspects of prenatal care.

Time and time again during the personal interviews the researcher heard the participants (both women participants and resource mothers) comment on the value and benefits of group support *"I looked forward to going there [HBC sessions] every week; sometimes we just sat and talked; it was real nice."* The fostering of a supportive environment is integral to the HBC Prenatal Support Program. This was created through a comfortable, non-judgmental and empathic milieu in both individual and group settings. This aspect of health promotion was directly assessed in this study with very positive responses.

The respondents also identified as important other support elements such as the multi-disciplinary team – the community health nurse, nutritionist and breastfeeding mothers. The support system and multi-disciplinary approach could be greatly enhanced and strengthened if all resources – financial and supportive -- were more readily available particularly in rural areas of the province.

In spite of the research which does not demonstrate conclusive evidence, the importance of social support in improving pregnancy outcome is becoming increasingly recognized in combination with other strategies. Environments that offer support and mutual aid to vulnerable pregnant women can result in healthier pregnancies (Billingham, 1989; Higgins et al. 1994; Heins et al. 1987; Hubbard et al. 1984). Integral to the HBC Prenatal Support Program is the fostering of supportive environments. It is believed that in circumstances where stress is high, a supportive milieu can lead to the development of self-esteem and a network of varied and accessible resources for coping with stress

(Giblin et al. 1990; Heins et al. 1987; Hodnett, 1993; Hubbard et al. 1984; Lapierre et al. 1995).

Billingham (1989) described a center in the USA where health visitors and parents come together and pointed out that groups such as these provide the opportunity for people to meet, share and connect with others in similar situations as themselves. The group sessions enable participants to learn from each other and to compare their lives and childcare methods. Additionally, the group provides relief from stress, frequently making individual situations more manageable. The group also offers support and understanding to those isolated by reason of economics, culture, ignorance or fear.

Schorr and Schorr (1988) authors of Within Our Reach – Breaking the Cycle of Disadvantage claim that it is within our reach as a society to take preventive action to break the cycle of disadvantage and change the odds of vulnerable people in order for preventing “rotten outcomes”. These writers stress that it is crucial that society and providers of care create supportive environments for families to achieve the ultimate goal – a child who can contribute fully in society. Creating supportive environments is also a basic tenet of Epp’s *Charter for Health Promotion* (1986).

Multi-disciplinary Approach

The HBC Program draws on many disciplines from the community such as the community health nurse, nutritionist and others such as the lactation consultant or doctor. All contribute significantly from their varied areas of expertise. Often resource mothers

and the community health nurse hold joint sessions on particular topics such as breastfeeding, relaxation, smoking and labour and delivery. Their varied approaches usually add to a conducive learning environment for the women participants (Howard & Sater, 1985; Knowles, 1973; Morton, 1991). However, broadening the multi-disciplinary team may include others who are not sympathetic to adult learning principles and methods or reading material at the literacy level of participants which could result in an environment which does not promote learning.

When women participants of the HBC were asked to rank, by comfort level, those people with whom they interacted with in the HBC – resource mother, nutritionist, community health nurse, or other – some answered they had difficulty making a choice between the resource mother and community health nurse; indeed, some felt equally comfortable with both, possibly indicative of the effectiveness of the multi-disciplinary approach. However, some social desirability bias may be reflected in their responses considering the fact that most of these women live together in small communities and many continue to participate in follow up programs with many of the same people. Women participants reluctant to respond negatively may not have voiced their true opinions. However, this was not evident in the responses received as participants spoke quite openly and frankly including some negative comments and suggestions for improvement.

Resource mothers frequently consulted with the Health and Community Services Regional Nutritionist regarding new entrants to the HBC or on an “as needed” basis as

part of the ongoing monitoring of the women participants' food intake or in response to queries. However, in some rural communities the nutritionist is not readily accessible except by telephone or periodic visits; thus direct contact is limited. Indeed, women participants felt they could not rank their level of comfort with the nutritionist as they stated they did not have enough, or in some cases, any contact with this individual. One community partnered with the local hospital dietitian who provided ongoing support. Other examples of the multi-disciplinary approach include the availability of nutritionists, doctors, social workers, school personnel such as teachers and guidance counsellors, hospital personnel including obstetrical staff as consultants to the program and specifically to the resource mothers. A breastfeeding mother, a past woman participant of the HBC, is often invited to come to the group, to offer helpful tips to others and generally to demonstrate a success story.

The multi-disciplinary approach expands the supportive environment for women participants of the HBC and strengthens community action by drawing on community-wide resources which will increase the likelihood that the program will be sustained.

The experiences of women participants and resource mothers have been described drawing on their input during the personal interviews. These accounts provide insightful data for future prenatal programming.

6.5 Women Participants – Indicators of Their Satisfaction With the HBC

As previously outlined in Chapter 5, the majority (96.3%) of women participants were extremely pleased and satisfied with the HBC Program *“It was great”*; *“I really enjoyed it”*; *“I learned so much.”* Other satisfaction indicators were assessed through personal interviews using a structured questionnaire yielding both quantitative and qualitative data (see Appendix I). As well, other measures included the continued participation of members once they joined the program and their recommendation to others to join the program. Satisfaction is an indicator of a supportive environment. The resource mother was highlighted for the ongoing support she provided as was the community health nurse and, in some specific instances, the nutritionist. Two women participants voiced isolated comments of dissatisfaction. These comments centered on scheduling of HBC sessions and content of the program.

The importance of satisfaction as a variable is two-fold; it is an indicator of the quality of a program and it is a powerful stimulant to increase the use of a service (Handler et al. 1996; Hsieh & Kagle, 1991; Zweig et al. 1986). As well, Dennis et al. (1995) concluded satisfaction with prenatal services may influence when women begin prenatal care services. Therefore, it is essential to understand which features of prenatal care women value in order to recruit and maintain their participation. Improved programming for this vulnerable population could ultimately lead to a further decline in the rate of LBW (Carr-Hill, 1992; Howard & Sater, 1985).

Goldenberg (1994) recommended continuing research to develop evidence-based practices and to understand the most appropriate and effective methods of implementing these practices. As well, he emphasized enhancing strategies known to reduce infant mortality and the long-term disability of LBW babies. Research is critical to this self-correcting exercise and evidence-based decision making which should be oriented to healthy public policy. Inclusion of both qualitative methods and participatory research have each been shown to be important because they encourage an interactive learning process, contribute to the building of social trust and finally to successful policy implementation (Hanrahan, 1994; Health Canada, 1998; Milio, 1988). Analysis of findings, at both the individual and community level, can assist in determining best practices and serve to enlighten funding decisions (Hanrahan, 1994; Health Canada, 1998; Milio, 1988).

Overall, women participants who participated in the HBC Program indicated quite openly their high level of satisfaction with the program. They also provided suggestions for improvement to increase the efficiency and effectiveness of the program.

6.6 Women Participants and Resource Mothers – Spin Offs and Benefits of the HBC

Development of Personal Skills

The enhancement of personal skills was found to be an important spin off and benefit of the HBC. These were assessed in the study through the analysis of findings

following the personal interviews with the 59 participants. With these skills participants felt empowered to participate in decisions regarding their own care. The HBC Model, primarily through the resource mother, facilitates strategies which encourage the development of personal skills. Some examples of these strategies include: breastfeeding education and support, support for lifestyle changes and ultimately empowerment. This aspect of health promotion was a particular focus of this research.

Breastfeeding

It has been well documented that breastfeeding is one of the best starts a mother can give her baby (MacLean, 1998; Worthington-Roberts & Williams, 1993). From the study population of 48 women participants, 31 (64.6%) initiated breastfeeding following delivery of the baby. This is substantially higher than the 1997 provincial rate of 53% (MacLean, 1998). Matthews et al. (1995), in a longitudinal study of 912 mothers from the general population who gave birth in Newfoundland and Labrador in 1992, found that less educated mothers with lower-incomes were less likely to initiate breastfeeding. The data from this research provides another view. It is likely in this vulnerable sub-population of women that the one-to-one support was responsible for more mothers initiating breastfeeding. It is plausible that if all women could be provided with this kind of support the provincial initiation rate might be much higher. Seventeen of the 31 women participants who initiated breastfeeding in the HBC continued to breastfeed beyond two months; ten for three to six months. These results regarding the “drop off” of breastfeeding after initiation are consistent with Matthews et al.’s study (1995) which

reported that only 17% of their sample were still breastfeeding at six months. What was encouraging was the fact that three women participants who had had children previously but had never breastfed before did so this time for an average of two and one-half months. They cited the encouragement and support provided by the resource mother and the community health nurse as crucial factors in their decision to breastfeed and to continue with breastfeeding. On the basis of these findings, it appears that infant feeding practices can be changed within a supportive environment which allows the development of new skills.

Three of the 48 (6.3%) women participants stated they were not “open” to breastfeeding at all. They referred to breastfeeding as “*gross*” and embarrassing. They added that this topic was not appropriate for the HBC sessions if it was not applicable to them. Considering these comments it may be necessary to put more effort into education to help women to accept their own bodies and to help society to increase its comfort level with breastfeeding.

Lifestyle

The two primary lifestyle factors addressed with this study population were smoking and nutrition.

During the personal interviews two women participants commented “*Smoking helps me cope better*”; “*I like to take time out with a cigarette.*” Resource mothers stated that smoking is addressed during most of their interactions with the pregnant women.

However, they added that they give the women “their space” if they feel they need a cigarette because they realize that continuing to smoke during pregnancy can be accompanied by feelings of guilt and shame. It was also evident that the women participants were not always aware of the harmful effects of smoking or second hand smoke. They reported the information provided in the HBC Program helped them understand the risks of smoking and exposure to second hand smoke. This resulted in their making informed choices such as not smoking in the household or around the baby and not permitting others to do so, as well – thereby exhibiting their enhanced decision making and empowerment skills. *“I gave up [smoking] when I found out I was pregnant”*; *“We don’t smoke around the baby or in the baby’s room”*; *“If I need a smoke I go outside, now [since the baby’s birth].”* *“The community health nurse gave me [no smoking] signs to hang up around the house so others won’t smoke here.”*

A smoking rate of 54.2% was reported by the women participants who participated in the HBC during pregnancy. This compares with a rate of 19.2% for 20 to 34 year olds and 27.2% for 35 to 49 year olds in Newfoundland and Labrador women of childbearing age. Considering this is a vulnerable sub-population group these higher smoking rates are not unexpected since many of these women live in poverty, stress and isolation on a daily basis (Kliegman et al. 1990; Kogan, 1995; Lia-Hoagberg et al. 1990). With the individual and group support of the HBC, 21(80.8%) of the initial smokers reduced the number of cigarettes smoked and five (19.2%) quit smoking altogether during their pregnancy. At the time of the interview, when the women participants were

two to nine months postpartum, 14 (53.8%) of the former group had maintained decreased smoking and three (11.5%) of the smoking group were still non-smokers. The Perinatal Education Program of Eastern Ontario (1998) referenced Edwards et al.'s study (1994b) which reported that for pregnant women who received smoking interventions, quit rates ranged from 14% to 27% compared with 2% to 14% for controls. Women participants found helpful the one-to-one support and implementation of some behavioural changes such as chewing gum and taking only a few cigarettes when going out. However, one of the greatest motivators for change in smoking behaviour was the baby. *"If I continued to smoke while I was pregnant I knew it could affect the baby"; "I don't want to smoke around the baby."* As well, respondents reported impediments to changing their smoking behaviour which included: addiction, their stressful "life situations" and lack of support from significant others.

Maternal smoking is the most clearly established preventable risk factor associated with low birth weight and the most amenable to modification (CICH, 1993; Haddow et al. 1991; Hebel et al. 1988; Kramer, 1987; Perinatal Education Program of Eastern Ontario, 1998; Sexton & Hebel, 1984; Walsh, 1994). Researchers such as Haddow et al. (1991); Hebel et al. (1988) and Sexton & Hebel (1984) have also documented the benefits of smoking reduction on the infant's birth weight. Evidence from the randomized controlled trial of Sexton & Hebel (1984) demonstrated the benefits of smoking cessation in terms of higher birth weights. They found a statistically significant difference ($p < 0.05$) in the mean birth weight between the intervention group

[smoking cessation] and the control group [no intervention]. Evidence from Walsh's work (1984) indicates that the relative risk of having a LBW baby is nearly doubled in women who smoke during pregnancy compared with non-smoking women.

Oakley et al. (1990) and Stewart et al. (1996) discussed the significance of smoking in the lives of vulnerable women. Indeed, it is much more than "lighting up a cigarette." Many of these women of disadvantaged circumstances live in fear, isolation and poverty and smoking represents a sense of control in their daily lives. For others smoking provides a sense of pleasure, it is a stress reliever and it is perceived to prevent weight gain. It is also known that smoking is an addiction (Haddow et al. 1991; Walsh, 1984). Thus, the reasons why women smoke and continue to smoke during pregnancy are complex. Women require strong support and counselling in order to master the skills necessary to effect cessation or reduction of smoking behaviour.

Health Canada (1995b) reported that about 75% of women of childbearing age who smoke have made at least one serious attempt to quit smoking. The motivation to quit is evident; if counselling regarding smoking cessation were available it could offer the support to change. It has been shown that expectant mothers who quit early in pregnancy may be more successful in staying smoke-free than those who quit later in pregnancy. Cessation programs have proven to be helpful at this stage of pregnancy (first trimester) when motivation is highest (Health Canada, 1995a and b).

As well, the HBC Program incorporates nutrition education, nutrition counselling and food supplementation components. The food supplements provide the “core” ingredients a woman needs to maintain a healthy pregnancy. The women participants are actively involved with the resource mother in grocery tours, developing and using recipes, cooking sessions, sharing ideas on buying, preparing and cooking healthy foods and, particularly how to incorporate the food supplements into their diet. Women participants expressed that not only did they find these activities helpful in increasing their knowledge and skills but they also enjoyed them *“They were so much fun.”* Respondents viewed the “spin offs” of these activities as beneficial for the baby, the pregnant woman, the resource mother and their families.

This participatory educational approach enhances the vulnerable woman participant’s knowledge and skills regarding healthy eating and promotes learning and participation (Cross, 1982; Howard & Sater, 1985; Knowles, 1973; Morton, 1991). Its success in the HBC is evident.

Other effective programs such as the Montreal Diet Dispensary in Canada and the Women, Infants and Children Program in the USA have acknowledged the need for food supplementation of vulnerable women during pregnancy (Higgins et al. 1989; Owen & Owen, 1997). Way et al. (1998) also reported that the longer a pregnant woman takes food supplements and participates in prenatal care the higher the birth weight of the baby.

Empowerment

The experiences of the women participants of the HBC Program and the resource mothers were assessed through the personal interviews. These were supported by observation of current participation and activities. These were reported to be beneficial and empowering for both participants and their families. The study group stated that their levels of self-worth, self-esteem, confidence and assertiveness had been raised. Their knowledge of pregnancy, relaxation, nutrition, breastfeeding, sexuality, lifestyle and parenting increased.

Resource mothers stated that being in the program influenced their attitudes resulting in their being less judgmental and having more empathy for others, particularly for those of vulnerable circumstances. *"What resiliency these women have."* Newly acquired skills of working with others in a team and facilitating groups were also seen as an asset. Others valued the new acquaintances they had gained. *"I have a whole new group of friends."* The training and experience of being a resource mother gave these individuals the courage to try new things such as returning to school or entering the workforce. *"The Healthy Baby Club gave me the courage to go back to school."* However, this could result in frustration as well, since some women will be unable to build on their newly enhanced skills considering the limited opportunities available to women in small rural communities in Newfoundland and Labrador.

The women participants talked about the information provided and the providers themselves and how important these were to them. Women participants also had the confidence to relay what they did not like. They provided recommendations to improve the program related to scheduling, more individual support, increased emphasis on content areas such as labour and delivery, baby care, breathing techniques, safety and exercise and more efficient use of HBC time and sessions. Also, they commented on the resources used and some stated that the labour and delivery videos “*were gross*”, a comment not unusual among lay audiences in any prenatal program. Others felt that some topics were not applicable to them, for example, normal labour and delivery if a caesarian section birth was planned, or breastfeeding if they chose to bottle feed their baby. Knowles (1973) corroborates their recommendation. The information provided must be relevant to the audience but in group sessions total relevance to the total group may be difficult to achieve. Having the necessary resources available and accessible was also stressed. For example, vacant community health nursing positions should be filled as quickly as possible. Admission criteria to the HBC could be more liberal and, in fact, open to everyone. As one respondent commented “*The Healthy Baby Club is a great idea, everyone should be able to attend...I hope we never lose it.*” This suggests a population health approach may be more effective rather than a high-risk targeted approach; although it is unlikely that all components of the HBC would be extended to the total population alternative strategies and options could be explored. Actually, a

debate exists whether or not a targeted approach can effect a change in the low birth weight rate in the total population; further research is required.

“Strategies to enhance self-esteem and social support have to be developed to reach women at risk for receiving inadequate prenatal care” (Higgins et al. 1994, p. 26). The willingness of the women participants to comment on the program negatively as well as positively was seen as an indication of their increasing empowerment and confidence (Lapierre et al. 1995; Oakley et al. 1990; Stewart et al. 1996). It would then be expected that those women would be more likely to receive adequate prenatal care.

Community Partnerships

Strategies to address the problem of low birth are best achieved through a partnership with the community. This partnership is a premise of the HBC Model of prenatal support. Partnerships with the program and the local community through church groups, tenants associations and private or non-governmental associations such as the Single Parents Association or breastfeeding support groups are essential. Three of the Healthy Baby Clubs are accommodated in donated Newfoundland and Labrador Housing units, another three in local schools, one in municipal council space and two in community centers. The “train the trainer” approach using a lay facilitator/peer counsellor, such as the resource mother, supports the philosophy of strengthening community action by enhancing the skills of members of the community; this is an integral component of the Healthy Baby Club.

Coordination and collaboration are essential among all those sectors which determine health; education, justice, health and community services, human resources and employment and non-governmental agencies to enhance community action (CICH, 1992, 1993). As well, the active support of the general public is required to achieve successful outcomes and ensure sustainability in the community. Strategies such as the multi-disciplinary team used in the HBC Model demonstrate this approach.

Strengthening community action is important to ensure communities have the capacity to set priorities and make decisions on issues that affect their health. A community-wide approach to the reduction of LBW may involve a variety of strategies that focus on multiple health determinants (Health Canada, 1998; Perinatal Education Program of Eastern Ontario, 1998).

The spin offs and benefits of the HBC for participants and the community were found in this study to be positive.

The five health promotion strategies: (1) building healthy public policy, (2) creating supportive environments, (3) strengthening community action, (4) developing personal skills, and (5) reorientation of health services have been applied to the HBC Program initiative. The findings of the study confirm that the Healthy Baby Club addresses healthy public policy primarily through its integration of goals, interventions to reduce low birth weight in vulnerable sub-populations and its community-based

approach. Supportive environments are encouraged through the implementation of a lay facilitator, individual and group support, incentives and a conducive milieu.

Strengthening community action has begun since the community and its resources are drawn into the HBC initiative, and, hopefully this will promote its sustainability. The women participants' personal skills are enhanced through education, active participation and a supportive environment. Finally, the Healthy Baby Club Model of Prenatal Support is an example of a reorientation of health services to a community-based setting using a peer counselling model.

6.7 Limitations of the Study

While it might have been preferable to have a random sample of all participants extending over many years of the program, when actual numbers were finally made available for the study period the decision was made to use the total registered group. Eligible participants were all women participants of the HBC Program who were two to nine months postpartum and all resource mothers of at least six months experience during the study period -- December 1997 to June 1998. The study's eligibility criteria were broadened from four to six months postpartum to two to nine months postpartum to increase the size of the study population and to ensure representative geographic distribution of the women. The responses from the study population are interesting and provide useful information for future planning, however, it is not possible to generalize

these findings to the overall population of HBC women participants nor to disadvantaged women in the general population. Comparisons with others who have not had access to the program would have been useful but logistically difficult; for example socio-economic status variables are not available in birth records and other identifying factors which makes finding a sample for matching purposes problematic. Although useful associations can be inferred, cause and effect relationships cannot be established in a descriptive study.

There were 11 refusals to participate which must be taken into consideration as these women's input may have added different information. All eleven women had initially consented to be included but for varied reasons – illness, did not show for appointment or were not at home when visited or phoned – were not interviewed.

Initially the researcher hoped to retrieve a previously validated tool but none was available appropriate to this particular study setting. Thus, the investigator developed two survey questionnaires; reliability was assessed through a preliminary project, a subsequent pretest with representatives of the target population and comparison of results of identified questions with the national CPNP evaluation.

Another limitation was the fact that only one person analyzed the qualitative responses which could result in lack of objectivity. On the other hand, consistency of categorization is likely increased. Printed transcriptions were compared with taped material to catch omissions or coding errors.

The variability of time which elapsed from the women's participation in the Healthy Baby Club and the date of interview -- a range of two to nine months -- may have influenced the participants' responses. Likewise, the length of experience of the resource mothers, which ranged from six months to two years, could yield differing perspectives. Recall bias could exist. This was taken into consideration by comparing responses from resource mothers in the program for a few months versus those with many months of experience and responses from women participants of two months versus nine months postpartum. There were no consistent differences. In assessing the consistency of messages received -- overall satisfaction, positive experiences and recommendations for continuance of the HBC program -- duration in the program did not appear to impact results.

There also exists the possibility that the respondents were answering questions in a "socially correct" way or providing the response they thought the researcher wanted to hear. Critics have questioned the validity of self-reports. Avis et al. (1995) identified that client satisfaction surveys usually report high levels of satisfaction which they suggest is often due to inherent weaknesses in such surveys -- social desirability bias and a reluctance to express negative opinions. However, there were no discernible signs in the interviews that the participants were responding in such a manner. In fact, constructive, worthwhile feedback and suggestions were received. Women participants offered frank responses when asked what they liked least in the program and they offered recommendations for improvement based on their experiences.

For the participants' convenience the interviews were carried out where they stated was most convenient, creating a conducive environment which was mutually advantageous to the participants and the investigator. However, this resulted in the use of a number of settings such as community/resource centers, private homes and schools. Uncontrollable factors such as interruptions, noise, telephone calls, children present and running around, partners or friends present during the interview may have affected some respondents' replies to questions although this was not discernible in the participants' responses. Interviews in more public settings, with partners or children present did not show shorter or more "socially correct" responses.

Seven telephone interviews were conducted. These provided similarly detailed, frank information about the experiences of participants in the program related to lifestyle behaviours, satisfaction with HBC personnel and components and suggestions for changes and improvements. For example, when responses regarding interactions with staff were reviewed there were similar negative and positive comments between personal and telephone interviews.

Also, the use of a tape recorder could deter some responses if subjects felt restricted or uncomfortable. Most stated that they forgot about the recorder after a few minutes into the interview and only four refused to be audio taped, primarily because they were not used to the idea of being taped or were embarrassed.

Notwithstanding the above limitations, the data obtained from the study provide useful information concerning the perceptions of vulnerable pregnant women and resource mothers and about successful community strategies such as the Healthy Baby Club Model of Prenatal Support to reduce low birth weight.

CHAPTER 7

COMMENTS AND CONCLUSION

Two structured questionnaires were used as interview guides to elicit information from the women participants and resource mothers of the nine Healthy Baby Club sites in Newfoundland and Labrador. The themes emerging from the content analysis of the interviews were used to draw conclusions about the experiences of participants of the HBC Prenatal Support Program and to formulate general comments and ideas which may guide further policy and program development.

7.1 Comments

- Sustainability of the Healthy Baby Club Prenatal Support Program: Adequate funding must be secured to sustain this program which effectively supports vulnerable pregnant women and their families. Currently, all sites require additional funding to adequately serve the target groups. This is particularly true in the St. John's Region. Additional HBC sites across the province would increase program accessibility. More support services within sites, for example, drivers, would allow the resource mothers to use their time more efficiently and effectively.
- Advocacy Role: The community, health professionals (nurses, doctors, social workers, teachers) and non-governmental agencies must work collaboratively and in coordination to advocate for comprehensive community-based prenatal support

services which will encourage participation of vulnerable women in the Healthy Baby Club Prenatal Support Program as early in pregnancy as possible.

- Healthy Baby Club Model Must Adhere to its “Core” Elements: For example, the content and personnel must be flexible and continue to incorporate adult learning principles. Women participants have requested increased emphasis on labour and delivery, breathing techniques, baby care, lifestyle and child safety. Learning sessions must be kept short and some women participants recommended more one-to-one sessions. Teenagers, who have unique needs should receive special attention.
- Group Support: This is an important component in the HBC Model facilitated by the lay mentor, the resource mother. To be effective, groups must be small and all members should be motivated and encouraged to attend sessions regularly.
- Multi-disciplinary Approach: Resources must be available and accessible. Vacant community health nursing positions must be filled as quickly as possible if the HBC is to have consistent access to this valuable professional. HBC Programs require the expertise of a nutritionist, lactation consultant, social worker and increased involvement of the past graduates of the program to attain the program’s multi-faceted outreach objectives and goals. Other options such as teleconferencing, conference calls or pre-taped lectures/seminars could be explored to access resources .
- Ongoing and Continued Education of Resource Mothers: The resource mothers

highlighted educational needs in the areas of grief/loss/bereavement, breastfeeding support, facilitation skills and time management. These need to be addressed by the training program.

Based on the research literature and participants' comments and recommendations, the investigator notes the need for research in a number of areas. For instance, replication of this study using a larger sample and control group through cohort or case control designs. This could confirm the results of this study and enable the findings to be generalized to the broader population of vulnerable pregnant women. More rigorous qualitative research to strengthen this study and other prenatal research would be valuable. Further studies to examine the different variables affecting the problem of low birth weight (poverty, smoking, nutrition, alcohol and other substances, stress, education, age, work, prenatal care, genetics, medical problems, and others unknown) as well as assessment of appropriate interventions.

Further testing of the study instruments -- the structured interview questionnaires -- used in this study could be useful. A longitudinal study of participants to examine the long-term impact of the Healthy Baby Club Model of Prenatal Support on resource mothers, vulnerable pregnant women, their children and the community as well as sustainability in the community would provided data that is presently unavailable. Input from the additional key informants of the program such as community members

and leaders would enhance further development of community initiatives to address the needs of vulnerable pregnant women and their families. Further exploration of recruitment, cost benefit and client satisfaction comparing the volunteer versus paid resource mother is required. In depth studies of: breastfeeding -- initiation and continuance; smoking and other lifestyle behaviours; stress; violence; prenatal care within the HBC Program versus other programs are required areas of further research.

7.2 Conclusion

The Healthy Baby Club Model of Prenatal Support is an example of a primary prevention initiative and serves as a model for the delivery of prenatal care and support to reduce low birth weight. The purposes of this study included: (1) to describe the experiences of women participants and resource mothers of the HBC Program, (2) to assess the indicators of satisfaction of women participants with the program, and (3) to determine whether there were longer-term benefits and “spin off” effects for women participants and resource mothers that resulted from this program. These have been addressed and presented in detail from information provided by the participants in personal interviews.

Further study is required to fully evaluate the outcomes of the Healthy Baby Club approach but results to date are promising. This study as well as Health Canada's (1997a and b), Barrington's (1997) and Way et al.'s (1998) have addressed different aspects of

the program; all have found the program effective. This community-based approach to prenatal support which uses the resource mother concept has many positive aspects leading to improved access to prenatal services and empowerment of participants and the community, healthier pregnancies and decreased low birth weight infants. In this study there was consensus voiced by both the women participants of the HBC Program and the resource mothers that this approach is effective in reaching vulnerable pregnant women and their families and in maintaining their participation in prenatal and post natal programming. This success has primarily been related to the integration of a lay mentor model, multi-disciplinary approach, group support, nutrition supplementation and community engagement.

This descriptive study provides the basis for further research into initiatives that could further enhance the prevention of low birth weight or minimize its consequences by promoting the participation of vulnerable women, families and communities in strategies to promote healthier pregnancies.

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APPENDICES

APPENDIX A

OVERVIEW OF SELECTED PRENATAL SUPPORT PROGRAMS OFFERED IN CANADA AND UNITED STATES OF AMERICA

**(adapted from CICH Prevention of Low Birth Weight in Canada:
Literature Review and Strategies, 1992)**

Women, Infants and Children (WIC) Program USA

This program has been in operation in the USA since 1972. The program is directed toward low-income pregnant and postpartum women, nursing mothers and children from birth to five years. The program provides food supplementation through food vouchers or home delivery, individual nutrition counselling and referral to health services. Funding is provided by the federal government, administered by the states and delivered locally. Some states also provide funds to supplement funds from Washington. The program has been evaluated and has demonstrated many positive outcomes.

The Resource Mothers Program Norfolk, Virginia, USA

The Norfolk Resource Mothers Program (RMP) is a community-based lay home visiting initiative for pregnant adolescents. The Resource Mothers Program supports disadvantaged teens through the use of para-professional home visitors who are similar to the teens in race and socio-economic status. In addition to recruiting teens into the program and encouraging early prenatal care, the Resource Mothers Program provides teen mothers and their families with practical help and increases community awareness regarding infant mortality and adolescent pregnancy.

De Madres a Madres Arizona, USA

A prenatal outreach and education intervention for low-income, Hispanic women living in three migrant and seasonal farm worker communities in Arizona. The program includes three major elements: a Spanish language prenatal curriculum, a group of mature Hispanic women recruited from the target communities and trained as "Comienzo Sano" (healthy beginnings) Promotoras (health promoters), and the organization of a support network of local health professionals.

The Montreal Diet Dispensary Program Montreal, Quebec, Canada

The Montreal Diet Dispensary Program is one of the oldest of several active programs across Canada which try to improve the health of mothers and infants with nutritional counselling, food supplements and other supports during pregnancy. The Dispensary, started in the 1960s by Agnes Higgins to improve the health of poor women and their babies, combines nutritional supplements with social supports and suggestions for lifestyle improvements for pregnant women. The program targets women at-risk of delivering a low birth weight baby because of poverty, family violence, depression, psychiatric history or health and nutritional problems. A comparison of the weights of babies born to women before and after they started participating in the program showed the rate of low birth weights was cut in half. (Higgins, Moxley and Pencharz, 1989).

**Healthiest Babies Possible
Toronto and Vancouver**

A prenatal support program run by public health departments for many years. This is an example of a community-based multicultural prenatal outreach program for women at-risk of having a low birth weight baby affected by alcohol or drug misuse. They use lay counsellors. The program provides health and nutrition counselling, milk supplements and other supports to these women. Positive effects have been demonstrated particularly with the increase of the number of mothers who breast feed, improved eating habits, reduced smoking behaviour and increased support to families.

**Health for 2
Edmonton, Alberta**

This is a collaborative program involving several agencies and is designed to serve low-income pregnant women in inner city Edmonton. Milk coupons, a low literacy manual and caring attitudes encourage poor women to identify themselves early in pregnancy and to maintain contact with community agencies.

**Naître égaux-Grandir en Santé
Quebec**

This is a comprehensive preventative perinatal program that reaches out to women in the poorest neighborhoods in the province of Quebec. A team approach, the development of a trusting relationship based on respect for participants and nutrition supplementation enable participants and caregivers to work out a personalized plan for support and followup.

APPENDIX B

SUMMARY OF POTENTIAL ESTIMATED WOMEN PARTICIPANTS IN THE HEALTHY BABY CLUB AT THE NINE SITES (11 Locations) as of November/97

Area	Project Name, Add. PH & Fax #'s	Resource Mother	*Jan 1998	*Feb	*Mar	*Apr	*May	*June	*July	*Aug	*Sept	*Oct	*Nov	*Dec	Total # of projected deliveries
St. John's Region Buckminster Circle Community Centre MackMoran Community Center	Buckminster Circle HBC 579-0118 St. John's Torbay 431-6984 (h) 709-739-4096 Fax 709-739-8397		?	?	?	0	1	1	2	3	2	0	1	0	10
	MackMoran HBC St. John's		?	?	?	?	?	?	?	0	0	0	2	0	2
	709-722-1168		?	?	?	0	1	1	2	3	2	0	3	0	12
Eastern NF Region Carbonear	Trinity Conception HBC 9 Nfld. Dr. Carbonear A1Y 1A4 709-596-0712 Fax 709-596-0713		?	?	?	3	0	0	0	3	0	4	0	0	10
	Birch Peninsula Brighter Futures Inc. P.O. Box 659 Marytown AOE 2N40 709-239-2922 Fax 709-239-2902		?	?	?	2	2	2	1	0	0	0	1	3	11
	Sub Total		?	?	?	5	2	2	1	3	0	4	1	3	21
Central NF Region Gender Bay - Wings Point	Gender Bay & Area HBC Riverwood Academy Wings Point, Nfld. A0G 4T6 709-676-2475 Fax 709-676-2238		0	2	2	2	0	0	0	0	1	2	0	2	11
	Exploits Valley Community Coalition 61 13 th Ave., Grand Falls-Windor A2B 2E6 709-489-8940 709-257-3657		?	?	?	?	?	?	3	2	4	4	1	0	14
	Fortune Bay North HBC General Delivery, Bellisrum AOH 1B0 709-481-2111 Fax 709-481-2111		?	?	?	?	?	?	?	2	1	1	1	1	6
Western NF Region Corner Brook North Shore Bay of Islands, Meadows Corner Brook (Dunfield Park)	Northshore Early Childhood Assoc. Box 3764, R2C2 Corner Brook, NF. A2H 6B9 709-783-3996 Fax 709-783-2970		0	2	2	2	0	0	3	4	6	7	2	3	31
	Family Outreach Resource Centre 9 Vine Place, P.O. Box 712 Corner Brook, A2H 6E5 709-634-2316 Fax 709-634-2319		4	0	2	0	0	1	2	0	1	1	2	0	13
	St. Jean Vianney School, Piccadilly P.O. Box 421, Stephenville A2N 2Z5 709-642-5414 or 642-5392 (h) Fax 709-642-5983		?	?	?	?	?	?	?	1	0	5	4	1	15
Port au Port Peninsula (Piccadilly)	Sub Total		4	0	2	0	1	2	5	3	5	6	7	3	38
	TOTAL		4	2	4	7	4	5	11	13	13	17	13	9	102

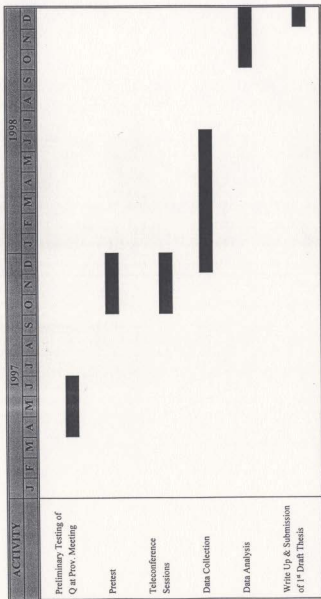
Key:

? = Information unknowns to be retrieved

* = Number of births in each month

APPENDIX C

STUDY TIME LINE



APPENDIX D

MEMORIAL UNIVERSITY OF NEWFOUNDLAND - FACULTY OF MEDICINE

HUMAN INVESTIGATION COMMITTEE - APPLICATION FORM

This form is designed to cover as large a variety of proposals as possible: not all questions will apply to all projects; however, please consider each question carefully before writing it off as "Not Applicable".

Please type your answers. If the space provided is not adequate and it is necessary to add further information, please submit this in **single spaced typing**, indicating clearly to which question the addition refers.

~~YOU ARE ASKED TO FORWARD 16 COPIES OF APPLICATIONS AND CONSENT FORMS WHEN SUBMITTING TO THE COMMITTEE AND 23 ADDITIONAL COPIES PER HOSPITAL INVOLVEMENTS**~~**

1. Name of Principal Investigator: Patricia Nugent

Mailing Address/Telephone No.: Box 8545, Moncton, Nfld A1X 1B6/834-4635(h), 738-4885 or 4800(w).

2. Name(s) of Co-Investigator(s): N/A

Name of supervisor, if Principal Investigator is a student: Dr. Sharon Buehler

4. Title of investigation: **(PLEASE HI-LIGHT KEY WORDS)**
The Experiences of Pregnant Women and Resource Mothers with The Healthy Baby Club Model of Prenatal Support.

5. What is the proposed starting date? (Must be at least 4 weeks later than date of receipt of this application by the H.I.C. Office.)
As soon as possible - September 5, 1997.

6. What is the anticipated date of completion of the study? February, 1998.

7. Please fill in the appropriate information:

Hospital/Community Setting Involved	Involves Patients/Residents	Involves Records	Involves Facilities	Submitted to Participating Community Health Ethics Committees
Community Health Regions-Province of NF and Labrador	Resource Mothers and Pregnant Women	No	No	N/A
Healthy Baby Club Advisory Committee NF and Labrador	Resource Mothers and Pregnant Women	No	No	Approved

This application may be forwarded to participating institutions if requested. Yes.

State, briefly, the objectives of the investigation:

To study: a) the experiences of pregnant women and resource mothers with various aspects of this program; b) the satisfaction levels of pregnant women with the program; c) the benefits and "spin off" effects for pregnant women and resource mothers that resulted from the program.

-
9. What is the scientific background and rationale for the study? What benefits may be anticipated? Have any relevant human or animal studies already been conducted? Please specify. (Attach another sheet of paper, if required.)

The Healthy Baby Club (HBC) Model of prenatal support is a project funded under the Canada Prenatal Nutrition Program and operated under the auspices of the Brighter Future Coalitions in the Province of Newfoundland and Labrador. This community-based holistic model of prenatal support uses the resource mother concept. The resource mother is a lay person, often indigenous to the culture, who is trained to assist pregnant women and their families with the non-medical dimensions of pregnancy.

Characteristics of the HBC include:

- 1) peer support
- 2) team approach
- 3) food and vitamin supplements
- 4) comprehensive programming including education, referral and counseling
- 5) breast feeding support
- 6) standardized program tools
- 7) province wide advisory committee and support network.

Goals of the HBC program are:

- 1) to reduce the barriers for participation in prenatal education
- 2) to offer a program designed specifically to meet the needs and enhance the health of high risk women and their families
- 3) to offer a viable option to traditional approaches to prenatal education.

Previous studies have explored the effectiveness of a variety of programs providing pregnancy support for high risk women (Canadian Institute of Child Health, 1993, Health Canada, 1993, Lapierre J, Perreault M, Goulet C, 1993). Heins, H, Nance W, Ferguson J. 1987; Oakley, A, Rajah, L., Grant, A. 1990).

However, there is little research into the community based model which uses resource mothers. Such information is valuable in adding to the available body of research knowledge about support programs. It will also be useful for future planning and development of prenatal programs in the province. As well, it may be helpful in sustaining support for effective programs.

Health Canada is currently evaluating the HBC program; my study focuses on an aspect of the program not being evaluated - the satisfaction of the program clients and short term effects of participation. There is anecdotal evidence which suggests that in addition to providing pregnant women with educational support program, some clients and resource mothers were "empowered" to take on other activities and programs. I hope to document this in my study.

-
10. Which of the following are to be employed in the investigation? List only those that are NOT part of normal patient care.

(a) Samples to be taken from subjects: State type of sample, frequency and amount.

Nil.

(b) List the procedures and any tests or substances to be administered to patients: special diets, drugs (state dose and frequency), isotopic tracers, etc.

Nil.

(c) Questionnaires: Attach copy of questionnaire to be used.

Two structured interview questionnaires attached:

(1) Pregnant woman's questionnaire

(2) Resource mother's questionnaire

(d) Is this application for a clinical trial?

() Yes (X) No

If yes, what "phase" of the trial does this study represent? What is the design of the trial (e.g. open, double blind, etc.)?

-
11. Does the study involve the use of any radioactive material?

() Yes (X) No

If yes, specify.

A positive response to this question will be communicated to the Radiation Control Committee.

-
12. Give a brief description of the design of the study. (Please also attach one copy of a protocol if available.) This should include details of subject selection, sample size calculation (if applicable), outcome measurement and details of analysis.

Design: Descriptive Cross-Sectional Study

Subjects: (1) Resource mothers with a minimum of six months experience.

(2) Pregnant women who have participated in the Healthy Baby Club Programs

Methods: Convenience sample of available potential participants from 11 project sites. Face to face interviews.

Outcome: The study will provide quantitative and some qualitative data necessary to assess resource mothers and pregnant women's experiences with this community based model of prenatal support.

Data entry and analysis: Epi Info 6 to produce frequencies and proportions.

13. Number of subjects: Will pregnant women be excluded? State how subjects will be selected.

Resource Mothers - Approximately 22: (2 from each site)
Pregnant Women - Approximately 55: (5 from each site)

14. Number of controls: State how they will be selected.

Not applicable to project comparisons are being made within the group.

15. What (a) risks, (b) discomforts or (c) inconveniences are involved?

a) No risks

b) No discomforts

c) The greatest inconvenience will be the time factor; each interview will take 30-45 minutes.

16. Are there any immediate benefits arising out of the study for the subjects? (Specify)

Results and the summary of the study will be made available to the subjects and the agencies involved.

17. What steps will be taken to preserve confidentiality?

All documentation regarding the subjects and interviews will be coded.

All client information will be kept confidential.

This information will be kept in a locked file cabinet accessible only by the researcher.

Tapes will be destroyed following the study.

18. Explain procedure for obtaining consent.

Who will make the initial contact with the subject? Patricia Nugent

Who will obtain the consent of the subject? Patricia Nugent

19. Will subjects include minors

() Yes (X) No

mentally incompetent persons

() Yes (X) No

legally incompetent persons

() Yes (X) No

If so, what steps will be taken to protect their rights?

20. What mechanism will there be for debriefing or feedback to subjects?

A report and summary of the study will be made available to the subjects and agencies involved.

21. (a) Will volunteers receive reimbursement for expenses () Yes (X) No
time lost from work () Yes (X) No
payment for participation in the study? () Yes (X) No

**** Please specify on separate sheet according to Guidelines for the Remuneration of Research Subjects.**

- (b) Will there be any third party remuneration for referral of patients? () Yes (X) No

**** Please specify on separate sheet according to Guidelines for Payment of Finders' Fees.**

**** AVAILABLE IN THE OFFICE OF RESEARCH & GRADUATE STUDIES (MEDICINE)**

22. Please enclose a copy of the budget for this study, including an indication of source of funding.

Will the budget be administered through the University Finance Office? () Yes (X) No
If no, specify.

Will the investigator accrue any benefits by virtue of participation in this study? (X) Yes () No

No budget attached. Any expenses incurred will be assumed by the researcher - Patricia Nugent

23. Is this part of a multi-centre study? () Yes (X) No

24. Will data become the exclusive property of a pharmaceutical company or other outside agency? If yes, please elaborate. () Yes (X) No

25. It is the responsibility of the investigator to ensure that permission is obtained from clinicians, departments, institutions or communities whose patients/residents will be involved in the study. Have the appropriate contacts been made?

I have made contact with the provincial Department of Health (see letter attached).

I have met with representatives/resource mothers and coordinators from the eleven sites at the Networking Meeting of the Healthy Baby Club Projects in St. John's, May 1997 to explain the project. All were supportive. I will hold a teleconference with Community Health Nurses in September to explain the project in detail; all are familiar with the HBC project in Newfoundland.

26. Have you read "Guidelines on Research Involving Human Subjects" (MRC. 1987) (X) Yes () No

Date of submission:

JULY 28, 1997

Signature of principal investigator:

Patricia Nugent

Signature of supervisor, in case of student application:

Sharon Buchler

QUESTIONNAIRES

Introduction

These questionnaires were developed initially to be mailed. Introductory scripts for the interview questions are still being developed. The content of the questions will be retained.

An (*) denotes questions which duplicate those in the Canada Prenatal Nutrition Program Evaluation and are included for verification purposes.

THE EXPERIENCES OF PREGNANT WOMEN AND RESOURCE MOTHERS WITH THE HEALTHY BABY CLUB MODEL OF PRENATAL SUPPORT

My name is Patricia Nugent and I am a Community Health Nurse and a Graduate Student of Memorial University of Newfoundland. As part of my studies at Memorial University I am carrying out research related to the Prenatal Program - the Healthy Baby Club. I have received approval from the Provincial Advisory Committee and Memorial's Human Investigation Committee to conduct this study.

Purpose of Study:

The purpose of this study is to assess:

- (a) the experiences of pregnant women and resource mothers with various aspects of this program.
- (b) the satisfaction levels of pregnant women with the program.
- (c) the benefits and "spin off" effects for pregnant women and resource mothers that resulted from the program.

Description of Procedure:

Your participation in the study is entirely voluntary. You do not have to participate or answer any questions you do not wish to. I will ask you questions in a face to face meeting. Some questions will be about you and some will be about the program. We can do the interview in your home or some other place that is convenient or easy for you. I expect the interview to take about half an hour to one hour of your time. I don't expect any problems for you in doing this interview.

Confidentiality:

All of the information you provide will be kept confidential. I will keep my information in a safe place with a lock. I will share the detailed information only with my supervisory committee. I will be the only person to know who you are. I will give each interview a code. I will not identify any one person when I use the information. If it's okay with you, I'd like to use a tape recorder. This will help me make sure my notes are accurate. I will be the only person to listen to the tapes. After I have finished my research, I will erase and dispose of the tapes. I will be happy to share the results of my work with you.

Liability Statement:

Signing this document means you give your consent. This means you agree to participate in the study. It also means you understand the details I have explained to you about my research project. This does not mean you have given up your legal rights or that we have given up our legal responsibilities to you.

Thank you for your time and cooperation.

Interview:

		Code #
Participant's Signature	Witness	Date

Taping:

Participant's Signature	Witness	Date
Permission to access Healthy Baby Club Information:		

Participant's Signature	Witness	Date

☐ Results of Study Requested

APPENDIX E



Memorial

University of Newfoundland

Human Investigation Committee
Research and Graduate Studies
Faculty of Medicine
The Health Sciences Centre

1997 08 21

Reference #97.126

Ms. Patricia Nugent
Box 8545
Manuels, NF
A1X 1B6

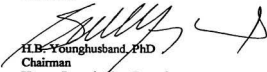
Dear Ms. Nugent:

At a meeting held on August 14, 1997, the Human Investigation Committee reviewed your application entitled "The Experiences of Pregnant Women & Resource Mothers With the Healthy Baby Club Model of Prenatal Support".

The Committee granted full approval of the application.

We take this opportunity to wish you every success with your research study.

Sincerely,



H.B. Younghusband, PhD
Chairman
Human Investigation Committee

HBVjglo

- c Dr. K.M.W. Keough, Vice-President (Research)
Dr. E. Parsons, Vice-President, Medical Services, HCC

SUPPORT





Memorial

University of Newfoundland

Office of Research and Graduate Studies (Medicine)
Faculty of Medicine
The Health Sciences Centre

1997 08 21

TO: Ms. P. Nugent

FROM: Dr. Verna M. Skanes, Assistant Dean
Research & Graduate Studies (Medicine)

SUBJECT: Application to the Human Investigation Committee - #97.126

////////////////////////////////////
The Human Investigation Committee of the Faculty of Medicine has reviewed your proposal for the study entitled "The Experience of Pregnant Women and Resource Mothers With the Health Baby Club Model of Prenatal Support".

Full approval has been granted for one year, from point of view of ethics as defined in the terms of reference of this Faculty Committee.

For a hospital-based study, it is your responsibility to seek necessary approval from the Health Care Corporation of St. John's.

Notwithstanding the approval of the HIC, the primary responsibility for the ethical conduct of the investigation remains with you.

Sandra Keough

for Verna M. Skanes, PhD
Assistant Dean

cc: Dr. K.M.W. Keough, Vice-President (Research)
Dr. E. Parsons, Vice-President, Medical Services, HCC

APPENDIX F



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR

**Department of Health
Community Health**

February 28, 1997

Ms. Patricia Nugent
P.O. Box 8545
Manuels, NF
A1X 1B6

Dear Ms. Nugent:

On behalf of the Canada Prenatal Nutrition Provincial Advisory Committee we are pleased you have chosen to focus your masters research on the Healthy Baby Clubs. Specifically your interest being the experiences of project coordinators and resource mothers and their roles and responsibilities in the Healthy Baby Club Projects.

The Provincial Advisory Committee reviewed your request at its February 26, 1997 meeting and as co-chairs we are pleased to inform you that the group fully supports your research topic and is interested in being kept apprised of your work as it proceeds.

Best of luck with your research project.

Yours sincerely,

Lynn Vivian - Book
LYNN VIVIAN-BOOK
Parent & Child Health Consultant
Community Health

Eleanor Swanson
ELEANOR SWANSON
Director
Health Promotion & Nutrition

APPENDIX G

Patricia Nugent
Box 8545
Manuels, NF
A1X 1B6

1997-10-06

Dear:

Re: Research study related The Healthy Baby Club Model of Prenatal Support

My name is Patricia Nugent. I work with Community Health - St. John's Region and I am also a Graduate Student at Memorial University of Newfoundland in the Division of Community Health. I am interested in exploring the Healthy Baby Club Prenatal Support Program in my thesis work. I have received approval from the Provincial Prenatal Nutrition Advisory Committee and Memorial University's Human Investigation Committee to conduct this research.

The study focuses on "**The Experiences of Pregnant Women and Resource Mothers with The Healthy Baby Club Model of Prenatal Support**". I am particularly interested in:

- (1) the experiences of pregnant women and resource mothers with various aspects of this program
- (2) the satisfaction levels of pregnant women with the program
- (3) the benefits and "spin off" effects for pregnant women and resource mothers that resulted from the program.

Such information is valuable in adding to the available body of research knowledge about the Healthy Baby Club Program. It will also be useful for the future planning and development of prenatal programs and it may be helpful in sustaining support for such endeavors.

In October, 1997 I will conduct a pilot study at the Daybreak Parent Health Center in St. John's. Following this; tentatively in November and December, I plan to visit all nine Healthy Baby Club Projects throughout the Province of Newfoundland and Labrador. There, I will do face to face, individual, taped interviews with:

- (1) resource mothers (1 to 2, if feasible at each site)
- (2) post partum mothers (5 to 6 at each site) at 4 months post delivery stage (or as consistent an age as possible) who have participated in the Healthy Baby Club.

Many of you are already aware of this research as I initially introduced it at the Networking Meetings held in St. John's in May, 1997 and I have recently spoken at your teleconference session.

I will be requesting the assistance and cooperation of the resource mother, the coordinator and the community health nurse. Many of whom are already aware of this research as I initially introduced it at the Networking Meetings held in St. John's in May, 1977 and recently I have spoken at some of the Healthy Baby Club scheduled teleconferences (Provincial Advisory Committee, coordinators, community health nurses and resource mothers).

I sincerely appreciate your interest in research and I admire your efforts and dedication to the Canada Prenatal Nutrition Projects and specifically the Healthy Baby Club. I am very excited about this study and upon its completion I can share my findings with you, if you wish.

If you have any questions please call.

Thank you,

Patricia Nugent,RN,BN
Phone 738-4885 (w)
834-4635 (H)
Fax 738-4902
Email 'hcc.nugpa@hccsj.nf.ca'

cc. Coordinators

APPENDIX H

Patricia Nugent
Box 8545
Manuels, NF
A1X 1B6

1997-10-06

Dear:

Re: Research study related The Healthy Baby Club Model of Prenatal Support

My name is Patricia Nugent. I work with Community Health - St. John's Region and I am also a Graduate Student at Memorial University of Newfoundland in the Division of Community Health. I am interested in exploring the Healthy Baby Club Prenatal Support Program in my thesis work. I have received approval from the Provincial Prenatal Nutrition Advisory Committee and Memorial University's Human Investigation Committee to conduct this research.

The study focuses on "**The Experiences of Pregnant Women and Resource Mothers with The Healthy Baby Club Model of Prenatal Support**". I am particularly interested in:

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In October, 1997 I will conduct a pilot study at the Daybreak Parent Health Center in St. John's. Following this; tentatively in November and December, I plan to visit all **nine** Healthy Baby Club Projects throughout the Province of Newfoundland and Labrador. There, I will do face to face, individual, taped interviews with:

- (1) resource mothers (1 to 2, if feasible at **each site**)
- (2) post partum mothers (5 to 6 at **each site**) at 4 months post delivery stage (or as consistent an age as possible) who have participated in the Healthy Baby Club.

Many of you are already aware of this research as I initially introduced it at the Networking Meetings held in St. John's in May, 1977 and I have recently spoken at your teleconference session.

I need your assistance and cooperation. Could you complete the attached form and fax to me at 1-709-738-4902 as soon as possible? *This will give me an idea of the numbers of mothers available, as this is an important element in the study.*

I sincerely appreciate your interest in research and I admire your efforts and dedication to the Canada Prenatal Nutrition Projects and specifically the Healthy Baby Club. I am very excited about this study and upon its completion I can share my findings with you, if you wish.

If you have any questions please call.

Thank you,

Patricia Nugent,RN,BN
Phone 738-4885 (w)
834-4635 (H)
Fax 738-4902
Email 'hcc.nugpa@hccsj.nf.ca'

cc. Coordinators

INTEROFFICE MEMO:

TO: Patricia Nugent
Community Health - St. John's Region
☎ 1-709-738-4885
Fax 1-709-738-4902

FROM:

RE: Healthy Baby Club

Name of Resource Mom	Name of HBC	Location	# of deliveries in August	# of deliveries in Sept.	# who will deliver in Oct.	# who will deliver in Nov.	# who will deliver in Dec.

* N.B. I will be contacting you at a later date for the mom's names, addresses & Phone #'s, prior to my visit to your community.

APPENDIX I

**SURVEY OF WOMEN PARTICIPANTS
IN THE HEALTHY BABY CLUB**

This questionnaire requests information about your participation in the Healthy Baby Club Program. This information will be useful for future planning purposes. A summary report will be prepared and your name or community will not be identified as all participants will have a code known only to the researcher. As well, the information you provide will not be discussed with the coordinator, the nurse, the nutritionist or the staff.

1. How did you become aware of the Healthy Baby Club Prenatal Support Program?
 - ☐ Social Worker
 - ☐ Community Health Nurse
 - ☐ Friend
 - ☐ Family Member
 - ☐ Doctor
 - ☐ Another Healthy Baby Club Participant
 - ☐ Resource Mother
 - ☐ Community Center
 - ☐ Family Resource Center
 - ☐ Other (please specify) _____
2. Did you participate in the Healthy Baby Club Program with any of your other pregnancies:
 - ☐ Yes
 - ☐ No
3. At what stage of your most recent pregnancy did you first start in the Healthy Baby Club Program?
_____ months or _____ weeks
4. What different people did you have contact with at the Healthy Baby Club?
 - ☐ Resource Mother
 - ☐ Coordinator
 - ☐ Community/Public Health Nurse
 - ☐ Nutritionist
 - ☐ Others who were pregnant
 - ☐ Other (please specify) _____

5. What type of sessions did you participate in and can you estimate how many?

☐ group How many? _____
☐ one to one How many? _____
☐ both How many? _____

- 6.. What type of activities did you participate in:

☐ home visits ☐ hospital tour
☐ telephone visits ☐ other, please specify _____
☐ group activities _____

7. Which of these activities did you like the best why? _____

8. Were you generally comfortable with the contacts, sessions and activities?

☐ Yes
☐ No

9. What things should be included to ensure pregnant moms feel comfortable? _____

10. If no, what made you feel uncomfortable (eg. space, noise, people)? _____

11. To what extent were you comfortable with the following people? (*Please rank by putting cards in order*):

_____ Resource Mother
 _____ Nutritionist
 _____ Community Health Nurse
 _____ Other

Please elaborate, why _____

- 12a). Have you continued to maintain contact with the people whom you met through Healthy Baby Club?

☐ Yes ☐ No

- b) If yes, with whom?

☐ Other mothers ☐ Resource Mother
☐ Nutritionist ☐ Community/Public Health Nurse
☐ Others, specify _____

- c) Please describe your contact/involvement _____

13. Suppose there were funding cuts to Healthy Baby Club Program, and everything had to be taken away except one thing, what would you keep? (*pass index cards*)

- | | |
|---|--|
| <input type="checkbox"/> Food supplements | <input type="checkbox"/> Group with Community Health Nurse |
| <input type="checkbox"/> Resource Mother | <input type="checkbox"/> Group with Nutritionist |
| <input type="checkbox"/> Child Care | <input type="checkbox"/> Home Visits |
| <input type="checkbox"/> Transportation | <input type="checkbox"/> Other (specify) _____ |

14(a). Did you follow up on any referral made by the Healthy Baby Club staff?

- ☐ Yes
☐ No

(b) Which of the following did you follow up on? (Check all that apply!): (*Pick from cards*)

- | | |
|--|---|
| <input type="checkbox"/> Social Services | <input type="checkbox"/> Legal Aid |
| <input type="checkbox"/> Friendship Centre | <input type="checkbox"/> Religious Organization |
| <input type="checkbox"/> ESL Classes | <input type="checkbox"/> Support groups |
| <input type="checkbox"/> Addictions Counselor | <input type="checkbox"/> Parenting courses |
| <input type="checkbox"/> Health Services/Physician | <input type="checkbox"/> Mental Health Worker |
| <input type="checkbox"/> Prenatal Class | <input type="checkbox"/> Breastfeeding Group |
| <input type="checkbox"/> Housing Agency | <input type="checkbox"/> Childcare |
| <input type="checkbox"/> Food Banks | <input type="checkbox"/> Early Childhood Intervention Program |
| <input type="checkbox"/> Lunch/meal Programs | <input type="checkbox"/> Employment Program |
| <input type="checkbox"/> Community Kitchen | <input type="checkbox"/> Other (specify) _____ |
| <input type="checkbox"/> Clothing/Equipment Bank | |
| <input type="checkbox"/> Women's (safe) Shelter | |

15. Since your Healthy Baby Club involvement, if you required a service or support in the community would you make the contact yourself? ☐ Yes ☐ No

If **no**, why _____

16. What were you most interested in the Healthy Baby Club Program? (*Rank by using the cards*)

- | | |
|-------|--------------------------------------|
| _____ | Cooking sessions |
| _____ | Relaxation sessions |
| _____ | Baby care |
| _____ | Exercise, eg. walking, activities |
| _____ | Hospital tour |
| _____ | Labor and delivery information |
| _____ | Smoking related information |
| _____ | Drug and alcohol related information |
| _____ | Money management related information |

17. There is a lot of emphasis on good foods and food preparation in the Healthy Baby Club. Did you try any of your **new** Healthy Baby Club recipes?

- ☐ Yes
☐ No

18. Which recipes and foods have you continued to use yourself **and** with your family?

19. What type of feeding did you give with this new baby after delivery?

- ☐ Breast
☐ Bottle

20. If **breastfeeding**, are you currently breastfeeding?

- ☐ Yes
☐ No
☐ Breastfeeding with supplementation

21. If **no**, what was the baby's age when you stopped?

_____ Months
 _____ Weeks

22. Were you a smoker when you entered the Healthy Baby Club Program?

- ☐ Yes
☐ No

- 23(a). If **yes**, have you changed your smoking habits since you entered the Healthy Baby Club Program? ☐ Yes ☐ No

- (b). How?

- ☐ decreased
☐ quit

23. Are you currently maintaining this change in your smoking habits?

- ☐ still decreased
☐ still quit
☐ reverted back to "old" smoking habits _____

24. How are you maintaining this change? _____

25. What did you like the **best** about the Healthy Baby Club? _____

26. What did you like the **least** about the Healthy Baby Club? _____

27. Would you recommend the Healthy Baby Club to other pregnant women?

☐ Yes ☐ No

Why? _____

28. In your opinion, what are the benefits for pregnant women who receive support from Resource Mothers?

29. What things you do now or participate in that you didn't before you entered the Healthy Baby Club Program?

Please give examples:

40. Is there anything you would like to add? _____

41. Is there anything you would like to ask me? _____

THANK YOU FOR PARTICIPATING IN THIS STUDY!

APPENDIX J

SURVEY OF RESOURCE MOTHERS IN THE HEALTHY BABY CLUB

This questionnaire requests information about your participation in the Healthy Baby Club Program. All the information you provide will be useful to learn more about how Resource Mothers are involved in this model. There are no right or wrong answers. You play an important role in this project. The data which you provide will be important in future planning. I would like to tape our interview for later review of accuracy, if you don't mind. All information will remain strictly confidential. Names of communities and personal names will not be identified as all information will be coded.

1. How did you become a Resource Mother with the Healthy Baby Club (HBC)?
- ☐ Did you volunteer yourself to someone in the program?
 - ☐ Did you make a formal application?
 - ☐ Other (please specify) _____
2. What type of employee are you?
- ☐ Volunteer with stipend
 - ☐ Volunteer
 - ☐ Paid employee
3. Are you **currently** involved in the Healthy Baby Club Program?
- ☐ Yes
 - ☐ No
- If yes, please explain _____
4. Did you have previous experience as a volunteer in the community? (For example, Girl Guides, Church Group)
- ☐ Yes
 - ☐ No
- If yes, please specify _____
5. Are you **currently** involved in any programs in the community?
- ☐ Yes
 - ☐ No
- If yes, please specify _____

6. The Healthy Baby Club programs throughout the Province of Newfoundland & Labrador are similar in some ways and different in others. However, they all offer a range of activities. Some activities are listed below. Please rank in order from 1 - 10 the activity you enjoy most (1) to the activity you enjoy least (10): *(-put cards in order from 1-10)*

Activity	Ranking
a) Home visits	_____
b) Telephone visits/contacts	_____
c) Group Sessions	_____
d) Recruitment	_____
e) Cooking Sessions (Groups, or at home of pregnant mom)	_____
f) Record Keeping	_____
g) Follow-up of Breastfeeding Mothers	_____
h) Food Histories & Diet Follow-up	_____
i) Group Activities eg. Games, Relaxation with Resource Mother, Community Health Nurse	_____
j) Hospital Tour	_____

7. Before being involved with the HBC, did you have any previous experience (working or volunteering) with pregnant women?

☐ Yes

☐ No

If yes, what kind of experience? _____

8. Why did you become a Resource Mother with this program?

9. Did you receive any training to prepare you for your role as a Resource Mother?

☐ Yes ☐ No

☐ Initial

☐ Ongoing

Please describe _____

10. Did the training you received prepare you for your role as a Resource Mother?
☐ Yes ☐ No

If no, what would you have liked differently in the training? _____

- *11. What characteristics have you seen in participants in the Healthy Baby Club? (select cards)

- ☐ Pregnant women living in poverty
- ☐ Pregnant teens
- ☐ Pregnant women who drink and use drugs
- ☐ Pregnant women living in violent situations
- ☐ Pregnant women diagnosed with medical problems (e.g. gestational diabetes)
- ☐ Aboriginal or Inuit women
- ☐ Immigrants/Refugee
- ☐ Women living in isolation or with poor access to services

- *12. Generally, if clients dropped out of the Healthy Baby Club before delivering their babies, what were their reasons?

- ☐ Moved/transient
- ☐ Childcare
- ☐ Transportation
- ☐ Pregnancy terminated
- ☐ Cultural issues
- ☐ Illness
- ☐ Did not want service
- ☐ Other (please, specify) _____

13. Have you ever been the Resource Mother for a participant who was asked to leave the Healthy Baby Club Program?

- ☐ Yes
- ☐ No

If yes, what were the reasons for this request? _____

14. For the participant who was finally requested to leave, what ways did you try to keep the participant engaged? _____

15. What are your roles and responsibilities as a Resource Mother?

16. What do you feel is your most important or primary role?

17. Did you participate as a pregnant mother in the Healthy Baby Club Program yourself?

☐ Yes
☐ No

18. If no, who supported you through the births of your child/children? _____

19. What did you feel was the most important support you got during your pregnancies?

20. What date did you start as a Resource Mother? _____

Month

Year

21. To date how many pregnant women have you seen as a Resource Mother? _____

22. How many pregnant women have you been responsible for as a Resource Mother at the one time? _____

23. As a Resource Mother, what are the greatest barriers you face? *For example, knowledge, space, noise, participants without phones* _____

- 24(a). How have you tried to deal with these barriers? _____

- (b). What's been the most successful? _____

25. As a Resource Mother what are the greatest challenges you face in helping others? *For example low literacy, lack of referral sources* _____

26. What do you see is the value of a Healthy Baby Club Program for the mother? _____

27. Are there things you now do or participate in that you wouldn't have attempted or thought of doing before you became a Resource Mother?

☐ Yes

☐ No

If yes, please give examples _____

28. What other benefits have occurred for you as a result of becoming a Resource Mother? _____

Finally, a few questions about yourself:

29. Where were you born?

Town/Community _____

Province _____

30. How old are you?

- ☐ 15-19
- ☐ 20-24
- ☐ 25-29
- ☐ 30-34
- ☐ 35-39
- ☐ 40-44
- ☐ 45-49
- ☐ 50 or older

*31. What is the highest level of education that you have completed?

- ☐ No schooling
- ☐ Some elementary
- ☐ Completed elementary school; grade _____
- ☐ Some secondary (junior/senior high school) grade _____
- ☐ Completed high school; grade _____
- ☐ Some post-secondary (trade, technical, vocational school, business, college, university) Please specify _____
- ☐ Completed post-secondary diploma or degree
- ☐ Other (Please specify) _____

*32. What is your marital status?

- ☐ Married
- ☐ Widowed
- ☐ Single (never married)
- ☐ Common law/Living with spouse
- ☐ Divorced
- ☐ Separated
- ☐ Refused to answer
- ☐ Don't know

33. What is your main source of income?

- ☐ Employment
- ☐ Social Assistance
- ☐ Other

If employed, please describe your job _____

*34. What is your net monthly household income after taxes? (Read down list until participant says stop).

- | | |
|---|---|
| <input type="checkbox"/> No Income | <input type="checkbox"/> \$1601 to \$1900 |
| <input type="checkbox"/> Under \$600 | <input type="checkbox"/> Over \$1900 |
| <input type="checkbox"/> \$601 to \$1000 | <input type="checkbox"/> Don't know |
| <input type="checkbox"/> \$1001 to \$1300 | <input type="checkbox"/> Refused to answer |
| <input type="checkbox"/> \$1301 to \$1600 | <input type="checkbox"/> Seasonal variation |

35. Have you had children yourself?

- ☐ Yes
 ☐ Birth ☐ Adoption
☐ No

If yes, how many children do you have? _____

What are their ages? _____

36. Is there anything you would like to add? _____

37. Is there anything you would like to ask me? _____

THANK YOU FOR PARTICIPATING IN THIS STUDY!

APPENDIX K

A BRIEF SYNOPSIS OF A "SUCCESS STORY" FROM A HEALTHY BABY CLUB PARTICIPANT

K has been a volunteer resource mother with the Healthy Baby Club for three years. K went through the HBC Program with her second pregnancy. Comparing it to her first pregnancy, she says it was a much better experience. At 16 years of age K became pregnant for the first time and dropped out of school. Her family lived on Social Assistance and was upset with her; not supportive of her pregnancy and her boyfriend did not stay with her.

I was frightened and uptight during the whole pregnancy as I didn't know or understand what was going on with my body.

I gained weight poorly. I had very little money. The baby was five pounds at birth.

A year later K was pregnant again. Her Social Assistance Worker referred her to the community health nurse and as a result, she joined the Healthy Baby Club. Here K blossomed with the nurturing of the resource mother, food supplements and group support. Her self-esteem and confidence grew and she became more involved in her own decision making. This baby weighed six pounds at birth and K decided to breastfeed (something she never even considered with her first pregnancy).

Postpartum, K continued to come to the community center with her two children to participate in other programs involving the general healthy growth and development of children. "I learned so much," she says.

Then the resource mother approached K to become a volunteer resource mother with Healthy Baby Club. "I couldn't refuse", she said "it did so much for me, and I want all women to have a healthy good weight baby."

Since that time K has returned to complete high school at night classes and gone on enter a post secondary college to complete a Business Administration course. "I couldn't have done it without the Healthy Baby Club, they gave me the courage", she stated.

APPENDIX L

Dear

Please accept my sincere thanks for your assistance and cooperation while I conducted my research study related to the Healthy Baby Club Prenatal Support Program. Specifically, the freedom to use your facilities was particularly appreciated. Also, the provision of clients' names, relevant data and "directions to their homes" was extremely helpful.

Sincerely,

Patricia Nugent

