IMPLEMENTATION AND ASSESSMENT OF A TEEN FOCUSED PRENATAL EDUCATION SEMINAR

by

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DEDICATION

This project is dedicated to my sweet husband, Brent, and my wonderful family who have supported and encouraged me through the long days and short nights.

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TABLE OF CONTENTS

TABLE OF CONTENTS-CONTINUED

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

GLOSSARY

Adolescent pregnancy- Pregnancy in a girl aged 13-19.

ABSTRACT

Teen pregnancy is an increasingly common occurrence in the United States with approximately 34.3 birth per 1,000 teens aged 15 to 19 in 2010 ("Montana teen birth," 2012). Many teens do not seek prenatal education for a variety of reasons including cost, lack of transportation or time and fear of judgment from others. A teen focused prenatal education program may be helpful in increasing knowledge regarding pregnancy, childbirth and parenting. In this project, a teen focused prenatal education seminar was designed and presented to a group of pregnant teens. A pretest/posttest format was used to assess the understanding and retention of the information presented. A course satisfaction survey was administered with the posttest to assess the teens overall satisfaction with the course. The results of the pretest and posttest showed a statistically significant increase in knowledge on the posttest when compared to the pretest. The course satisfaction survey indicated that overall, teens were quite satisfied with the course, felt comfortable in the setting and would recommend it to their friends. The results of this study suggests that this teen focused prenatal education seminar helped to increase teens' knowledge of pregnancy, childbirth and parenting and that teens were satisfied with this type prenatal education.

CHAPTER ONE

INTRODUCTION

Teen pregnancy is an increasingly common occurrence in the United States with approximately 34.3 births per 1,000 teens aged 15 to 19 in 2010. Currently, the United States has one of the highest teen pregnancy rates of all developed countries ("Montana teen birth," 2012). The economic impact of these teen pregnancies on society is exceptional. According to a report from the CDC, teen pregnancy and parenthood costs taxpayers at least $9 billion each year. These costs include welfare, foster care and prison costs. Aside from the monetary impact teen pregnancy and parenthood has on society, children of teenage mothers are more likely to be born at a low birth weight, experience abuse or neglect, become teen parents themselves or end up in prison or foster care (Will, 2008).

Prenatal education and support can be a very useful adjuvant to standard prenatal care to hopefully decrease the impact teen pregnancy and parenthood has on society. Prenatal education is available as either individual education sessions between a childbirth educator and the expecting patient or couple or as a group education session involving many expecting mothers or couples. The benefits of prenatal education have been well documented in the literature. Women who attend prenatal education classes tend to smoke and drink less than those who did not receive education (Serçeku, 2010). These women also displayed an increased interest in proper diet and exercise, increased interpersonal support and had an overall higher concern for their health than their

counterparts who did not attend prenatal education classes. Studies have also shown that women who attend prenatal education had increased satisfaction with the childbirth experience (2010).

Problem Statement

The United States has one of the highest rates of teen pregnancy in all of the developed countries ("Montana teen birth," 2012). Despite great efforts at promoting prevention, teens are still becoming pregnant every day. Many pregnant teenagers feel alone, scared and unprepared. Many also lack the life skills and experiences necessary to confidently and healthfully navigate through a pregnancy and the raising of a child. Prenatal classes are commonly offered to women through their hospital or clinic. Teens may be reluctant to attend these classes for several reasons including lack of transportation, fear of embarrassment or judgment, cost, and lack of support from family or friends. This lack of prenatal education can leave teens unprepared for motherhood and could put the physical and mental state of both the mother and the infant at risk.

A prenatal class designed specifically for teenagers may encourage these young women to attend classes and may help provide better outcomes for young mothers and their children through education. There are currently no prenatal classes or seminars specifically designed for teenagers offered in south-central Montana

Research Questions

The two primary research questions for this study include: Did the class result in increased knowledge for the teens? Did the teen participants find the class helpful and were they satisfied with the class?

Purpose of the Project

The purpose of this project was threefold. The first purpose was to develop a teen focused prenatal education seminar. The second purpose was to assess perceived effectiveness and knowledge acquisition of the teen focused prenatal seminar presented to pregnant teenagers via satisfaction surveys. Third, the data from the surveys was analyzed and presented to Planned Parenthood. The purpose of the presentation to Planned Parenthood was to raise awareness about the potential value of a teen focused prenatal workshop.

Background and Significance

Teen pregnancy is an ongoing problem in the United States with significant social, health, economic and societal consequences. The national birth rate for young women aged 15-19 was 31.3 per 1000 females in 2011 ("About teen pregnancy," 2012). Financially, teen pregnancy presents a significant burden on society with roughly $11 billion spent nationwide in 2008 ("About teen pregnancy," 2012). Most of these costs come from increased health care and foster care costs, lost tax revenue from teen mothers and increased rates of incarceration of children of teen mothers ("Montana teen birth,"

2012). Teen pregnancy and parenting has had negative effects on both the adolescent mother and her child. Children of teen mothers are more likely to be born at low birth weight, are at increased risk for long-term physical and cognitive problems, are twice as likely to experience abuse and neglect and are more likely to end up in foster care. Daughters of teen mothers are three times more likely to become teen mothers themselves (Will, 2008). In addition, the CDC website reports that only 50% of teen mothers earn a high school diploma by 22 years of age ("About teen pregnancy," 2012). A study done by Julie J. Lounds, John G. Borkowski, Thomas L. Whitman, Scott E. Maxwell, and Keri Weed examined the levels of attachment of a child and their adolescent parent through early childhood. The study found that the rate of disorganized attachment in the adolescent population was approximately 3 times that of other low-risk sample groups. The article also states "parenting during infancy provides the foundation that allows a child to feel secure and to develop a basic trust of their caregivers" (Lounds, Borkowski, Whitman, Maxwell & Weed, 2005).

Reducing the numbers of teen pregnancies has been identified as one of the Healthy People 2020 national objectives. There is a number of teenage pregnancy programs aimed toward preventing pregnancy through safe sex or abstinence. Statistics indicate that these programs may be helping to reduce the number of teen pregnancies. The national teen birth rate declined 44 percent from 1991-2010. While these numbers are encouraging, there are still a fairly high number of teenage pregnancies every year, especially in Montana. In fact, Montana was one of only three states that did not see a decrease in teen birth rates from 2007-2010 (Montana teen birth, 2012).

Prenatal education is a standard practice for many planned pregnancies but is very rarely sought after by pregnant teens. Teenagers may not seek prenatal education classes for many reasons including cost, transportation, lack of time, and fear of judgment from the other participants or the instructor.

An article by Bonita Pilon states “early and continuous access to prenatal care and childbirth education are key factors in ensuring healthy outcomes for mother and infant” (Pilon, 2011). This is especially important for teens as their lack of knowledge and life experience can certainly hinder their ability to parent a child. In regards to teens, Tilghman and Lovette state that their developmental level, lack of education and susceptibility to peer influences make it necessary to provide targeted, individualized prenatal education (Tilghman & Lovette, 2008). Creating a prenatal education class specifically designed for young women aged 15-19 years may be beneficial to the mother, infant and society if the mother can enter parenthood feeling a bit more prepared with the proper tools to provide herself and her infant with the best life possible. The goal would be to eventually reduce the negative outcomes of teenage pregnancy including lack of further education for the mother, increased rates of incarceration for the child, decreased health complications for the infant and decreased costs for society.

Resources for pregnant teens in this area tend to be costly and inconvenient. Most prenatal classes offered take place over the course of several weeks and are at a time when most teens are either working or attending school.

Definitions

In this paper, the terms “teen” and “adolescent” are used interchangeably. As generally defined in the literature, teenage or adolescent pregnancy is assumed to be a pregnancy in a female aged 15-19 years.

Prenatal education includes education about pregnancy, childbirth, parenting and childcare and resources available both during pregnancy and after the child is born.

Assumptions

The design of this project is based on Ramona Mercer’s Maternal Role Attainment Theory. The theory describes the process a woman goes through in attaining a maternal role identity. Achieving a maternal role identity involves developing feelings of competence, confidence and joy in the mothering role (Mercer, 2004). The four stages of role attainment described by Mercer include the anticipatory, formal, informal, and personal identity. The anticipatory stage describes the time period during pregnancy prior to delivery when preparation for the maternal role takes place (Mercer, 2004). During this stage the mother psychologically adjusts to the idea of becoming a mother. All the teens that participated in the seminar are in the anticipatory stage of pregnancy. This is an ideal time for increasing knowledge of pregnancy, childbirth, and parenting through education.

The author assumed that pregnant teens have a desire to become competent parents and provide quality care to their children. It is also assumed that teens are

capable of providing adequate care to themselves and their child given the proper education and support.

It is this author's experience that most teens do not seek prenatal education during pregnancy but are in fact open to the idea of taking a class. It has also been noted by the author that most teens are unaware of the resources available to them to help support and guide them through pregnancy and parenthood.

Limitations

There is very little research that has been published regarding the benefit of prenatal education for teen mothers-to-be. Most of the literature surrounding teen pregnancy is in regards to pregnancy prevention. While prevention is important, finding ways to support these teen mothers and their infants can positively influence the lives of the mothers and the children. Hopefully further research will be done that may lead to the implementation of more teen-focused prenatal education programs.

Another limitation is the time frame in which the project was completed due to the length of the chosen Master's program. It would be nearly impossible to reach all pregnant teens in the city of Billings and to gather them together for a prenatal education course in the time frame that is available. The project was also limited by finances. Limited financial resources affected the way course materials were created as well as ways in which the participants were recruited. There was also difficulty in recruiting participants within the given timeframe and within the population area.

Conclusion

In this chapter, I discussed the issue of pregnancy in the adolescent population and some of the ways that pregnancy in this population can affect the adolescent and her infant. Prenatal education classes targeted specifically toward the teenage population may help to reduce some of the negative outcomes associated with adolescent pregnancy and may help promote healthier pregnancies and infants. The intent of this project is to design and implement a teen focused prenatal education seminar and assess the effectiveness and satisfaction of the seminar among teen participants. In the following chapter, I will be exploring the review of literature related to adolescent pregnancy and prenatal education.

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CHAPTER TWO

REVIEW OF LITERATURE

Introduction

In the previous chapter I discussed the purpose of the project as well as the significance of the problem and assumptions and limitations surrounding the project. In this chapter I will review the current literature regarding teen pregnancy and prenatal care. I will also discuss the Maternal Role Attainment Theory by Ramona Mercer, cognitive constructivism, and basic concepts of adolescent development. Creating a developmentally appropriate teen focused prenatal education seminar requires taking into account the ideas of theorists like Mercer and Piaget if the seminar is to be successful.

Maternal Role Attainment Theory

Ramona Mercer began her nursing career in 1950 in the area of maternal-child nursing (Husmillo, 2013). Mercer developed the Maternal Role Attainment Theory, which explores the complex progression of becoming a mother. Mercer developed this mid-range theory on the premise that women go through stages in the process of developing their maternal role identity. Achieving a maternal role identity involves developing feelings of competence, confidence and joy in the mothering role (Mercer, 2004). The four stages of role acquisition described in the theory include anticipatory,

formal, informal, and personal identity. The anticipatory stage describes the time period during pregnancy prior to delivery when preparation for the maternal role takes place (Mercer, 2004). During this stage the mother psychologically adjusts to the idea of becoming a mother.

Mercer also describes how the transition between stages and eventually to achieving a maternal identity is affected by a woman's personal attributes, cultural beliefs, conditions of her community and society, socioeconomic status, and her prior preparation and knowledge, social stress, social support, self-concept, health status and personality traits (Mercer 2004). Other areas that can hinder attainment of the maternal role include young maternal age, immaturity, and unwanted pregnancy (Husmillow, 2013). Mercer also noted that a woman's relationship with her own mother, both past and current affects her journey toward maternal role attainment. In discussion of the theory, Mercer (2004) also explains that challenges such as young maternal age, low socioeconomic status, lack of education, or health complications with the mother or infant can be overcome and that maternal role identity can be achieved in these situations.

Pregnant teens have several non-modifiable factors that may hinder their achievement of the maternal role identity. These factors include young age, lack of education, and oftentimes, unplanned pregnancy. Pregnant teens are also at risk for an unstable support system, both emotionally and financially, may be of low socioeconomic status, have increased social stress and a low self-concept. All of these things can make maternal role attainment difficult. Intervention during the anticipatory phase can influence a woman's transition to motherhood (Mercer, 2004). Interventions include

education regarding pregnancy, child birth and parenting, emotional support and encouragement, support and assistance with planning for the child financially, and support and encouragement in achieving and maintaining optimal health throughout the pregnancy. All of these interventions are important to address when working with pregnant teens if a smooth transition to the maternal role is to be achieved.

It is also important to consider the developmental level of teens and how it may differ from that of adults. Interventions that take place during the anticipatory phase of an adult woman's pregnancy may not be appropriate for a teen. Addressing the unique needs of pregnant teens in a way that is developmentally appropriate may lead to a smoother transition toward maternal role attainment by providing teens with the knowledge and skills needed to begin motherhood. Women report more feelings of confidence and competence with their role as a mother when they are educated about pregnancy, child birth and parenting as well as knowing what to expect during each phase of pregnancy and motherhood (Mercer, 2004).

Healthcare providers are in a position to provide developmentally appropriate care and education to pregnant and parenting teens beginning, ideally, in the anticipatory phase. Recognizing and understanding the different stages maternal role acquisition can help providers tailor the care and education they are providing to women during and after pregnancy to assist women in attaining a maternal role identity.

Cognitive Constructivism

Cognitive constructivism is a learning theory developed primarily by Jean Piaget and William Perry ("Cognitive Constructivism", 2013). Cognitive constructivism is based on the idea that knowledge is made up of symbolic mental representations and a mechanism that operates on these representations. Learning is relative to the learner's stage of cognitive development and knowledge is actively constructed by learners based on their existing cognitive development. Understanding a learner's existing cognitive level is important in understanding the best ways to teach a population. The cognitive learning theory also views learning as an active process where knowledge is assimilated over time and is not simply passively absorbed. This theory also describes motivations as largely intrinsic. Learning requires a personal investment and internal drive on the part of the learner. The cognitive learning theory also suggest that teaching be focused on assisting students to actively assimilate new information through discussion, sharing of resources and encouragement of exploration of their new and existing cognitive structure ("Cognitive Constructivism", 2013).

Jean Piaget was the most influential participant in the development of cognitive constructivism. He described the learning as a dynamic process made up of stages of adaptation to reality. During this time, learners obtain knowledge by composing and exploring their own theories of the world and assimilating knowledge within these existing theories. Piaget also explores the idea of equilibration. Equilibration is described as the process of transferring new information to knowledge using existing

cognitive structures. Thus, the assimilation of new information is based on a learner's existing cognitive structure ("Cognitive Constructivism", 2013).

Piaget also describes four stages in the cognitive development of children (McLeod, 2012). Stages include the sensorimotor stage during the first 2 years of life followed by the preoperational stages, concrete operational stage, and formal operational stage. The formal operational stage includes adolescents aged 11 and over. Children learn very differently at each of the different developmental stages. Piaget proposed that every child goes through each stage in sequence but not necessarily at the same age. Additionally, not every child reaches the final developmental stages described by Piaget and is therefore incapable of achieving the cognitive structures of adulthood. Understanding the different stages of development and recognizing that adolescents have different learning needs that both children and adults is important when developing a lesson plan for this age group (McLeod, 2012).

Adolescent Development

Robert Havighurst proposed stages of development in terms of developmental tasks that are part of the normal transition from childhood to adulthood (Ingersoll). The developmental tasks of normal adolescence include physical, social, personal and cognitive changes that require time and adaptation skills. Tasks identified by Havighurst include adjusting to a new sense of the physical self, adjusting to new intellectual abilities, adjusting to increasing cognitive demands, developing expanded verbal skills, developing a sense of personal identity, establishing adult vocational goals, establish

independence from parents, developing stable peer relationships, learning to manage sexuality, adopting a personal value system, and developing increased impulse control and behavioral maturity (Ingersoll). Adolescents may go through these stages separately or simultaneously. Physical and cognitive changes may not occur together and may present exceptional challenges to adolescents both personally and socially.

Learning and developing the role of mother is not a normal developmental task of adolescence and creates significant challenges because many children in this age group are not cognitively ready to understand the responsibilities and duties that accompany pregnancy and motherhood. Tailoring prenatal education and parenting classes to the developmental level of the adolescent is very important if the pregnant adolescent is going to gain and retain the knowledge necessary to enter the mother role.

Adolescent Pregnancy

According to an article from the Montana Department of Health and Human Services, 7 young women ages 15-19 became pregnant and 5 gave birth every day in Montana in 2011 ("Montana teen birth," 2012). The teen pregnancy rate in Montana for the year 2010-2011 was 42 per 1000 females aged 15-19, down from 50.6 per 1000 females aged 15-19 in 2008-2009 ("Montana teen birth," 2012). The actual birth rate is a bit lower at 32.3 per 1000 females aged 15-19 and 39.4 per 1000 females aged 15-19 for 2010-2011 and 2008-2009, respectively ("Montana teen birth," 2012). This rate is just slightly higher than the national birth rate of 31.3 per 1000 females aged 15-19 in 2011 ("About teen pregnancy," 2012). In 2008, adolescent pregnancy in Montana cost

taxpayers roughly $29 million ("Montana teen birth," 2012). The cost nationwide in 2008 was estimated at $11 billion ("About teen pregnancy," 2012). The Montana Department of Health and Human Services article states:

> Most of the costs of teen childbearing are associated with negative consequences for the children of teen mothers, including increased health care and foster care costs, increased incarceration rates among the children of teen parents, and lost tax revenue from teen mothers who earn less money because they have less education ("Montana teen birth," 2012).

A graph showing the national adolescent pregnancy rates from the CDC website is shown below (figure 1).

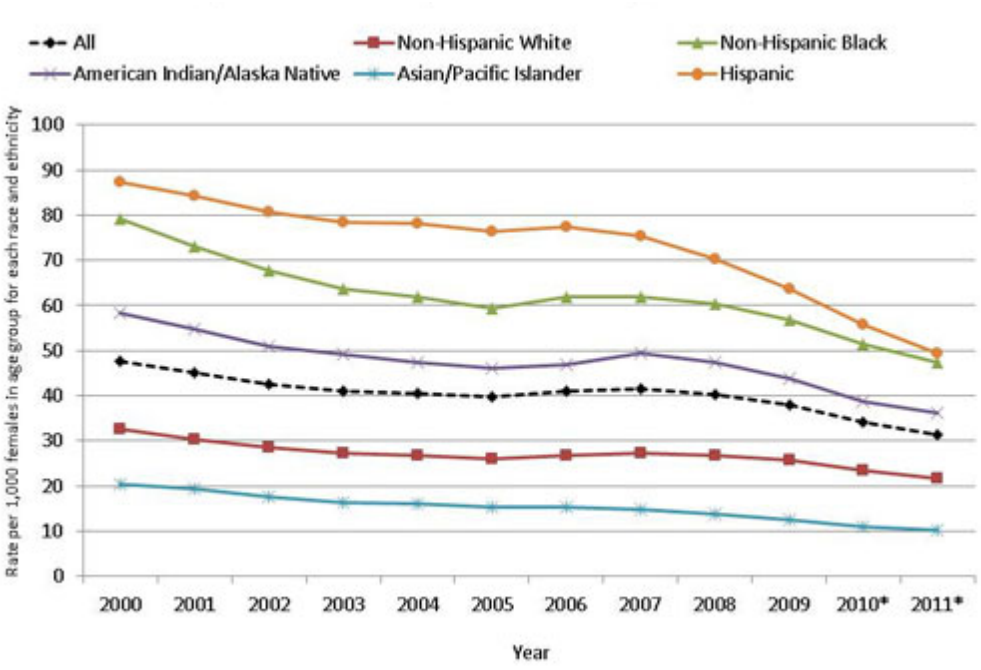

Figure 1. Birth Rates (Live Births per 1, 000 Females Aged 15-19 Years, by Race and Hispanic Ethnicity, 2000-2001.

This issue of teen pregnancy has been identified as one of the Healthy People 2020 national objectives. The objective states that the goal is to reduce pregnancies in adolescent girls ages 15-19 by 10% (HealthyPeople.gov). Prevention is key in reducing

the number of unplanned, adolescent pregnancies and there are programs and initiatives in place to help encourage prevention in this population. The CDC has partnered with the Office of the Assistant Secretary of Health (OASH) to work toward reducing teenage pregnancy. This is part of the President's Teen Pregnancy Prevention Initiative. The goals of the program are to reduce the rates of teenage pregnancy and provide education and services to teens with the intention of preventing teenage pregnancy ("Teen pregnancy prevention," 2013). Traditionally, pregnancy prevention has been the primary goal of health care initiatives in this arena. This is evidenced by the very large number of programs and resources nationwide that are available or are being created. When a Google search was performed using the search term "teen pregnancy prevention," nearly 8,640,000 results were found. These prevention programs have certainly had a positive impact on teenage pregnancy as evidenced a decrease of forty four percent from 1991-2010 (Montana teen birth, 2012). There is a need, however, to provide education to pregnant adolescent girls to help them maintain healthy pregnancies and learn parenting skills in a safe, non-judgmental environment. Quality prenatal education may help to combat some of the negative effects of teenage pregnancy on the mother, infant and society.

Adolescent pregnancy and parenting also correlates with "significant personal, social health, and economic consequences" (Herrman & Nandakumar, 2012 p. 3). These negative consequences affect both the adolescent mother and her child. These effects can be long lasting, affecting the mother and child throughout the remainder of their lifespan.

Pregnancy during adolescence presents many challenges and risks for mother to be. Challenges encountered by almost every pregnant adolescent include increased social stress, increased stress and tension between them and their friends and family, and increased financial stress. In addition to this, teens are also at increased risk for complications during pregnancy including anemia, pregnancy induced hypertension, preeclampsia, preterm delivery and postpartum depression. These health complications combined with the increased social and logistical challenges can make pregnancy and extremely stressful time for teens (Magness, 2012. Parenting teens are also less likely to complete high school or seek higher education and are at higher risk for long term poverty and dependence on welfare (Will, 2008). The CDC website states “Only about 50% of teen mothers receive a high school diploma by 22 years of age, versus approximately 90% of women who had not given birth during adolescence” ("About teen pregnancy," 2012). This lack of education only furthers the challenges that adolescent mothers face. Rapid subsequent pregnancy is also an occurrence that is seen with teen pregnancies. A review of literature showed that 20% to 37% of teen mothers have a second pregnancy and birth within 24 months (Magness, 2012). Adolescent mothers are also at risk for both decreased maternal sensitivity and cognitive readiness for parenting. Both of these factors put their children at risk for altered mother-child attachment. An article by Julie J. Lounds, John G. Borkowski, Thomas L. Whitman, Scott E. Maxwell, and Keri Weed also identified a teen mother’s potential for language deficits herself and the resulting lack of verbal encouragement for her infant as another risk factor for insecure attachment. When assessed during the third trimester, adolescent mothers

showed “deficits in IQ, high levels of internalizing and externalizing problems and were not cognitively prepared for their parenting roles” (Lounds, Borkowski, Whitman, Maxwell & Weed, 2005 p 95). The above-mentioned factors, as well as low socioeconomic status, place teen mothers “at high risk for inconsistent or even inappropriate parenting practices that can lead to insecure attachment” (Lounds, Borkowski, Whitman, Maxwell & Weed, 2005 p 95-96).

Children born to teen mothers are also at risk for complications both in the neonatal period and throughout their lifespan. The National Campaign to Prevent Teen Pregnancy and the CDC reports that children of teen mother have an increased risk of low birth weight, leading to long-term physical and cognitive challenges, are twice as likely to experience abuse or neglect, are three time more likely to become teen mothers themselves, are more likely to be raised by single parents with low incomes, and are more likely to spend time in foster care (Will, 2008). Children of teen mothers also have a higher incidence of impaired attachment to caregivers than those born to older mothers (Lounds, Borkowski, Whitman, Maxwell & Weed, 2005).

Prenatal Education

An article by Bonita Pilon states “early and continuous access to prenatal care and childbirth education are key factors in ensuring healthy outcomes for mother and infant” (Pilon, 2011, p. 23). Ateah cites a study of new mothers in the United States that showed that mothers “identified a lack of education on how to care for a new baby as one of the concerns of new mothers” (Ateah, 2013**,** p. 92). Short hospital stays after childbirth also

limit the time for education while in the hospital care setting (Ateah, 2013). Traditionally, prenatal education has been geared toward married couples in their twenties or thirties and is made up of a series of classes over several weeks that cover a variety of topics. Adolescents are a particularly vulnerable population in terms of lack of knowledge regarding pregnancy and newborn care (Pilon, 2011). Their own developmental needs, financial challenges and incomplete formal education make parenting a child difficult. According to an article by Tilghman and Lovette, "childbirth education designed for the typical population is unlikely to best serve the needs of the pregnant adolescent" (Tilghman & Lovette, 2008 p 51). Their developmental level, lack of education and susceptibility to peer influences make it necessary to provide targeted, individualized prenatal education (Tilghman & Lovette, 2008). The article states "childbirth educators can play a primary role in promoting, advocating for, and providing care to two especially vulnerable and needy groups today: pregnant adolescents and, in turn, their infants" (Tilghman & Lovette, 2008 p 53).

Reaching adolescents for prenatal education remains an ongoing challenge across the nation (Pilon, 2011). Primary barriers identified in the literature include cost and transportation (Pilon, 2011). Other barriers include lack of social acceptability among peers, fear of judgment and lack of time for classes between school and work (Tilghman & Lovette, 2008). Addressing these barriers is crucial in developing a successful prenatal education program or class for adolescents.

CHAPTER 3

METHOD

Introduction

In the previous chapters I discussed the background and significance of pregnancy in the adolescent population as well as the ways teen-focused prenatal education can help to reduce the burden of adolescent pregnancy on the mother, infant, and society. In this chapter I will discuss the methodology used in the design and implementation of a teen focused prenatal education seminar.

Population and Setting

Pregnant teens aged 15 to 19 years in south-central Montana were chosen as the target sample for this project. The location of the study is an urban area in Montana with a population of just over 100,000 people in 2010 (Billings Chamber of Commerce, 2013). There are three major public high schools and two private high schools serving the community (Billings Chamber of Commerce, 2013). According to the 2010 Montana Census, there is approximately 6,325 fifteen to nineteen year olds in the area (United States Census Bureau, 2010). The high volume of teenagers in the area made it an adequate setting for this project. The lack of a free, teen focused prenatal education program in the community also influenced the decision to use the area as the community of choice for the project.

Participants were recruited primarily via social networking, specifically Facebook. Information about the seminar was also distributed to the counselors at the local high schools. Kuss and Griffiths (2011) report that more than 500 million people are "active participants" within the Facebook community and between 55% and 82% of teenagers use social networking on a regular basis (Kuss & Griffiths, 2011 p. 68). The study also showed that many teens report accessing a social networking site more than four times per day. These statistics made Facebook a very viable way to reach young women ages 15-19. An advertisement for the class as well as a web page were set up on Facebook and contained information regarding the class including topics, location, time and transportation information. Potential participants were also able to post questions to the public space on the web page or send a private message if questions arose prior to the class. In addition to the social networking site, handouts were created and distributed to the three local public high school counseling offices to be offered to students by the counselors. Participants were excluded from the study if they did not speak English, were unable to read or were multiparous.

The class took place at a popular local coffee shop. The coffee shop offers a private conference room and lounge area. This area was utilized for the class and allowed both adequate space and privacy for the participants. The location of the class was chosen carefully for two reasons. The first reason was the geographical location of the coffee shop. It is within walking distance of one major high school and is only a short drive from another. The public transportation system also has a stop located less than 1 block from the shop. The cost to ride public transportation is $1.25 one way (City

of Billings, 2013). Timing of bus pick up and drop off was also considered when choosing the time for the class. The second reason for the location of the class was the fact that it is a safe, comfortable and non-intimidating place for teens to come. Many teenagers are intimidated by going to the hospital for a class but feel quite comfortable coming to a coffee shop. Refreshments and light snacks were provided for participants.

Study Design

This project utilized a pretest-posttest design to collect data. This is a form of experimental design and involves the collection of data prior to intervention. This baseline data is then compared to data collected after an intervention has taken place (Polit & Beck, 2012). The focus of the project was to assess change in the knowledge level of the participants after attending the class; this makes the pretest-posttest design an ideal format for data collection.

The project used quantitative data that had been collected from surveys obtained from participants of a prenatal education class organized and presented by the author. Outcome analysis was used in this project. Outcome analysis is a form of research analyzing the "extent to which the goals of the program are attained" (Polit & Beck, 2012 p. 261). The goals of this project were to increase knowledge and provide a class that the participants found to be helpful.

Data Collection and Analysis

The data for this study was collected using a pretest and posttest format and assessed whether or not the participants' knowledge increased as a result of the seminar and if they were satisfied with the presentation. The pretest consisted of seven multiple choice or true/false questions and was administered at the beginning of the class. The posttest contained the same seven questions as the pretest and was administered at the end of the class prior to the participants' departure. The purpose of this questionnaire was to assess knowledge gain and retention. A survey containing 6 statements was also distributed to the participants with the posttest. The purpose of this survey was to assess the participants' satisfaction with the course. The questionnaire and survey were created by the author (Appendix C). The participants responded to the satisfaction survey using a Likert scale. The Likert scale consisted of five options for the participants to choose: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, and Strongly disagree. Numerical values were given to each of the options with a score of 5 being assigned to "strongly agree" and a score of 1 being assigned to "strongly disagree (Appendix D).

The questionnaires were completed after the consent forms were signed (Appendix E).

Seminar Design

A teen focused prenatal education seminar was developed with the intent of providing education as well as a safe environment for discussion for teenaged females of

any stage of pregnancy (Appendix F). The class was comprised of three components: pregnancy/childbirth, newborn care, and available resources. These three components were chosen based on anecdotal data collected by the author over two years of working with pregnant and mothering teens in the inpatient setting. In the experience of the author, most teens are uneducated regarding basic newborn care and the resources that are available to them in the community both during pregnancy and after the child is born. There was also time at the end of the class for questions and discussion. Content for the class was compiled from various sources on the internet. Videos and handouts were utilized as learning tools for the class. Literature states that more than eighty percent of the information gathered in the brain is through sight (Beebe & Beebe, 2007). Visual and audio visual aids are also helpful in retention and organization of information (Beebe & Beebe, 2007). Teens are generally quite comfortable and "at home" with technology and therefore technology was included in the presentation of the class. Prior to the class starting, the teens were all given a written transcript of the class. This transcript was also projected onto a large screen in the room. Videos were also utilized to demonstrate skills such as diaper changes, feeding, rocking, bathing and dressing. These videos were projected on the large screen. Three handouts were also created by the author and given to all participants at the beginning of the class. These handouts covered SIDS, newborn care, and normal physical changes during pregnancy. The participants retained the handouts for review at home. Having materials to take home will allow the teens to review the information privately as frequently as they wish (Appendix G).

Statistical Analysis

Descriptive statistics were used for this project. Similarities were identified and conclusions were formulated. The statistics were used to create a general notion of the perceived effectiveness of the seminar presented to the participants.

A paired *t*-test was also used to analyze the data collected in this project. A paired *t*-test compares the data obtained from same sample at two different points in time (Polit & Beck, 2012). This test is used for dependent groups and is frequently utilized when comparing pretest and posttest data (Polit & Beck, 2012). The results of a paired *t*-test show differences in data collected at two different points in time, such as before and after an intervention.

Protection of Human Subjects

The purpose of the study was clearly explained to participants prior to the start of the seminar and all questions were answered. Attendance at the seminar was completely voluntary and participants could leave at any time. Demographic data was not collected and the questions asked on the tests and survey were not of a sensitive nature. All tests and surveys were anonymous.

Conclusion

In this chapter I discussed the methodology used to design and implement a teen focused prenatal education seminar. I also discussed the research methods used to collect and interpret the data. In the following chapter I will discuss the results of the study.

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CHAPTER FOUR

RESULTS

Introduction

In the previous chapter I discussed the methodology used for this project. A prenatal education class was developed and presented to a group of six teens at a local coffee shop. A pretest was administered prior to the class and the same set of questions was asked following the class. In addition, the teens completed a survey asking about the value of the class. This chapter presents the findings of the study.

Description of Sample

Pregnant teens in south-central Montana 19 years of age or younger were invited to participate. Six teens participated in the class and all completed the pretest, posttest and course survey. Specific demographic data was not collected. Five of the six teens were pregnant and at varying stages of pregnancy. All teens were Caucasian, well dressed and spoke and read English fluently. Reasons for attending the class and plans following delivery were not discussed unless volunteered by the teen during the class. All of the teens drove themselves to the class.

Data Analysis

Data on the course survey was scored using a 1-5 likert scale with 1 meaning strongly disagree and 5 meaning strongly agree (Appendix D). The pretest and posttest

consisted of five multiple choice questions and two true or false questions. The same questions were asked on the pretest and the posttest (Appendix C). All questions were answered by all participants. A paired *t*-test was also performed to analyze the difference in pretest and posttest scores. A paired *t*-test is used to compare means of dependent groups (Polit & Beck, 2012). In this case, the dependent groups are the scores achieved on the pretest and posttest.

Question 1: How Many Extra Calories Are Needed During Pregnancy?

This multiple choice question had 4 possible answer choices and one correct answer. On the pretest, only two of the teens answered this question correctly and four teens answered incorrectly. All of the teens answered correctly on the posttest, indicating an increase in knowledge relating to caloric intake requirements during pregnancy.

Question 2: What Are Examples of Hunger Cues in an Infant

This question had 5 possible answer choices and 3 correct answers. The response was only considered correct if all three correct responses were selected. Only one teen answered this question correctly on the pretest. All six teens answered the question correctly on the posttest. This indicates a significant increase in knowledge about infant hunger cues.

Question 3: How Long Does it Generally Take for the Umbilical Cord Stump to Fall Off?

This question had 4 possible answer choices and 1 correct answer. Like question 1, two of the teens answered this question correctly and 4 answered incorrectly on the pretest. On the posttest, all teens answered the question correctly. Discussion of this question indicated that several of the teens were completely unaware that the umbilical cord stump remained for any amount of time. The difference in correct responses from the pretest to the posttest indicates the knowledge gain related to this topic.

Question 4: What is the Very First Stool that a Baby Passes Called?

This question also presented 4 possible responses with 1 correct response. On the pretest, four of the teens answered this question correctly and only two answered incorrectly. All of the teens answered the question correctly on the posttest. This question had the highest number of correct responses of all the questions on the pretest.

Question 5: Infant's Should Always Be Placed on Their Backs to Go to Sleep.

This was the first of 2 true or false questions. Three of the teens answered this question correctly on the pretest and all answered correctly on the posttest. This question sparked much discussion about sleeping habits and Sudden Infant Death Syndrome prevention.

Question 6: All of the Following Help Reduce the Risk
of Sudden Infant Death Syndrome (SIDS) Except..

This multiple choice question had 4 possible responses and 1 correct response. On the pretest, three of the teens answered the question correctly and all of the teens answered correctly on the posttest. This question was a bit challenging for participants and did require some discussion.

Question 7: Most Babies Cry the
Most Around 6 Weeks Old.

This true or false question was answered correctly by only 2 teens on the pretest and 6 teens on the posttest. This indicates an increase in knowledge about the crying habits of infants. There was a lengthy discussion about infant crying patterns during the seminar

Pretest & Posttest Questions

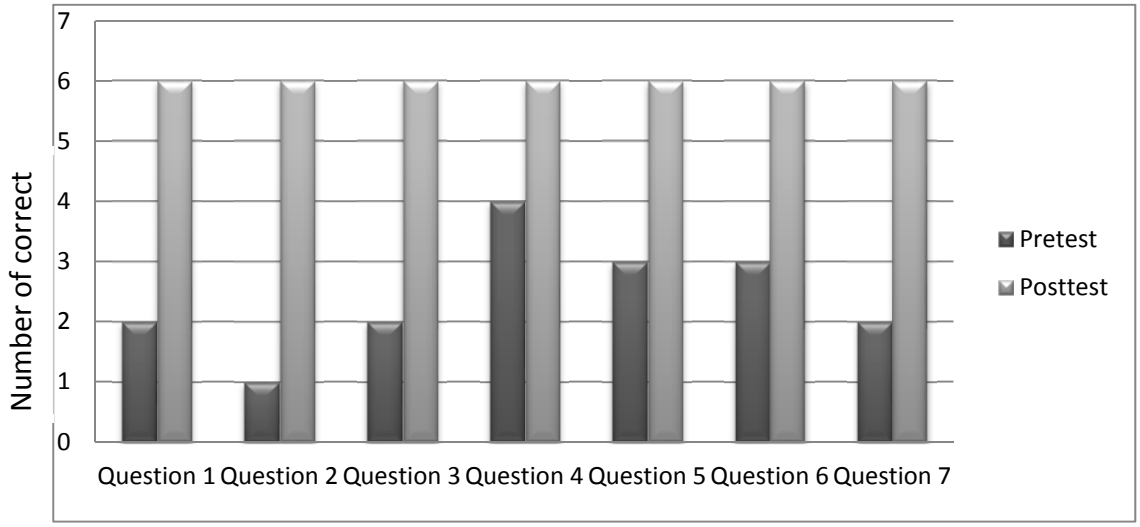

Figure 2. Multiple Choice Answers On Pretest And Posttest.

Figure 2 displays the results of the multiple choice questions asked on the pretest and posttest. Scores were calculated based on either a correct answer or an incorrect answer. For questions that asked for more than one response, i.e. "circle all that apply," responses were only counted as correct if all correct options were circled. Partial credit was not given on any of the questions. Improvement was seen in the number of correct responses on all multiple choice questions with the most improvement being on question number 2.

Next I will discuss the results of the seminar evaluation survey that was distributed to each of the teen participants at the end of the seminar (Appendix C). The purpose of the seminar evaluation survey was to assess the teens' level of satisfaction with the course. The surveys were scored using 1-5 Likert scale with 1 meaning "strongly disagree" and 5 meaning "strongly agree."

The first statement presented on the survey read "I learned something that I didn't know before the class." All the teen's rated this with a "5", "strongly agree." Increasing knowledge was one of the primary goals of the project so this result was encouraging. The seminar content and design facilitated an increase in knowledge regarding pregnancy and newborn care for the teens involved. The second statement "I found the class helpful" assessed the teens' perception of the usefulness of the seminar. All 6 teens rated this statement "5", "strongly agree." This result helped to show the worth of a seminar of this nature. The third statement read "I would attend a class like this again." This is the only statement that did not receive a 5 from all teens. This statement was scored "5" by 4 teens and "3" by 2 teens. The teens that rated this statement "3" volunteered that they

gave this score because they did not feel that they would need to attend another class after attending this seminar. This was encouraging as these teens felt that the seminar provided a thorough education regarding pregnancy and basic newborn care. The fourth statement read "I would suggest this class to my friends." All 6 teen's rated this "5." This result points to the potential future possibilities for the project. Presenting the seminar to more teens would likely be helpful. The fifth statement read "I feel more prepared now than I did before the class." Again, all 6 teens rated this statement "5." In addition to increasing knowledge, adequately preparing teens for pregnancy, birth, and newborn care was also a goal of the seminar. This result indicates that the teens did feel more prepared for their future than before the seminar. The last statement read "I felt comfortable in this environment." All teens rated this statement "5", "strongly agree." Providing an environment that felt safe, comfortable and private to the teen participants was very important for this project. Teens are more likely to attend a seminar if they feel comfortable within the environment; therefore, assessing this in relation to this specific seminar was important for future seminar planning.

Figure 3 displays the results of the class evaluation survey completed by the participants following the class. Six statements were given and participants scored the statements on a five point likert scale with 1 meaning strongly disagree and 5 meaning strongly agree. The survey evaluated the participants' perception of the class. The mean score for each statement was calculated and is presented above. Statements one, two, four, five and six were all scored "5" by all participants. Statement three was scored "5" by four participants and "3" by two participants.

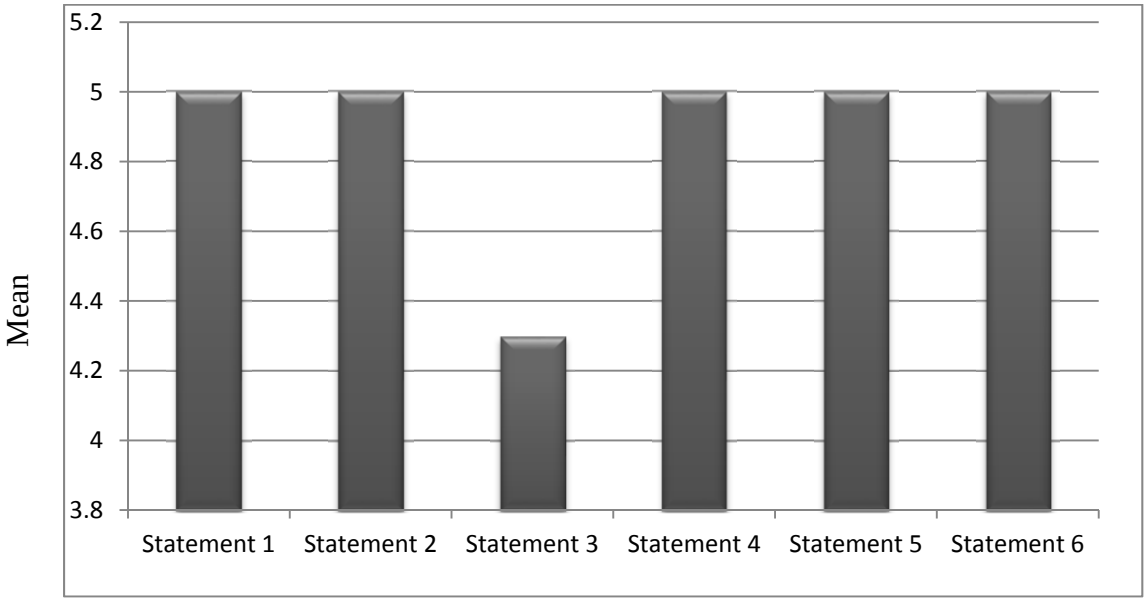

Figure 3. Class Evaluation Survey, Mean Scores.

Paired *T*-test Results

A paired *t*-test was performed using Microsoft Excel. When calculating the results, the number 1was assigned to all incorrect answers and the number 2 was assigned to all correct answers. The results of the paired *t*-test showed significant differences in correct responses (p= 0.00011) on the pretest (x= 9.8) versus the posttest (x=13.8).

Table 1. Paired *T*-test Results.

	x	*t*	*p*
Pretest	9.8		
Posttest	13.8	-10.95	0.00011

Planned Parenthood Presentation

A handout outlining the information shared in the class was presented to 2 providers at Planned Parenthood of Montana. Copies of the handout were given to be distributed at the discretion of the organization's director. Results of the study were also discussed during this short meeting. The providers were appreciative of the efforts of this project and thought that the topic was important and very relevant. They believed that a class such as this would be helpful to have within their clinic but stated that budget issues would make it difficult at this time. They stated that they would be happy to distribute the materials in the clinic. The purpose of the presentation was to raise awareness of the importance of specialized prenatal education for teens and to provide a resource that could be distributed in a clinic setting.

Conclusion

The teen participants in this study showed significant improvement on the test after having taken the class when compared to the pretest. The teens answered all of the multiple choice questions correctly and only two participants answered one of the true or false questions incorrectly on the post test. The teens also rated the class helpful and worthwhile on the course evaluation survey. These results indicate that the class was beneficial and effective for the teens that participated and that most teens thought that the class was helpful to them.

In the following chapter I will discuss the implications, limitations and recommendations for future research related to this project.

CHAPTER FIVE

DISCUSSION

Overview

In the preceding chapters, I reviewed teen pregnancy and the importance of prenatal education for the health and wellbeing of both the mother and infant. I also discussed the effect teen pregnancy and parenting can have on society. I then discussed the methods used in designing and implementing a prenatal education seminar specifically for teenagers. The seminar was evaluated using a pretest and posttest as well as a course evaluation survey. The results and seminar resources were then presented to providers at Planned Parenthood with the intent of raising awareness about the potential value of a teen focused prenatal workshop.

In this chapter, I will discuss the implications of the results of the project on nursing practice, future research and education.

Implications

The literature has demonstrated both the implications of teenage pregnancy and the value of prenatal education. In her article, Bonita Pilon states “early and continuous access to prenatal care and childbirth education are key factors in ensuring healthy outcomes for mother and infant” (Pilon, 2011 p. 23). This idea was a driver in the development of this course. The literature also discusses reasons why teens do not attend prenatal education classes. Reasons reported in the literature include cost, transportation,

lack of social acceptability among peers, fear of judgment from others and lack of time to attend classes (Pilon, 2011; Tilghman & Lovette, 2008). The results collected in this study showed the value of a prenatal education course designed specifically for the teenaged population. Designing a curriculum specific to the needs of the population is important when implementing a teaching program (McLeod, 2009). The curriculum tested in this study was shown to be effective based on the improvement in scores from the pretest to the posttest. The teens also reported a high level of satisfaction with the course on the course evaluation survey. Education developed for the typical pregnant adult population likely does not meet the needs of the pregnant adolescent (Tilghman & Lovette, 2008). Teen parenting itself presents unique challenges such as balancing school, work and parenting, lack of life experience, lack of formal education, lack of financial resources and a potential lack of support. Developing a class specifically for teens that touches on all of these unique challenges may help ease the transition and provide for better outcomes for both the mother and the infant. Providing a safe, non-judgmental environment is also important when developing a course for teens. Perhaps with improved prenatal education opportunities for teens, the adverse outcomes associated with teen pregnancy and parenting can be reduced. These adverse outcomes include pregnancy complications, low birth weight infants, low levels of education for teen mothers and increased costs for society (Will, 2008).

Implications for Nursing Practice

There are many ways that the results of this study and others like it can influence day to day nursing practice. Increasing the awareness of the need for specialized care for teen mothers and their infants will hopefully increase nurses' sensitivity to the unique needs of this population. It is also important for any nurse or other health professional that may come into contact with this population to recognize the challenges faced by pregnant and parenting teens and to work to minimize risk and challenges to both the teen and her child. Understanding that teens learn differently than adults and face challenges unique to their age is important when planning and implementing programs aimed at helping teens navigate through pregnancies and parenting. The results of the study may also help illustrate the need for a nurse or program dedicated specifically to this population. Increasing education in nursing schools would be an excellent place to start and could occur in either a pediatric or maternity nursing course. Education for staff in a hospital or clinic setting could occur through either educational seminars or brochures distributed with a contact number to the creator of the brochure if questions should arise. Other educational options include on online module outlining the educational and healthcare needs unique to pregnant teens or a short video discussing the topic.

Implications for Education

Increasing education about the unique needs and challenges of this population both in nursing schools and among healthcare providers that may be working with this population is important if high quality, teen focused care is going to be provided. Teens

receive care in many settings including family practice clinics, pediatric clinics, obstetrician/gynecology offices, community health clinics, income-based fee clinics, and emergency rooms. Educating the staff, nurses and providers working at each of these facilities about unique needs of teens, especially pregnant teens, would help to improve the quality of care and education that pregnant teens are receiving.

Limitations

The first limitation of this study is the small sample size, which limits the number of responses on the pretest, posttest and course evaluation survey. Secondly, time limited the number of classes that could be performed. Challenges included recruiting participants in the limited time frame and finding a facility that provided a private, comfortable environment at an affordable cost to host the class. Finding a time that allows for teens to attend such a class is also difficult as many teens are juggling work and school schedules and may have very limited free time. Another limitation is the limited research published specifically looking at prenatal education for teenage mothers. Much research is available regarding prenatal care and teenage pregnancy but prenatal education for teens seems to be an overlooked topic.

If I were to complete this project again, I would explore doing a few things differently. Reaching teens to participate in the study was a challenge with this project and so perhaps partnering with the local hospitals, Planned Parenthood and the early pregnancy clinics in town to advertise the seminar would provide a larger sample size. A

larger room would also be necessary if a much larger group of participants was expected. I do believe that the coffee shop setting worked well for this particular study.

Recommendations for Future Research

There are many possibilities for future research in this arena. Gaining more knowledge and improving practices and resources available to pregnant and parenting teens is important for the lifelong health and quality of life for mothers and children. Improving the outcomes of teenage pregnancies can also benefit society by reducing costs related to teen pregnancy including health care and foster care costs, lost tax revenue from teen mothers and costs related to the increased incarceration rates of children of teen parents ("Montana teen birth," 2012).

Further research assessing the barriers and reasons why teens do not attend standard prenatal education courses would provide information that could be used to develop strategies that address these issues, hopefully leading to increased attendance. It is important to have a clear understanding of the reasons why teens do not seek prenatal education if there is going to be any effective interventions put into place.

Comparing the outcomes of teen mothers and their newborns who attended prenatal education courses with those who did not would be an important long term research study. Knowing this information would help organizations develop effective programs for this population, encourages other teen mothers to seek prenatal education and may improve the likelihood of obtaining funding to support these types of programs.

Proving the value of a teen focused prenatal education course may also raise awareness of the importance of prenatal education.

Another helpful research project may be a focus group made up of pregnant and parenting teens to more closely assess the needs, desires and perceptions regarding prenatal education for this unique patient population.

Conclusion

Teen pregnancy and parenting presents a host of unique challenges to the teen, her family and society. Programs are available that advocate for teen pregnancy prevention but resources related to the education and preparation of the pregnant teen are scarce. Prenatal education is important for any new mother and may improve outcomes for both mother and child. However, many barriers to prenatal education exist for teen mothers and therefore many do not seek or attend any form of prenatal education. This study showed that a teen focused prenatal education class can be effective and that teens find it worth their time to attend such a class.

With the continuing prevalence of teen pregnancy as well as the extreme costs associated with teen pregnancy, developing programs that promote healthy pregnancies and parenting strategies is a necessary adjunct to the current teen pregnancy prevention programs.

Ramona Mercer devoted her career to maternal-child nursing and the development of her Maternal Role Attainment Theory. The four stages of maternal role attainment described by Mercer include anticipatory, formal, informal and personal

identity (Mercer, 2004). This project included a seminar that took place during the anticipatory stage of pregnancy, which includes the time during pregnancy prior to delivery. Assisting mothers to achieve confidence, competence and joy in the mothering role through any and all of the stages described by Mercer will help to achieve a maternal role identity.

APPENDICES

APPENDIX A

FACEBOOK GROUP SCREENSHOT


facebook
Search for people, places and things
Billings Teen Bab
Billings Teen Baby Talk
Timeline
Recent
Admin Panel
Billings Teen Baby Talk
33 likes
Update Page Info
Follow

APPENDIX B

SEMINAR ADVERTISEMENT FLYER

Join in with a group of your peers and learn what you need to know about pregnancy, childbirth, infant care and the resources available to you in a safe, relaxed environment! Teens only! The goal of the discussion is to learn and grow in a safe, non-judgmental environment. We will get together on Thursday September 12th from 4-6 pm at Off the Leaf. We will be in the conference room. Refreshments will be served!

Off the Leaf--Conference Room

September 12th 4-6 pm

FREE!!!

Questions?

Call Katie Skelton

406-690-1170

APPENDIX C

QUESTIONAIRE AND SURVEY

Participation is voluntary, and you can choose to not answer any question that you do not want to answer and you can stop at anytime.

1. How many extra calories are needed during pregnancy?

a. 0

b. 100

c. 300

d. 1,000

2. What are examples of hunger cues in an infant? (circle all that apply)

a. rooting

b. sleeping

c. tongue thrusts

d. Sucking

c. Yawning

3. How long does it generally take for the umbilical cord stump to fall off?

a. 1-2 days

b. 7-10 days

c. 14-18 days

d. 21-25 days

4. What is the very first stool that a baby passes called?

a. Meconium

b. Transitional

c. Regular

d. Seedy

5. Infant's should always be placed on their backs to go to sleep.

T

F

6. All of the following help reduce the risk of Sudden Infant Death Syndrome (SIDS) except

a. place baby on back to sleep

b. keep baby away from secondhand smoke

c. do not keep stuffed animals, pillows, or blankets in the crib

d. keep the room warmer than 75 degrees

7. Most babies cry the most around 6 weeks old.

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F

Participation is voluntary, and you can choose to not answer any question that you do not want to answer, and you can stop at any time.

Please circle the number that most closely correlates with the feelings you have about each statement.

(1= strongly disagree, 3= slightly disagree, 3= neither agree nor disagree, 4= slightly agree, 5= strongly agree)

1. I learned something that I didn't know before the class.

1 2 3 4 5

2. I found the class helpful.

1 2 3 4 5

3. I would attend a class like this again.

1 2 3 4 5

4. I would suggest this class to my friends.

1 2 3 4 5

5. I feel more prepared now than I did before the class.

1 2 3 4 5

6. I felt comfortable in this environment.

1 2 3 4 5

APPENDIX D

SCORING SYSTEM

Statement	Numerical Score
Strongly Agree	5
Somewhat Agree	4
Neither agree nor disagree	3
Somewhat Disagree	2
Strongly Disagree	1

APPENDIX E

CONSENT FORM

SUBJECT CONSENT FORM
FOR
PARTICIPATION IN HUMAN RESEARCH AT
MONTANA STATE UNIVERSITY

Evaluation of the Effectiveness of a Teen Focused Prenatal Education Seminar

You are being asked to participate in a research study of a teen focused prenatal education class. Prenatal education can provide valuable information to any expectant mother. This is especially true for teenagers who may lack life experience or the basic knowledge of pregnancy and childcare.

Participation is voluntary and you can choose to not answer any questions you do not want to answer and/or you can stop at anytime. The time required to complete the study is approximately 2 hours. This time includes completing a pretest, attending the seminar, and completing a post test and evaluation of the class. This is a one-time task, there will be no long-term follow-up. The results are completely confidential. There are no foreseen risks to completing this task. This study will most likely be of no benefit to you. There is no cost to participate and no financial compensation for completing the task. If you have any questions about this research or would like to add further comments or feedback, please contact Katie Skelton @ 406-690-1170.

AUTHORIZATION: I have read the above and understand the discomforts, inconvenience and risk of this study. I,_____, agree to participate in this research. I understand that I may later refuse to participate, and that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed:_____

Investigator:_____

Date:_____

APPENDIX F

LESSON PLAN

PURPOSE:

To assess the effectiveness of a teen focused prenatal education seminar.

GOAL:

The teen will identify the increased nutritional needs of pregnancy, identify feeding cues displayed by an infant, identify normal characteristics of the newborn period, identify three ways to reduce the risk of SIDS and identify sources of support in the community that can be utilized during pregnancy and after the infant is born. They will also report that the class was beneficial to them.

OBJECTIVES:

Following a 60-minute teaching session the teen will:

1. Identify the increased nutritional needs of pregnancy
2. Identify feeding cues displayed by an infant
3. Identify normal characteristics of the newborn period
4. Identify 3 ways to reduce the risk of SIDS in an infant
5. Identify sources of support in the community that can be utilized during pregnancy and after the infant is born.
6. Report that the class was beneficial to them

CONTENT OUTLINE:

1. The teen will need to identify the increased nutritional needs of pregnancy, specifically the increase in calories per the American Pregnancy Association.
2. Teen will identify behavioral cues in the infant, specifically feeding and tiredness cues.

3. Teen will identify normal characteristics of the newborn period including care of the umbilical cord stump, feeding patterns, voiding and stooling patterns and sleep and crying patterns.
4. Identify the risk factors for SIDS and 3 ways to reduce the risk of SIDS
5. Provide resources for financial and emotional support during pregnancy and after childbirth.

METHOD OF INSTRUCTION

1. The first objective will be addressed with verbal instruction and will be written on a handout given to each participant.
2. The second objective will be addressed through verbal instruction and demonstration.
3. The third objective will be addressed through verbal instruction as well as through video demonstration.
4. The fourth objective will be addressed through verbal instruction, written handouts and demonstration.
5. The resources available to the teens will be presented with verbal instruction and written handouts.

TIME ALLOTTED:

1. First objective is covered in 15 minutes.
2. Second objective is covered in 10 minutes.
3. Third objective is covered in 25 minutes
4. Fourth objective is covered in 15 minutes.
5. Fifth objective is covered in 10 minutes.

The presentation was 75 minutes.

15 minutes will be allotted for introductions and the pretest. There will be one 5 minute break. 25 minutes will be allotted for questions, posttest and course evaluation.

Total time is 120 minutes

RESOURCES:

1. The American Pregnancy Association website americanpregnancy.org was used for objective one
2. The resources for the second objective came from WIC and the Mayo Clinic website.
3. Resources for the third objective also came from the Mayo Clinic Website
4. Information regarding the fourth objective was retrieved from the American SIDS Institute and SIDS Alliance.
5. The resources were identified via a web search and from pamphlets distributed from local hospitals..

METHOD OF EVALUATION:

1. Improvement of score from the pretest to the posttest.
2. Improvement of score from the pretest to the posttest.
3. Improvement of score from the pretest to the posttest.
4. Improvement of score from the pretest to the posttest.
5. Discussion and identification of the available resources.

APPENDIX G

SEMINAR HANDOUTS

Welcome All!!

Introductions

My name is Katie Skelton. I am a Family Nurse Practitioner student at Montana State University. I started my nursing career in Labor and Delivery and now work in NICU. I have a passion for helping mothers maintain healthy pregnancies and deliveries and provide the best care to their children possible.

Pregnancy

- Prenatal vitamins
  - Folic Acid 400-800 mcg per day
- Nutrition
  - 300 extra calories per day
  - Plenty of iron (Fortified cereals and breads, beans, tofu, green, leafy vegetables, lean red meat, fish, dried fruit (apricots, prunes, raisins).
  - Calcium-1200 mg daily
  - Fluids: 2 quarts per day
- Medications
  - Tylenol is safe
  - Avoid NSAIDS such as ibuprofen (Advil) or naproxen (Aleve)
  - Ask your doctor about any other medications.
- Rest
  - Get plenty of rest!
- Body changes
  - See handout from Womenshealth.gov
- What to think about before baby comes
  - Cloth or disposable diapers?
  - Where will baby sleep? (crib, bassinet)
  - Do I want to breastfeed or formula feed?
  - Who is going to care for baby when I go back to school/work?
  - Who is going to help me after delivery?
  - Health Care/Insurance
  - Anything else?

Handouts

Body Changes, Text4Baby, Florence Crittenton's Center for Pregnant and Parenting Teens, Healthy Montana Kids

Labor and Delivery

Braxton Hicks- irregular, mildly painful contractions

- Early Labor

  - Contractions 6-30 minutes apart, 30-45 seconds long. May be uncomfortable but mom can usually relax between contractions. Early labor can last 2-24 hours.
  - Cervix may be dilating and effacing (thinning) a bit. Your cervix is "prepping" for active labor.
  - Distracting activities (walking, shopping, cleaning) can help. Make sure to get plenty of rest though! This is prep for active labor.
  - Timing contractions can help to track progression and decide when to go to the hospital. Record when the contraction began, how long it lasted, and the length of time between the start of one contraction and the start of the next one.
- Active Labor
  - Active labor is considered the time when the cervix dilates from 4 to 8 cm and thins to 100%.
  - Contractions are generally 3-5 minutes apart and last 40-70 seconds
  - This period may last 30 minutes to 10-15 hours. It is generally longest with your first baby.
- Transition
  - Transition is considered the time when the cervix dilates from 8 to 10 cm.
  - Contractions are generally 2-3 minutes apart and last 60-90 seconds.
  - This can be an intense time for the mother. She may feel discouraged, scared, shaky, hot/cold or nauseated.
- Birth!
  - Once fully dilated, the mother generally feels a strong urge to push.
  - Pushing usually lasts 1-2 hours but can be anywhere from a few minutes to 3 hours.
  - A labor nurse will help teach and guide you with pushing.
- Pain relief
  - Breathing techniques
  - Warm bath, massage, hot/cold packs, walking, music
  - IV pain medication
  - Epidural

- Cesarean Section
  - Reasons: Breech or transverse position, failure to progress, fetal distress, maternal health reasons.
  - Longer recovery than vaginal delivery. Mom and baby will usually stay in the hospital for 3-4 days rather than 1-2 days.
  - Goal is a healthy mom and healthy baby!

Baby!!

- Still in the hospital
  - Cutting the cord

  - Erythromycin antibiotic ointment in the eyes, Vitamin K shot- helps with blood clotting
  - Hepatitis B vaccine, PKU screening test
  - If breastfeeding, talk to the lactation consultant early and often!
  - Get as much rest as you can, ask questions. The nurses are there for you and your baby.
  - This is a time for you to bond with your baby and allow others to help care for you.
- Taking baby home!
  - Have your car seat and going home outfit ready. Clothing does not need to be fancy a simple sleeper and a hat will do perfectly. Most hospitals provide a cute hat.
  - It is best to know how to use and install the car seat before the baby comes.
  - Have help available at home if you can. Accept there help!
  - Limit visitors in the first few days to allow you to rest and focus on feeding and bonding with your baby.
  - Sleep as much as you can.
- Feeding
  - Babies eat every 1.5 - 3 hours initially. (start time to start time). They have tiny tummies (about the size of a marble) and the milk digests quickly.
  - Hunger cues:
    - Rooting (hands to mouth, turn head)
    - Sucking
    - Tongue thrusts
    - Wiggling
    - Crying—late cue
  - Feed on demand (you can't spoil a newborn)
  - Growth spurts typically occur at 2 weeks, 6 weeks and 3 months. During these times, baby may eat and sleep more than they had been.
  - Breastfed babies may eat more frequently than bottle fed babies.
  - Pumping may help increase/maintain milk supply and will allow the father or other family members to feed the baby.
  - Formula options- regular lactose (Enfamil, Similac), Soy and others for unique needs. Most babies tolerate regular lactose (milk based) formula but a pediatrician can help you decide what is best. At this time, WIC sponsors Enfamil.
  - Pediatrician will closely monitor weight to ensure baby is eating enough.
  - Burping!
- Bathing
  - Avoid a tub bath until the cord falls off (7-10 days).
  - Bathe baby in a small tub or sink in warm (not hot) water with a mild soap.

- Babies only need bathed a few times a week.

- Diapering/Dressing
  - Meconium- greenish black, tarry poop. Last for a few days. This is the stool that is in the intestines before birth.
  - After meconium, stool appears yellowish and seedy. This is normal and stool will turn to more "normal" looking baby poop in a week or so.
  - Breastfed baby poop- mild smell, usually 2 bowel movements per day for the first month. May have more! Diarrhea and constipation are rare in breastfed babies.
  - Formula fed baby poop- smell is stronger, one or two putty-like stools per day. Constipation is more common with babies who are formula fed.
  - Should have 8-12 wet or poopy diapers per day.
  - Babies cannot regulate their own temperature. Dress them in what you would be comfortable in without shivering or sweating.
  - A baby that is too warm may breathe rapidly, have a clammy neck or have flushed skin. A baby that is too cold may appear blotchy or marbled.
  - Swaddling- very comforting to baby.

    http://video.about.com/babyparenting/The-ABCs-of-a-Newborn-s-Poop.htm
  -

- Sleeping
  - Newborns sleep 12-20 hours per day. They wake frequently and rarely sleep more than 3 hours at a time. The length of sleeping periods increases over time.
  - At night, babies should sleep on their backs on a firm surface covered with a light sheet. A sleeper and a swaddle are usually enough to keep baby warm. Do not add any extra blankets, pillows or stuffed animals to the crib or bassinet. Keep the room temperature between 65-68 degrees. These measures will help reduce the risk of SIDS.
  - Do you want the crib to be in your room or a separate nursery? Either is ok.
  - See SIDS handout

    http://video.about.com/babyparenting/Learn-the-Basics-of-Newborn-Sleep.htm

- Crying/Calming
  - Crying usually peaks at 6 weeks.
  - 5 S's for calming a baby: Swaddle, swing, shhhh, suck, side lying

- Baby is crying…Now what. Check diaper. Is baby hungry? Is she too cold or too warm? Does she just want some loves?
- Slings can be very helpful. Babies love people, feeling your skin and hearing your heart beat. Your smell is nice to them too ☺

http://video.about.com/babyparenting/Ways-to-bond-with-your-baby.htm

- Open discussion----Any questions??

Resources available

- WIC- Nutritional support and education for pregnant women, breastfeeding women, postpartum women, infant and children up to age 5.
  - Contact the WIC office to set up an appointment.
    - Location: 711 Central Avenue
    - Hours: Monday, Tuesday, Thursday, Friday-- 8:00 am- 5:00pm
      Wednesday-- 9:00am-1:00pm, 2:00pm-6:00pm
    - Phone: 406-247-3370
    - Website: www.dphhs.mt.gov
- Young Families Early Head Start- Provides support and services to pregnant/parenting teens. Services include parenting classes, childcare, developmental services and support for finishing your education.
    - Location: 1020 Cook Avenue
    - Phone: 406-259-2007
    - Fax: 406-259-4901
    - Website: www.youngfamilieshs.org

- Riverstone Health- Provides low cost health care to adults and children. They also provide prenatal care. Excellent resource for health care.
    - Location: 123 South 27th Avenue
    - Phone: 406-247-3200 or 406-247-3350
    - Website: www.riverstonedhealth.org

- La Vie- Provides health care, ultrasounds and pregnancy advice and counseling
    - Location 1: 44 Wicks Lane (Billings Heights)
    - Phone: 406-256-7038
    - Location 2: 2321 Broadwater Avenue
    - Phone: 406-652-4868
    - Website: laviebillings.com

- Medicaid- Financial assistance for healthcare and other related costs.
    - Website: www.dphhs.mt.gov
      - This website is a wealth of information regarding WIC, Medicaid, food stamps, Healthy Montana Kids and more!

Body Changes and Discomforts During Pregnancy

During pregnancy, you might have:	What might help:	Call the doctor if:
Body aches As your uterus expands, you may feel aches and pains in the back, abdomen, groin area, and thighs. Many women also have backaches and aching near the pelvic bone due the pressure of the baby's head, increased weight, and loosening joints. Some pregnant women complain of pain that runs from the lower back, down the back of one leg, to the knee or foot. This is called sciatica (SYE-AT-ick-uh). It is thought to occur when the uterus puts pressure on the sciatic nerve.	Lie down. Rest. Apply heat.	Pain does not get better.
Breast changes A woman's breasts increase in size and fullness during pregnancy. As the due date approaches, hormone changes will cause your breasts to get even bigger to	Wear a maternity bra with good support. Put pads in bra to absorb leakage.	Tell your doctor if you feel a lump or have nipple changes or discharge (that is

During pregnancy, you might have:	What might help:	Call the doctor if:
prepare for breastfeeding. Your breasts may feel full, heavy, or tender. In the third trimester, some pregnant women begin to leak colostrum (coh-LOSS-truhm) from their breasts. Colostrum is the first milk that your breasts produce for the baby. It is a thick, yellowish fluid containing antibodies that protect newborns from infection.		not colostrum) or skin changes.
Constipation Many pregnant women complain of constipation. Signs of constipation include having hard, dry stools; fewer than three bowel movements per week; and painful bowel movements. Higher levels of hormones due to pregnancy slow down digestion and relax muscles in the bowels leaving many women constipated. Plus, the pressure of the expanding uterus on the bowels can	Drink eight to 10 glasses of water daily. Don't drink caffeine. Eat fiber-rich foods, such as fresh or dried fruit, raw vegetables, and whole-grain cereals and breads. Try mild physical activity.	Tell your doctor if constipation does not go away.

During pregnancy, you might have:	What might help:	Call the doctor if:
contribute to constipation.		
Dizziness Many pregnant women complain of dizziness and lightheadedness throughout their pregnancies. Fainting is rare but does happen even in some healthy pregnant women. There are many reasons for these symptoms. The growth of more blood vessels in early pregnancy, the pressure of the expanding uterus on blood vessels, and the body's increased need for food all can make a pregnant woman feel lightheaded and dizzy.	Stand up slowly. Avoid standing for too long. Don't skip meals. Lie on your left side. Wear loose clothing.	You feel faint and have vaginal bleeding or abdominal pain.
Fatigue, sleep problems During your pregnancy, you might feel tired even after you've had a lot of sleep. Many women find they're exhausted in the first trimester. Don't worry, this is	Lie on your left side. Use pillows for support, such as behind your back, tucked between your	

During pregnancy, you might have:	What might help:	Call the doctor if:
normal! This is your body's way of telling you that you need more rest. In the second trimester, tiredness is usually replaced with a feeling of well being and energy. But in the third trimester, exhaustion often sets in again. As you get larger, sleeping may become more difficult. The baby's movements, bathroom runs, and an increase in the body's metabolism might interrupt or disturb your sleep. Leg cramping can also interfere with a good night's sleep.	knees, and under your tummy. Practice good sleep habits, such as going to bed and getting up at the same time each day and using your bed only for sleep and sex. Go to bed a little earlier. Nap if you are not able to get enough sleep at night. Drink needed fluids earlier in the day, so you can drink less in the hours before bed.	
Heartburn and indigestion Hormones and the pressure of the	Eat several small meals instead of three	Symptoms don't improve after

During pregnancy, you might have:	What might help:	Call the doctor if:
growing uterus cause indigestion and heartburn. Pregnancy hormones slow down the muscles of the digestive tract. So food tends to move more slowly and digestion is sluggish. This causes many pregnant women to feel bloated. Hormones also relax the valve that separates the esophagus from the stomach. This allows food and acids to come back up from the stomach to the esophagus. The food and acid causes the burning feeling of heartburn. As your baby gets bigger, the uterus pushes on the stomach making heartburn more common in later pregnancy.	large meals — eat slowly. Drink fluids between meals — not with meals. Don't eat greasy and fried foods. Avoid citrus fruits or juices and spicy foods. Do not eat or drink within a few hours of bedtime. Do not lie down right after meals.	trying these suggestions. Ask your doctor about using an antacid.
Hemorrhoids Hemorrhoids (HEM-roidz) are swollen and bulging veins in the rectum. They can cause itching, pain, and bleeding. Up to 50 percent of pregnant women get	Drink lots of fluids. Eat fiber-rich foods, like whole grains, raw or cooked leafy green vegetables, and	

During pregnancy, you might have:	What might help:	Call the doctor if:
hemorrhoids. Hemorrhoids are common during pregnancy for many reasons. During pregnancy blood volume increases greatly, which can cause veins to enlarge. The expanding uterus also puts pressure on the veins in the rectum. Plus, constipation can worsen hemorrhoids. Hemorrhoids usually improve after delivery.	fruits. Try not to strain with bowel movements. Talk to your doctor about using products such as witch hazel to soothe hemorrhoids.	
Itching About 20 percent of pregnant women feel itchy during pregnancy. Usually women feel itchy in the abdomen. But red, itchy palms and soles of the feet are also common complaints. Pregnancy hormones and stretching skin are probably to blame for most of your discomfort. Usually the itchy feeling goes away after delivery.	Use gentle soaps and moisturizing creams. Avoid hot showers and baths. Avoid itchy fabrics.	Symptoms don't improve after a week of self-care.

During pregnancy, you might have:	What might help:	Call the doctor if:
Leg cramps At different times during your pregnancy, you might have sudden muscle spasms in your legs or feet. They usually occur at night. This is due to a change in the way your body processes calcium.	Gently stretch muscles. Get mild exercise. For sudden cramps, flex your foot forward. Eat calcium-rich foods. Ask your doctor about calcium supplements.	
Morning sickness In the first trimester hormone changes can cause nausea and vomiting. This is called "morning sickness," although it can occur at any time of day. Morning sickness usually tapers off by the second trimester.	Eat several small meals instead of three large meals to keep your stomach from being empty. Don't lie down after meals. Eat dry toast, saltines,	You have flu-like symptoms, which may signal a more serious condition. You have severe, constant nausea and/or vomiting

During pregnancy, you might have:	What might help:	Call the doctor if:
	or dry cereals before getting out of bed in the morning. Eat bland foods that are low in fat and easy to digest, such as cereal, rice, and bananas. Sip on water, weak tea, or clear soft drinks. Or eat ice chips. Avoid smells that upset your stomach.	several times every day.
Nasal problems Nosebleeds and nasal stuffiness are common during pregnancy. They are caused by the increased amount of blood in your body and hormones acting on the tissues of your nose.	Blow your nose gently. Drink fluids and use a cool mist humidifier. To stop a nosebleed, squeeze your nose	Nosebleeds are frequent and do not stop after a few minutes.

During pregnancy, you might have:	What might help:	Call the doctor if:
	between your thumb and forefinger for a few minutes.	
Numb or tingling hands Feelings of swelling, tingling, and numbness in fingers and hands, called carpal tunnel syndrome, can occur during pregnancy. These symptoms are due to swelling of tissues in the narrow passages in your wrists, and they should disappear after delivery.	Take frequent breaks to rest hands. Ask your doctor about fitting you for a splint to keep wrists straight.	
Stretch marks, skin changes Stretch marks are red, pink, or brown streaks on the skin. Most often they appear on the thighs, buttocks, abdomen, and breasts. These scars are caused by the stretching of the skin, and usually appear in the second half of pregnancy. Some women notice other skin changes	Be patient — stretch marks and other changes usually fade after delivery.	

During pregnancy, you might have:	What might help:	Call the doctor if:
during pregnancy. For many women, the nipples become darker and browner during pregnancy. Many pregnant women also develop a dark line (called the linea nigra) on the skin that runs from the belly button down to the pubic hairline. Patches of darker skin usually over the cheeks, forehead, nose, or upper lip also are common. Patches often match on both sides of the face. These spots are called melasma or chloasma and are more common in darker-skinned women.		
Swelling Many women develop mild swelling in the face, hands, or ankles at some point in their pregnancies. As the due date approaches, swelling often becomes more noticeable.	Drink eight to 10 glasses of fluids daily. Don't drink caffeine or eat salty foods. Rest and elevate your feet.	Your hands or feet swell suddenly or you rapidly gain weight — it may be preeclampsia.

During pregnancy, you might have:	What might help:	Call the doctor if:
	Ask your doctor about support hose.	
Urinary frequency and leaking Temporary bladder control problems are common in pregnancy. Your unborn baby pushes down on the bladder, urethra, and pelvic floor muscles. This pressure can lead to more frequent need to urinate, as well as leaking of urine when sneezing, coughing, or laughing.	Take frequent bathroom breaks. Drink plenty of fluids to avoid dehydration. Do Kegel exercises to tone pelvic muscles.	You experience burning along with frequency of urination — it may be an infection.
Varicose veins During pregnancy blood volume increases greatly. This can cause veins to enlarge. Plus, pressure on the large veins behind the uterus causes the blood to slow in its return to the heart. For these reasons, varicose veins in the legs and	Avoid tight knee-highs. Sit with your legs and feet raised.	

During pregnancy, you might have:	What might help:	Call the doctor if:
anus (hemorrhoids) are more common in pregnancy. Varicose veins look like swollen veins raised above the surface of the skin. They can be twisted or bulging and are dark purple or blue in color. They are found most often on the backs of the calves or on the inside of the leg.		

SIDS (Sudden Infant Death Syndrome)

What is SIDS?

SIDS is the unexpected death of an otherwise healthy infant, whose death remains unexplained even after autopsy and full investigation of the death. It is the leading cause of death in infants aged 1 month to 1 year. It is still rare, however.

What causes SIDS?

Some theories about the cause of death in SIDS included inability to self-regulate heartbeat or breathing patterns due to immature neurological system, overheating, suffocation and inability of the infant to arouse himself from a deep sleep.

How can I reduce the risk of SIDS?

Because it is not known exactly what the cause of SIDS is, it is important to do whatever we can to reduce the risk. Ways to help prevent SIDS are:

Place your baby on her back to sleep.

Pediatricians began recommending this in 1992 and since then SIDS deaths have decreased at least 42%.

Babies have increased motor activity when they sleep on their back and this is thought to help arouse them more frequently.

Avoid exposing the baby to tobacco smoke.

Breastfed babies have a lower incidence of SIDS.

Avoid exposing the baby to illnesses like colds and flu.

Place baby on a firm mattress covered with a sheet to sleep.

Prevent overheating by not over-dressing the baby or overheating the room.

Co-sleeping with a mother that smokes or with an adult whose responsiveness may be weakened by sleep deprivation or substance abuse can increase the risk of SIDS.

Never place an infant on soft mattress or waterbed to sleep.

American SIDS Institute. www.sids.org

SIDS Alliance. www.sidsalliance.org.

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