

Running head: BIRTH PLANS AND PERCEPTIONS

Birth Plans and Perceptions of College Students

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**Abstract**

This thesis aimed to discover what the future birth plans and perceptions surrounding the birth process of college age females were so as to formulate a direction for future efforts to address the false and oftentimes negative stigmas surrounding the labor and delivery process. A prospective, descriptive study design was used with an online survey distributed to a sample of 176 participants. Results indicated that college age females who had not yet had children held opinions in regards to childbirth, highlighted by fear of pain and their own capabilities, as well as lack of knowledge regarding birth location and attendants. The results of this study chimed in with similar studies conducted among this demographic, and began looking into how age, area of postsecondary study, and maternal influence work together to form strongly held beliefs in regards to labor and delivery. Knowing what the gaps in knowledge and misconceptions of young women are can help health care providers to promote more education and conversation about childbirth earlier on, so as to promote the most individualized, safe, and positive experience for women and newborns.

*Keywords:* birth plans, birth perceptions, college females, nursing education

### **Introduction**

More than 80% of women in the United States will become pregnant at some point in their lifetime and deliver one or more children. Out of all these women, 31% of them will suffer from pregnancy complications, ranging from depression to the need for a cesarean delivery (Division of Reproductive Health, Centers for Disease Control and Prevention, 2010). The recommended rate of C-sections by the World Health Organization is between 10 and 15 percent. Perhaps it is a cause for concern that the number of C-sections has remained unchanged or increased in various countries worldwide (World Health Organization, 2015). In fact, in the United States alone in 2016, there were 2,684,803 vaginal deliveries and 1,258,581 C-section deliveries. This indicates that almost 1/3 of U.S. births in 2016 were via C-section, which is more than double the recommendation (Martin, Hamilton, Osterman, Driscoll, Drake, 2018).

Much has been done to educate the public and obstetric health care professionals on the importance of maintaining physical health prior to pregnancy and throughout pregnancy for positive birth outcomes. However, critical threats to maternal and neonatal health still exist in the United States. These threats include a rise in preterm births of more than 20 percent between 1990 and 2006 (Martin, Hamilton, Sutton, et. al, 2006), a higher infant death rate than 40 other countries in 2017 (Central Intelligence Agency, 2017), and the increasingly high rates of C-sections.

While the education and health promotion surrounding physical health factors during the perinatal timespan are crucial, it is possible that other factors could contribute to an all around more positive birth experience characterized by less invasiveness or risk

for complications. The World Health Organization's position on the definition of health states:

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity...the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic, or social condition. (World Health Organization, 1948)

The health and overall well-being of mothers and infants determine the health of future generations and are valuable indicators of the public health challenges that health care systems around the globe face (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion).

### **Literature Review**

In a study affiliated with the Department of Nursing at the Hunan University of Medicine, it was reported that the relationships between C-sections and infant mortality were considered significant, even after accounting for potential confounding variables. Therefore, it is important to consider the global excessive increase in the use of C-sections, particularly unnecessary ones. (Xie, Gaudet, Krewski, Graham, Walker, & Wen, 2015). With this in mind, health promotion encouraging a more natural birth experience, along with holistically healthier mothers, pregnancies, and newborns, should be a goal in the United States. This would potentially decrease complications and better

accomplish the all-encompassing definition of health provided by the World Health Organization.

Current research indicates that the most common and notable childbirth experiences are correlated with the expressed expectations of women prior to the labor and delivery, with women who look at childbirth favorably reporting more positive birth experiences (Haines, Rubertson, Pallant, & Hildingsson, 2012). There are a variety of factors influencing young women's perceptions of childbirth. Several of the main influences include the birth stories of others, the amount of trust in themselves or their healthcare professionals, and fear of pain, judgment, or for safety (Blount, 2011). Another major influence, especially in the modern world, is media portrayal of the labor and delivery process. Studies have reported that reality television depictions of childbirth often include women appearing powerless, the physicians being the only one with a voice, and all technology as completely necessary for the majority of births (Morris & McInerney, 2010).

It is becoming increasingly common for pregnant women to prepare birth plans, outlining how they would like their labor and delivery to proceed, either free of complications or in the case of an emergency. Studies have been conducted that evaluated the effects and benefits of birth plans on outcomes and childbirth experiences. One such study was one conducted in Scotland of women who implemented birth plans in the postpartum period. Some of the positive effects that the study attributed to birth plans included allowing the women more control over events and better interactions between women and their health care providers. It was determined that even when documented preferences were not fulfilled due to unforeseen circumstances, women still

expressed satisfaction with using birth plans because the discussion of their options was beneficial to them (Whitford et al., 2014).

Another study even suggested that when women use birth plans, there may be health benefits for the baby as well. One such benefit was that babies of nulliparous women with birth plans had better umbilical cord blood pH values than the babies of women without birth plans. Much of this could be confounded by the fact that women with birth plans tended to be older and have higher education and levels of health than those without birth plans (Hidalgo-Lopezosa, Rodríguez-Borrego, & Muñoz-Villanueva, 2013).

This thesis focuses in on the birth perceptions and future plans of college students in particular, so as to attempt to determine what efforts might prove useful in giving this population more accurate expectations. The results also may be used to encourage young women to start thinking about this topic or seek out more information if they have not yet already done so. The current research reports that at this age, fear is a primary component related to birth perceptions and that lack of knowledge is the main contributing factor to this fear (Stoll, Hall, Janssen, & Carty, 2014). An Australian study similar to this one reported that female college students who have not delivered any children have been found to hold fairly strong attitudes towards childbirth, reporting fear and feelings of low self-efficacy. This Australian study also suggested that many social and cultural attitudes may play a major role in women's approach and varying perceptions regarding to childbirth (D'Cruz & Lee, 2013). Another study also determined that those who were more afraid of childbirth, who were worried over physical changes after birth, who held favorable attitudes towards hospital equipment and

technology, and had previous exposure to media information portraying pregnancy and birth had significantly higher rates of preferring a C-section delivery over a vaginal delivery (Stoll, Hall, Janssen, & Carty, 2014).

One potential solution to promoting more natural birth plans with less medical intervention in low-risk pregnancies is the increased implementation of nurse midwives. However, college students also have been found to have many, often inaccurate, views about midwifery. They have often displayed lack of understanding about midwives' scope of practice, the amount of midwife-assisted deliveries that actually occur in the hospital and not at home, and the safety of a labor and delivery with a midwife as opposed to a physician in a low-risk pregnancy (DeJoy, 2010). Therefore, this thesis also aims to determine what the perceptions surrounding midwives and even home births were among this sample.

This study will determine whether or not the current research in regards to influences on young women's childbirth choices and preferences holds true among this sample. It is hypothesized that fear, age, level of education, and female familial influences will have a relationship with the plans and perceptions of childless college females, as they were found to in other studies. A new factor that will be explored in this thesis will be the area of postsecondary study of the participants, to try to determine whether or not that plays a significant role in shaping birth plans and perceptions of college age females.

## Methods

### Overview

An online survey (Appendix B) was distributed to female college students, from Oakland University in Rochester, Michigan along with some recruited using Facebook distribution, from December 2<sup>nd</sup>, 2017 until December 16<sup>th</sup>, 2017.

### Participants

The sample was made up of 176 women: recruited online using Facebook, and via the Honors College of Oakland University and Student Nurses Association of Oakland University e-mail lists. Interested participants were considered eligible if they identified as female, were a college student, did not already have biological children, and were between the ages of 18 and 24. This population was chosen because their perceptions are important to fully understand so as to gear more reproductive education towards those who have not yet had children. Educating females even earlier than college age may be part of the answer to improving birth expectations and outcomes. This research was conducted to fill in a gap in the knowledge and to potentially add to and replicate similar results as the studies that *have* looked at the birth plans and perceptions of childless college students. Information about the participants' family birth history, educational level, age within the "young adult" category, and area of study were gathered to determine if these things played a significant role in birth plans and preferences of this specific group of educated young females.

**Survey**

All participants responded to an online survey created using Qualtrics. The survey was sent to members of the Oakland University Honors College, to the members of the Student Nursing Association of Oakland University, and was posted to the principal investigator's Facebook page.

**Demographics and eligibility**

The beginning portion of the survey asked participants questions about their age, gender, pregnancy and delivery history, student status, and area of study. The goal was to get a basic background from all of the participants so as to see if any of these factors played a role in their birth perceptions and plans.

**Basic birth plan and previous exposure**

A brief scale was developed to get baseline knowledge about what the women's birth plans would be if they were to suddenly become pregnant and decide to continue with the pregnancy accompanied by brief explanations for their preferences. The respondents were also asked about the birth histories of women in their family.

**Childbirth expectations**

Permission was received to use the Childbirth Expectations Questionnaire (Gupton, Beaton, Sloan, & Bramadat, 1991), and a modified version of the Childbirth Expectations Questionnaire (Appendix C) was developed and used to determine the perceptions and expectations of childbirth and how positive or negative they were. Out

of 35 questions in the original questionnaire, 31 questions were chosen to be used in this study as the answers were most relevant to what this study aimed to discover. The questions all used a 5-point response scale, ranging from “strongly disagree” to “strongly agree.” These questions were prefaced by the statement, “The rest of the questions in this survey will be based on a hypothetical situation in which you become pregnant, and you decide to continue with the pregnancy through delivery.”

### **Procedure**

After obtaining ethical approval from the Institutional Review Board of Oakland University, the study was advertised via Facebook, the e-mail list for the Honor’s College of Oakland University students, and the e-mail list for the Student Nurses Association of Oakland University with a title of “Birth Plans and Perceptions of College Students.” Participant consent was obtained at the beginning of the survey (Appendix A), reminding participants that their identity would be anonymous and that they could withdraw from the survey at any time. In a networking method, some participants and friends of the principal investigator shared the link to the survey with friends or family that they thought may be interested and eligible to participate.

### **Results/Analysis**

#### **Preliminary analysis**

A total of 196 responses to the survey were originally collected. Of the 196 responses, 15 were excluded for not responding to the informed consent or a lack of consent to the study. There were 5 responses that were also excluded: 1 for not being

within the specified age range, 2 for already having had biological children in the past, and 2 for not being current college students. The final sample included 176 participants.

### **Demographic analysis**

Of the 176 respondents, 81 (46.02%) were between 18 to 19 years old, 72 (40.91%) were between 20 and 21 years old, and 23 (13.07%) were between 22 and 24.

To determine how far along into their postsecondary education the respondents were, they were asked how many years of college-level classes they had taken. A total of 46(26.14%) had finished less than 1 year of college-level education, 31 (17.61%) had finished between 1 and 1.5 years, 20 (11.36%) had finished between 2 and 2.5 years, 55 (31.25%) had finished between 3 and 3.5 years, 15 (8.52%) had finished between 4 and 4.5 years, and 9 (5.11%) had finished more than 5 years of postsecondary education.

When breaking down the areas of study of those who completed the survey, 93 (52.84%) identified as pre-medical or nursing students, 18 (10.23%) identified as engineering or computer science students, 18 (10.23%) identified as psychology or sociology students, 14 (7.95%) identified as English or communications students, 13 (7.39%) identified as education students, 12 (6.82%) identified as business students, and 8 (4.55%) identified as art, music, or theater students.

### **Family birth history**

To get a better idea of one of the many influences on birth perceptions, the respondents were asked what types of deliveries their biological mothers had experienced. Results showed that 115 (65.34%) reported their mother's had only vaginal

deliveries, 25 (14.20%) reported that their mother's had only C-sections, 32 (18.18%) reported that their mother's had a combination of vaginal deliveries and C-sections, and 4 (2.27%) reported they were unsure what types of deliveries their mothers had.

When asked about the mode of delivery that the women in their extended families had experienced, 23 (13.07%) reported that family members all delivered vaginally, 76 (43.18%) reported that their family members had mostly vaginal deliveries with a few C-section deliveries, 19 (10.80%) reported there were about an equal number of vaginal deliveries and C-section deliveries in the family, 6 (3.41%) reported that family members had mostly C-section deliveries with a few vaginal deliveries, no respondents reported that there were only C-section deliveries in the family, and 52 (29.55%) respondents were unsure about the types of deliveries most of the women in their family had.

### Basic birth preferences

Figure 1 (below) displays the primary birth preference of the respondents: vaginal delivery or C-section. A total of 148 (84.09%) respondents preferred a vaginal delivery, and 28 (15.91%) respondents preferred a C-section.



Figure 1. Pie chart visualization of delivery-type preference

Figure 2 (below) displays the birth attendant preference of the respondents: physician or nurse-midwife. A total of 111 (63.07%) respondents preferred a physician as primary birth attendant, while 65 (36.93%) respondents preferred a nurse-midwife.

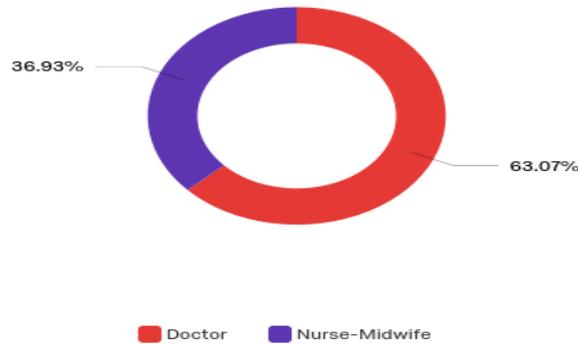


Figure 2. Pie chart visualization of birth attendant preference

Figure 3 (below) displays the respondents' interest or disinterest in ever delivering their baby at home. A total of 11 (6.25%) respondents said they would consider delivering their baby at home, 45 (25.57%) respondents said they might consider delivering their baby at home, and 120 (68.18%) respondents said that they would not consider delivering their baby at home.

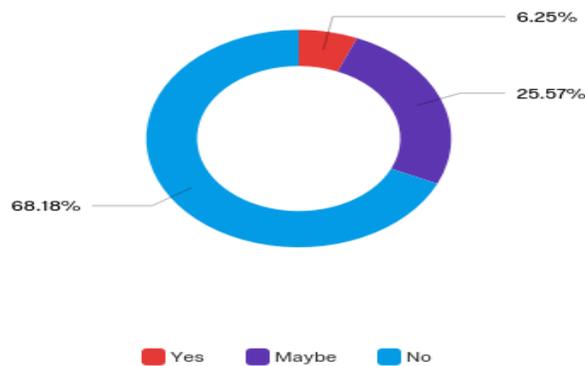


Figure 3. Pie chart visualization of homebirth preferences

## Rationale

When the women were asked to briefly explain why they picked one method of delivery over the other, many justified their preferences based on things they have heard from others or due to fear or concern for themselves, the baby, or both. Figure 4 (below) shows the array of rationale from the participants that provided it.

<b>Vaginal delivery</b>	<b>N (% of total)</b>	<b>C-section</b>	<b>N (% of total)</b>
More natural	47 (28.14%)	Less pain/scared of vaginal delivery	14 (8.38%)
Avoid scarring	25 (14.97%)	Less genital damage/personal preference	5 (2.99%)
Easier recovery	24 (14.37%)	Too small for vaginal delivery/health risk	4 (2.40%)
Fear of surgery/risks	23 (13.77%)	Mother's influence	2 (1.20%)
C-section unnecessary/emergency only	12 (7.19%)	Low self-efficacy	1 (0.60%)
Better for baby	5 (2.99%)	Quicker delivery/can be scheduled	1 (0.60%)
"Healthier"	2 (1.20%)		
More intimate	1 (0.60%)		
Less drugs needed	1 (0.60%)		

**Figure 4. Distribution of rationale for delivery-type preference**

From similar places of concern and fear for themselves and their baby, the respondents gave rationale for their preference of doctor or nurse-midwife assisting throughout their labor and delivery. Figure 5 (below) displays the reasoning provided by the respondents. Many had less intense preferences for one birth attendant over the other than they did for their delivery type preference. Most women seemed to be open to either a doctor or a midwife, as long as they and the baby were safe.

Doctor	N (% of total)	Nurse-midwife	N (% of total)
More experience/knowledge/training	53 (33.76%)	More attention and personalized care	30 (19.10%)
Better suited for emergencies	17 (10.83%)	More labor experience(not just delivery)	16 (10.20%)
Safer	8 (5.10%)	More holistic	4 (2.55%)
Lack of knowledge about midwives	7 (4.46%)	More likely to be a female	2 (1.27%)
Want hospital delivery	7 (4.46%)	Mother's influence	1 (0.64%)
Mother's influence	4 (2.55%)	Have heard good things about them	1 (0.64%)
Have heard good things about them	2 (1.27%)	Wants to be a midwife herself	1 (0.64%)
Midwives seem "weird"	1 (0.64%)	Less likely unnecessary intervention	1 (0.64%)
Want delivery by doctor they saw throughout pregnancy	1 (0.64%)	Wants homebirth	1 (0.64%)

Figure 5. Distribution of rationale for birth attendant preference

The responses given when asked for an explanation of why the participants would consider or not consider a home birth were less varied. For the most part, 68.18% of respondents, who said they would not ever consider having a home birth, reported they were worried about potential emergencies that could arise during labor and delivery and not getting to a hospital quickly enough. Another major reason given for not considering home birth as an option was that it seemed "gross" or "unsanitary." Other reasons included lack of technology, associating birth with being at a hospital, health conditions that would make a home birth too dangerous, no access to pain medications such as the epidural, and simply not being interested.

The 6.25% of respondents who said that they would consider delivering their baby at home, in the case of a low-risk pregnancy, mostly reported that it would be a more comfortable and familiar environment for them. Other reasons given included less risk of hospital acquired illnesses, having been born via homebirth themselves, and desire for a more natural approach.

The 25.57% of respondents who were unsure primarily gave reasons in between the two extremes as to why they were uncertain. They said that they would definitely feel more comfortable at home, but would be quite worried about what would happen if an emergency were to arise. A few respondents also mentioned that they would definitely want to do more research before making a decision either way, especially considering the financial burden that could be alleviated due to delivering at home rather than at a hospital.

### **Responses to Modified Childbirth Expectations Questionnaire**

The questions in the Childbirth Expectations Questionnaire (CEQ) were created to determine what women expected would happen, or what they would prefer to happen, when the time came to give birth. The questions were created to see whether women anticipated positive or negative experiences in regards to their support person and nursing staff, perception of pain and coping ability, preferences for routine procedures, and amount of medical intervention during their labor and delivery. This tool was chosen to determine if these areas in particular about which women seemed to feel more uncertain. These indices could assist in directing reproductive. In the past, this tool was typically used with women who were already pregnant and had an actual impending labor and delivery to make decisions in regards to. This study used this tool to direct the questions towards women who had not been pregnant, and are often younger.

**Support person and nursing staff**

Overall, the general expectations and associations towards a partner or coach along with nursing staff during their childbirth were positive. In total, 146 (83.42%) respondents either strongly agreed or agreed with the statement, “My partner/coach will be happy and excited” during childbirth. A total of 39 (22.16%) respondents either strongly agreed or agreed with the statement, “My partner/coach will feel quite helpless” during the childbirth process, with a total of 93 (52.84%) respondents either strongly disagreeing or disagreeing with that statement. This can indicate that most of the participants anticipated that childbirth would be an exciting and happy time for them and their family. More than half of the participants felt that those present for the labor and delivery would be included in helping to ease the process wherever possible.

Positive opinions of nursing staff and a sense of trust in them were exhibited by the sample. Many women felt that the nurses would contribute to fostering a positive and comforting birth experience. A total of 159 (90.35%) respondents either strongly agreed or agreed with the statement, “The nurses will be kind to me,” a total of 159 (90.34%) respondents either strongly agreed or agreed with the statement, “I will feel reassured by the nurses’ presence,” and a total of 168 (95.45%) respondents either strongly agreed or agreed with the statement “The nurses will offer me encouragement,” with none of the respondents strongly disagreeing or disagreeing.

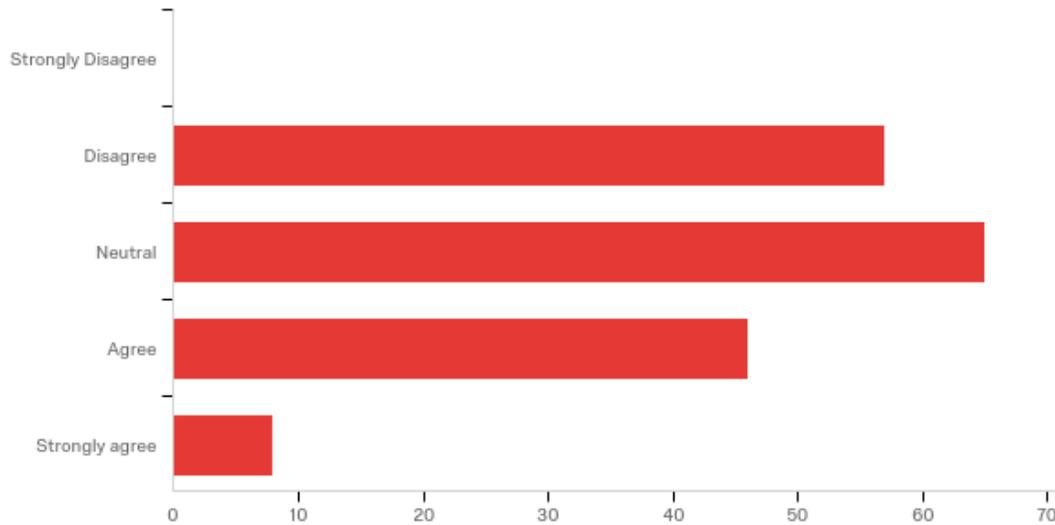
Attentiveness was another quality that many thought that nurses would possess and provide for them and their family during labor and delivery. A total of 129 (73.30%) respondents either strongly disagreed or disagreed with the statement, “The nurses will

spend little time with me” and a total of 158 (89.77%) respondents either strongly agreed or agreed with the statement, “I will receive personal attention from the nurses.”

It is also important to note that most of the women felt that the nurses would empower women to ask for help when needed and to be actively involved in healthcare choices, not letting their desires and needs get pushed to the side. A total of 159 (90.35%) respondents either strongly disagreed or disagreed with the statement, “I will avoid seeking help from the nurses,” a total of 158 (89.78%) of respondents either strongly disagreed or disagreed with the statement, “My plans for birth will be ignored by the nurse,” and a total of 158 (89.77%) respondents either strongly agreed or agreed with the statement, “The nurse will allow me to be an active participant in decision making.”

### **Pain and coping**

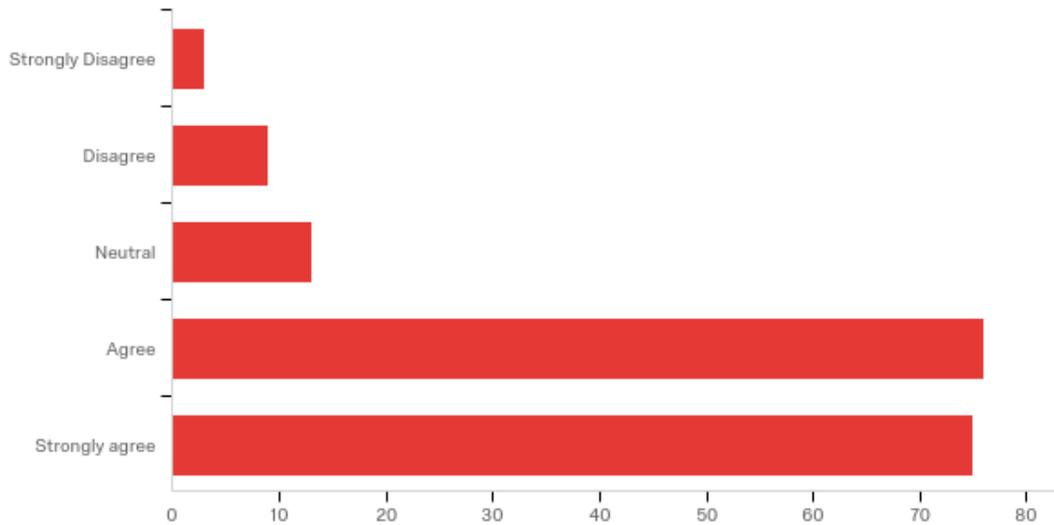
Many questions were asked to determine the participants’ feelings and perceptions on the severity of pain they expected to endure during labor and delivery and their ability or inability to cope with it. This topic is where more fear and uncertainty started to be displayed. Figure 6 (below) displays the different responses to the statement, “I will be immobilized by the pain of labor.” This data shows that many respondents were pretty unsure how they would respond to the pain, and some even strongly agreed that the pain would immobilize them.



**Figure 6. Responses to the statement, “I will be immobilized by the pain of labor.”**

A total of 65 (36.93%) of respondents stated that they were neutral to the statement, “I will be immobilized by the pain of labor.” A total of 8 (4.55%) respondents strongly agreed with this statement; 46 (26.14%) respondents agreed with this statement; 57 (32.39%) respondents disagreed with this statement, and no respondents strongly disagreed. This could be indicative of many women not particularly knowing how severe the pain will be or if they will possess the ability to manage it.

A woman knowing that they will be able to get through the pain does not typically stop them from worrying and feeling anxious about the pain they will feel. Figure 7 (below) displays the participants’ responses to the statement, “I will worry about the severity of labor pain.” Overwhelmingly, most women (87.80%) did state that pain severity was a concern of theirs.



**Figure 7. Responses to the statement, “I will worry about the severity of labor pain.”**

Responses were similar in response to the statement, “The pain of labor will be agonizing.” A total of 110 (62.5%) respondents strongly agreed or agreed and only 20 (11.37%) respondents strongly disagreed or disagreed. A total of 131 (74.43%) respondents either strongly agreed or agreed with the statement, “I will be scared when I think about the pain of labor.” A total of 146 (82.95%) respondents either strongly agreed or agreed with the statement, “I will feel intense pain,” with only 7 (3.98%) respondents either strongly disagreeing or disagreeing.

Along with the often uncertain and negative expectations associated with pain and discomfort concerned, participants overall responded in ways indicative of at least some level of confidence in coping methods and a reasonably high sense of self-efficacy. A total of 103 (58.53%) respondents either strongly agreed or agreed with the statement, “I will be able to cope with labor.” A total of 46 (26.14%) responded that they were neutral to this statement, possibly due to uncertainty, and a total of 27 (15.34%) respondents either strongly disagreed or disagreed with this statement. A total of 113 (64.21%)

respondents either strongly disagreed or disagreed with the statement, “I will be afraid of being a coward.” A total of 100 (56.82%) respondents either strongly disagreed or disagreed with the statement, “I will be embarrassed by my behavior.”

Responses were more divided to the statement, “I will experience discomfort, but not unbearable pain.” A total of 61 (34.66%) respondents either strongly agreed or disagreed, a total of 38 (21.59%) said they were neutral, and a total of 77 (43.75%) respondents either strongly disagreed or disagreed. This could be the result of uncertainty on the quality or type of pain that one might experience during childbirth, or it could be simply acknowledgment of the reality that the sensations during childbirth will be more than just discomfort.

There was some degree of fear and concern among the participants in regards to how they may react to the emotional stress and demands of labor and delivery, despite ultimately being able to work through it. A total of 102 (57.96%) respondents either strongly agreed or agreed with the statement, “I will be afraid of panicking,” and a total of 105 (59.66%) respondents either strongly disagreed or disagreed with the statement, “I will be able to relax during labor.”

### **Routine procedures**

It is important that pregnant women consider whether or not they want routine procedures and monitoring even in the case of a healthy pregnancy. It can make some women feel more comfortable knowing that everything is being done to make sure that no complications arise, or that if complications do occur, they are detected as early as

possible. For others, the seemingly unnecessary procedures can be perceived as invasive and uncomfortable.

Unfortunately, not everyone is always confident that their wishes will be upheld when there are experienced professionals involved, even when things are going well in the labor and delivery. A total of 41 (23.30%) respondents either strongly agreed or agreed with the statement, “I will be required to have routine procedures even if I don’t want them,” with a total of 56 (31.82%) saying that they were neutral or unsure and a total of 79 (44.88%) either strongly disagreed or disagreed. Not all participants reported that they would feel comfortable defending their desires or birth plans when they may be being compromised at the expense of the convenience or opposing judgment calls of certain healthcare providers. A total of 77 (43.75%) respondents either strongly agreed or agreed with the statement, “I will refuse to have any procedures I consider unnecessary.” A total of 56 (33.52%) said that they were neutral or unsure about this statement, and a total of 43 (24.43%) respondents either strongly disagreed or disagreed. This is a significant result for medical and nursing practice, and it identifies an area that needs to be improved to create more positive and safer experiences for patients who are in a potentially vulnerable place.

More specifically, a total of 62 (35.23%) respondents either strongly agreed or agreed with the statement, “Lots of medical equipment and machinery will be used,” with a total of 67 (38.07%) neutral and 47 (26.71%) respondents either strongly disagreeing or disagreeing. One of the most common routine procedures during childbirth is monitoring of the baby’s movement and heart rate. A total of 159 (90.34%) respondents strongly agreed or agreed with the statement, “I will want to have monitoring of the baby.”

### **Medical intervention**

One of the most common requests of women during childbirth is anesthetics or other pain medications, presumably related to the fear of or a desire to eliminate the pain that they will experience. Even in the case of healthy deliveries, pain medication and anesthetics are often still offered and given. A total of 120 (68.18%) respondents either strongly agreed or agreed with the statement, "I will use anesthetics and/or pain killing drugs." A total of 41 (23.30%) remained neutral, and only 15 (8.53%) respondents either strongly disagreed or disagreed with the use of pain reducing or numbing agents during labor and delivery.

It appeared that most of the participants expected some sort of medical intervention during their labor and delivery. A total of 127 (72.16%) respondents either strongly disagreed or disagreed with the statement, "I will have a childbirth free of medical intervention." In fact, it appeared that either a lack of understanding or a fear of complications led to many perceptions of possibly needing more rather than less invasive intervention. A total of 109 (61.93%) respondents were neutral or unsure responding to the statement, "Forceps will be used." In response to a more serious statement, "There is little chance that I will end up having a cesarean section," there was some divisiveness and uncertainty. A total of 76 (43.18%) were neutral, 47 (26.71%) either strongly agreed or agreed, and a total of 53 (30.12%) strongly disagreed or disagreed.

### **Age Analysis**

One goal of this study was to determine if age played a factor in childbirth fear or perceptions. Due to p-values from these results that were  $> 0.05$ , a hypothesis that age

plays a factor in delivery type preference, can not be accepted, nor can a hypothesis that age plays a factor in birth attendant preference. It may be acceptable to hypothesize that younger age may be associated with less willingness to consider a homebirth, as evidenced by a p-value of < 0.01. Figure 8 (below) displays the statistical analyses involved with age of the participants.

**Age Analysis**

		Delivery type preference		Birth attendant preference		Would you ever consider delivering your baby at home?		
		Vaginal delivery	C-section delivery	Doctor	Nurse-Midwife	Yes	Maybe	No
Age	18-19 years old	65 80.25%	16 19.75%	55 67.90%	26 32.10%	7 8.64%	10 12.35%	64 79.01%
	20-21 years old	63 87.50%	9 12.50%	41 56.94%	31 43.06%	3 4.17%	25 34.72%	44 61.11%
	22-24 years old	20 86.96%	3 13.04%	15 65.22%	8 34.78%	1 4.35%	10 43.48%	12 52.17%

		Delivery type preference	Birth attendant preference	Would you ever consider delivering your baby at home?
Age	Chi Square	1.66*	2.02	14.94*
	Degrees of Freedom	2	2	4
	p-value	0.44	0.36	0.00

*\*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.*

**Figure 8. Analysis of levels of significance that age plays in birth plans**

**Area of Study Analysis**

When analyzing the women’s preferences along with their area of postsecondary study, the results produced p-values that were > 0.05, therefore it also could not be assumed, based on this sample, that area of study plays a significant factor in the participants’ delivery type preference, birth attendant preference, or one’s willingness to consider a homebirth.

**Maternal Influence Analysis**

In attempting to determine whether or not the types of deliveries that a participant’s mother had with their children affected the birth plans and perceptions of the participants, the p-values were too high to accept that one’s mother’s birth history had significant impact on willingness to have a homebirth. The p-values indicated that there is a significant relationship between one’s mother’s birth experiences and future delivery type preference and birth attendant preference. Further calculations also found that the types of deliveries had by the women in one’s extended family may have a meaningful impact on participants’ delivery type preferences, but could not be declared significant in forming birth attendant preferences, or opinions on homebirth. Figures 10 and 11 (below) display the statistical analyses involved when focusing on the influence of mothers and extended family on the birth plans and perceptions of the participants.

**Mother's influence Analysis**

		Delivery type preference		Birth attendant preference		Would you ever consider delivering your baby at home?		
		Vaginal delivery	C-section delivery	Doctor	Nurse-Midwife	Yes	Maybe	No
What method(s) of delivery did your biological mother have?	Only vaginal deliveries	103 89.57%	12 10.43%	64 55.65%	51 44.35%	8 6.96%	30 26.09%	77 66.96%
	Only C-section deliveries	13 52.00%	12 48.00%	19 76.00%	6 24.00%	1 4.00%	5 20.00%	19 76.00%
	Combination	29 90.63%	3 9.38%	24 75.00%	8 25.00%	2 6.25%	9 28.13%	21 65.63%
	Unsure	3 75.00%	1 25.00%	4 100.00%	0 0.00%	0 0.00%	1 25.00%	3 75.00%

		Delivery type preference	Birth attendant preference	Would you ever consider delivering your baby at home?
What method(s) of delivery did your biological mother have?	Chi Square	23.09*	8.81*	1.25*
	Degrees of Freedom	3	3	6
	p-value	0.00	0.03	0.97

*\*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.*

**Figure 10. Analysis of levels of significance that maternal influence plays in birth plans**

Extended Family Influence Analysis

		Delivery type preference		Birth attendant preference		Would you ever consider delivering your baby at home?		
		Vaginal delivery	C-section delivery	Doctor	Nurse-Midwife	Yes	Maybe	No
What method(s) of delivery did the women in your extended family have?	Only vaginal deliveries	20 86.96%	3 13.04%	16 69.57%	7 30.43%	0 0.00%	7 30.43%	16 69.57%
	Combination	84 83.17%	17 16.83%	65 64.36%	36 35.64%	9 8.91%	21 20.79%	71 70.30%
	Only C-section deliveries	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%	0 0.00%
	Unsure	44 84.62%	8 15.38%	30 57.69%	22 42.31%	2 3.85%	17 32.69%	33 63.46%

		Delivery type preference	Birth attendant preference	Would you ever consider delivering your baby at home?
What method(s) of delivery did the women in your extended family have?	Chi Square	0.22*	1.13*	5.45*
	Degrees of Freedom	3	3	6
	p-value	0.97	0.77	0.49

\*Note: The Chi-Square approximation may be inaccurate - expected frequency less than 5.

Figure 11. Analysis of levels of significance that extended family influence plays in birth plans

**Strengths and Limitations**

The primary strengths of this study include extensive background of the literature and current research on similar topics, a higher participation rate than was originally predicted, and wide eligibility criteria including most female college students. Another strength of this study would be the survey design.

There were a few limitations without which the research could have been even stronger. One such limitation was that the majority of participants recruited ended up being pre-medical or nursing students, rather than a wider variety of types of students with different areas of expertise, which could potentially have lead to different preferences and wider generalization. Another way to further the research basis for this

topic would be to separate nursing students and pre-medical students to determine whether or not this played a significant factor in birth plans and perceptions. This likely could have been alleviated with more time and more advertising of the survey using other sources, such as university housing or other organizations on campus. A third limitation was that students were primarily from one midwestern university campus. Future studies could be aimed at investigating potential factors such as media influence, the influence that peers may have, or the role of culture.

### **Discussion**

The results from the “Birth Plans and Perceptions of College Students” study seemed to align fairly closely with the results of the study of young childless Canadian women that found that women with more fear of childbirth typically preferred more interventions and a more invasive childbirth experience (Stoll, Hall, Janssen, & Carty, 2014). This study also reflects the results of a study conducted of Australian college students that found that young women already have childbirth opinions heavily influenced by social attitudes that they are exposed to, especially early on in life (D’Cruz & Lee, 2013).

It was found that the majority of participants preferred to deliver vaginally, with a physician assisting them, and not at home. Many reasons were given for these preferences, such as wanting the most natural delivery possible, fearing surgery and its complications, wanting someone with more medical experience that may be better prepared for emergencies, and not wanting to be too far away from hospital and equipment in the case of emergency. Fear and worry about pain levels and the possibility

of panicking and being unable to relax during labor and delivery were also prevalent among the sample.

Women did express an overall trust in nursing support and staff, which is a crucial component of a positive birth experience. It is important for nursing personnel to be aware of this fact, and use this opportunity to educate women, childless and pregnant alike, about what to expect, what their bodies are capable of, benefits of a “normal” birth, and information about the options available to them. A study based in Iran found that there was a high prevalence of severe fear among first time mothers and that it was likely to be due to insufficient and inadequate prenatal education and low awareness of childbirth (Matinnia et al., 2014). So, early targeting and identifying of childbirth related fears should be conducted. It should be the basis to promote positive attitudes regarding labor and delivery to encourage vaginal births and to reduce the risk of cesarean sections, either planned or as a complication. Health care providers should also provide as much accurate information to women as possible and be as open with their patients as possible, encouraging more significant contribution from women (Fenwick, Toohill, Creedy, Smith, & Gamble, 2015).

This study was successful in identifying several key areas that can be a focus for future nursing education, a major one being misconceptions about nurse-midwives. One educational need displayed in many of the women was exactly what the qualifications and training that nurse-midwives receive are, and what exactly their scope of practice is. Most certified nurse midwives have earned at least a master’s degree in advanced practice nursing, and they are considered to be legal primary care providers. Midwives are trained to accept patients that are relatively low-risk, refer higher risk patients to

physicians for delivery, and to ensure proper measures are taken if an emergency occurs unexpectedly. Many respondents also seemed to be under the impression that midwives would only assist during home births. However, 94.2% of midwife-attended births in the year 2014 occurred in a hospital setting, which helps to eliminate some of the worry about potential emergencies occurring (American College of Nurse-Midwives, 2016). It is important that in the future, more education is given to women, especially at an earlier age, about this option that may be a good fit for healthy and low-risk pregnancies. This could prove to be beneficial in improving positive birth experiences subjectively for women, because it has been displayed that there is a large degree of trust in nurses in general.

Just as many women didn't appear to be aware that midwives can assist with deliveries in hospitals rather than just at home, it seemed like many women may not be aware that they have a third option worth considering when it comes to birth location. Some respondents stated that they desired a more natural and comfortable experience if possible, but that they felt safer at a hospital. A good middle ground for many families is delivering at a birth center or clinic. At these centers, birthing mothers will not be induced, fetal monitoring is kept to a minimum, pain medications are used infrequently, no C-sections are performed, and an emergency response plan is in place as a precautionary measure. Many women find that this is a much more relaxing atmosphere than a hospital but that they feel more secure than they would delivering at home (American Pregnancy Association, 2015). It is important that nurses that interact with women early on in their pregnancies or who are trying to conceive make them aware of

all of their options, so as to ensure the most personalized, safe, comfortable, and positive experience possible.

Another important public health issue is sex education for the world's youth, not only about sexually transmitted infection (STI) prevention and reproductive development, but also in regards to the typical female body's remarkable ability to deliver naturally under normal circumstances. Many women fear that they will be too small to deliver naturally, or that just because their mother couldn't deliver naturally that they will have to have a C-section as well. Encouraging as natural a delivery experience as possible at an early age can help empower women to have a higher sense of self-efficacy and confidence when and if they decide to have children. Decreased fear and a higher sense of self-efficacy has been linked to better birth outcomes (Tilden, Caughey, Lee, & Emeis, 2016). Some evidence suggests that delivering in the common lithotomy position that most women do makes it much more difficult to give birth naturally, as it makes the pelvis smaller. Possibly, if more women were encouraged to deliver in a setting more open and conducive to them walking around, squatting, or sitting during labor, then they could be better able to deliver naturally, even if they have a smaller body type to begin with. Reminding women of their body's innate abilities could also reduce the potential cascade of complications that occurs when women receive even a simple dose of Pitocin (oxytocin) to induce or enhance the progress of labor. This can lead to increased risk for an epidural or pain medication. Even if a woman did not originally want these interventions, and this, in turn, could lead to an increased risk for an otherwise unnecessary C-section (*The Business of Being Born*, 2008).

With so many of the participants in this study reporting fear and concern over the severity of pain, it is important that nurses address this when teaching young women about childbirth. While the benefits and risks of commonly used pain medications and anesthetics should always be presented to the patients, other methods may be appropriate for decreasing pain perception and anxiety as well. The nursing community, especially recently, has done a phenomenal job at building a strong evidence-based practice for the use of non-pharmacologic pain management techniques, even in hospital settings, to decrease the use of unnecessary pain medication wherever possible. In fact, nurses have been one of the driving forces in leading to the Joint Commission requiring the use of complementary and alternative medicine (CAM) for pain management of patients in the healthcare setting to help combat the opioid crisis and to increase patient safety (National University of Health Sciences, 2017). Some of the relaxation and pain management methods of which nurses can educate the public, and especially their patients, include other than pharmacological methods, include aromatherapy, deep and measured breathing, yoga, tai chi, qi gong, chiropractic or osteopathic manipulation, meditation, massages, and guided imagery (National Center for Complementary and Integrative Health, 2016). Labor and delivery could be an excellent area for hospitals and nurses to encourage increased implementation of CAM methods for patients to alleviate pain and increase comfort and relaxation.

A final knowledge gap displayed in this sample was the common misconception that a hospital birth would automatically be cleaner and less “gross” than a home birth. On any given day, at least one of every 25 patients in the hospital is suffering from a hospital-acquired infection. Not only does this decrease patient comfort, but also it can

lead to serious complications, including death. In 2011, 75,000 patients who developed hospital-acquired infections in the United States died as a result (Centers for Disease Control and Prevention, 2018). Obviously if a woman feels more comfortable and safe delivering in a hospital rather than home or at a birth center, than she should be provided with that option. However, more women, and healthcare consumers in general, should be educated on and informed of the risks involved with inpatient stays in hospitals. Not delivering in a hospital, or having more invasive procedures at the hospital, such as a C-section, may provide a birthing mother and her newborn with more protection from getting unnecessarily sick.

To determine other educational needs and possibly better ways to address them, the principal investigator would like to direct future research towards distributing the survey to women of the same age range without a postsecondary formal education. This would be done to determine if a formal education plays any part in either increased positive or negative associations with childbirth. Another potential sample would include females much younger than 18-24 years old, likely middle-school or high school females, so as to determine how early the plans and perceptions of childbirth are being formed, and how they differ from the plans and perceptions of young adult women. Figuring out what the fears and concerns of much younger females would also assist with developing more effective education and health promotion material and teaching strategies. Another area for future research would be distributing the survey and asking participants about their race, ethnicity, or socioeconomic status as a part of the demographic data collection, or only distributing surveys to women of a certain group, so as to focus in on what exactly socializes women to believe what they do about labor and delivery in that

particular community. This could improve public health nursing and medical practice regarding maternal and reproductive health and its improvement, which could in turn lead to a healthier society now and for future generations.

### **Conclusion**

What this study adds to the body of knowledge is an analysis of age, area of study, and the strength of maternal influence on college-age women and how these factors may work together, along with other things, to contribute to their beliefs. It also collects more qualitative data supporting the rationale that young women give for the birth plans that they chose. With further investigative research and data from younger women, women of varying educational levels, and more culturally and socioeconomically diverse women, more complete and more patient-centered teaching plans can be created by nurses and other members of the healthcare team. This improved education can also be provided earlier at more crucial times for developing healthy and informed birth perceptions that can ideally lead to improved neonatal and maternal birth outcomes and experiences, both physically and emotionally.

### **Acknowledgments**

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## **Appendix A**

### **Informed Consent Given to Participants**

Consent to Participate in a Research Study

Birth Plans and Perceptions of College Students

#### **Introduction**

You are being asked to be in a research study that is being done by Oakland University researchers. This study is being done as part of the requirements for graduation from the Honors College by Hannah Zoran, under the direction of Margaret Harris, PhD-RN, Associate Professor and Graduate Program Director at the School of Nursing.

This form describes the study and what you will be asked to do. The researcher(s) can answer any questions you may have so you can make an informed decision. You can talk with your friends and family about this research study before making your decision. When your questions have been answered, you can decide if you want to be in this study. This process is called “informed consent.” If you decide to be in the study, you will be asked to click the ‘I agree’ button and should print this form for your records.

#### **What is the purpose of this study?**

The purpose of this research study is to discover what the future birth plans and perceptions surrounding the birth process of college age students are to formulate an aim for future efforts in improving the false and oftentimes negative stigmas surrounding the labor and delivery process. The thesis will aim to promote more education and conversation between pregnant women and their families and the nursing professional about what to expect from childbirth and how to best make for an individualized, safe, and positive experience.

#### **Who can participate in this study?**

You are being asked to participate in the study because you are an 18-24 year old college student who identifies as a female and does not currently have children or is not pregnant. If these descriptions don’t apply to you, you are excluded from this survey.

**\_Where will this study take place?**

This study will take place online using a Qualtrics survey, either via e-mail or Facebook.

**What do I have to do?**

If you are in this research study you will be asked to answer questions as part of an online survey, that is predicted to take between 10-20 minutes.

**How long will I be in the study?**

Participation in this study will not require extra time beyond taking the online survey, which is estimated to take between 10-20 minutes.

**Are there any risks to me?**

Research studies may involve different kinds and levels of risks or discomforts. These could be physical, emotional, social, economic or legal risks. For this study, the potential risks and discomforts that we know about are described below.

-There is a small risk that questions related to the birthing process could cause minor discomfort or negative emotions. If this occurs, participants may exit out of the survey without clicking 'submit' at any time.

-There is a small risk that a participant could be identified through deductive disclosure. No personal identifiers such as name, birthdate, or IP addresses will be collected by this survey, however, so the chances of this are unlikely.

With many research studies, there is a risk of a breach of confidentiality. A breach of confidentiality means that it is possible that someone who is not part of this research may accidentally see your personal information. We will try to make sure that this does not happen by keeping your research records as confidential as possible. However, no researcher can guarantee complete confidentiality.

To minimize the risk of a breach of confidentiality, we will not collect any identifiable information. We will not be collecting IP addresses. All data collected from the surveys will be kept on a password-protected computer. There will be limited access to all research records.

Qualtrics, the tool being used to gather data from the surveys, has its own specific privacy policies. If you have concerns, you should contact Qualtrics directly at

<http://www.qualtrics.com/privacy-statement/>

There may also be risks involved from taking part in this study that we do not know about at this time.

**Are there any benefits to me?**

Although there may be no direct benefits to you, the results of this study may benefit others in the future by the means of improved nursing education for women in regards to what birth plan options are available to them and how to best choose the birth plan that they desire.

**What are the alternatives to participation in this study?**

You may choose not to participate in this study.

**How much will it cost me to participate in the study?**

There is no cost to you for participating in this study.

**Will I receive anything for participating?**

You will not receive anything for participating in this study.

**Who could see my information?**

The researcher/research team will have access to your information. Information about your research participation may be shared with others if required by law (for example, child or elder abuse and/or neglect).

Your research records may be reviewed by the following groups:

- Representatives of the Oakland University Institutional Review Board and/or other regulatory compliance staff, whose job is to protect people who are in research studies
- Regulatory authorities who oversee research (Office for Human Research Protections, or other federal, state, or international regulatory agencies)

When the results of this research are published or discussed in conferences, no information will be included that personally identifies you.

**What are my rights if I participate in this study?**

Your decision to participate in this study is voluntary. You do not have to be in this

study. There is no penalty or loss of benefits if you don't want to participate or if you stop participating. Your decision will not affect your present or future relationship with Oakland University, the researcher, the Honors College, the School of Nursing, or any other organizations that you may be involved with. If you are a student or employee at Oakland University, your decision about participation will not affect your grades or employment status.

If you want to stop participating, close your browser before clicking 'submit.' If you click 'submit,' it may not be possible to stop participating.

The researcher may stop your participation in this study at any time without your consent. Reasoning may include not being qualified to participate in the study, whether that be identifying as a male, not being between the ages of 18 and 24, or already having children or being pregnant.

**Who do I contact if I have questions about this study or my rights as a research participant?**

For questions about the study you may contact:

Hannah Zoran—Principal investigator  
(734) 679-3141  
hlzoran@oakland.edu

Margaret “Meghan” Harris, PhD, RN—Mentor  
(248) 364-8762  
harris23@oakland.edu

**For questions regarding your rights as a participant in human subject research, you may contact the Oakland University Institutional Review Board, 248-370-4898.**

You are not giving up any rights by signing this consent form. You should print a copy of this form.

Please click yes from the choices below to consent to this survey.

- Yes
- No

**Appendix B****Survey Distributed to Participants**

Q1. Are you between the ages of 18 and 24?

- Yes
- No

Q2. If yes, choose the age category that you fall into:

- 18-19 years old
- 20-21 years old
- 22-24 years old

Q3. Do you identify as a female?

- Yes
- No

Q4. Do you have any biological children?

- Yes
- No

Q5. Are you currently pregnant?

- Yes
- No
- Unsure

Q6. Are you a college student?

- Yes
- No

Q7. If you are currently a college student, which of the following categories best fits your area of study/major?

- Pre-medical studies/Nursing
- Engineering/Computer Science
- Education

- English/Communications
- Art/Music/Theater
- Business
- Psychology/Sociology

Q8. How many years of college-level education have you completed?

- Less than 1
- 1-1.5
- 2-2.5
- 3-3.5
- 4-4.5
- 5 or more

Q9. What method(s) of delivery did your biological mother have?

- Only vaginal deliveries
- Only C-section deliveries
- A combination of both vaginal deliveries and C-section deliveries
- Unsure

Q10. What method(s) of delivery did the women in your extended family have?

- Only vaginal deliveries
- Mostly vaginal deliveries with a few C-section deliveries
- About an even amount of both vaginal deliveries and C-section deliveries
- Mostly C-section deliveries with a few vaginal deliveries
- Only C-section deliveries
- Unsure

Q11. Starting with this question, the rest of the questions in this survey will be based on a hypothetical situation. The situation is that you become pregnant, and you decide to continue with the pregnancy through delivery.

In this scenario, would you prefer to deliver vaginally or via Cesarean section (C-section)?

- Vaginal delivery
- C-section delivery

Q12. Please briefly describe why you might prefer to have one method of delivery over the other.

Q13. If you were to deliver vaginally, would you prefer to have a doctor or a nurse-midwife assist you in the delivery?

- Doctor
- Nurse-Midwife

Q14. Please briefly describe why you would prefer to have either a doctor or a nurse-midwife assist you in your delivery.

Q15. Would you ever consider delivering your baby at home?

- Yes
- Maybe
- No

Q16. Please briefly describe why you would or would not consider delivering your baby at home.

Q17. During my labor and delivery, my partner or coach will be happy and excited.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Q18. During my labor and delivery, the nurses will be kind to me.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Q19. During my labor and delivery, I will avoid seeking help from the nurses.

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly Agree

Q20. I will be immobilized by the pain of labor.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q21. I will be able to cope with labor.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q22. During my labor and delivery, I will feel reassured by the nurses' presence.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q23. During my labor and delivery, the nurses will spend little time with me.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q24. My plans for birth will be ignored by the nurse.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q25. During my labor and delivery, my partner or coach will feel quite helpless.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

Q26. During my labor and delivery, I will be required to have routine procedures even if I don't want them.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q27. I will worry about the severity of labor pain.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q28. There is little chance that I will end up having a cesarean section.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q29. During my labor and delivery, lots of medical equipment and machinery will be used.

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly agree

Q30. During my labor and delivery, I will be afraid of panicking.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q31. During my labor and delivery, I will experience discomfort, but not unbearable pain.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q32. During my labor and delivery, I will feel intense pain.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q33. I will have a childbirth free of medical intervention.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q34. During my labor and delivery, I will want to have monitoring of the baby.

- Strongly Disagree
- Disagree
- Neutral
- Agree

- Strongly agree

Q35. During my labor and delivery, I will be afraid of being a coward.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q36. I will be able to relax during labor.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q37. During my labor and delivery, the nurses will offer me encouragement.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q38. During my delivery, forceps will be used.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q39. The pain of labor will be agonizing.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q40. During my labor and delivery, I will receive personal attention from the nurses.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q41. During my labor and delivery, the nurse will allow me to be an active participant in decision making.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q42. I will be scared when I think about the pain of labor.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q43. During my labor and delivery, I will refuse to have any procedures I consider unnecessary.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q44. During my labor and delivery, my opinion or that of my partner/coach will be sought for all major medical decisions.

- Strongly Disagree
- Disagree
- Neutral

- Agree
- Strongly agree

Q45. During my labor and delivery, I will use anesthetics and/or pain killing drugs.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q46. During my labor and delivery, my doctor will make most of the decisions.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

Q47. During my labor and delivery, I will be embarrassed by my behavior.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly agree

## Appendix C

## Permission to Use CEQ



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Faculty of Health Sciences

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December 23, 2017

Dear researcher:

Thank you for your interest in the Childbirth Expectations Questionnaire. I am enclosing a copy of the questionnaire as well as the scoring instructions for your use in a research project, as requested. Please note that the following items are reverse scored: 3, 4, 7, 8, 9, 10, 12, 14, 15, 18, 20, 21, 24, 25, 29, 32, 33, 34, 35.

I am sending this questionnaire to you on behalf of Dr. Janet Beaton and Dr. Annette Gupton who have both retired from the College of Nursing.

Permission for use of the Childbirth Expectations Questionnaire is given with the understanding that the source of the questionnaire (Gupton, Beaton, Sloan, & Bramadat, 1991) will be appropriately referenced in all documents and publications pertaining to the study:

Gupton, A., Beaton, J., Sloan, J. & Bramadat, J. (1991). The Development of a Scale to Measure Childbirth Expectations. *The Canadian Journal of Nursing Research*, 23(2), 35-47.

Other references related to the Questionnaire are as follows:

Beaton, J. & Gupton, A. (1990). Childbirth expectations: a qualitative analysis. *Midwifery*, 6, 133-139.

Heaman, H., Beaton, J., Gupton, A. & Sloan, J. (1992). A Comparison of Childbirth Expectations in High-Risk and Low-Risk Pregnant Women. *Clinical Nursing Research*, 1(3), 252-265.

Please feel free to contact me if you have any questions. Good luck with your project.

Sincerely,

Maureen Heaman, RN, PhD  
Professor  
College of Nursing, Rady Faculty of Health Sciences