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Adolescent Pregnancy in Saskatchewan: Best Practices for Prevention Literature Review

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Adolescent Pregnancy in Saskatchewan: Best Practices for Prevention

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Executive Summary

Introduction

The purpose of this literature review is three-fold: 1) to examine adolescent pregnancy in the context of Saskatchewan and Canada; 2) to provide guidance for the best practices to prevent adolescent pregnancy; and 3) to increase support for pregnant adolescents and adolescent parents to create the best possible outcomes.

Adolescent pregnancy is defined as a girl becoming pregnant in the period between the onset of puberty (generally around age 12) and age 20. Pregnancy occurs because of unprotected sexual activity. Adolescents who become pregnant have many decisions to make regarding the pregnancy; if the young woman decides to keep her baby, she faces the risk of many adverse outcomes for herself and her child in the areas of health, education and relationships.

In Canada, rates of adolescent pregnancy remain some of the highest among developed countries (30.5 per 1,000 for women aged 15 to 19), and Saskatchewan has the highest rates of adolescent pregnancy and live births of the Canadian provinces (34.3 per 1,000 for women aged 15 to 19). There is, therefore, a need for prevention strategies that can affect change in Saskatchewan's diverse ethnic and religious communities.

Risky sexual behaviour (e.g., lack of contraception use, multiple sexual partners, unprotected sexual activity) can lead to consequences such as unplanned pregnancy or STIs. Adolescents may engage in risky sexual behaviour for many reasons, including lack of knowledge, peer pressure, lack of planning and substance use. Contraceptive use is not always consistent in this population, and may be due to lack or difficulty in accessing contraception (e.g., embarrassment, lack of anonymity, needing parental consent), or shyness introducing contraception with partners.

Consequences of Adolescent Pregnancy

There are many adverse consequences of adolescent pregnancy. Adolescent pregnancy poses a risk for both the woman and her baby during pregnancy, labour, and after birth. Pregnant adolescents are more likely than other women to receive late or no prenatal care; have a higher risk of pre-eclampsia, gestational hypertension, anemia, prolonged labor, and postnatal depression; as well as poor maternal weight gain. Children born to adolescent mothers have a higher risk of low birth weight, preterm delivery, infant mortality, hospital admissions for intestinal problems, and accidental and non-accidental injuries.

In the long term, adolescent pregnancy can impact both the male and female parties by limiting educational and employment outcomes, and increasing the risk of relationship and marital instability. It can also have long-lasting effects on the child due to a less stimulating home environment and a lack of resources (e.g., financial, educational). Children of adolescent mothers are also at an increased risk of becoming adolescent parents themselves.

Risk & Protective Factors

There are many risk factors associated with adolescent pregnancy, including:

- child abuse
- poverty
- poor academic experiences or lack of education
- psychological factors
- a preference for early childbearing
- familial factors
- early onset of puberty
- relationship factors
- lack or difficulty in accessing health services
- rapid repeat pregnancy

The protective factors relating to adolescent pregnancy include the following:

- parent-child relationship
- education
- religion

Special Populations in Saskatchewan

There are two specific communities that have special situations in relation to adolescent pregnancy in Saskatchewan: Aboriginal groups and immigrants.

Aboriginal communities in Saskatchewan have disproportionately high rates of adolescent pregnancy, and may also face other health disparities that affect their access to sexual education, pre- or post-natal care, and/or support. This community does not necessarily view adolescent pregnancy as a negative event, and therefore appropriate supports should be in place for adolescents who do face pregnancy, planned or unplanned. Because of the different values, culture, and beliefs of these communities as compared to other groups in Saskatchewan, community members should be involved in the planning and implementation of programming in order to be most effective in the population.

Immigrant populations also face differing rates of adolescent pregnancy than the general population in Saskatchewan. There has been limited research regarding adolescent pregnancy in this population, although they may have slightly lower than normal rates of adolescent pregnancy due to different religious and cultural beliefs. Prevention programming needs to take into account the needs of these groups (e.g., literacy levels, language barriers, cultural beliefs) in order to be most effective in addressing adolescent pregnancy rates.

Paternal Involvement in Adolescent Pregnancy

Males can play an important role in adolescent parenthood. These males may not be adolescents themselves, but prevention strategies should still aim to involve them in programming; males can be influential in the use of contraception and other sexual health behaviour that can impact adolescent pregnancy.

There are several risk factors for males being involved in an adolescent pregnancy, including:

- being the son of an adolescent mother and/or father
- poor familial or parent-child relationships
- being from a single-parent family
- living in poverty and/or low income communities
- behavioural problems (e.g., smoking, drinking, illicit drug use)
- involvement in risky sexual behaviour
- disadvantaged childhood
- low educational achievement
- aggression, delinquent behaviour, and truancy

Being involved in an adolescent pregnancy can have long-lasting effects on both the father and the children. Fathers may have limited education, financial resources, and parenting abilities. Children may be impacted by the father's resources (e.g., educational and financial), lack of parental contact, close paternal relationships, and/or the relationship between his/her father and mother.

Adolescent males can benefit greatly from prevention strategies. These programs work best in places where adolescent males have high levels of involvement (e.g., sports teams), or where males receive medical care. The most effective strategies are those that include a service learning component, a parent component, or those where sexuality education focuses specifically on males.

Best Practices for Prevention of Adolescent Pregnancy

There are a variety of programs available for adolescent pregnancy prevention; however, the most effective programs utilize a variety of strategies that are chosen based on the specific needs of the community. Although the primary goal of these programs should be geared towards adolescent pregnancy prevention, they should also have support in place for pregnant adolescents.

There are five main types of programs that can be effective in reducing adolescent pregnancy rates:

- Curriculum-based Education: generally occurs in a school setting and encourages both abstinence and contraceptive use.
- Service Learning Program: focuses on keeping adolescents constructively engaged in their community through service projects and group discussions.
- Youth Development: attempts to prepare and encourage adolescent participants to plan for the future through investment in school, sports, employment, etc. in order to reduce some of the risk factors of adolescent pregnancy (e.g., poor educational achievement).

- Parent Programs: involve both the parent(s) and the adolescent to improve parent-child communication in general, and specifically with sex-related topics.
- Community-wide Programs: encourage the whole community to get involved with adolescent pregnancy prevention through public service announcements, educational activities, or community-wide events, each reinforcing the same message.

Whichever program type is chosen, there are specific aspects of program development, curriculum content and program implementation that should be included in order to increase effectiveness.

Conclusion

Adolescent pregnancy rates are high in Saskatchewan compared with the rest of Canada and other developed countries. As such, there is a great need for effective strategies to reduce adolescent pregnancy and to support adolescents that do become pregnant. These programs should take into account the specific needs of the community at hand, as well as cultural and religious values and beliefs. There are many different strategies available for effective programming, but communities should choose those which directly suit the needs of their participants in order to be most effective.

1. Introduction

The purpose of this literature review is three-fold: 1) to examine adolescent pregnancy in the context of Saskatchewan and Canada; 2) to provide guidance for the best practices to prevent adolescent pregnancy; and 3) to increase support for pregnant adolescents and adolescent parents to create the best possible outcomes.

Adolescent pregnancy has been defined as a girl becoming pregnant in the period between the onset of puberty (generally around age 12) and age 20 (PubMed Health, 2011). Despite recent overall declines in Canada, adolescent pregnancy rates in Saskatchewan remain the highest of the Canadian provinces.

Adolescents in Canada who become pregnant have many decisions to make regarding their pregnancy (e.g., abortion, adoption, raising the baby by herself or with a partner). If the young woman decides to keep her baby, she faces the risk of many adverse outcomes for herself and her child in the areas of health, education, and relationships. To reduce the occurrence of these adverse outcomes, there is a need for prevention of adolescent pregnancy and risky sexual behaviour in general. When prevention is not possible, there is a need for appropriate and accessible supports for the adolescent parents and their child.

Adolescent pregnancy is a complex issue and is influenced by familial, home, socioeconomic, social, and educational factors. Prevention strategies need to take these factors into consideration during development and implementation in order to increase effectiveness.

There is no one strategy that adequately meets the needs or affects the behaviours of every adolescent. Often within a community, multiple strategies can be used and adapted to the variety of needs within the community (Kirby, 2007). This increases the likelihood that adolescents hear and listen to the message intended to affect a change in behaviour. This is especially true in Saskatchewan, with its diverse cultural and religious influences.

This paper will examine the current data, research, and best practices surrounding adolescent pregnancy, taking into account the cultural and religious perspectives in Saskatchewan. Focusing on prevention of adolescent pregnancy and appropriate supports when prevention is not possible, this literature review will look at the factors surrounding adolescent sexual behaviour and provide guidelines for programs that will affect change in these populations.

2. Adolescent Pregnancy Statistics

2.1 Canadian Statistics

In Canada, rates of adolescent pregnancy remain some of the highest among developed countries (UNICEF, 2007). Pregnancy rates described here include rates for live births (the number of live births per 1,000 females of the same age group) as well as rates for fetal loss and induced abortion (Best Start & SIECCAN, 2007). In 2004, the overall rate of adolescent pregnancy in Canada for women aged 15 to 19 was 30.5 per 1,000 women (Luong, 2008), with the live birth rate being 13.6 per 1,000. For women under age 15, the pregnancy rates are generally very low in Canada (2.0 per 1,000), with the live birth rate being even lower (0.5 per 1,000) (Best Start & SIECCAN, 2007).

There is much variation between provincial rates of adolescent pregnancy across Canada. Adolescent pregnancy rates for women aged 15 to 19 range from a low of 10.8 per 1,000 in British Columbia to a high of 117.4 per 1,000 in Nunavut (Luong, 2008).

The range in age-specific fertility rates for 15 to 19 year old females in Canadian provinces is outlined below in Table 1. The age-specific fertility rate is the number of live births per 1,000 females in a particular age group. Data was not available for females younger than 15 years of age. This is due to the low rate of pregnancy, and subsequently live births, occurring in those populations.

Table 1: Age-specific Fertility Rates by Province for Females 15 to 19 years old (Statistics Canada, 2009)

Province	Fertility Rate per 1,000 Females aged 15 to 19
Newfoundland & Labrador	19.2
Prince Edward Island	16.9
Nova Scotia	18.3
New Brunswick	20.9
Quebec	11.0
Ontario	10.8
Manitoba	32.7
Saskatchewan	34.3
Alberta	20.0
British Columbia	10.3
Yukon	23.3
Northwest Territories	34.3
Nunavut	111.5

2.2 Saskatchewan Statistics

Saskatchewan has the highest rates of live births from adolescent pregnancies in Canada (excluding the Canadian territories), at 34.3 out of 1,000 (Statistics Canada, 2009). In 2005, Saskatchewan adolescents experienced 1,652 pregnancies that resulted in 1,191 live births; 15 of these were to girls under the age of 15 (Murdock, 2009).

In Saskatchewan, there is a significant Aboriginal population, which may impact the pregnancy rate. Aboriginal fertility rates have been decreasing over the last several decades; however, they are still much higher than the non-Aboriginal population – this is true of both adolescent pregnancies and pregnancies in older women. In 1999, more than 1 in 5 First Nations infants were born to adolescent mothers aged 15 to 19, as compared to 1 in 20 for Canada as a whole (Murdock, 2009). As well, when compared to the non-Aboriginal population, adolescent pregnancy is four times higher among First Nations adolescents, twelve times higher for Inuit adolescents and eighteen times higher on reserves (Murdock, 2009). In 2002, in one Northern Saskatchewan health region, the birth rate for adolescent women aged 15 to 19 years was 110.4 per 1,000 (Athabasca Health Authority, 2004). From these statistics, it is clear that there needs to be prevention and support strategies focused on these communities. It is important to note that many First Nations communities do not see adolescent pregnancy as a problem or a negative event, and therefore do not necessarily desire prevention oriented interventions. Cultural beliefs need to be considered and communities involved when developing programming and intervention strategies, in order to ensure that what is developed is appropriate and effective for that community.

2.3 Difficulties with Statistic Reporting

Pregnancy statistics are often difficult to compare at provincial and national levels, and are not always accurate because of several factors, including the following (Best Start & SIECCAN, 2007):

- Statistics may use data from either live births or from all potential pregnancy outcomes (i.e., live births, abortions, pregnancy loss, stillbirth), and it is not always clear which is being used.
- It is not always possible to get accurate abortion statistics (e.g., the number of abortions in an area, the age of the woman at the time of the abortion).
- Pregnancy loss is generally under-reported in adolescent populations.
- Women who become pregnant at the age of 19 and give birth or have an abortion at age 20 are not included in adolescent pregnancy rates.

It is also important to note that not all adolescent pregnancy statistics are broken down into different age categories (e.g., 15- to 17-year-olds and 18- to 19-year-olds), even though these categories may often show significant differences in pregnancy rates (Best Start & SIECCAN, 2007). Very young adolescent girls (under 15 years of age) are also not well represented in the statistics. This may be because of the extremely low rates of pregnancy, live birth and induced abortion within this population in Canada; for example, in Saskatchewan the live birth rate for this age group was 1.3 per 1,000 (Best Start & SIECCAN, 2007).

3. Adolescent Pregnancy

Adolescence is a period of transition that involves biological, cognitive, psychological, social and physical changes (Commendador, 2010) that generally take place from ages 12 to 19 years (Benoit, 1997). Adolescent pregnancy occurs as a result of unprotected sexual activity. In 2005, 43% of Canadian adolescents aged 15 to 19 reported that they had had sex at least once, with more 18- to 19-year-olds reporting that they had had intercourse than 15- to 17-year-olds (Rotermann, 2008). Data was not available for 12 to 15 year olds.

3.1 Risky Sexual Behaviour

Risky sexual behaviour (e.g., multiple or concurrent sexual partners, inconsistent or lack of use of contraception) can result in high pregnancy and birth rates, as well as STIs and HIV/AIDS. The health consequences of STIs and HIV/AIDS are abundant and include infertility, ectopic pregnancy, and cancer (Kirby, 2007). Prevention of the range of negative outcomes from risky sexual behavior is not the focus of this literature review; however, it is often a by-product of strategies to prevent and reduce adolescent pregnancy in Canada.

Adolescents may engage in such risky behaviours for a variety of reasons (Archibald, 2004):

- lack of knowledge about contraception, or embarrassment about contraceptive use
- drug and alcohol use
- peer pressure
- desire to fit in, or look cool
- boredom
- lack of planning for sexual activity (e.g., having unplanned sex) (Woodward, 1995)

There are several types of behaviour that will reduce adolescent pregnancy rates. These include abstaining from sex, reducing the frequency of sex among those who are sexually active, and the use of contraception by those who are sexually active (Kirby, 2007).

3.2 Contraception Use among Adolescents

The more frequently adolescents have sex without effective contraception, the more likely it is that they will become pregnant. The chances of becoming pregnant while using contraception depends on the effectiveness of the method chosen, as well as the correct and consistent use of contraceptives.

Many adolescents, although they have knowledge about the correct use of contraceptives, are not consistent about using them. Kirby (2007) notes that although 80 to 90% of adolescents used contraception the most recent time they had sexual intercourse, many adolescents do not use contraceptives each time they have sexual intercourse. As well, among adolescent women aged 15 to 19 that rely on oral contraceptives for their birth control method, only 70% take their pill every day (Kirby, 2007).

Adolescents are also not consistent about their use of condoms. Proper use of condoms reduces the risk of both an unplanned pregnancy and contracting an STI; however, many adolescents do not use condoms every time they have intercourse. According to Rotermann (2005), only three-quarters of sexually active 15- to 19-year-old adolescents who had been with multiple partners in the past year and who were not married or in a common-law relationship reported condom use. During this period, condom use was also more common with younger adolescents (15- to 17-year-olds) than with older adolescents (18- to 19-year-olds), and was less common among oral contraceptive users.

A lack of contraceptive use is not always due to a lack of knowledge. Many adolescents reported not using condoms because of shyness with partners, or embarrassment accessing contraceptives (Archibald, 2004), as well as being unprepared for sexual intercourse because they did not expect or plan to have sex (Kirby, 2007). Adolescents are, in general, very concerned about others' perceptions of them. They may be hesitant to bring up contraceptive use during sexual encounters, and may be embarrassed about buying condoms or other forms of contraception (Koniak-Griffin et al., 2003). This is especially true in rural or remote settings where anonymity is not always possible (Koniak-Griffin et al., 2003).

Therefore, it is necessary that intervention strategies not only increase the knowledge that adolescents have regarding their sexual health and contraception, but also actually change their behaviour. Adolescents may know how to prevent pregnancy and how to reduce their risk of contracting an STI; however, they are not always consistent in applying this knowledge to their actions. Sexual education should ensure that adolescents have the realistic skills that are needed to deal with embarrassment, access contraceptives, and negotiate condom use with their partners.

3.3 Intended and Unintended Pregnancy during Adolescence

Although some adolescents make the decision to become pregnant, the majority of adolescent pregnancies are unintended (Henshaw, 1998). Pregnancy intention refers to a woman's feelings before conception. This can impact her behaviour surrounding sexual activity; for example, some adolescents may choose to become pregnant and therefore they are consciously choosing behaviours that could lead to pregnancy (e.g., engaging in sexual activity, not using effective contraception). Even if the pregnancy was unplanned, a woman's feelings about it may change during or after the pregnancy (Russell, Vaughan & Stanford, 1999; Sable & Wilkinson, 1998).

In 2001, 82% of adolescent pregnancies in the U.S. were unplanned (Finer & Henshaw, 2006). For women aged 15 to 19, in 2001, 40% of these unplanned pregnancies resulted in abortion; for women less than 15 years, 100% of pregnancies were unplanned and 51% resulted in abortion (Finer & Henshaw, 2006).

Many adolescents are ambivalent about pregnancy (Cowley & Farley, 2001; Davies et al., 2003; Sipsma, Ickovics, Lewis, Ethier, & Kershaw, 2011), meaning that they realize the potential

consequences of sexual activity and how to prevent pregnancy, yet choose to use contraception infrequently or not at all. (Adolescents may not use contraception for many reasons; for more information, see *Section 3.2: Contraception Use among Adolescents*). Adolescents who were ambivalent towards pregnancy were more likely to be older, have been younger at sexual debut, be involved in short-term relationships, and have a greater level of perceived stress (Sipsma et al., 2011). Sipsma et al. found that 24% of the adolescent participants reported feelings of ambivalence or desire towards pregnancy within the next year. At the follow-up 18 months later, these views towards pregnancy were significantly associated with pregnancy incidence.

In summary, ambivalence towards or desire for pregnancy has an effect on adolescent sexual behaviour and contraceptive use, and these views should be acknowledged in any prevention programs.

4. Consequences of Adolescent Pregnancy

Adolescent pregnancy in Canada is associated with many adverse consequences for both the mother and her child throughout their lifespan.

4.1 Adverse Birth and Pregnancy Outcomes

Adolescent pregnancy poses a risk for both the woman and her baby during pregnancy, labour and after birth. Pregnant adolescents are more likely than other pregnant women to receive late or no prenatal care, potentially affecting both the mother and child's health (Scholl, Hediger, & Belsky, 1994). Babies born to adolescent mothers have a higher risk of low birth weight, preterm delivery and infant mortality (e.g., SIDS), hospital admissions for intestinal problems, and accidental and non-accidental injuries (Rotermann, 2007; Social Exclusion Unit, 1999). These outcomes can cause complications as the child ages, such as child developmental delay (Chandra, Schivello, Ravi, Weinstein, & Hook, 2002).

Pregnancy during adolescence is also associated with complications for the adolescent herself. Pregnant adolescents have a higher risk of pre-eclampsia, prolonged labor, and postnatal depression (Social Exclusion Unit, 1999). These women also have higher rates of gestational hypertension, anemia, and poor maternal weight gain (Scholl, Hediger & Belsky, 1994).

4.2 Educational and Employment Outcomes

Adolescent mothers face many difficulties in raising their children, many of which are due to a lack of educational attainment. Many adolescents who become pregnant do not finish high school because of the time off required for their pregnancy, recuperation, and child-care (Luong, 2008). This affects later job and educational outcomes (Coley & Chase-Lansdale, 1998). As a result, they may have socioeconomic disadvantages and fewer resources to provide for themselves and their family, leading to persistent poverty (Meade, Kershaw, & Ickovics, 2008; Ralph & Brindis, 2010; Wakhisi, Allotey, Dhillon & Reidpath, 2011).

This is also true of adolescent males who are involved in a pregnancy. Many adolescent fathers drop out of high school to provide financially for their child. They may work more hours and make more money than their peers in the first few years; however, this slight benefit disappears quickly as a lack of education severely limits job opportunities and earning potential (Cole & Chase-Lansdale, 1998). Therefore, strategies to improve educational outcomes for adolescent parents should target both males and females.

4.3 Familial Outcomes

Adolescent pregnancy has long-term consequences for relationships. Although some adolescent mothers may maintain a long-term relationship with the father of their child, these relationships are more likely to deteriorate over time (Coley & Chase-Lansdale, 1998). As such, even as they age, adolescent mothers face higher rates of marital instability and are more likely to be single parents than women who become mothers later in life (Coley & Chase-Lansdale, 1998; Corcoran, 1998; Kirby, 2007).

4.4 Effects on Children

Adolescent pregnancy has long lasting effects on the children involved. Children of adolescent mothers are likely to have less supportive and stimulating home environments, contributing to lower cognitive development than children of parents born to older mothers (Maynard, 1997). These children have also been shown to have higher rates of emotional distress and problem behaviour than children of older mothers (Meade et al., 2008). These influences have long-lasting effects on the child and may affect later educational and employment achievements. Child-parent relationships are also extremely important for proper development and will be discussed in more depth in *Section 5.2.1: Parents*.

Children of adolescent mothers are also at an increased risk of becoming adolescent parents themselves (Meade et al., 2008). This is not directly causal, but may be due to a greater exposure to risk factors faced during their lives, as well as an acceptance of adolescent parenthood as parents are important role models for their children (Meade et al., 2008). There are many risk factors for intergenerational adolescent childbearing, such as poverty, low educational achievement, a preference for early childbearing, single-parent households, poor parent-child relationships, and low maternal education (Meade et al., 2008).

5. Factors Affecting Pregnancy

Adolescent pregnancy is affected by both protective and risk factors. These factors can range across cultures and geographical location, and even within cities and provinces. As well, there are other influences such as culture and religion that can impact adolescent sexual behaviour and pregnancy. It is important to note that adolescent pregnancy prevention programs have limited capacity to affect many of these factors.

5.1 Risk Factors

Several risk factors are discussed in detail in other parts of the report – being an ethnic minority (*Section 6.2: Adolescent Pregnancy among Aboriginal and First Nations Communities* and *Section 7: Immigrants and Adolescent Pregnancy*) and engaging in risky sexual behaviour (see *Section 3.1: Risky Sexual Behavior*).

5.1.1 Child Abuse

Child abuse, whether physical or sexual, can have many lasting effects on the individual and their behaviour. In regards to adolescent sexual behaviour and adolescent pregnancy, child abuse has been associated with having more sexual partners, earlier age at first intercourse and less likely to use contraception (Anda et al., 2002). Boyer & Fine (1992) found that two-thirds of adolescent mothers in their study were sexually abused as children (Boyer & Fine, 1992). Noll, Shenk, & Putnam (2008) found that women with a history of childhood sexual abuse were more than two times more likely to have experienced an adolescent pregnancy than women who did not experience any abuse.

5.1.2 Poverty

Poverty has a complex, cyclical relationship with adolescent pregnancy. Women of low socioeconomic status who live in poverty have high rates of adolescent pregnancy (First Steps Housing Project, 2006; Furstenberg, Brooks-Gunn & Morgan, 1987; Meade, Kershaw & Ickovics, 2008; Moore et al., 1993). As well, adolescent mothers have high rates of poverty as a consequence of early childbearing. This may be because adolescent mothers have a lower likelihood of finishing high school and poor employment outlooks which affect earning capacities (First Steps Housing Project, 2006).

Poverty has a negative effect on children of adolescent mothers as well, potentially influencing their risk for adolescent pregnancy. Poverty is a strong predictor of adolescent pregnancy (Sullivan, 1993), and it is a factor that is very difficult for any prevention strategies to influence.

5.1.3 School & Education

School plays an important role in shaping an adolescent's worldview and behaviours. However, poor school experiences can influence the adolescent's behaviours negatively. Poor academic performance, dislike of school and school dropout are all associated with risky sexual health behaviours (e.g., not using protection during sexual activity) and adolescent pregnancy (Fergusson & Woodward, 2000; Fletcher et al., 2008; Manlove et al., 2006). As well, as discussed above (see *Section 4.4: Effects on Children*), if the individual does not return to school, a lack of educational attainment (e.g., low literacy level) has long lasting effects on their life, and the life of their current and future children.

Sexual health education is also important. Adolescents should receive appropriate sexual health education as they age. School is an important environment for adolescents to learn about sexual health and sexuality. Insufficient sexual education can lead to risky sexual behaviour, and potentially adolescent pregnancy or sexually transmitted infections (STIs) (Wakhisi et al., 2007).

5.1.4 Psychological Factors

There are a variety of psychological factors that affect adolescents in their sexual activity. Adolescence is a time of much psychological development and maturation. Adolescents may think that they are prepared for adulthood, and want to be seen as adults. They may deny the risks of adolescent parenthood, and the difficulties and demands that come with raising a baby (Benoit, 1997).

Early upbringing experience, along with the current beliefs of adolescents, can also affect their decision-making in many ways, including their choices relating to sexual behaviour. Adolescents may have unmet dependency needs from their childhood. This is especially true if they themselves are the children of adolescents who were not prepared for parenthood.

Various types of abuse in childhood may affect psychological development and subsequently, sexual behaviour. For more information on the effects of sexual abuse in childhood as it relates to sexual behaviour, see *section 5.1.1: Child Abuse*.

5.1.5 Preference for Early Childbearing

In some communities and cultures, and for some women, early childbearing is desirable. Some adolescents, especially females, may see early parenthood as a career choice (Merrick, 1995), and may also see motherhood as a way of attaining adult status (Palacios, 2007). As such, these women may intend to become pregnant during adolescence.

A preference for early childbearing is influenced by several factors:

- some cultures, including the prevalent Aboriginal culture in Saskatchewan, readily accept adolescent pregnancy (see *Section 6.2: Adolescent Pregnancy in Aboriginal and First Nations Communities*) (Geronimus, 2003)
- adolescent marriage (Montgomery-Anderson, 2003)
- parental views on adolescent pregnancy (i.e., if the parents themselves experienced an adolescent pregnancy) (Meade, Kershaw, & Ickovics, 2008)
- early experiences of adult responsibilities (e.g., being responsible for siblings at an early age) (Meade, Kershaw, & Ickovics, 2008)

5.1.6 Familial factors

Family influences are extremely important during childhood and adolescent development. There are many familial factors that are associated with adolescent pregnancy and risky sexual behaviour, such as (Meade, Kershaw, & Ickovics, 2008):

- growing up in a single-parent household
- maternal characteristics (e.g., lower educational attainment, being an adolescent mother herself)
- having a poor parent-child relationship
- low parental monitoring
- increased or excessive home responsibilities (e.g., caring for siblings at a young age)
- harsh or inconsistent discipline

Family, especially parents, can also act as a protective factor; see *Section 5.2.1: Parents* for more information.

5.1.7 Early Onset of Puberty

Early onset of puberty is associated with higher levels of risky sexual behaviour, often occurring at an earlier age (Belsky et al., 2010). This may include an earlier age of first dating, first kissing and first sexual intercourse (Belsky et al., 2010). An earlier age at first intercourse is associated with a higher likelihood of having unprotected sex (Rotermann, 2008) which in turn can lead to unwanted pregnancy or contracting STIs. Early onset of puberty is also associated with higher rates of adolescent pregnancy (Belsky et al., 2010). These issues may be caused by a lack of information given to children on sexual health at younger ages, or may be because adolescents who become sexually active earlier have a longer period of time when they are at risk of the negative consequences of risky sexual behaviour (e.g., unwanted pregnancy, STIs) (Rotermann, 2008).

5.1.8 Relationship Factors

Friends and peers play an important role in shaping an adolescent's worldview and behaviour. Although this can be positive in some situations, adolescents are often vulnerable to negative peer pressure, especially from older friends or acquaintances. Adolescent pregnancy is associated with (Noll, Shenk, & Putnam, 2008; Wakhisi et al., 2011):

- peer pressure towards sexual activity
- dating older partners
- being in a relationship with a violent partner
- pressure from older partners to have sex
- having early and high levels of seriousness with partners
- difficulty or embarrassment negotiating the use of birth control with a partner

Adolescent pregnancy prevention programs may have little effect on peer and partner choice; however, they can prepare adolescents for potentially risky sexual situations (e.g., how to deal with peer pressure to have sex, how to ensure contraception is used).

5.1.9 Accessing Health Services

Health services in Saskatchewan work to provide opportunities for education, support, treatment and diagnosis to the general public; however, adolescents may have difficulty in accessing these services for a variety of reasons, which may lead to a lack of sexual health information, lack of contraception use, delay in prenatal care, and adverse health outcomes for the adolescent and the child (Ralph & Brindis, 2010).

Adolescents may have difficulty accessing health services in their community because of (Ralph & Brindis, 2010):

- lack of anonymity and fear of disclosure of confidential information to family and peers
- lack of familiarity with the healthcare system
- limited ability to pay for services
- uncertainty about their ability to access services without the consent of a parent or guardian
- mistrust of health services (Wakhisi et al, 2011)

As well, adolescents may not want to ask their parents for permission to buy contraception or access other reproductive health services. The age that an adolescent can access health services without their parents' consent or knowledge depends on the age of majority in the province (age 19 in Saskatchewan) and the rules of the individual facility. Adolescents can access condoms and emergency contraception at any age, but need a prescription for birth control pills, which may require parental consent or the use of parents' insurance. Birth control pills can be accessed in most provinces by an adolescent who is aged 16 or older (Kids Help Phone, 2012).

It is therefore essential that healthcare services within the community maintain a good relationship with adolescents. Adolescents should feel comfortable accessing these services and should be confident that their information will not be disclosed to others. Healthcare providers can help to ensure that adolescents are receiving correct and appropriate sexual health information, as well as proper and effective contraception when needed (Ralph & Brindis, 2010).

5.1.10 Rapid Repeat Pregnancy

A rapid repeat pregnancy (RRP) is a subsequent pregnancy occurring within 24 months of a previous pregnancy or an inter-pregnancy interval (the period between the delivery of a live birth and the conception of a subsequent live birth; Zhu, 2005) less than or

equal to 24 months (Rigsby, Macones, & Driscoll, 1998). RRPs during adolescence compound many of the problems that adolescent mothers and their partners face.

There are many risk factors for RRP (Crittenden et al., 2009):

- early age of mothers at first birth
- being married as an adolescent
- having an intentional first pregnancy
- poor first birth outcome (i.e., abortion, stillbirth or miscarriage)
- low educational achievement
- risky sexual behaviour (e.g., lack of contraceptive use, use of alcohol or drugs leading to unprotected sexual activity)
- poor family involvement
- low parental education
- being the child of an adolescent mother
- mental health and behavioural factors (e.g., anxiety, depression, aggression)
- childhood abuse and trauma

RRP has been a difficult trend among adolescent mothers to affect through the use of prevention strategies. However, strategies that are effective for reducing rates of the first adolescent pregnancy may also be effective in reducing rates of subsequent births (Klerman, 2004; Kirby, 2007). These programs need to provide individualized support, counseling and education through nurturing relationships. They also need to promote educational achievement and youth development.

5.2 Protective Factors

5.2.1 Parents

The family system is an extremely important factor in the prevention of adolescent pregnancy (Quinlivan et al., 2003). Child-parent closeness can influence adolescents' beliefs, attitudes and behaviours towards sexual activity, including having intercourse, using substances, impulse control, and association with sexually active peers (Commendador, 2010). Child-parent closeness, as well as parental involvement in adolescents' lives, can have a protective effect against adolescent pregnancy.

Parents can help to prevent pregnancy in their adolescent by (Ramirez-Valles, Zimmerman & Newcomb, 1998):

- providing opportunities to develop social skills
- reinforcing educational performance and achievement
- helping the adolescent to feel more competent and have higher self-esteem

Parental communication regarding sexual health with their adolescent has a positive effect on their relationship, and can help to reduce adolescent sexual activity. However, this communication occurs infrequently (Fox & Inazu, 1980). It is therefore important for parents to ensure that they are actively working to communicate with their children about their sexual health, including topics such as responsibility in sexual relationships, and education about STIs, sexuality and contraception (Aspy et al., 2007; Hutchinson, 2002).

Mothers are in an especially important position to affect their adolescent's sexual activity. Open communication between mothers and their adolescent daughters and sons about sexual health can postpone or delay sexual activity and increase contraception use (Fox, 1980; McNeely et al., 2002; Miller & Whitaker, 2001).

Parental monitoring has also been shown to have an effect on adolescent sexual activity. Parents' efforts to set and enforce rules, as well as to monitor their adolescents' activities within and outside of the home, can be a protective factor against adolescents engaging in sexually risky behaviours (Roche et al., 2005). Higher levels of parental monitoring have been associated with fewer sexual partners, lower levels of sexual activity, and more consistent condom use (Miller et al., 1999).

Parental influence on adolescent sexual behaviour can help to combat peer influence on adolescents. However, parental influences can interact with other factors; for example, close parent-child relationships may not be as strong of a protective factor in single-parent households (Deptula et al., 2010).

For a more detailed and comprehensive description on how parents can affect adolescent sexual behaviour, and can help to educate their adolescents on sexuality and sexual health, please see: *Parents as Sexual Health Educators, Saskatchewan Prevention Institute, 2011.*

5.2.2 Education

Education is an important factor in adolescent sexual behaviour. Sexual health education can lead to more effective and frequent contraceptive use, a reduction in STI transmission, safer sexual activity, and, depending on the type of sexual health education given, can also delay sexual activity. However, methods and strategies for sexual health education are diverse, and programs can vary widely in their effectiveness – see *Section 8: Best Practices for the Prevention of Adolescent Pregnancy* for more information. As well, parents play an important role in the sexual health education of their children and adolescents; see *Section 5.2.1: Parents* for more details.

Educational aspirations are a protective factor against adolescent pregnancy, especially among females. Girls who have low educational aspirations and perform poorly in school are more likely to experience a pregnancy during adolescence (Fergusson & Woodward, 2000). However, adolescents who have high educational aspirations for themselves, or have parents who have high educational aspirations for them (e.g., expect them to attend college) are less likely to become adolescent parents (Kapinus & Gorman, 2004; Thornberry, Smith, & Howard, 1997).

5.2.3 Religion

Religious views and beliefs can act as a protective factor against adolescent and pre-marital sexual activity. Regular church attendance is associated with a later onset of sexual activity (Langille & Curtis, 2002). Adolescents with more involvement in religious activities had lower rates of adolescent pregnancy than those with less involvement (Whitehead et al., 2001). Those with stronger religious beliefs (i.e., those who followed more traditional views more closely) were more likely to delay sexual activity, and were more likely to make abstinence pledges. However, they were less likely to use contraception at first intercourse (Bearman & Bruckner, 2001; Rostosky et al., 2004). Others have found religious adolescents to have decreased levels of sexual activity, and decreased levels of sexual risk taking (Galambos & Tilton-Weaver, 1998).

However, communities with higher levels of religiosity do not necessarily have lower levels of adolescent pregnancy. This may be due to several factors (Ovadia & Moore, 2010):

- religions vary in their views on premarital sex
- early, adolescent marriages (Montgomery-Anderson, 2003)
- followers of particular religions may vary in their views on premarital sex
- beliefs do not always coincide with behaviour (e.g., even if the adolescent believes that premarital sex is wrong, they may still engage in sexual activity).

Therefore, it is important for all adolescents to receive adequate sexual health information. Adolescents who have not been provided with sexual health information because of their strong religious beliefs may not have the knowledge necessary to protect themselves from pregnancy and STIs if they do choose to have sexual intercourse.

6. Aboriginal Communities & Adolescent Pregnancy

6.1 Aboriginals in Saskatchewan

The term Aboriginal, in this section, refers to First Nations, Métis, and Inuit groups. Most of the findings below are based on data from First Nations groups, unless otherwise indicated. There is a lack of data that specifically focus on Inuit and Métis groups in regards to adolescent pregnancy, and therefore, research on trends in these groups is recommended. It is likely that most Aboriginal communities face similar trends in regards to adolescent pregnancy.

In Saskatchewan, there are approximately 129,000 First Nations individuals, making up about 12% of the province's population. As mentioned previously, a disproportionately high number of adolescent pregnancies occur within this population (see *Section 6.2: Adolescent Pregnancy among Aboriginals in Saskatchewan*). It is necessary that prevention strategies in Saskatchewan take the views and culture of these communities into account when developing and implementing programming.

Cultural factors can have a great impact on health and behaviour. In general, Inuit, Métis, and First Nations populations in Canada face many health and other disparities; these include (Health Council of Canada, 2005; Montgomery-Anderson, 2003):

- unequal access to healthcare
- low standard of living
- high unemployment
- high prevalence of communicable disease
- substandard housing
- membership in a marginalized group (Palacios & Kennedy, 2010)

Such disparities are related to higher rates of poverty, lower levels of maternal education and limited prenatal care in First Nations women as compared to members of the non-Aboriginal population (Palacios & Kennedy, 2010).

6.2 Adolescent Pregnancy among First Nations and Aboriginal Communities

Adolescent pregnancy is common among First Nations populations in Canada and Saskatchewan. The risk factors for adolescent pregnancy in First Nations adolescents are the same as for the non-Aboriginal population (see *Section 5.1: Risk Factors*). However, additional cultural and societal factors may influence their sexual behaviour. There are many stereotypes associated with adolescent pregnancy in First Nations adolescents that come both from their own communities and from society as a whole; for example, that the adolescent is dealing with substance abuse, comes from an abusive and/or broken home, and that they have little chance of becoming a competent mother (Olsen, 2005). These stereotypes need to be addressed in awareness and prevention strategies.

Although adolescent pregnancy is often viewed as a negative life event, First Nations communities place a high value on children, regardless of the age of their parents and, therefore, they accept pregnancy as a natural and positive event (Garwick et al., 2008, Montgomery-Anderson, 2003). It is important to understand that outcomes of adolescent pregnancy are often highly influenced by the surrounding environment, and many of the health problems facing pregnant adolescents can be minimized with proper and timely prenatal care and adequate support before and after pregnancy (Montgomery-Anderson, 2003).

Similar issues may exist in Métis and Inuit communities; however, there is limited information on this population in the context of adolescent pregnancy. More research is needed in this area.

Community-specific prevention strategies may be more effective in addressing adolescent pregnancy among Aboriginal individuals. For example, in a study on Inuit adolescent mothers, the following strategies were recommended for addressing adolescent pregnancy in Inuit communities (Best Start & SIECCAN, 2007):

- better access to contraception
- education and social awareness campaigns regarding sexual health and pregnancy prevention in both English and Inuit dialects
- involvement of community Elders in teaching traditional approaches to pregnancy and parenting
- involvement of youth in community activities
- open, honest, and frequent discussion about sexuality and relationships
- support for parents in talking with their children about sexuality and sexual health

Many of these strategies could likely be extrapolated to First Nations and Metis communities within urban and rural contexts, as well as on reserves.

7. Immigrants and Adolescent Pregnancy

There is limited data available on immigrant women and adolescent pregnancy. The extent to which immigrant status can be associated with adolescent pregnancy can differ from country to country (i.e., the country that they now live in, as well as the country in which they were born). Different countries and cultures may differ in values, attitudes and behaviours surrounding sexual activity.

In Canada, recent immigrants have lower levels of adolescent childbearing than Canadian-born adolescents; however, in the United States, the opposite has been shown. Sexual initiation before age 20 is also lower in foreign-born women than in Canadians (42% and 79%, respectively) (Singh, Darroch, Frost, & the Study Team, 2001). These differences may reflect the ideals of the birth country and cultural background of the immigrants to each country.

8. Paternal Involvement in Adolescent Pregnancy

Males can play an important role in adolescent parenthood. Although prevention strategies often focus on women, programs are more effective when they include males (University of California Agricultural and Natural Resources [UC ANR] Latina/o Teen Pregnancy Prevention Workgroup, 2004). In terms of relationships, male partners can impact the use of contraception and other sexual health behaviours that can influence whether their partner becomes pregnant. If a pregnancy occurs, males can impact financial situations, childcare, and relational support, all of which can benefit the adolescent mother and the child. Fathers of the children of adolescent mothers can be adolescents themselves (i.e., adolescent fathers), or can be the older partners of adolescent mothers. There are some differences between the two groups that will be noted below; the term, 'fathers of the children of adolescent mothers' is a blanket term to cover both groups.

8.1 Male Partners of Adolescent Mothers

Fathers of the children of adolescent mothers are not necessarily adolescents themselves. There has been conflicting research on the age of these men. Larson et al. (1996) found that fathers tended to be only two to three years older than adolescent mothers, which is the same as the male partners of older women; however, a study in California found that over a quarter of conceptions to very young mothers (less than 15 years of age at the time of conception) were by adult males who were on average 8.8 years older than the mother (Taylor et al., 1999).

Relationships involving adolescent parenthood are often complex. Adolescent mothers and their partners are more likely to be romantically involved two years after conception than other adolescents, but as previously noted, these relationships often deteriorate over time (Bunting & McAuley, 2004). Larson et al. (1996) found that 60% of adolescent mothers reported that their child's biological father was their current boyfriend one month after the birth, but this decreased to 26% forty-two months after the birth. The same study also showed a pattern of 'on-off intimacy' rather than an ongoing relationship, as only 17% of the mothers reported involvement with the biological father at all 6 interviews.

8.2 Risk Factors and Challenges Associated with Fatherhood in Adolescent Pregnancy

There are a variety of risk factors associated with males being involved in an adolescent pregnancy, including:

- inter-generational practices of young parenthood; that is, their mother and/or father were adolescent parents themselves (Bunting & McAuley, 2004)
- poor familial and parent-child relationships (Tan & Quinlivan, 2006)
- being from a single-parent family (Curtis, Lawrence & Tripp, 1988)
- living in poverty and/or low income communities (Coley & Chase-Lansdale, 1998)
- behavioural problems (e.g., smoking, drinking, illicit drug use) (Tan & Quinlivan, 2005)
- involvement in risky sexual behaviour (e.g., concurrent sexual partners, STIs) (Tan & Quinlivan, 2005)
- disadvantaged childhood (Social Exclusion Unit, 1999; Tyrer et al., 2005)

- low educational achievement (Bunting & McAuley, 2004; Tan & Quinlivan, 2005; Tyrer et al., 2005)
- aggression, delinquent behaviour, and truancy (Dearden et al., 1995; Dennison & Lyon, 2003; Tan & Quinlivan, 2005)

Adolescent males who are involved in an adolescent pregnancy face many obstacles that older fathers may not face. Adolescent fathers may face long-term employment difficulties (e.g., lower earnings, increased likelihood of unemployment) and lower educational achievements (Coley & Chase-Lansdale, 1998; Joseph Rowntree Foundation, 1995). These factors may also affect housing and accommodations, as these men are less likely than older fathers to own their own homes by age 33 (Joseph Rowntree Foundation, 1995). Adolescent pregnancy may also affect adolescent fathers' emotional and mental health (e.g., stress levels, self-esteem) (Bunting & McAuley, 2004).

Fathers of children born to adolescent mothers often lack the support that they need. Many receive little or no encouragement and support in their adjustment to fatherhood (Speak et al., 1997), and many are excluded from choices regarding the pregnancy (Tyrer et al., 2005). It is important to include males in sexual health education and programming, and reproductive services.

8.3 Paternal Contact with Children of Adolescent Mothers

There are many factors affecting paternal involvement with the child. If the child does not live with the biological father, he or she may only have minimal contact with their father. Several studies have shown that sustained contact between children and non-resident fathers occurs rarely, but most biological fathers have some contact with their children (Furstenburg & Harris, 1993). Paternal contact with the child may be affected by the father's perception of his paternal role (Bunting & McAuley, 2004), resistance to his involvement by the mother or other family members (Rhein et al., 1997), the father's ability to provide financial support, and the nature of the relationship with the child's mother (Bunting & McAuley, 2004).

Close paternal relationships, whether or not they are with the biological father, can have positive impacts on the child, including better educational and employment achievement, lowered risk of adolescent parenthood, lowered risks of criminal conviction, and lowered risk of depression (Bunting & McAuley, 2004). Therefore, it is important to support fathers with their parenting and in their involvement with their child.

8.4 Adolescent Males in Prevention Strategies

It is important to include adolescent males in prevention strategies regarding adolescent pregnancy to provide them with the knowledge and skills to protect themselves and their partner from unintended pregnancy, STIs and other potential adverse outcomes of risky sexual behaviour.

Adolescent males, on average, initiate sex earlier than girls and tend to accumulate more lifetime sexual partners (Sonenstein, Stewart, Lindberg, Pernas, & Williams, 1997). For their own health and for the health of their sexual partners, therefore, it is important to include them in sexual education and adolescent pregnancy prevention programs. Males can play an important role in ensuring contraception is used – male methods of contraception (e.g., condoms, withdrawal) are the main forms of contraception used at first initiation of sex (Sonenstein et al., 1997).

Reductions in pregnancy rates are due possibly to an improvement in adolescent males' contraceptive behaviour (Sonenstein et al., 1997), therefore, it is important to start and continue to involve this population in prevention and sexual education programming. Many adolescent males are involved in sexual activity; half of adolescent males have had sexual intercourse by age 17 (Sonenstein et al., 1997). Risk factors for risky sexual behaviour and early sexual initiation are often similar in adolescent females and males, but some are more specific to adolescent boys (e.g., substance use, criminal involvement) (Marsiglio, Ries, Sonenstein, Troccoli, & Whitehead, 2006; Sonenstein et al., 1997). Males face similar risks to females after engaging in risky sexual behaviour (e.g., STIs, HIV/AIDS, unintended pregnancy) (Marsiglio et al., 2006).

Adolescent males believe that they should play a part in preventing pregnancy. More than 90% agree that male responsibilities include talking about contraception before sexual intercourse, using contraception, and taking responsibility if there is a pregnancy (Sonenstein et al., 1997). Male partners can also strongly influence the decisions that adolescent girls make about sex and contraception (e.g., contraception use) (Sonenstein et al., 1998).

Adolescent males can benefit greatly from personalized prevention strategies. Prevention programs involving adolescent males may work best in places where adolescent males have high levels of involvement (e.g., school, sports participation, clubs, youth groups), or where they receive medical care (Sonenstein et al., 1997). Many young men may experience negative interactions with reproductive health services (e.g., with their pregnant adolescent partner), including feelings of exclusion and marginalization (Children First, 2010). Young men may be interested in the information and services available; however, often these programs are not directed to them, and they may feel ignored. Prevention programs that provide mentoring and youth development activities can help to increase sexual education, as well as to improve other relevant factors (e.g., education, employment, self-respect) (Sonenstein et al., 1998).

Strategies that have been shown to be effective in addressing adolescent males' attitudes and behaviour towards sexual health and sexual intercourse include (National Campaign to Prevent Teen and Unplanned Pregnancy, 2006):

- programs with a service learning component (e.g., community service projects)
- programs with a parent component
- programs with sexuality education focused on males

However, more research in this area is needed, and there is a need for programming to implement these strategies and increase their focal area to males. There are challenges to involving males in adolescent pregnancy prevention programs (Marsiglio et al., 2006). Many programs do not invite adolescent boys and young men to participate – programs should ensure that programs and initiatives are made male-friendly, or include male-friendly components (e.g., male staff, comfortable setting). A lack of access to adolescent males; to ease problems associated with accessing male participants, programs should be initiated in places where there is already male involvement (e.g., sports, youth groups, school).

Marsiglio et al. suggest different solutions for reaching males in the context of adolescent pregnancy prevention. Parents can be important sexual health educators for their sons and can help to reduce adolescent pregnancy. It is important to involve them in programming and help them to learn to communicate with their sons about sexuality and sexual health. Just as female-specific prevention programs have to be tailored to the community, male-specific programs should take the age, maturity, lifestyle and culture of the boys into account.

9. Best Practices for the Prevention of Adolescent Pregnancy

There are many programs that seek to prevent adolescent pregnancy; however, not every program is effective in its goal, and no one program is successful in all situations. Given the high rates of adolescent pregnancy in Saskatchewan, it is imperative that a variety of prevention strategies that have been found to be effective in applicable situations are implemented. As well, the unique ethnic and cultural situation in Saskatchewan demands community-specific programming.

Although the focus of these prevention strategies is to reduce the number of adolescent pregnancies, it is important that adolescent parents are not viewed negatively, and that the potential positive outcomes of parenthood are acknowledged while still presenting alternate options for those that wish to delay pregnancy (Best Start & SIECCAN, 2007). Programs that focus on negative stereotypes of pregnant adolescents and young parents, and those that use shame, blame, and stigma to convey messages may continue to propagate such negative views of young parents. Steps should be taken to ensure that these tactics are not used in prevention strategies (Best Start & SIECCAN, 2007).

Both proximal and distal factors of adolescent pregnancy need to be considered when planning programs. Proximal factors include the knowledge, attitudes, skills, and norms that an adolescent has that relate to sexual behaviour and sexual health. Distal factors include wider social determinants, education and employment (Fletcher et al., 2008).

Some factors related to adolescent pregnancy cannot be effectively influenced by adolescent pregnancy prevention programs. It is difficult, for example, for these prevention programs to influence socioeconomic status and childhood influences. Therefore, it is important for programs to realize where they can be most effective in creating change.

9.1 Different Types of Prevention Programs

There are many different types of programs that attempt to reduce adolescent pregnancy and promote sexual health in this population. Because the effectiveness of programs can be measured in several ways and many factors can contribute to the success or failure of programs, it may be difficult to accurately determine the effectiveness of any one program, or to compare effectiveness across programs. For example, some programs measure behavioural or outcome changes (e.g., increased use of contraception, delayed age of first intercourse, reduction in the number of sexual partners, and/or the reduction of adolescent pregnancy), while others measure effectiveness by increased knowledge of reproductive and sexual health issues, or by self-reported attitudes towards these issues (Best Start & SIECCAN, 2007).

According to the United States' National Campaign to Prevent Teen and Unplanned Pregnancy (2006), there are five categories of effective programs; each will be discussed below. The effectiveness of these programs is variable, but depends in part on their adherence to the characteristics described below in *Section 8.2: Characteristics of Effective Prevention Programs.* Kirby (2007) notes that in a meta-analysis of adolescent pregnancy prevention programs, two-thirds of the programs studied had a significant positive impact on at least one aspect of sexual behaviour or lowered the rates of pregnancy, childbearing, or STI. However, the same study notes that even the effective programs did not dramatically reduce risky sexual behaviour or rates of pregnancy or STIs – the most effective programs lowered risky sexual behaviour by about one-third.

9.1.1 Curriculum-based Education

Curriculum-based education generally occurs in a school setting, either in regular school classes or as part of after-school programming. These programs usually encourage both abstinence and contraceptive use. School-based sexual education programs have been shown to be effective, especially when linked to contraception services (National Health Services [NHS] Centre for Reviews & Dissemination, 1997). Many effective characteristics of these programs will be discussed below in *Section 8.2: Characteristics of Effective Prevention Programs*.

In a meta-analysis of several reviews of studies on the subject (Swann, Bowe, McCormick, & Kosmin, 2003), abstinence-only education (as compared with sexual education programs) was found to have no effect on delaying sexual activity, reducing pregnancy rates (Swann et al., 2003), age of initiation of sexual intercourse, return to abstinence, number of sexual partners, or use of condoms or other contraceptives (Kirby, 2007). On the other hand, no link has been shown between sexual education and

increased sexual activity or pregnancy rates (NHS Centre for Reviews & Dissemination, 1997).

Some evidence has shown that community-based, rather than school-based sexual education programs are effective (Franklin, Grant, Corcoran, O'Dell, & Bultman, 1997). These tie into knowledge that community values and interests must have a place in the development and delivery of prevention programming.

9.1.2 Service Learning Programs

Service learning programs focus primarily on keeping adolescents constructively engaged in their communities and schools. Rather than focusing solely on education, these programs arrange for adolescents to take part in community services (e.g., tutoring, working in nursing homes, helping clean parks). After their community services, the adolescents then have a group discussion or writing session about their experiences. Some education about adolescent pregnancy prevention and potential consequences of risky sexual behaviour is generally included. These programs allow adolescents the chance to apply their knowledge to practical, relevant, community-based activities.

9.1.3 Youth Development

Youth development programs take a wider approach to adolescent pregnancy prevention, in that these programs attempt to prepare and encourage adolescent participants to think about and plan for the future. This type of program takes various areas of adolescent life (e.g., school, healthcare, sports, employment), and assists the participants in participating and succeeding in these areas. These programs can help to promote future options in the adolescents' lives, which can provide the motivation to delay childbearing (UC ANR Latina/o Teen Pregnancy Prevention Workgroup, 2004). In this approach, pregnancy prevention is a product of the elimination of certain risk factors (e.g., poor educational achievement), rather than through the direct influence of information (e.g., sexual health seminars). According to Fletcher et al. (2008), these programs can be very effective in modifying behaviour, promoting safe sexual practices and reducing pregnancy rates among high-risk adolescents. Kirby (1999) also notes that some youth development programs are effective even if they do not directly address adolescent pregnancy (e.g., adolescent outreach, community or employment programs). However, a review by the NHS Centre for Reviews and Dissemination (1997) notes that these programs should be linked to some curriculum-based sexual education in order to increase efficacy, as well as increase contraceptive use. They also note that programs focusing on personal development (e.g., confidence, self-esteem, negotiation skills), and educational and vocational development may increase contraceptive use and reduce pregnancy rates.

9.1.4 Parent Programs

Parent programs are those that involve both parents and their adolescent children. Because parental and familial factors have a great influence on adolescent sexual activity, these programs seek to improve parent-child communication in terms of sex-related topics. These programs are usually offered within a community setting and can be targeted towards mothers, fathers, or both parents. As mentioned above in *Section 5.2.1: Parents*, parental communication and involvement with their adolescent can play a large role in preventing or delaying sexual activity, but many parents do not actively communicate with their children about these topics. Programs that involve the parents and encourage healthy and open communication can help to prevent adolescent pregnancy and risky sexual behaviour in the adolescent, while also promoting a healthy parent-child relationship. A review by Swann, Bowe, McCormick, and Kosmin (2003) found that family outreach programs and those programs that included the adolescents' parents can be effective in preventing risky sexual behaviour and adolescent pregnancy.

9.1.5 Community-wide Programs

Community-wide programs have a wide scope of information, and encourage the whole community to get involved with adolescent pregnancy prevention. Prevention efforts may include public service announcements, educational activities, or community-wide events (e.g., health fairs). Community-wide campaigns can be more effective than 'organizational isolation', as many organizations can come together to reinforce the same message, rather than each trying to do it alone (UC ANR Latina/o Teen Pregnancy Prevention Workgroup, 2004). It is important to anticipate the potential barriers to these types of programs, such as time constraints, language skills, and reluctance to talk about sexuality (UC ANR Latina/o Adolescent Pregnancy Prevention Workgroup, 2004). Cheesbrough, Ingham, and Massey (1999) noted in their review of interventions and programs aimed at prevention in the US, Canada, Australia, and New Zealand that the most successful programs were multi-agency: combining schools, media and health services and necessitating whole communities working together.

9.2 Characteristics of Effective Prevention Programs

The characteristics highlighted below are a combination of the results of several large-scale evaluations of adolescent pregnancy prevention programs in the United States (Kirby, 2007; The National Campaign to Prevent Teen and Unplanned Pregnancy, 2006; UC ANR Latina/o Teen Pregnancy Prevention Workgroup, 2004). Kirby (2007) concludes that although these guidelines below have been shown to be effective, the needs of the specific community are still paramount. As well, programs that do not follow the guidelines are not necessarily ineffective, and programs that follow all of the guidelines are not necessarily effective – effectiveness depends on many factors and some cannot be easily controlled (e.g., personality of the leaders and participants).

9.2.1 Program Development

- **Significant duration**. Most effective programs have a longer duration (e.g., several months or years). As well, it is better to have shorter sessions over a longer duration, rather than longer sessions over a shorter timespan.
- **Include people and groups with diverse backgrounds and expertise** in the development process.
- **Assess the needs of the population through discussion with youth and community workers.** Ensure that youth are involved in the process, and ask for their opinions on issues related to sexuality and adolescent pregnancy.
- **Identify program goals, risk behaviours, protective behaviours, and knowledge level of participants, based on the knowledge obtained from the community.** Choose activities that will encourage development of protective factors and help to deal with any risk factors.
- **Design program activities that support community values and are achievable given available resources.**
- **Pilot test all or part of the program before full-scale implementation**. This can help to eliminate any problems so that the program will run smoothly with the actual participants.

9.2.2 Curriculum Content

- **Have a simple, clear and non-judgemental message for the adolescents regarding adolescent pregnancy and adolescent sexual activity**. Comprehensive sexuality and sexual health education programs give adolescents the necessary information and skills to lead sexually responsible lives.
- **Address behaviours that may affect sexual health choices, such as peer pressure.** As mentioned above (see *Section 5.1.8: Relationship Factors*), peer and partner relationships can affect adolescent sexual behaviour. If the adolescent does not have the abilities to withstand peer pressure, or to negotiate contraception use with a partner, sexual health knowledge will not be effective.
- **Teach communication skills.** Adolescents need to be able to communicate with their partners regarding sexual encounters and contraception use.
- **Reflect the age, sexual experience, and culture of the adolescents in the program.** Appropriate sexual education changes as the adolescent ages. As well, it is unnecessary for adolescents who are already sexually active to receive information on remaining abstinent. Culture is a major factor associated with adolescent pregnancy, and as such, cultural considerations and sensitivity should be included in any adolescent pregnancy prevention program.
- **Identify the protective and risk factors and behaviours regarding adolescent pregnancy in the curriculum.**

- **Address the sexual psychosocial factors that affect behaviour.** These factors could include knowledge, values, and attitudes towards condoms, communication with parents and partners, perceived risk of pregnancy, negotiating, and refusal skills.
- **Use a variety of activities** designed to change the identified risk behaviours.
- **Use a variety of instructional techniques** and activities to engage adolescents (i.e., short lectures, discussions, games, role playing, homework assignments that encourage parent-child communication).
- **Cover the topics in a logical sequence** (i.e., begin with a general overview and discussion and gradually move to more detailed and specific information).
- **Ensure that both males and females are targeted.** Although many programs may target adolescent girls specifically, it is important that adolescent males are included in the programming as well.

9.2.3 Program Implementation

- **Have well-trained leaders who believe in the program.** Leaders should come from within the community if possible, as it is important that community leaders are involved in the planning and implementation of the program. As well, leaders should be well trained in all areas of the programming.
- **Actively engage participants and have them personalize the information for their own situation.** Adolescents' beliefs will influence their participation and benefit from the program. It is important that they realize that the information applies directly to their lives, and that they have the power to enact change within themselves.
- **Contact relevant authorities to obtain support and/or approval** (i.e., public health department, school board, school principal/teachers, community organizations).
- **Anticipate problems youth might have in attending the program and find ways to attract and retain participants** (i.e., provide transportation, offer programs at convenient times and locations, communicate with parents). It can also be effective, especially among hard-to-reach groups, to use incentives to entice young people to remain with the program; these can be financial or non-financial (Wakhisi et al., 2011).
- **Implement the program as designed** (i.e., same duration, information and messages, and setting).
- **Ensure that all youth have access to reproductive health services.** Access to reproductive healthcare is crucial to program effectiveness (Center for Health Improvement, 2003). If adolescents cannot consistently access appropriate services in their community, they will not be able to follow-up on the message that they hear in prevention programs, whether they want to or not.

10. Conclusion

In Saskatchewan, adolescent pregnancy rates are very high compared with the rest of Canada and other developed countries. There is a need for effective strategies to reduce adolescent pregnancy. This literature review focuses on the situation in Canada and Saskatchewan, factors surrounding adolescent pregnancy (both risk and protective), and possible approaches that can be taken to affect rates of risky sexual behaviour and adolescent pregnancy in Saskatchewan. It also notes the importance of providing support for those adolescents who do become pregnant, whether planned or unplanned. These supports are important during the pregnancy (e.g., parenting classes, help to finish high school, financial support), as well as after the pregnancy.

There are many cultures present in Saskatchewan, including several First Nations, Metis and immigrant cultures from many parts of the world. This necessitates community-specific consultation, involvement, and knowledge to know how to best address adolescent pregnancy for these populations.

Males play an important role in adolescent pregnancy and are often not addressed in prevention strategies. It is necessary to implement programs that have male-specific components, as males have been shown to affect both contraception use and risky sexual activity.

There are many different strategies available for effective programming. Communities and program planners must choose the best strategies for their specific population based on the resources available to them (e.g., financial resources, education of leaders, training, participant involvement). There is no one key program that will be effective in all communities. Rather, programs should be tailored to the specific population using the best practice strategies outlined above. In order to be most effective, a variety of community-based approaches should be taken to address the needs of diverse populations, and to ensure that the message is getting out in a useable form.

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