THE FUNCTIONS OF PREGNANCY IN THE LIVES OF BRITISH COLUMBIA STREET-INVOLVED YOUNG WOMEN IN 2000

by

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Abstract

Street involved adolescents are 4 times more likely to become pregnant than at-home adolescents; they are less likely to seek out prenatal care due to a variety of reasons, resulting in a higher risk of pregnancy complications. Previous studies that examined the meanings, experiences and functions of pregnancy in the lives of street involved young women have been exploratory in nature, and focused on developing theory, not testing theory. This study was a secondary analysis of the 2000 British Columbia Street Youth Survey from the McCreary Centre Society [N=238 girls ages 12-19 years, 36% ever pregnant], to test the functions of pregnancy in the lives of street-involved girls as first postulated by E. Saewyc in her 1999 study, and affirmed by others since. Age-adjusted regression analyses were performed to determine whether pregnancy experience was associated with participant responses to questions in the survey that could indicate reconnecting to family, maturing or settling down, stepping away from risk behaviours, opportunities for a new life, and access to health and social services; for significant relationships, further analyses were performed comparing the ever pregnant sample with the never pregnant sample to assess the prevalence of behaviours or mean ranks on attitudinal measures. Statistical analyses revealed few instances where the functions of pregnancy were supported within this Canadian sample; the only area was the ever-pregnant sample did show higher interest in receiving or having received drug/alcohol treatment. However, the inability of this study to support the original findings may be due to the limitations of performing a secondary analysis rather than the soundness of the theories themselves; post hoc power analyses indicated limited power for most specific analyses. Alternatively, perhaps pregnancy is a form of harm reduction,
but once the child is born, the effects are gone. Further research to test the reasons for pregnancy among street-involved young women is needed. The six functions of pregnancy provide a testable theory for future research, but the study design may need to use the functions as the basis for developing more precise questions to collect data in a new sample.
Preface

This thesis was conducted as part of the training opportunities of the interdisciplinary Stigma and Resilience Among Vulnerable Youth Consortium. The Behavioural Research Ethics Board of the University of British Columbia approved the overarching program of research that included these data and analyses (certificate # H06-80551).
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Dedication

This thesis is dedicated to my Father who instilled in me a passion for learning from a young age. Thank you Dad, I miss you every day.
Chapter 1: Introduction

Adolescent Pregnancy

Teenage pregnancy remains concerning in North America; in 2002 in Canada the average pregnancy rate for young women between the ages of 15 to 19 was 32.1 per 1000 or roughly 3.2% (McKay, 2006). In 2002 the average pregnancy rate for young women under the age of 20 in the United States was roughly 6.6% down from 10.4% in 1990 (McKay, 2006). The United States department of health proposed a mandate in 2000 to reduce teenage pregnancy, decrease infant mortality rates and promote prenatal care by 2010 (Afable-Munsuz and Magnus, 2006; Herrman, 2008; Spear, 2001).

Despite the decrease in the number of teenage pregnancies, research shows that young women are less likely to access prenatal care for a variety of reasons including stigma, uncertainty, or fear of rejection from family. This can result in lower birth weights, higher rates of infant mortality, and increased incidence of learning or behavioral disabilities in their offspring (Afable-Munsuz & Magnus, 2006; Herrman, 2008; Spear, 2001). It has been determined that not only are repeat pregnancies more likely in this population but that pregnancies, and especially early repeat pregnancies, result in an increased likelihood of living in poverty for these young women and their children (Afable-Munsuz & Magnus, 2006; Herrman, 2008; Spear, 2001).

Problem Statement

Street involved adolescents are 4 times more likely to become pregnant than their at-home counterparts; this can be attributed to factors such as survival sex or sexual exploitation and increased use of drugs and alcohol, which may impair judgment about utilizing safe sex practices (Little, Gorman, Dzendoletas & Moravac, 2007). Street involved adolescents, much
like their at home counterparts, are less likely to access prenatal care, they are also less likely to realize that they are pregnant due to malnutrition, drug and alcohol use that can affect hormonal systems (Little et al 2007). There is an estimated 45,000 to 150,000 street-involved youth in Canada at any given time (Frankish, Hwang and Quantz, 2005; Haley, Roy, Leclerc, Boudreau & Boivin, 2004; Public Health Agency of Canada, 2006). Approximately 40% of street youth are female and of that group 48% have reported being pregnant (Boivin, Roy, Haley & Galbaud du Fort, 2005; King, Ross, Bruno and Erikson, 2009; Little et al 2007; Haley et al, 2004; Public Health Agency of Canada, 2006). There are estimates that street-involved young women are 4 times more likely to become pregnant than their stay at home peers (Thompson, Bender, Lewis & Watkins, 2008). This would result in approximately 21,600 to 72,000 pregnant street-involved young women at any given time (Boivin et al, 2005; Haley et al, 2004; Little et al, 2007; Public Health Agency of Canada, 2006).

Complications of pregnancy within the population of street involved young women include premature birth, low birth weight, miscarriage, higher mortality rates and developmental defects for the baby such as fetal alcohol syndrome (Halcon & Lifson, 2004; Little et al, 2007; Thompson et al, 2008). Street involved adolescent mothers are less likely to get prenatal care due to unawareness of their pregnancy, inability to access health care, or fear that they will have the child taken from them (Boivin et al, 2005; Hagedorn, 2002; Hwang, 2001; Little et al, 2007). Furthermore street-involved youth may have issues with drugs and alcohol, depression and mental health issues, poor diet, lack of shelter and inability to meet basic needs, putting their own health at risk as well as that of the fetus (Boivin et al, 2005; Little et al, 2007; Saewyc, 2003; Scappaticci and Blay, 2008). Although the aforementioned research shows that pregnancy and life circumstances for street involved young women pose a threat to the unborn fetus there is
a small, but significant, body of research that demonstrates pregnancy may have a positive influence in the lives of street involved young women, providing them with access to care and opportunity for change (Haley et al, 2004; King et al, 2009; Little et al, 2007; Meadows-Oliver, 2006; Saewyc, 1999; Scappaticci and Blay, 2008). Understanding the lives of street-involved young women and the advantages and disadvantages of pregnancy can help to determine how pregnancy functions in the lives of these young women.

The objective of this study is to test a theory developed from a qualitative study involving nine pregnant street-involved young women from Seattle (Saewyc, 1999). Six functions of pregnancy were identified in that study: a) meeting affiliative needs, b) reconnecting with family, c) maturing/settling down, d) opportunities for a new life, e) access to services, and f) stepping away from risk behaviors. The six functions are positive in nature and indicate that pregnancy may have been a catalyst for affirmative change in the lives of these nine women.

The purpose of this study was to test these six functions of pregnancy using a larger sample comprised of street-involved young women living in British Columbia in the year 2000. The research question used to direct this study was, Do the six functions of pregnancy hold true for the sample from British Columbia in 2000?

Background

Review of the Literature

A careful search of the literature turned up many articles on pregnancy among adolescents, studies about adolescent homelessness, the health issues of street-involved youth, and other related topics. There were very few articles that specifically examined the experience and meanings of pregnancy for street-involved young women. The selection of articles that did focus on street youth and the health of street youth identified pregnancy as a substantial issue for
this group (Boivin et al, 2005; Frankish et al, 2005; Guerina, 2004; Hagedorn, 2002; Halcon & Lifson, 2004; Haley et al, 2004; King et al, 2009; Little et al, 2007; Meadows-Oliver, 2006; Public Health Agency of Canada, 2006; Saewyc, 1999; Scappaticci and Blay, 2008).

**Health Issues of Homeless Youth**

In 2005 Boivin et al. conducted a meta-synthesis on the health of Canadian street-involved youth, examining 52 articles on the topic. They found that street involved youth were more prone to contracting infectious diseases such as HIV, Hepatitis B and C, and Chlamydia, they showed higher rates of mental health and addiction issues, and there was a higher rate of mortality for street involved youth compare to their at home peers. Boivin and colleagues determined that pregnancy was more frequent among street-involved youth, however, provided no suggestion as to why this was the case. They further identified that barriers to health care were prevalent in this group. Many of the studies used in their meta-synthesis did not provide a comparison group, and some of the studies only provided details of risk behaviors for contracting certain diseases but neglected to provide actual incidence rates of those diseases within the population. Boivin et al stated that they did not use any studies in their meta-synthesis comparing pregnancy rates among stay at home youth to those among street involved youth; they concluded that further epidemiologic research is required to better define the health challenges and needs of this unique population.

Boivin et al’s meta-synthesis provides some insight to the health needs of street-involved youth; however, a major factor that may affect how transferable the findings are to the population of this proposed study is the age ranges examined in the meta-synthesis, which were much broader, including participants from pre-teen to 30 years. The age range for the purpose of this project is much more narrow and focused on adolescents.
Street Involved Youth and Predictors of Risk

Two articles focused on the predictors of risk within the street youth population; one identified predictors of risk in relation to sexually transmitted infection (STI) while the second looked at the predictors of risk for pregnancy in the young street-involved population (Halcon and Lifson, 2004; Thompson et al, 2008). These studies do not delve into discussion of the meanings and experience of pregnancy for these young street involved women, but they do provide insight to the factors that may contribute to the life situation and challenges that the young women within this population face.

Halcon and Lifson (2004) surveyed homeless and street-involved youth in Minneapolis in 1998 and 1999. The sample included 203 homeless and street-involved youth, both male and female, between the ages of 15 and 22 years. Results showed that over half of the young women surveyed had been pregnant at least once. The researchers determined that risk behaviors were often clustered, with participants reporting 2 or more of the following risks in the last 30 days: multiple partners, non-use of barrier methods, history of STI and history of survival sex. A major limitation of this study is that the researchers did not know whether or not the pregnancies occurred while the young women were homeless or street involved. Due to the cross-sectional study design, Halcon and Lifson caution that it is not possible to make inferences about causation or timelines. Furthermore, the focus of this study was primarily to determine risk factors in relation to STI contraction and transmission, not to determine risk factors for pregnancy; however the research did determine that, along with STI transmission, pregnancy is also of increased concern for this population and warrants further study to determine how to meet the needs of the young women and their fetus in challenging circumstances.

Thompson et al.’s 2008 study identified risks associated with adolescent pregnancy and homelessness by reviewing data from the 1997 Runaway/Homeless Youth Management
Information System, a database managed by the Administration for Children and Families in the United States of America. A sample of 16,438 street-involved young women between the ages of 12 and 18 were identified and of that sample, 476 participants were pregnant. The focus of this study was to determine the differences between females who became pregnant and those who did not, and to identify if there were specific demographic and family factors that could be used to predict pregnancy. They determined that the pregnant cohort was less likely to be connected to their schools and family, more likely to have experienced long-term family difficulties, to be of an ethnic minority, and/or from a lower socioeconomic or single parent home, and they were more likely to participate in a clustering of sexual risk behaviors. Thompson and colleagues concluded that youth should be screened for risk factors so that interventions such as pregnancy and prevention counseling, and sexual and reproductive health education, could be provided to individuals at higher risk.

Limitations of this study include the cross-sectional design, which does not allow for the ability to determine causal order and sample limitations, due to the data set being exclusively made up of young women who have accessed shelter services, missing those street-involved individuals who did not access shelter services. Thompson et al.’s study does provide insight to the factors that may contribute to the likelihood of a young street involved woman becoming pregnant. Knowing these risk factors, health care providers and service providers can assess clients and provide them with contraceptive education and counseling to reduce the number of unplanned pregnancies or provide early interventions and option counseling for young women who are at higher risk and do become pregnant.

The previous studies indicate that street-involved youth participate in higher frequencies of risk behaviors such as unprotected sex, drug and alcohol use, suicide and fighting (Boivin et
al, 2005; Frankish et al 2005; Halcon & Lifson, 2004; Thompson et al., 2008). The studies clearly illustrate that pregnancy, access to health care and risk behaviors are issues for street-involved female youth.

It is paramount to understand how these risk factors come together so that the health of the young women and their unborn fetus can be attended to early in the pregnancy to avoid complications later in pregnancy or after the child has been born. Although pregnancy and street involvement may constitute a risky combination for the health of the mother and fetus, there is literature that identifies the pregnancy experience for young street-involved women to be beneficial in helping them out of the chaos of street involvement (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). If pregnancy can be anticipated in this population, by looking at risk factors, and if pregnancy can be identified in a young street involved woman and early interventions can be undertaken to protect the health of both the mother and the fetus, perhaps the pregnancy experience can influence the other choices of the young mother. It may allow her to desire a change from her current life situation and move off the streets. If there is a chance that the pregnancy could benefit the young women in making changes in her life that will ultimately benefit her child, then it is important understand this complex phenomenon so that resources and programs can be designed to provide support to benefit both the fetus and the mother. Perhaps by understanding what the experience of pregnancy fulfils in the young women’s life, supports that meet the needs of these young women can be designed and possibly these needs can be met before a young street-involved woman becomes pregnant or perhaps even before they end up on the street.
Meanings and Functions of Pregnancy for Street-Involved Young Women

Many studies on the function and meaning of pregnancy for street involved young women identify pregnancy as a positive and potentially transformative event for these young women (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). Some of the positive outcomes for these young women, as stated in the literature, include reconnection with family of origin, increased access to services, impetus for change and a reason to move away from destructive behaviors (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). All of the studies conclude that further research is needed, with a focus on the experience and function of pregnancy in the lives of street-involved young women, in order to develop a better understanding of how pregnancy works for these women (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009).

In her 2003 paper on influential life contexts of street-involved pregnant youth, Saewyc identified life events and experiences that contributed to decision making about pregnancy for the young women in her sample. Her study, which took place in Seattle in 1999, took a closer look at the meanings of pregnancy in the lives of the participants. The 1999 Seattle study was one of the first to address the issues around street involved young women and pregnancy and the unique challenges and needs of this population. In this paper Saewyc identified key themes: conflict, sexual violence, drug or alcohol use, history of unstable housing, and one unique theme, spirituality. Participants’ beliefs and how these beliefs influenced the participants’ choices about pregnancy were explored in this paper.
That study is a qualitative analysis, and is therefore limited to allowing for identification of themes, but does not allow for testing of the theories that were derived from it. The finding from this study can be used as the beginning steps in theory development. Since its publication the results of this paper have been quoted in many papers, and the findings have been echoed through the current literature.

Meadows-Oliver conducted a meta-synthesis in 2006 looking at previous qualitative study findings for pregnant street-involved youth. Meadows-Oliver consolidated the findings and themes from six North American qualitative studies. The rationale for this meta-synthesis was to determine what generalizations could be made from these qualitative research studies that would allow for nurses to provide better care, create promotion and prevention programs and improve access to care for pregnant street-involved young women. Meadows-Oliver grouped the themes found throughout the six studies under the headings of: being homeless, enduring abuse, lamenting lost years, searching for support, recreating self, and seeking a better life. Meadows-Oliver concluded that any current programs designed to benefit street-involved adolescent mothers may not succeed until the experiences of this unique population have been explored and are better understood (2006).

Many of the same themes are echoed throughout the literature used for Meadow-Oliver’s meta-synthesis, which begs the question of whether the phenomenon is universal, and would be seen in other samples in other settings. If the current studies all identified similar findings, then perhaps they are right, or perhaps they are all limited by the same bias. Meadows-Oliver wrote about what has been examined in the literature, but neglected to address what is missing from current research. Furthermore, Meadows-Oliver recommended comparing homeless adolescent mothers to adult at home mothers; this would not be the best comparison, given the fact that the
youth have not gone through the levels of maturation that would allow for such a comparison. This meta-synthesis did nicely summarize the general findings of the current research of the time with respect to the, predominantly North American, pregnant homeless adolescent population.

Haley and colleagues, in their 2004 study of the characteristics of street youth with a history of pregnancy, utilized data from a previous study on risk behaviors for HIV in female street youth gathered between 1995 and 2000. The sample consisted of 225 street-involved female youth between the ages of 14 and 19 years of age. The study focused on determining lifetime pregnancy risk and predictors of risk behaviors. Haley et al. found it most disconcerting that despite free reproductive health care available from out-reach workers pregnancy among adolescents living in the streets of Montreal was still very high at an estimate of 48% of street-involved youth. In the discussion portion of their paper, meanings of pregnancy were broached, and the idea that there may be social and financial benefits that influence reproductive choices was presented. They recognized that for some, pregnancy might be a way to get off the streets. They concluded that understanding the meanings of pregnancy and motherhood and developing an understanding of the knowledge and attitudes that influence reproductive decisions are paramount when designing and providing services to pregnant street-involved youth.

Haley et al.’s study is limited by the sample, which was comprised of young women who had accessed select social service agencies in Montreal (2004). It is unknown whether those street involved young women who had accessed the services from which participants were recruited represent the broader group of street-involved youth; the results may not be generalizable. Haley et al suggested that many of the young women, especially those with a history of sexual abuse, were more likely to want to become pregnant, and perhaps this was due to the needs that pregnancy fulfils for these young women (2004). The focus of that study was to
look at ways to predict pregnancy risk for this population; this is valuable information indeed, but it is only half of the equation, identifying risk. Elaborating on the meaning or experience once a young woman becomes pregnant, in light of the finding that many of these young women want to become pregnant, is the other portion of the equation (2004). Haley et al. acknowledge that further study is needed to understand the meanings and experience of pregnancy for this population in order to develop a clear understanding of how to meet the needs of these young women (2004).

King and colleagues performed a research project examining the meanings of pregnancy in the lives of 10 ever-pregnant street-involved young women aged 17-21 living in Toronto (2009). They identified 3 major themes in the data: past self, present or transitional self, and future self. From these clusters, interactions between the themes emerged, such as past self versus present self, a turning point in the lives of the drug dependent, reconnecting with family, a renewed interest in education, and leaving risk behaviors behind. King determined that street-involved young women recognized pregnancy and motherhood as a positive and transforming event; for this population pregnancy and motherhood were valued identities. They concluded that previous research has focused on pregnancy as a risk for street-involved youth, rather than as a positive and transforming occurrence in the lives of these young women. However, the study sample was all from Toronto, so results may not be transferable to other cities. The themes identified by King et al. are also a beginning step towards theory similar to those of previous studies.

Scappaticci and Blay performed a qualitative study looking at the social and psychological aspects of 21 homeless teen mothers in Brazil (2009). From the data six themes emerged: circulation or domestic instability, not being able to count on their own parents or
relatives, the street as a solution, fear of theft of the child, need of support, maternity as hope/searching for identity. The researchers proposed that motherhood was a transforming experience, helping the youth move away from destructive behaviors and find purpose in their lives. Scappaticci and Blay suggested that pregnancy was a catalyst to the recovery and rebuilding of more stable relationships. The researchers believed that the youths’ pregnancies resulted from the need for support, and that once pregnant, the youth had greater access to support services. Scapaticci and Blay concluded that maternity organizes and disciplines the lives of these young women, so that they may create a positive future for themselves and their child/children. This study was undertaken in San Paulo, Brazil, and the results may be indicative of the culture and not comparable to other cultures or countries. Despite this, it seems that their findings are similar to Saewyc’s and King’s, so an argument can be made that perhaps the meanings of pregnancy for you street involved women are similar regardless of culture or setting.

Most recently in Canada, Haley, Denis, Roy and Gervais authored a report for the Social Services Agency of Montreal (2009) on their findings about pregnancy and contraception among street involved young girls in Montreal. This was a qualitative study which included 34 female participants who provided information in focus groups. This study identified that the street youth in their focus groups accredited pregnancy as a catalyst for change, and felt that having a child helped them to fill an emotional void.

Knowledge Gaps

Previous studies focused on the meanings, experiences and functions of pregnancy in the lives of street involved young women were exploratory in nature, and focused on developing theory, not testing theory. The literature that was reviewed in the previous section was qualitative
in nature or a meta-synthesis of the existing literature, utilized to determine themes. The data were not always collected for the purpose of looking at the functions of pregnancy in the lives of street involved young women specifically, and some of the findings related to the meanings of pregnancy for these young women were anecdotal and postulated in the discussion, so not truly a finding of the study at hand (for example, in Haley et al., 2004). The sample sizes were generally small, in keeping with qualitative research, and many of the studies used convenience samples, so there may have been some groups of street youth population that were not represented. Although there was research done in America, Canada, Australia and Brazil, it could be questioned whether the results only apply to Westernized cultures, or perhaps are specific to larger cities, or perhaps are only applicable to the specific population being tested.

Because there are few quantitative studies testing the theories that have been postulated by the previous authors, it is imperative to test these theories in another population to see if they hold true.

**Conceptual Framework: The Six Functions of Pregnancy**

Saewyc was one of the first researchers to examine the experience of pregnancy and the functions of pregnancy in the lives of street-involved young women (1999). Saewyc worked in the downtown Seattle clinics and noticed that many young women became pregnant regardless of the unlikelihood with limiting factors such as malnutrition possibly resulting in amenorrhea, unpredictable menstrual cycles, limited control of reproductive choices, no fixed address, drug and alcohol use, contributing to less than optimal conditions to produce a viable pregnancy. Saewyc observed that many of these women chose to maintain the pregnancy and expressed feelings of hope for their future and the future of their children once they discovered they were
pregnant. From observing experiences Saewyc decided to further investigate how pregnancy functions in the lives of street-involved young women.

The six functions of pregnancy as identified by Saewyc’s study in 1999 are a) meeting affiliative needs b) reconnecting with family c) maturing/settling down d) opportunities for a new life e) access to services, and f) stepping away from risk behaviors. Much of the research since has echoed similar findings, but few have been as structured and concise in their description of the functions of pregnancy as Saewyc’s six functions of pregnancy, making it the ideal theoretical framework for this study.

The first proposed function is that pregnancy met the affiliative needs of these young women. Affiliative needs were described as feelings of belongingness, needing to be loved, and resulted in a decrease in negative feelings of abandonment and loneliness. The baby signified one person who would love them and stay with them for the rest of their lives. The child would alleviate feelings of loneliness and abandonment while enhancing their feeling of belongingness and of being loved.

The second function postulated was reconnecting with family. The pregnancy was shown to provide the youth with a reason to reconnect with their family, and for their family to accept them back. Many of the young women reported becoming closer to their mothers; the pregnancy providing a new focus from which a new relationship could be forged.

Maturing or settling down was the next function of pregnancy proposed by Saewyc. The women reported having matured since becoming pregnant; some even felt that the maturing process pre-dated the pregnancy but that the pregnancy was the catalyst for the maturation process and provided them with the drive to settle down. Many of the young women felt that the
pregnancy provided them with a reason to continue to mature and progress as adults away from the risk behaviors of their youth.

The fourth function of pregnancy proposed that it provides the opportunity for a new life. Pregnancy was shown to provide the youth with a sense of wanting to do things differently, for the betterment of their child. For the young women in that sample, pregnancy was experienced as a new beginning and the chance for a fresh start.

The fifth function that pregnancy was thought to serve in the lives of street-involved female youth is the opportunity for greater access to services. Pregnant street youth in that study had greater access to medical care, shelter beds, social services and other social programs. The pregnancy provided improved access to health care and services that may also provided the youth with the resources needed to progress in her life.

Saewyc found that once the women in the study were aware of their pregnancy they became motivated to step away from risk behaviors; this is the sixth function of pregnancy. The participants explained that when they found out about their pregnancy they wanted to stop drinking, drugging and smoking and hanging out with people who participated in these types of behaviors. The women saw the pregnancy as taking their life focus off of self-destruction and selfdestructive behaviors.

For the purpose of this project I used the six functions of pregnancy as the overarching conceptual framework to guide the research (Saewyc, 1999). This framework is appropriate because it is the most developed and structured theory available in the current literature. Many other studies put forth similar findings or described similar themes; however Saewyc’s theories are the most developed with descriptions of how these functions might manifest themselves in the young women’s lives and what that might look like (Haley et al, 2004; King et al, 2009;
Meadows-Oliver, 2006; Saewyc, 1999; Scappaticci and Blay, 2009; Haley et al., 2009). Most of the current research cites Saewyc, they have similar findings, but they use different language to describe their theories; when testing a theory it is best to go with the most original and succinct (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 1999; Scappaticci and Blay, 2009; Haley et al., 2009). This study tested the six functions of pregnancy using data from the 2000 McCrea Youth Survey, which provided a comparable group from a similar geographical area around the same time frame.
Chapter 2: Methods

Design

A descriptive study design was used. A secondary analysis was conducted using the 2000 Vancouver Street Youth Survey from the McCreary Centre Society. The McCreary Centre Society is a government funded non-profit organization located in Vancouver, British Columbia. McCreary conducts community-based research and is involved in initiatives and projects addressing current youth health issues. The McCreary Centre Society has conducted BC Adolescent Health Surveys since 1992. The data collected from the 2000 Adolescent Street-Youth Survey was used for this study as it is from a similar time period as the original study by Saewyc.

Research Question and Hypotheses

The primary research question for this study was: Do the six functions of pregnancy appear to hold true, for a sample of street-involved young women, who report having been pregnant at least once, from the communities of Vancouver, Victoria, Abbotsford, Mission, Surrey, White Rock, Langley, Prince Rupert and the Sunshine Coast in British Columbia in 2000? The following hypotheses were tested:

Hypothesis 1: The young women from the sample who reported ever being pregnant (the ever-pregnant group) will report higher levels of belonging and acceptance. Those who have ever been pregnant will have a higher degree of school connectedness, increased feelings that their teachers care about them, and a lower prevalence of difficulties with fellow students and instructors.
Hypothesis 2: The ever-pregnant sample will have a higher degree of overall family connectedness than the never-pregnant group, as measured by the Family Connectedness scale in the Youth Health Survey (McCreary, 2000).

Hypothesis 3: The ever-pregnant group will have a higher degree of maternal connectedness than the never-pregnant. The ever-pregnant group will report a higher degree of feeling close to their mothers, and feeling that their mothers care about them, than the never-pregnant group.

Hypothesis 4: The ever-pregnant group will show higher levels of mature behaviors than the never-pregnant group, such as being employed, having a greater interest in school, and a desire to attain higher levels of education.

Hypothesis 5: The ever-pregnant sample will be more likely to take advantage of opportunities to create a new life compared to the never-pregnant group, showing greater prevalence of employment or enrollment in school; they are also more likely to express greater feelings of hope, and have a lower likelihood of suicidality.

Hypothesis 6: The ever-pregnant group will be more likely to have accessed services such as drug and alcohol counseling, care workers and health care services than the never-pregnant group.

Hypothesis 7: The ever-pregnant group will report lower levels of risk behaviors than the never-pregnant group, such as drug, alcohol and/or tobacco use, or fighting; they will be more likely to report fewer sexual partners, and higher likelihood of safe sex practices.

Sample
Youth were recruited for the 2000 Street Youth Survey through agencies and programs that served the street youth population in Vancouver, Victoria, Abbotsford/Mission,
Surrey/White Rock/Langley, Prince Rupert and the Sunshine Coast, all located in the province of British Columbia, Canada. Participation was voluntary, but some incentives of cash, supermarket and movie coupons were provided to participants. Of the 523 participants between the ages of 12 and 19 years who completed the survey, 238 were female.

Defining Groups for Comparison

Questions in the 2000 Street-youth Survey provide data on age, sex, street involvement and experience with pregnancy (The McCreary Centre Society, 2001). There are many broad definitions of youth age range, anywhere from age nine to 25 years. Health Canada looked at street youth from the ages of 15-24 in their 2006 Street Youth in Canada Surveillance report (Public Health Agency of Canada, 2006). The 1999 Seattle study had a participant age range of 17-19 years (Saewyc, 1999). The 2000 Street Youth Survey age range was 12 to 19 years, with an average age of 17-18 years (The McCreary Centre Society, 2001). All female participants from the 2000 Street-involved Youth survey were included in the sample, as their ages fall within the commonly defined youth age range (Saewyc, 1999; The McCreary Centre Society, 2001; Public Health Agency of Canada, 2006).

Survey participants self identified as street-involved in order to complete the survey; therefore all youth in the sample were considered to have met the criteria for street involvement (The McCreary Centre Society, 2001).

The 2000 Street Youth Survey had questions to about gender identity. The survey provided the option for a participant to identify as male, female, or transgendered. The female-to-male transgender group was included with females in the sample for this study, as they may have had experience with pregnancy despite their decision to identify as a transgender.
The Survey asked participants how many times they had ever been pregnant. Those participants who had answered “0-times” or “not sure” were included in the never-pregnant set. The rationale for including the “not sure” sample in the never-pregnant group was that knowledge of having been pregnant or of having a child was thought to be the motivating factor for change; not knowing or being unsure would not necessarily contribute to the impetus to create change in one’s life (Saewyc, 1999; McCreary Centre Society, 2000).

Sample Size
A sample of 238 young women was identified for comparisons between the ever-pregnant females versus never-pregnant females (The McCreary Centre Society, 2001). There were 83 ever-pregnant young women and 155 never-pregnant young women.

Key Variables

Independent Variable /Operational Definitions
The independent variable was pregnancy involvement status. Ever-pregnant was defined as any female participant who has answered yes to having been pregnant one or more times. Never-pregnant was defined as any female participant who has never been pregnant or who is unsure if they have ever been pregnant.

Dependent Variable/Operational Definitions: By Function
Meeting affiliative needs
There were four questions in the 2000 survey that address perceived acceptance from teachers/school. There were no specific survey questions that address pregnancy as a way of fulfilling the youth’s affiliative needs; the survey questions more appropriately address the concepts of family, societal and school connectedness (For specific questions see Appendix A). The selected questions were examined to determine if the ever-pregnant young women identified
that they experienced increased feelings of belonging and of being accepted compared to the never-pregnant young women.

Reconnecting with family

There was one question on the survey that addressed the mother-daughter bond and one that addressed the father-daughter bond; the separate survey questions were used to examine these bonds separately (The McCreary Centre Society, 2000). The family connectedness scale is a validated scale used to measure how close the participant feels to their family. Seven questions about family relations made up the family connectedness scale. The family connectedness scale was used to identify how sibling and extended family relationships were experienced by the two groups (For specific questions see Appendix A).

Maturing/settling down

Many questions from the 2000 Street Youth Survey overlap somewhat for the functions of Maturing and Settling Down, and Opportunities for a New Life. There were, however, six specific questions that were most indicative of participants maturing and settling down (The McCreary Centre Society, 2000). The ever-pregnant sample may have more opportunities, and possibly more motivation, to engage with education and employment. There were four questions on the Youth Survey addressing participant’s satisfaction with school and the grade level at which they feel their education is complete. Getting along with others might be interpreted as a sign of maturing and settling down; there were two questions that ask participants how well they get along with their teachers and fellow students. The ever-pregnant group may be less likely to have trouble getting along with teachers and fellow students then the never-pregnant group. One survey question asked participants if they considered themselves to be spiritual; increased
interest in spiritual issues may also indicate maturation and a desire to settle down (For specific questions see Appendix A).

Opportunities for a new life

Eleven survey questions addressing level of education, academic goals and employment were used as indicators of opportunities for the participants to create a new life. The ever-pregnant sample may demonstrate a greater motivation to be in school and aspire to higher levels of education, and may be more likely to be legally employed. Participants’ experiences with suicide was addressed in a group of questions on the Youth Survey; pregnancy may provide these young women new meaning and purpose in their lives and reduced their feelings of hopelessness resulting in lower rates of suicide attempts and a higher degree of satisfaction in life (For specific questions see Appendix A).

Access to health and social services

Access to services was defined as community services such as police, social workers and street nurses, having attended a drug and alcohol treatment program in the past year, and whether or not the participants had a care card (The McCreary Centre Society, 2001). Five questions were used to determine access to health services. The ever-pregnant group may show a higher percentage of participants who have accessed care and services within the community (For specific questions see Appendix A).

Stepping away from risk behavior

The 2000 Youth Survey contained quite a number of questions about risk behaviors (The McCreary Centre Society, 2001). The array of risk behaviors included drug and alcohol use, smoking, un-safe sex, medical injury, fighting and carrying a weapon. The ever-pregnant group should show less participation in high risk behaviors; however this may not be the case. For
example, an ever-pregnant participant may participate in survival sex behaviors in order to financially provide for herself and her offspring. Smoking and drug or alcohol use may be seen by the ever-pregnant population as a way to escape from the stress of being a parent, or even more so the stress of having a child but not being allowed to parent them. Likewise, these behaviours have been identified as common among street-involved youth; if more than 75% of participants report actively participating in certain risk behaviors, there is little likelihood that the ever-pregnant sample will be distinguishable from the norm of this population.

There were five questions in the survey that asked about recent use of drugs, including pot, alcohol and cigarettes, in the last thirty days, or three to six months; these are the risk behaviors that were examined in this study. Other questions that ask about the participants about cocaine, heroin, crystal meth and other hard drugs ask about lifetime use, or if the participant has ever used the particular substance. The ‘have you ever’, ‘during your life’ or ‘in the last year’ questions were not used for the purposes of this study as there is no way to determine if the drug use was before, after or during the pregnancy. One of the premises of this study is to determine if the experience of pregnancy had a positive impact in the young women’s lives, providing them with a reason to step away from risk behaviors; only the answers to the short term use questions would be helpful in determining this.

Safe sex practices of participants were examined to determine if the ever-pregnant group is more likely to use safe sex practices compared to the never-pregnant group. Alcohol use and safe sex practices are addressed in the Street Youth Survey; four questions were used to look at the two risk behaviors together. Fighting is also addressed by one of the survey questions, and was used to determine if the ever-pregnant group was less likely to be involved in physical fights than the never-pregnant group (For specific questions see Appendix A).
Analyses

The ever-pregnant and never-pregnant groups were compared in their sociodemographic characteristics to determine if they were similar enough to be appropriately compared using bivariate statistics. Review of the original survey questions showed age was the only sociodemographic characteristic that could be clearly compared between the two groups. The survey questions that provided information on other sociodemographic factors such as ethnicity, age when first homeless, or recent living situations mostly allowed for multiple answers, which would result in many small samples rather than two distinct samples for comparison.

There was a significant difference between the ages of the groups, with the ever-pregnant group was on average a year older than the never-pregnant group. Therefore age needed to be treated as a confounding variable, so in addition to bivariate analyses, regression analyses were done with age as a covariate. For continuous or ordinal variables, linear regression was used, with age and pregnancy as the two independent variables in the model. For dichotomous variables, binary logistic regression was used with age and pregnancy. The results from these analyses showed that for quite a few of the questions, pregnancy was not significantly associated with the outcome after controlling for age, and in a small number of questions pregnancy still remained a significant factor in differentiating the two groups.

For example, the question in the survey regarding care cards in bivariate cross-tabulation analysis showed that the ever-pregnant group was less likely to have a care card than the never-pregnant group, opposite the original hypothesis. However, the regression analysis showed older participants were less likely to have a care card, but pregnancy was not significantly related to having a care card, therefore age was the contributing factor, not pregnancy experience. In this case it seems that the ever-pregnant group being a year older on average skewed the results to make it appear that the ever-pregnant status was a contributing factor when in fact age was.
Where pregnancy was not related to the outcome after controlling for age, the bivariate analyses are not shown, as this project was aimed at determining if pregnancy contributed to the experience of these variables. If pregnancy remained a significant predictor in the regression analyses after controlling for age, then the bivariate analyses are reported, to show further information about the dependent variables in the two groups, such as the prevalence of a risk behaviour, or the mean response on a scale score.

Chi square was employed for the statistical analysis of nominal data. For the Likert-type scales, the data were treated as interval data, as the sample was larger than 100, with the assumption that the rank and distance between the ranks are relatively standard. Interval data were analyzed using an independent t-test if the distribution was normal; if it was not normal, then the non-parametric Mann Whitney U test was utilized to determine if there was a significant difference between the mean rank of the groups. Because there were differing patterns of missing responses, in order to ensure the greatest number of participants in each analysis, cases with missing data were excluded on an analysis by analysis basis.
Chapter 3: Results

The overall sample size was 238 comprised of 154 never pregnant participants (64%) and 83 (36%) ever pregnant participants, the mean age of the never pregnant group was 15.8 years old, while the mean age of the ever pregnant group was 16.7 years old, the overall age range of the participants were 12 to 19.

Meeting Affiliative Needs: Findings

Hypothesis one asserts that the ever-pregnant youth will report higher levels of feelings of belonging and of acceptance. Regression analysis looking at age and pregnancy experience in relation to the school connectedness scale, evaluating how much the participants perceived that their teachers cared about them, and assessing the difficulty getting along with teachers and peers showed that neither age nor pregnancy experience were significantly linked to those outcomes.

Table 1: Regression Analysis for Meeting Affiliative Needs

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta Coefficient</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q40- How much did you feel your teachers cared about you?</td>
<td>233</td>
<td>.103</td>
<td>-.160 -.367</td>
<td>.441*</td>
</tr>
<tr>
<td>Q41- School Connectedness Scale</td>
<td>239</td>
<td>.045</td>
<td>-.237 -.328</td>
<td>.075*</td>
</tr>
<tr>
<td>Q42- Getting along with Teachers</td>
<td>233</td>
<td>.005</td>
<td>-.305 -.315</td>
<td>.973*</td>
</tr>
<tr>
<td>Q43- Getting along with fellow students</td>
<td>236</td>
<td>-.038</td>
<td>-.354 -.278</td>
<td>.814*</td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

Reconnecting With Family: Findings

The second and third hypotheses were concerned with family connectedness and maternal relationships. Regression analysis showed that family connectedness was not significantly related to pregnancy experience nor age. However, the regression analysis did show that pregnancy experience was significantly related to how much the participants felt that their
mothers cared about them. Further analysis comparing the ever-pregnant group to the never-pregnant group showed that, contrary to the hypothesis, the never-pregnant group reported higher degrees of feeling that their mothers cared about them.

Table 2: Regression Analyses About Reconnecting With Family

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta Coefficient</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q26 to Q33 continuous variable Family</td>
<td>218</td>
<td>-.232</td>
<td>-.1.20 - .738</td>
<td>.638*</td>
</tr>
<tr>
<td>connectedness scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q26- How close do you feel to your Mother</td>
<td>221</td>
<td>-.044</td>
<td>-.380 - .293</td>
<td>.798 *</td>
</tr>
<tr>
<td>Q27- How much do you think your Mother cares</td>
<td>227</td>
<td>-.317</td>
<td>-.619 - .016</td>
<td>.039</td>
</tr>
<tr>
<td>about you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

Table 3: Unadjusted Comparisons for Reconnecting With Family

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ever-Pregnant</th>
<th>Never-Pregnant</th>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q27- How much do you think your Mother cares</td>
<td>mean rank= 102.26</td>
<td>mean rank= 121.24</td>
<td>*U= 4962.00</td>
<td>.01</td>
</tr>
<tr>
<td>about you</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Mann-Whitney U

Maturing/Settling Down: Findings

The fourth hypothesis postulated that the ever-pregnant group would show increased levels of maturity than their never-pregnant counter-parts, as evidenced by having religious or spiritual beliefs, working at a legal job, attending school, liking school, and getting along with their peers and teachers. Regression analysis shows that after controlling for age, pregnancy experience was not linked to indicators, therefore bivariate analyses are not reported.
Table 4: Regression Analyses for Maturing/Settling Down

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta coefficient</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q15- Religious or spiritual</td>
<td>235</td>
<td>.096</td>
<td>-.267 -.460</td>
<td>.602 *</td>
<td></td>
</tr>
<tr>
<td>Q23- Hours per week at a legal job</td>
<td>239</td>
<td>-.166</td>
<td>-.568 -.236</td>
<td>.417 *</td>
<td></td>
</tr>
<tr>
<td>Q35- Currently attending school</td>
<td>234</td>
<td>1.049</td>
<td>.559-1.967</td>
<td>.882 *</td>
<td></td>
</tr>
<tr>
<td>Q39- Liking school</td>
<td>236</td>
<td>-.046</td>
<td>-.353 -.261</td>
<td>.768 *</td>
<td></td>
</tr>
<tr>
<td>Q42- Getting along with Teachers</td>
<td>233</td>
<td>.005</td>
<td>-.305 -.315</td>
<td>.973 *</td>
<td></td>
</tr>
<tr>
<td>Q43- Getting along with fellow students</td>
<td>236</td>
<td>-.038</td>
<td>-.354 -.278</td>
<td>.814 *</td>
<td></td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

Opportunities for a New Life: Findings

The fifth hypothesis stated that the ever-pregnant group would be more likely to take advantage of opportunities to create a new life and would demonstrate increased rates of employment and enrollment in school compared to their never-pregnant counterparts. Furthermore the ever-pregnant group would demonstrate increased feelings of hope, with a lower likelihood of suicidality compared to the never-pregnant group. It was also thought that the ever-pregnant group would show a higher degree of interest in receiving drug and alcohol treatment services.

Regression analyses showed that current grade level was not related to pregnancy experience after controlling for age, nor was pregnancy experience significantly related to enrollment in school, or future educational aspirations. Furthermore regression analysis showed that pregnancy history was not related to legal employment or number of hours worked after controlling for age. Regression analyses also showed that neither age nor pregnancy experience significantly contributed to participants’ wishes to attend either a recovery home or treatment center, to obtain drug and alcohol treatment services, or out-patient treatment services. The hypothesis that the ever-pregnant group would be more likely to show an interest in alcohol and
drug treatment programs is statistically supported for detox programs only; the results indicated that the ever-pregnant group is more interested in receiving detox services than the never-pregnant group.

However, after controlling for age, pregnancy was related to hopelessness and suicidality. Bivariate analyses showed that, contrary to the hypothesis, the ever-pregnant group was more likely to feel hopeless and discouraged about their life circumstances, to consider suicide, or to plan a suicide attempt in the last year. The ever-pregnant group was also more likely to have made more suicide attempts in the last year than the never-pregnant group. Regression analyses showed that neither pregnancy experience nor age were contributing factors to severity of suicide attempt, i.e., a suicide resulting in injury.

### Table 5: Regression Analyses Around Opportunities for a New Life

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta coefficient</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p–value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q23- Hours per week at a legal job</td>
<td>239</td>
<td>-.166</td>
<td>-.568 - .236</td>
<td>.417*</td>
<td></td>
</tr>
<tr>
<td>Q34- Grade level</td>
<td>241</td>
<td>-.090</td>
<td>-.446 - 265</td>
<td>.617 *</td>
<td></td>
</tr>
<tr>
<td>Q35- Currently attending school</td>
<td>234</td>
<td>1.049</td>
<td>.559 - 1.967</td>
<td>.882 *</td>
<td></td>
</tr>
<tr>
<td>Q37- Expect to finish school</td>
<td>222</td>
<td>-.257</td>
<td>-.620 - .106</td>
<td>.165 *</td>
<td></td>
</tr>
<tr>
<td>Q94- Felt discouraged and hopeless over the last 30 days</td>
<td>236</td>
<td>-.605</td>
<td>-1.006 - .205</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>Q96- Considered suicide in the past year</td>
<td>230</td>
<td>2.703</td>
<td>1.513 - 4.827</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Q97- In the past year did you plan a suicide attempt</td>
<td>233</td>
<td>2.714</td>
<td>1.511 - 4.875</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Q98- Suicide attempts in the past year</td>
<td>230</td>
<td>.692</td>
<td>.382 - 1.002</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Q99- If attempted resulted in injury</td>
<td>97</td>
<td>2.382</td>
<td>.990 - 5.735</td>
<td>.053 *</td>
<td></td>
</tr>
<tr>
<td>Q116- How you feel about current life circumstances</td>
<td>234</td>
<td>.269</td>
<td>.035 - .503</td>
<td>.025</td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>N</td>
<td>Beta coefficient</td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>p–value</td>
</tr>
<tr>
<td>---------</td>
<td>----</td>
<td>------------------</td>
<td>------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>Q120- No not interested in drug or alcohol treatment</td>
<td>219</td>
<td>1.602</td>
<td>.624 - 4.11</td>
<td>.327 *</td>
<td></td>
</tr>
<tr>
<td>Q120- Yes interested in outpatient treatment</td>
<td>219</td>
<td>.640</td>
<td>.181 - 2.260</td>
<td>.488 *</td>
<td></td>
</tr>
<tr>
<td>Q120- Yes interested in detox services</td>
<td>219</td>
<td>.226</td>
<td>.057 - .890</td>
<td>.033</td>
<td></td>
</tr>
<tr>
<td>Q120- Yes interested in a recovery home</td>
<td>219</td>
<td>.129</td>
<td>.014 - 1.183</td>
<td>.070 *</td>
<td></td>
</tr>
<tr>
<td>Q120- Yes interested in a treatment centre</td>
<td>219</td>
<td>.138</td>
<td>.015 - 1.256</td>
<td>.079 *</td>
<td></td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

Table 6: Unadjusted Analyses Related to New Life Opportunities

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ever-Pregnant</th>
<th>Never-Pregnant</th>
<th>Statistic</th>
<th>p–value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q94- Felt discouraged and hopeless over the last 30 days</td>
<td>mean rank= 97.11</td>
<td>mean rank= 128.00</td>
<td>U* = 4574.50</td>
<td>0.00</td>
</tr>
<tr>
<td>Q96- Considered suicide in the past year</td>
<td>62.4%</td>
<td>41.8%</td>
<td>$\chi^2 = 9.1$ (df=1)</td>
<td>0.00</td>
</tr>
<tr>
<td>Q97- In the past year did you plan a suicide attempt</td>
<td>50.6%</td>
<td>29.5%</td>
<td>$\chi^2 = 10.28$ (df=1)</td>
<td>0.00</td>
</tr>
<tr>
<td>Q98- Suicide attempts in the past year, mean rank</td>
<td>mean rank= 133.25</td>
<td>mean rank= 106.14</td>
<td>U* = 4725.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Q116- How you feel about current life circumstances</td>
<td>mean rank= 131.94</td>
<td>mean rank= 108.89</td>
<td>U* = 4966.00</td>
<td>0.01</td>
</tr>
<tr>
<td>Q120- Yes interested in detox services</td>
<td>11.5%</td>
<td>2.1%</td>
<td>$\chi^2 = 8.67$ (df=1)</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Mann-Whitney U

Access to Social and Health Services: Findings

The sixth hypothesis proposed that the ever-pregnant group would be more likely to have a care card, would have a better perceived level of health, would be less likely to be hungry, and more likely to have accessed services such as drug and alcohol counseling, care workers and
health care for help and assistance. Also the ever-pregnant group would be more likely to report that the service providers they encountered were helpful.

Regression analyses showed that pregnancy experience did not relate to how participants described their health status, nor to how helpful they found social assistant and community workers to be (see Table 7). In the regression analyses, as age increased, participants were less likely to have a care card; due to the ever-pregnant group being on average 1 year older than the never-pregnant group, they were less likely to have a care card. Regression analysis also showed that after controlling for age, pregnancy experience was a factor relating to hunger and whether or not participants have received drug or alcohol counseling.

Contrary to the hypothesis, the ever-pregnant group were more likely to be hungry once a month or more compared to the never-pregnant group. In support of the hypothesis, the ever-pregnant group was more likely to have received drug or alcohol treatment services. Analysis showed that the ever-pregnant group was more likely to have received drug/alcohol treatment, detox, and outpatient treatment services.

**Table 7: Regression Analyses for Access to Services**

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta coefficient</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p–value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q44- Describe your health</td>
<td>238</td>
<td>.095</td>
<td>-138 - .328</td>
<td>.423 *</td>
<td></td>
</tr>
<tr>
<td>Q49- How often are you hungry</td>
<td>237</td>
<td>-.496</td>
<td>-.947 - -.045</td>
<td>.031</td>
<td></td>
</tr>
<tr>
<td>Q117- Do you have a care card</td>
<td>225</td>
<td>.584</td>
<td>.288 - 1.184</td>
<td>.584*</td>
<td></td>
</tr>
<tr>
<td>Q118- Have you received drug or alcohol counseling</td>
<td>228</td>
<td>2.220</td>
<td>1.186 - 4.156</td>
<td>.013</td>
<td></td>
</tr>
<tr>
<td>Q118- Ever gone to detox</td>
<td>228</td>
<td>.228</td>
<td>.096 - .541</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Q118- Ever used outpatient services</td>
<td>228</td>
<td>.285</td>
<td>.119 - .686</td>
<td>.005</td>
<td></td>
</tr>
<tr>
<td>Q118- Ever gone to recovery home</td>
<td>228</td>
<td>.137</td>
<td>.026 - .725</td>
<td>.019</td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>N</td>
<td>Beta coefficient</td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>p–value</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----</td>
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<td>--------------</td>
<td>---------</td>
</tr>
<tr>
<td>Q121- In past year how helpful was a social worker</td>
<td>228</td>
<td>-.177</td>
<td>-.530 -.175</td>
<td>.322 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a financial aid worker</td>
<td>221</td>
<td>.046</td>
<td>-.342 -.433</td>
<td>.816 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a police officer</td>
<td>222</td>
<td>-.237</td>
<td>-.626 -.151</td>
<td>.230 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a youth outreach worker</td>
<td>222</td>
<td>.027</td>
<td>-.292 -.346</td>
<td>.869 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a street nurse</td>
<td>219</td>
<td>.066</td>
<td>-.272 -.404</td>
<td>.699 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a doctor/nurse</td>
<td>225</td>
<td>-.237</td>
<td>-.626 -.151</td>
<td>.230 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a housing worker</td>
<td>218</td>
<td>-.126</td>
<td>-.490 -.238</td>
<td>.496 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was an alcohol and drug counselor</td>
<td>221</td>
<td>-.028</td>
<td>-.398 -.342</td>
<td>.883 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a mental health worker</td>
<td>221</td>
<td>.052</td>
<td>-.330 -.434</td>
<td>.788 *</td>
<td></td>
</tr>
<tr>
<td>Q121- In past year how helpful was a probation officer</td>
<td>221</td>
<td>.052</td>
<td>-.304 -.408</td>
<td>.774 *</td>
<td></td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

Table 8: Unadjusted Comparisons Around Access to Services

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ever-Pregnant</th>
<th>Never-Pregnant</th>
<th>Statistic</th>
<th>p–value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q49- How often are you hungry</td>
<td>mean rank= 100.77</td>
<td>mean rank= 127.58</td>
<td>U*= 4895.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Q118- Have you received drug or alcohol counseling</td>
<td>37.8%</td>
<td>21.1%</td>
<td>$\chi^2 = 7.45$ (df=1)</td>
<td>0.01</td>
</tr>
<tr>
<td>Q118- Ever gone to detox</td>
<td>25.6%</td>
<td>6.1%</td>
<td>$\chi^2 = 17.56$ (df=1)</td>
<td>0.00</td>
</tr>
<tr>
<td>Q118- Ever used outpatient services</td>
<td>11.8%</td>
<td>7.5%</td>
<td>$\chi^2 = 7.32$ (df=1)</td>
<td>0.01</td>
</tr>
<tr>
<td>Q118- Ever gone to recovery home</td>
<td>11.0%</td>
<td>8.2%</td>
<td>$\chi^2 = 0.50$ (df=1)</td>
<td>0.048</td>
</tr>
</tbody>
</table>

*Mann-Whitney U
Stepping Away from Risk Behaviors: Findings

The seventh hypothesis proposed that the ever-pregnant group would report lower levels of risky behaviors than the never-pregnant group, such as drug, alcohol and/or tobacco use and fighting. The hypothesis also stated that the ever-pregnant group would report fewer sexual partners and would be more likely to report safer sex practices.

Regression analysis showed that pregnancy experience was not related to any of the proposed risk behaviours, such as marijuana or alcohol use over the last 30 days, binge drinking over the last 30 days, or tobacco use, use of alcohol and drugs before most recent sexual encounter or other risky sexual behaviours, or participants’ involvement in physical fights in the last year. The only relationship that was significant was in the opposite direction: contrary to the hypothesis, the ever-pregnant group was more likely to report non-use of birth control at their most recent sexual encounter.

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Beta</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>p–value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q56- In the past 30 days how many times did you use marijuana</td>
<td>232</td>
<td>-.145</td>
<td>-.725 - .434</td>
<td>.622 *</td>
<td></td>
</tr>
<tr>
<td>Q60- Drinks of alcohol over the last 30 days</td>
<td>235</td>
<td>-.019</td>
<td>-.481 - .442</td>
<td>.934 *</td>
<td></td>
</tr>
<tr>
<td>Q61- 5 or more drinks of alcohol within an hour over the last 30 days</td>
<td>234</td>
<td>-.024</td>
<td>-.546 .497</td>
<td>.926 *</td>
<td></td>
</tr>
<tr>
<td>Q65- Smoking</td>
<td>237</td>
<td>.113</td>
<td>-.096 - .322</td>
<td>.287 *</td>
<td></td>
</tr>
<tr>
<td>Q66- Smoking over the last 30 days</td>
<td>238</td>
<td>.367</td>
<td>-.279 - 1.01</td>
<td>.264*</td>
<td></td>
</tr>
<tr>
<td>Q70- Intercourse with how many people in the past 3 months</td>
<td>235</td>
<td>.141</td>
<td>-.363 -.644</td>
<td>.581*</td>
<td></td>
</tr>
<tr>
<td>Q71- Drank alcohol or used drugs before last sexual intercourse</td>
<td>198</td>
<td>.933</td>
<td>.495 - 1.57</td>
<td>.882 *</td>
<td></td>
</tr>
<tr>
<td>Q72- Condom use with last intercourse</td>
<td>196</td>
<td>.567</td>
<td>.316 - 1.017</td>
<td>.057 *</td>
<td></td>
</tr>
<tr>
<td>Q73- Last intercourse, no method used to prevent pregnancy</td>
<td>232</td>
<td>2.938</td>
<td>1.402 – 6.155</td>
<td>.004</td>
<td></td>
</tr>
<tr>
<td>Q73- Last intercourse, effective method</td>
<td>232</td>
<td>.897</td>
<td>.221 – 3.631</td>
<td>.878*</td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td>N</td>
<td>Beta coefficient</td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>p–value</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----</td>
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<td>--------------</td>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>Q109- Physical fights in the past 12 months</td>
<td>231</td>
<td>.458</td>
<td>-.073 - .988</td>
<td>.091*</td>
<td></td>
</tr>
</tbody>
</table>

Note: all regressions include age as a covariate, * not significant.

**Table 10: Unadjusted Comparisons, Stepping Away from Risk Behaviours**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Ever-Pregnant</th>
<th>Never-Pregnant</th>
<th>Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q73- Last intercourse, no method use to prevent pregnancy</td>
<td>26.2%</td>
<td>10.7%</td>
<td>$\chi^2 = 9.4$ (df=1)</td>
<td>0.000</td>
</tr>
</tbody>
</table>
Chapter 4: Discussion

The majority of the hypotheses tested were not supported; pregnancy history did not appear to be related to the functions identified in the original study performed in Seattle (Saewyc, 1999). Where there were some differences, they were in the opposite direction to what had been hypothesized, for example, it was hypothesized that ever pregnant group would express higher levels of feeling that their mothers cared about them, analysis showed that never-pregnant group were more likely to feel that their mothers cared about them, or that the ever-pregnant group would be more likely to use birth control but in this sample the never-pregnant group were more likely to use birth control (Saewyc, 1999). The only area where the hypotheses were supported was with respect to participants wanting to receive and having received drug/alcohol treatment; the ever-pregnant sample did show higher interest in receiving or having received drug/alcohol treatment (Saewyc, 1999).

Cultural, societal and time period differences may have contributed to the lack of findings of the current research (Boivin et al, 2005; McKay, 2006; Public Health Agency of Canada, 2006). There are definite differences between Canada and the United States as far as social programs are concerned, so perhaps it is difficult to compare access to services between these two countries. With universal health care in Canada, there may be fewer differences between the ever-pregnant group and the never-pregnant group when it comes to accessing health and social services and allocation of services. Location, culture and availability of social assistance programs are important differences that may have been limiting factors in this study. Perhaps the findings for the Six Functions of Pregnancy in the Seattle group are limited to that group, during that time, in that city (Saewyc, 1999). Further studies looking at larger samples in different cities and countries may help to determine if the perceived phenomenon of the six functions was
limited to that particular group and not applicable to the general population of young women across international boundaries and different social structural contexts (Saewyc, 1999).

The major limitation of this study was that the data were not specifically collected for this purpose. Secondary analysis is limited by the details of the data collected for the purpose of the original study; with secondary analysis additional supporting data cannot be collected nor can clarifying questions be asked of the respondents (Polit & Beck; 2008). The questions from the 2000 Street Youth Survey may not have been specific enough for this study; for example, there were no questions asking for temporal information, so it is impossible to determine when the pregnancy event occurred (The McCreary Centre Society, 2000). Perhaps the young women who were currently pregnant answered the questions differently from those who were parenting. Given the information provided it could not be determined when the pregnancy event occurred and if there was a detectable difference between the two sub groups of currently pregnant or currently parenting.

A further limitation was sample size. Although the sample for the original survey was quite large, with 523 participants, only 238 were female and of that sample only 83 had been pregnant at least once (The McCreary Centre Society, 2000). A post hoc power analysis was done with a selection of the non-significant findings and it was determined that, depending on the question, the sample size should vary from 550 to 3000 participants in order to avoid making a type II error (Polit & Beck; 2008). If the sample size would have been larger, then the differences between the groups could be better measured and the hypotheses may have been accepted rather than potentially “falsely” rejected (Polit & Beck; 2008). As the data were collected for another purpose and this study was a secondary analysis of the existing data, a proper power analysis before the project commenced could not be done (Polit & Beck; 2008). It
is clear that a post hoc power analysis will yield varying results, depending on each separate question, but may provide an approximation of the number of participants that would be needed for a future study (Polit & Beck; 2008).

There are many additional factors that may have contributed to the findings of this project. For example it was decided that all risk behaviors would be examined and compared between groups; however it was most likely that if 75% of the participants were engaging in certain behaviors, like smoking cigarettes, smoking pot and drinking, there would not likely be a difference between the two groups of interest (The McCreary Centre Society, 2000). Because the data was available and statistical analysis might reveal a difference between groups, some risk behaviors were looked at despite being practiced by more than 75% of participants; as such, regression analysis ruled out pregnancy experience as a factor contributing to involvement in risk behaviors (The McCreary Centre Society, 2000). A larger sample size may have offered more insight and may have allowed for a more concise analysis (Polit & Beck; 2008).

There were also some concerns over the coding of certain questions, for example in the care card question the yes and no coding was reverse from the other questions (The McCreary Centre Society, 2000). We checked the coding of the question and found it to be correctly reported, but this result is perplexing, as these young women would have had to use the medical system in order to give birth. So where are their care cards? Again, the secondary analysis of data previously collected for another purpose does not allow for the researcher to clarify the coding of the data and may result in misinterpretation of results that could in part be due to the inability to interpret the data in the context of the new study’s research questions and hypotheses (Polit & Beck; 2008).
There may also be a possibility that all the previous qualitative research was wrong. Perhaps the previous studies neglected to take into consideration social desirability bias; it may be that as a society we encourage women to view pregnancy as a happy and hopeful event. In trying to make sense of their life circumstances, maybe these young women were expressing what is socially desirable (Polit & Beck; 2008). Perhaps we need to look beyond what these young women think, and look at what they do. Do these young women make the positive changes they express a desire to make? Did they stick with those changes? Maybe they are just telling us what they have to believe in order to get through this experience. Social desirability bias may be an area that requires further thought and investigation (Polit & Beck; 2008). That being said, the discourse is quite strong, with the majority of previous studies echoing similar themes (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 1999; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). From the discourse it is apparent that something is happening here, whether it be due to social constructs that tell these young women that they should be excited and hopeful because they are pregnant or that the pregnancy experience is in fact a window of opportunity that can be used as a springboard for these young women to exit their street involvement. Either way further study and scholarly debate is required.

Furthermore, the results of this study beg the question of whether the window of opportunity for the six functions of pregnancy may be a very small one that lasts only through the duration of pregnancy. Perhaps pregnancy is a form of harm reduction, but once the child is born, the effects are gone. In the Seattle group pregnancy allowed for access to programs, re-connection with family, movement away from risk behaviors and provided hope for the future (Saewyc, 1999). Perhaps once these young women had given birth the realities of life as a young
mother and parent negated the positive influences of the pregnancy experience. Pregnancy itself provided these young women access to services, but once they have given birth and started to parent, the social assistance that is available becomes limited (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewye, 1999; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). The realities of parenting and the stress of meeting basic needs for both themselves and their children may not allow for the young women to continue to be hopeful about their future and have a desire to better themselves, as they are focused yet again on their own survival, but with the added burden of the survival of their offspring. Further study is needed to determine how pregnancy works in the lives of street involved young women and if the six functions as postulated by Saewyc hold true for different groups from different settings and cultures.

Directions for Future Research

Further research is needed to determine the function of pregnancy in the lives of street-involved young women. Due to the numbers of young street-involved women who become pregnant, and the poor outcomes for the fetus and mother, it is an area that deserves attention (Afable-Munsuz and Magnus, 2006; Herrman, 2008; Spear, 2001). Further research can help to determine how pregnancy works in the lives of these young women and how programs can be designed to support and encourage the positive behavior changes and allow for a better future for both mother and child (Haley et al, 2004; King et al, 2009; Meadows-Oliver, 2006; Saewyc, 1999; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009).

Future research could greatly benefit from studies with larger sample sizes that could allow for the greater likelihood of detection of differences between the never-pregnant and the ever-pregnant groups (Polit & Beck, 2008). A larger sample would decrease the likelihood of a
type II error, increase power and results that can be generalized from the sample to the population (Polit & Beck, 2008).

In future research, questions that are specific to the six functions of pregnancy should be used and could contribute to better testing of the theory underlying them (Saewyc, 1999). Additional questions about temporal aspects could further contribute by allowing a separate analysis of currently pregnant versus currently parenting (Polit & Beck, 2008). This could provide some answers as to whether the positive influences of the pregnancy event are limited to the duration of the pregnancy or not (Polit & Beck, 2008). Using a study design much like Saewyc’s original study with initial interviews and follow up interviews may allow for clarification questions to be asked at a later time; if there appears to be missing data the participants can, hopefully, be located and further data can be gathered (1999).

Perhaps future research could compare four groups rather than just two; never-pregnant, currently pregnant, parenting, and has children but is not parenting (Polit & Beck, 2008). Comparisons of these four groups would provide details about the differences between the never-pregnant and ever-pregnant street involved young women, and it would also allow for comparisons between the sub-sets within the ever-pregnant group (Polit & Beck, 2008). Knowing the similarities and differences between the ever-pregnant sub-sets can provide some insight into the functions of pregnancy and the duration of the positive influences of pregnancy (Polit & Beck, 2008).

Subsequent research might also benefit from a cross-sectional, multiple location study, perhaps a North American based study may be a good first step (Polit & Beck, 2008). Multiple cities would allow not only for collecting data from a much larger sample but it could also allow for comparison between samples from different cities (Polit & Beck, 2008). Further study
looking at larger samples in different cities may help to determine if the six functions of pregnancy are applicable to the general population of street-involved young women with a history of pregnancy (Saewyc 1999; Polit & Beck, 2008). Furthermore a North American based study would allow for comparison between young Canadian women and young American women which could provide insight into the cultural and societal differences between a socialist country and a historically capitalist country (Boivin et al, 2005; McKay, 2006; Public Health Agency of Canada, 2006). This analysis would provide insight as to whether the experiences of young pregnant street-involved women in Canada differs from their American peers.

In addition to cross-sectional studies, a longitudinal study could help determine if there is social desirability bias (Polit & Beck, 2008). Longitudinal studies could explore how young women view pregnancy and motherhood over time (Polit & Beck, 2008). It would be helpful to have data starting during pregnancy through a time after the young mother is engaged in parenting, this could allow for comparison of the participants with themselves but at different times throughout their experiences (Polit & Beck, 2008). Multiple time point data collection would allow the researchers to observe not only what these young women think, but to actually evaluate the outcomes over a period of time, then it can be determined if the young women are able to make the positive changes they expressed a desire to make, and if not, why not (Polit & Beck, 2008).

Conclusion

The current study has its shortcomings, mostly due to the use of previously generated data for secondary analysis, but the results of this study and the current discourse all point to the need for further research (Polit & Beck, 2008). The fact remains that street involved young women are four times more likely to become pregnant than their stay-at-home peers (Boivin,
Roy, Haley & Galbaud du Fort, 2005; King, Ross, Bruno and Erikson, 2009; Little et al 2007; Haley et al, 2004; Public Health Agency of Canada, 2006). Although globally, complications of pregnancy in the adolescent population are low birth weight and premature births, within the street-involved population pregnancy can result in further complications such as miscarriage, higher infant mortality rates and developmental delays (Halcon & Lifson, 2004; Little et al, 2007; Thompson et al, 2008).

To aid these young women and their children it is imperative for health care initiatives to take into consideration the meaning and function of pregnancy in the lives of street-involved young women(Haley et al, 2004; King et al, 2009; Meadows-Oliver,2006; Saewyc, 1999; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009). If the meanings and functions of pregnancy in the lives of these young women were better understood, perhaps programs could be designed to help meet the needs of the mother and the child, with a focus on providing support and assistance that allow for these young mothers to get off and stay off the streets (Haley et al, 2004; King et al, 2009; Meadows-Oliver,2006; Saewyc, 1999; Saewyc, 2003; Scappaticci and Blay, 2009; Social Services Agency of Montreal, 2009).

The Six Functions of Pregnancy are echoed throughout the current literature (Haley et al, 2004; King et al, 2009; Little et al, 2007; Meadows-Oliver, 2006; Social Services Agency of Montreal, 2009; Scappaticci and Blay, 2008). The theories may be sound, but they have not yet been appropriately tested. This study and previous research indicate that further study and testing is needed to determine the function of pregnancy in the lives of street-involved young women (Haley et al, 2004; King et al, 2009; Little et al, 2007; Meadows-Oliver, 2006; Social Services Agency of Montreal, 2009; Scappaticci and Blay, 2008). The six functions of pregnancy provide a testable theory for future research, but the study design may need to use the functions as the
basis for the questions used to collect data in a new sample (Saewyc, 1999). If the Six Functions were shown to hold for a variety of samples from different populations of street-involved young women, then perhaps they could be used to design interventions and programs to help young women who are pregnant or parenting better meet their needs, so that they may get off the streets and live a healthy, happy, safe and secure life (Saewyc, 1999).
References


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A collaborative approach to supporting pregnant homeless youth. *Nursing for Women’s Health, 11*(5), 459-466.


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Appendix A: Questions by Function of Pregnancy Category from Health Survey Street Youth 2000

Meeting Affiliative Needs

40. How much do/did you feel that your teachers care/cared about you?
   _Not at all
   _Very little
   _Somewhat
   _Quite a bit
   _Very much

41. How much do you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel/felt like I was a part of my school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am/was happy to be at my school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The teachers at my school treat/treated students fairly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel/felt safe at my school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

42. How often do/did you have trouble getting along with your teachers?
   _Never
   _Just a few times
   _About once a week
   _Almost every day
   _Every day

43. How often do/did you have trouble getting along with other students?
   _Never
   _Just a few times
   _About once a week
   _Almost every day
   _Every day

Reconnecting with Family
26. How close do you feel to your mother?
   _ Not at all
   _ Very little
   _ Somewhat
   _ Quite a bit
   _ Very much
   _ Don’t know or does not apply

27. How much do you think your mother cares about you?
   _ Not at all
   _ Very little
   _ Somewhat
   _ Quite a bit
   _ Very much
   _ Don’t know or does not apply

28. How close do you feel to your father?
   _ Not at all
   _ Very little
   _ Somewhat
   _ Quite a bit
   _ Very much
   _ Don’t know or does not apply

29. How much do you think your father cares about you?
   _ Not at all
   _ Very little
   _ Somewhat
   _ Quite a bit
   _ Very much
   _ Don’t know or does not apply

30. How much do you agree or disagree with the following statements?

   Most of the time, my mother
   is warm and loving toward me_______   ______   ______   ______   _______   _______

   Overall, I am satisfied with
   my relationship with my mother_______   ______   ______   ______   _______   _______

   Most of the time my father
   is warm and loving toward me_______   ______   ______   ______   _______   _______

   Overall, I am satisfied with
   my relationship with my father_______   ______   ______   ______   _______   _______

31. How much do you feel that people in your family understand you?
32. How much do you feel that you and your family have fun together?
   - Not at all
   - Very little
   - Somewhat
   - Quite a bit
   - Very much

33. How much do you feel that your family pays attention to you?
   - Not at all
   - Very little
   - Somewhat
   - Quite a bit
   - Very much

**Maturing/Settling Down**

23. During the past 3 months, on average, how many hours a week did you work at a legal job?
   - I didn’t work
   - Less than 5 hours a week
   - 5 to 9 hours a week
   - 10 to 20 hours a week
   - Over 20 hours a week

35. Are you currently attending school? (Mark one answer only)
   - No
   - Yes, regular school
   - Yes, alternative school

39. How do/did you feel about going to school?
   - Hate school
   - Don’t like school very much
   - Like school some
   - Like school quite a bit
   - Like school very much

42. How often do/did you have trouble getting along with your teachers?
   - Never
43. How often do/did you have trouble getting along with other students?
_ Never
_ Just a few times
_ About once a week
_ Almost every day
_ Every day

**Opportunities for a new life**

23. During the past 3 months, on average, how many hours a week did you work at a legal job?
_ I didn’t work
_ Less than 5 hours a week
_ 5 to 9 hours a week
_ 10 to 20 hours a week
_ Over 20 hours a week

34. What grade are you in? (Mark one answer only)
_ Grade 7
_ Grade 8
_ Grade 9
_ Grade 10
_ Grade 11
_ Grade 12
_ I’ve graduated from high school
_ I dropped out in grade

35. Are you currently attending school? (Mark one answer only)
_ No
_ Yes, regular school
_ Yes, alternative school

37. When do you expect to finish your education?
_ Before I graduate from high school
_ When I graduate from high school
_ When I graduate from community college or a technical institute
_ When I graduate from university
_ Don’t know
_ Other, specify: _________________________
94. During the past 30 days, have you felt so sad, discouraged, hopeless or had so many problems that you wondered if anything was worthwhile?
   _ Extremely so, to the point I couldn’t do my work or deal with things
   _ Quite a bit
   _ Some, enough to bother me
   _ A little
   _ Not at all

96. During the past 12 months, did you ever seriously consider attempting suicide (killing yourself)?
   _ Yes
   _ No

97. During the past 12 months, did you make a plan about how you would attempt suicide (kill yourself)?
   _ Yes
   _ No

98. During the past 12 months, how many times did you actually attempt suicide?
   _ 0 times
   _ 1 time
   _ 2 or 3 times
   _ 4 or 5 times
   _ 6 or more times

99. If you attempted suicide during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?
   _ I did not attempt suicide during the past 12 months
   _ Yes
   _ No

116. How do you feel about your current life circumstances?
   _ Good
   _ Fair
   _ Poor
   _ Awful

120. Are you interested in receiving alcohol or drug treatment services? (mark all that apply)
   _ No
   _ Yes, detox services
   _ Yes, outpatient treatment service (eg. drug and alcohol counseling)
   _ Yes, recovery home
   _ Yes, treatment centre
**Access to Services**

49. In general, how often are you hungry because you (or your parents) have no money to buy food?
   - More than once a month
   - At the end of most months
   - Every few months
   - Occasionally
   - Never

117. Do you have a Care Card?
   - Yes
   - No

118. Have you ever received alcohol or drug treatment services? (mark all that apply)
   - No
   - Yes, detox services
   - Yes, outpatient treatment service (eg. drug and alcohol counseling)
   - Yes, recovery home
   - Yes, treatment centre

121. If you have asked the following people for help during the past year, how helpful were they?

<table>
<thead>
<tr>
<th>Not at all helpful</th>
<th>Helpful</th>
<th>Very helpful</th>
<th>Didn’t ask for help</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Worker</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Financial aid worker</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Police</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Youth/Outreach worker</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Street nurse</td>
<td>______</td>
<td>______</td>
<td>_______</td>
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<tr>
<td>Doctor/nurse</td>
<td>______</td>
<td>______</td>
<td>_______</td>
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<tr>
<td>Housing worker</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Alcohol &amp; drug counselor</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Mental health worker</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Probation officer</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
<tr>
<td>Other, specify:</td>
<td>______</td>
<td>______</td>
<td>_______</td>
</tr>
</tbody>
</table>

**Stepping away from risk behavior**

56. During the past 30 days, how many times did you use marijuana (pot, grass)?
   - 0 times
   - 1 or 2 times
   - 3 to 9 times
   - 10 to 19 times
   - 20 to 39 times
   - 40 or more times
60. During the past 30 days, on how many days did you have at least one drink of alcohol?
   - 0 days
   - 1 or 2 days
   - 3 to 5 days
   - 6 to 9 days
   - 10 to 19 days
   - 20 to 29 days
   - All 30 days

61. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
   - 0 days
   - 1 day
   - 2 days
   - 3 to 5 days
   - 6 to 9 days
   - 10 to 19 days
   - 20 or more days

65. At the present time, do you smoke cigarettes every day, occasionally or not at all?
   - Not at all
   - Occasionally
   - Every day

66. During the past 30 days, on how many days did you smoke cigarettes?
   - 0 days
   - 1 or 2 days
   - 3 to 5 days
   - 6 to 9 days
   - 10 to 19 days
   - 20 to 29 days
   - All 30 days

70. During the past 3 months, with how many people did you have sexual intercourse?
   - I have never had sexual intercourse
   - I have had sexual intercourse, but not during the past 3 months
   - 1 person
   - 2 people
   - 3 people
   - 4 people
   - 5 people
   - 6 or more people
71. Did you drink alcohol or use drugs before you had sexual intercourse the last time?
   - I have never had sexual intercourse
   - Yes
   - No

72. The last time you had sexual intercourse; did you or your partner use a condom?
   - I have never had sexual intercourse
   - Yes
   - No

73. The last time you had sexual intercourse, what method(s) did you or your partner use to prevent pregnancy? (Mark all that apply)
   - I have never had sexual intercourse
   - The last time I had sex was with a same-sex partner
   - No method was used to prevent pregnancy
   - Birth control pills
   - Depo Provera
   - Diaphragm/contraceptive sponge
   - Condoms
   - Withdrawal
   - Emergency contraception (“morning after pill”)
   - Some other method
   - Not sure

109. During the past 12 months, how many times were you in a physical fight?
   - 0 times
   - 1 time
   - 2 or 3 times
   - 4 or 5 times
   - 6 or 7 times
   - 8 or 9 times
   - 10 or 11 times
   - 12 or more times