How do you feel about birth? A Study On Basic Birth Beliefs

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2021

Abstract

The following study investigates the effect of reading one of two birth stories on opinions relating to birth philosophies. This study incorporates an experimental design to evaluate whether reading a birth story that takes place in a home correlates to participants leaning towards a Natural birth philosophy more than the Medical model of birth. There were 337 participants in the study (*N*=337) randomly assigned to one of two groups. The Version 1 group read a birth story that took place in a home and the Version 2 group read a birth story that took place in a hospital. The hypothesis was that reading the Home birth story would show a positive relationship with a Natural birth philosophy. The survey following the birth stories included items from the Birth Beliefs Scale from Yael Benyaminito and Heidi Preis created in 2016 at the Bob Shapell School of Social Work, Tel Aviv University. In the experimental study, the independent variable is having read the Home birth story. The dependent variable is the extent to which participants' numerical scores from their survey responses follow the Natural birth model on the Birth Beliefs Scale. The results show that participants who read the Home birth story reported scores aligned slightly closer with the Medical model, showing the results were not in line with the hypothesis.

Introduction

Only in the beginning of the 20th century did birth become medicalized, meaning that most births did not happen in a hospital until the early 1900s (Shaw, 2011). Today, birthing people who choose an alternative setting for childbirth make up a small minority. Around eight percent of pregnant people give birth with a midwife, and only around one percent give birth at home in the United States (CDC, 2014). Prior to the 20th century, birth was regarded by many cultures as a spiritual event or rite of passage that often included herbs and other symbolic objects to sanctify the birth (Beinempaka, 2014). Birth and pregnancy are considered sacred by many cultures. The *Encyclopedia of Motherhood* explains that the impact of medicalization on birth beliefs has contributed to the majority of people in North America believing the ideal birth experience must be highly assisted by technological advances (Shroff, 2010).

Home birth, while making up less than one percent of births in the United States, is a valid and safe option in many circumstances, with many reasons for this choice. Reasons people may choose a home birth include past traumatic hospital experiences, a desire for an unmedicated birth, and wanting to be in the comfort of one's own home (Clancy & Gjaerum, 2019). Medicalization of birth has contributed to negative birth experiences in some cases. An excerpt from *Trials of Labor: The Re-Emergence Of Midwifery*, explains that hospital births have been criticized for impersonal care with too much medical intervention which can cause problems like infection (Burtch, 1994). While medicalization of birth has contributed to some negative outcomes, technological advancements have improved birth outcomes and maternal and infant mortality rates throughout the 20th century.

The present study does not intend to negatively impact perspectives on hospital birth, but rather to draw attention to the options that are more centered on the Natural beliefs model because these options are safe and provide positive birth experiences in many circumstances. Birth related fears and childbirth self-efficacy are factors that have been studied as they impact choices birthing people make during labor. These variables are only considerable in studies of pregnant people. Basic beliefs about birth are societal and cultural.

The big question of this study is, "Does reading a birth story that takes place in a home have an impact on participants' responses to the birth beliefs scale?" The implication of a positive correlation in results between having read the home birth story and Natural birth beliefs is that representation of normal physiological birth with minimal medical intervention urges people to view childbirth as a Natural process. Reading the hospital birth story, the participants are likely to notice details about medical technology and medications, as well as the attitudes the birthing person has about the medical model of birth. Reading both birth stories, the participant is likely to notice that the birthing person has fears and discomfort. When writing these vignettes for the hospital birth story and the home birth story I made sure to include positive and negative emotions in both stories. Neither experience of home birth or hospital birth is without discomfort and fear.

Participants reading these stories may feel relieved at the end that the birthing person was in the good care of the doctor or midwife, or they may feel that the birthing person would have been better off with the alternative. The participants' basic beliefs about birth will show whether reading the hospital birth story made them feel relieved that they were in the presence of medical technology and experts in medicalized birth, or their birth beliefs scale results will show that they

thought the birthing person should have been given more space for a normal physiological birth and not been in the presence of medical technology. Similarly, the results from the birth beliefs scale for participants who read the home birth story may show that they were relieved the birthing person was allowed to have a normal physiological birth without the presence of medical interventions, or their results from the birth beliefs scale will show that they thought the birthing person should have had more access to medical technology and been assisted by experts in medicalized birth. There is no mention of home birth or hospital birth in the birth beliefs scale survey items. The participants are only asked about their beliefs of birth as a medical or natural process through statements suggesting alignment with these beliefs.

Medicalization has improved outcomes with birth related complications such as placenta previa and prolapsed umbilical cord. Stigma about home birth in the US has roots in racism, xenophobia, misogyny, and classism. In the 1960s, hospital births were promoted as the sterile, high technology alternative to what was once considered a normal physiological experience. As birth was then considered the expertise of male doctors instead of women who had personally experienced birth. More prestige was associated with male doctors than female ones. Midwifery, a traditionally female trade, was perceived as an inferior profession. The midwifery model of care is centered on promoting wellness, rather than managing illness and complications. For birthing people deemed low risk by their medical caregivers, home birth with a Certified Nurse-Midwife is considered a safe and valid option in every state of the US.

Of the many advantages of home birth, the birthing person's comfort and agency in their own home, compared to a hospital, is paramount. Compared to a hospital birth, a home birth is a controlled environment in which the birthing person has invited a select group of support people

and medical caregivers to her home. In a hospital, labor and delivery nurses rarely ever meet the patient prior to her delivery. In her own home, the birthing person may feel more comfortable asking for what she needs compared to a hospital, an unfamiliar environment in which people are treated for illnesses. Her prior experiences in a hospital likely have to do with illnesses and injuries. If she went into labor at night, she most likely had to enter the hospital through the Emergency Room. When a person comes to the hospital for an illness or injury, they expect a doctor to provide their expertise and fix the issue. This experience of being in a hospital might bring up negative emotions, as well as a hope that the doctor will have the expertise to solve the pain of childbirth. In her own home, she is in her space and may feel more comfortable taking on the role as the director of her birth experience.

The creators of the Birth Beliefs Scale survey explain that identification with the Medical belief model or the Natural belief model are key in the decisions birthing people will make about where and how to give birth (Benyamini & Preis, 2017). They studied the correlation between results from the birth beliefs scale and the plans that pregnant people had for their birth. Because the vast majority of people in the United States give birth in a hospital, there is very little representation of alternative birth experiences in most media and social settings. The Birth Beliefs Scale focuses on the basic belief about birth as a Natural process or a Medical process, asking participants to respond to birth beliefs statements on a Likert scale While other similar studies focus on birth related fears, this study focuses on beliefs about birth. I chose this particular scale because college students who are not currently planning on having children may not have a concept of their own birth related fears and childbirth self-efficacy, but they are likely to have implicit attitudes towards birth even if they are not presently aware of them. The basic belief of birth as a Natural or Medical process influences the decisions people will make when

and if they give birth. The following study approaches the topic of birth beliefs before people become parents.

Evolutionary Psychology is a field of psychological study interested in the effects of evolution on human behavior. Evolutionary mismatch is the result of an inconsistency in the conditions under which humans existed and evolved to expect compared to present conditions (Geher, 2020). Evolutionary mismatch can cause psychological distress. In the context of birth, evolutionary conditions may be drastically different from present birth experiences depending on the extent to which a birth is medicalized. Many factors that exist in hospital birth are examples of evolutionary mismatched conditions. One characteristic of evolutionary conditions is the very small population size of about 150 people, known as Dunbar's number. Dunbar and his colleagues proposed that a population that exceeds 150 individuals will be likely to split (Geher, 2014). In today's world, most of us live in cities or towns that grossly exceed 150 people. Humans have not evolved to feel comfortable with and connected to such a large amount of people or people who are unfamiliar. In evolutionary conditions people knew intimately everyone they interacted with for their personal needs such as medical and spiritual advisors. Usually when someone gives birth in a hospital they have not met the nurses who will be assisting in their delivery, which is an evolutionary mismatched experience compared to a time when poeple knew everyone they interacted with, especially during transformative life experiences. Other evolutionarily mismatched conditions present in a hospital birth include artificial lighting, sounds of machines, and medical interventions such as synthetic hormones to induce contractions or anaesthetics to reduce pain. These medical technologies improve birth outcomes in many circumstances, but to acknowledge their divergence from evolutionary

conditions is crucial when discussing birth experiences in the context of evolutionary psychology.

Method

Participants

There were 337 participants who responded to the surveys (*N*=337). 164 (48.66%) participants (*n*=164) responded to the Home birth story (version 1), and 173 (51.33%) responding to the Hospital birth story (version 2) (*n*=173).

Materials

The 2016 study by Binyaminito and Preis asked socio-demographic questions about obstetric history and past pregnancy experiences. My study does not ask these questions because it assumes participants have no personal experience being pregnant. This is one variable that may be a threat to internal validity. Participants may have varying personal experiences that could influence their birth beliefs besides a basic conception of birth based on mainstream representations of birth in the United States. Unlike the 2016 study from Binyaminito and Preis, this study is including participants who are not women, because it is not only women who perpetuate ideas of birth in the media and society. The present study is interested in associations with birth among people who have likely not done much research into birth options to study whether reading one home birth story has an impact on basic birth beliefs. Participants were recruited through email with a Qualtrics link and received one SONA credit if they were Psychology majors at SUNY New Paltz. This makes up one twelfth of the research study

participation requirement for graduation. The entire procedure took less than fifteen minutes for participants to complete.

Procedure

The participants were randomly assigned to either Version 1 or Version 2 of the survey and read different birth stories depending on which survey they responded to. Participants were told that they would not be reading for the purpose of recalling details later on.

The Home birth story from Version 1 of the survey reads as follows:

1. **Home birth story:**

I gave birth in my home on November 2 of 2015. It was a cold day. I went into labor in the movie theater and called my midwife who told me to time my contractions and call again when my contractions were five minutes apart and lasting for one minute. My partner stayed with me at home and helped me get comfortable. I had the most supportive midwife and I knew I would be supported to give birth with no pain medication. After a few hours I decided I wanted to walk around my house. The pain was so bad that I began to doubt myself and wanted to go to the hospital. I was told continuously that I was capable of bringing this baby into the world. I tried changing positions and breathing but was feeling sleep deprived. The midwife stayed with me the whole time and assured me I was capable of bringing this baby into the world. I was squatting when I started to push. I began to doubt myself but the midwife told me to keep going. I knew I didn't want to have surgery or anything like that, part of the reason I had chosen to give birth at home. It was still scary to know that I wouldn't be able to have that option if I wanted surgery, but I didn't need it. After another hour, I had a healthy baby and an overwhelming

emotional release. I am so grateful for how the experience went and I couldn't imagine a better support system.

The hospital birth story from Version 2 of the randomized survey reads as follows:

2. Hospital birth story:

I gave birth in the hospital on November 2 of 2015. It was a cold day. I went into labor in the movie theater and called my doctor who told me to time my contractions and come to the hospital when my contractions were five minutes apart and lasting for one minute. My partner drove cautiously to the hospital where we got checked into the labor and delivery wing. I had the most supportive nurses and I knew I could get pain medication when I wanted it. After a few hours I decided I wanted an epidural, an anesthetic injected into the spinal cord. The pain was so bad that I didn't mind the injection. Once I had the injection I wasn't able to get up and change positions. I was connected to monitors and couldn't eat or drink anything. The medication set in and I was able to sleep for a few hours until it was time to bear down. The doctor came in and assured me I was capable of bringing this baby into the world. I was on my back and had the urge to push. I began to doubt myself but the nurses told me to keep going. I heard the doctors talking about potentially having to do some interventions that I really hoped would not be necessary. I knew I didn't want to have surgery or anything like that. I got anxious that they would tell me I needed to have an intervention I wasn't comfortable with. After another hour, I had a healthy baby and an overwhelming emotional release. I am so grateful for how the experience went and I couldn't imagine a better support system.

This experimental study will analyze whether having read the Home birth story prior to responding to the statements from the Birth Beliefs Scale correlates to agreement with Natural

birth beliefs and disagreement with Medical model beliefs when compared to the participants who read the hospital birth story prior to responding to the statements. The statements from the Birth Beliefs Scale are below, with Natural model beliefs statements in bold font:

BIRTH BELIEFS QUESTIONNAIRE:

Please respond to the following items with how much you agree or disagree with the statement.

Scale: Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Childbirth requires vigilant medical supervision

There are many things that can go wrong during childbirth

Often, a woman's body structure does not allow her to give birth naturally

Birth is a medical event

Childbirth is a dangerous process

Nowadays, there is no reason why women should suffer pain in childbirth

Birth is an empowering experience

Pain in childbirth is a significant part of the birth experience

Birth is a natural event

A woman's body knows how to give birth

Labor should be allowed to proceed at its own pace

(Benyaminito & Preis, 2016)

After reading one of the birth stories, the participants responded on a scale of 1-5 how much they agree with the statements above. Participants were randomized and did not know there was another version of the birth story besides the one they read. They were told they would not need to read for the purpose of recalling information. The purpose of reading the birth story was to urge participants to think about birth in the context of a home birth or birth in the context of a hospital birth to see if this would impact their responses about their beliefs about birth as a medical process or a natural process.

Results

Agreement on statements related to the Natural model of birth were higher on average for participants who read the Hospital birth story. The average response on a 1-5 scale (strongly disagree to strongly agree) to the statement "Childbirth requires vigilant medical supervision" following reading the Hospital birth story was $M = 33.00$, $SD = 4.69$ (Appendix, pg 19). The average response to the same statement in the Version 1 survey (participants who had read the Home birth story) was $M = 31.92$, $SD = 4.86$. While I note that the *t*-test result does show statistical significance, the differences between the two groups in mean responses to those items are in not line with my hypothesis. For the *t*-test analysis, the two variables (Natural model and Medical model) were narrowed down to one variable: the extent to which participants agreed with the Natural model. This was done by reverse scoring the results from the questions related to the Medical model, meaning that a score of 1 means strong agreement and 5 means strong disagreement on those items, but on the items related to the Natural model 5 means strong

agreement and 1 means strong disagreement. The difference between groups was statistically significant, $t(337) = -2.062$, $p = 0.040$ (Appendix, pg 19). A p-value of 0.040 is less than 0.05, meaning that the difference in scores is enough to be statistically significant.

Discussion

The use of imagery in representation of home birth was an important variable in this study to evaluate whether being encouraged to think about home birth influenced the participants to consider a Natural model rather than just the Medical model of birth. In a prior study, I implemented the same research methods with a smaller selection of survey items from the Birth Beliefs Scale using three sentence long birth stories, and that study only had 41 participants. Due to constraints including the requirement of a three sentence maximum birth story, only six survey items, and a small sample size, I wanted to recreate the same study with the complete Birth Beliefs Scale and more detailed birth stories for participants to read prior to responding to the Birth Beliefs Scale. I hypothesized that greater ecological validity due to the extent of detail possible in longer birth stories would provide more concrete results and statistical significance of the results. The larger sample size helped this study to gain more information about the beliefs of a larger population and statistically significant results.

This study used longer stories to provide more detail about the process of the birth and the attitudes of the birthing person. A better way to provide imagery would be with videos from real births. Watching a video was not possible in this study so the participants read a very short story, just one paragraph long, which cannot provide as much possible influence as a video. Perhaps watching a video from a home birth could have provided more ecological validity in the way that it has the ability to portray a home birth and human emotions and experiences more

vividly. A more vivid representation of birth stories may be necessary to convince participants to think about an alternative choice in birth in a positive way. I speculate that a home birth video from a real birth would have more of an impact on viewer's perceptions of birth as a natural process due to the emotionally evocative nature of witnessing a home birth. I assumed that the majority of participants would be likely to envision a hospital birth if asked questions about their beliefs about birth in general without being reminded of the option for home birth. This is in part due to the history of medicalization and the high rates of medical interventions that occur as a normalcy in the majority of births in the United States. Because most participants are likely to agree that medicalization is a normal and necessary part of birth for safety purposes, many participants who read the home birth story may not have seen the value in a home birth and may associate it with unnecessary risk, naivete, or uncleanliness.

My discussion about the results of the study not following my hypothesis is that people wanted to address their concerns following reading one of the birth stories. If someone had read the home birth story they may have had some concerns about the lack of access to medicalisation for the birthing person if she required interventions, or wanted interventions to make her birth more comfortable. They may have felt her pain was an unnecessary part of the birth experience, and in their response to the Birth Beliefs Scale survey items they responded according to such concerns. This is an explanation that makes sense because often people view what they are reading with a critical lens rather than an openness to feel agreement with what they read.

Similar to my explanation for the participants who read the home birth story, participants who read the hospital birth story may have had concerns related to the lack of a natural model approach to birth. If they felt a concern for the birthing person about the authoritative role of the

doctors present in the story, they may have been likely to respond according to the natural model on the Birth Beliefs Scale survey items to convey their concerns about the role of medicalization in the hospital birth story.

Over-medicalization refers to the use of medical interventions when not medically necessary. This could be due to desires of the patient to reduce their discomfort or shorten their labor, or due to suggestions or coercion by the medical providers to shorten the labor or take control over the process. The possibility of cesarean can cause a sense of fear, or be desirable for someone giving birth. Cesarean birth can also require a grieving process if the birthing person was hoping for a vaginal birth and they may feel disappointed and shameful about having a cesarean birth. Cesarean births are common and the stigma around it is decreasing, with more people recognizing that cesarean birth is a valid birth experience and it is not an easy option both physically or mentally. The surgery itself takes just one hour compared to a prolonged labor of two to three days. The birth in the hospital birth story that participants read in this study did not involve cesarean delivery, but it was mentioned that the birthing person did not want that to happen and it was a worry that it might be necessary. Approximately one third of births in the United States are birthed via cesarean delivery (UNC Health, 2020), which creates longer recovery times compared to vaginal birth, and many of these are not medically necessary. This is a very high rate of cesarean birth compared to Nordic countries with around 15% cesarean rates (OECD, 2019). Knowing the high rate of cesarean births in the United States, some birthing people are distrustful of medical providers who suggest a cesarean birth, which may be a contributing factor into choosing an alternative setting for birth such as one's home or an out-of-hospital birthing center. Distrust of medical providers, especially in cases where a birthing person will not be able to meet the medical providers who will be at their birth, is a reason some

people choose a midwife as their caregiver or choose a doula to support them in addition to a medical caregiver within the hospital or another location. When a person chooses to birth with a midwife or a doula or both, they know who will be supporting them in their birth and feel assured they are supported in having the birth experience they envision.

When considering the possibility of the discussion about the concerns related to over-medicalization in the hospital birth story and the concerns of the lack of medicalization in the home birth story, it is important to note that all kinds of concerns are valid when people are focused on the physical and emotional wellbeing of the birthing person. There is possibility for malpractice with over-medicalization, especially in the case of a doctor taking advantage of interventions for interest of their own schedule rather than when medically necessary or desired by the birthing person. As Penny Simkin says, a positive birth experience is not about whether or not medication or interventions were used, but if the birthing person held a sense of bodily autonomy and was included in every decision (Simkin, 1991).

A lack of access to options decreases bodily autonomy. There are many ways in which there are increased options for the birthing person in a home birth that are not possible in a hospital birth, and many ways in which there are increased options in a hospital birth that are not possible in a home birth. In the case of a home birth there are plans made for circumstances in which a cesarean delivery might be necessary, but in a hospital the options for such medical interventions are much more accessible and provided with more encouragement from healthcare providers and support professionals. This gives the birthing person the bodily autonomy to request medical interventions. In the case of a home birth, the birthing person has the ability to labor without the presence of medical interventions, and more freedom of movement.

Although the differences in mean scores between the two groups did not follow my hypothesis, with participants who read the hospital birth story aligning closer with the natural birth model compared to the group that read the home birth story, the results are statistically significant from this study. One advantage to this study is that the birth stories were highly controlled because the written word provides less room for variation compared to other media such as a video. In a future study, more in-depth stories could be used to provide more imagery for the participants to empathize with the birthing person. A more detailed portrayal of a birth experience such as watching a video would provide more ecological validity due to the level of similarity to witnessing a birth in real life. Some variables that are difficult to control in video form are the consistency in the people who would be present in the video. There would be different families, doctors, nurses, midwives, and other people for each video, so there would be a lot of differences between the birth videos. A way to control for some of these variables would be to create birth videos with actors so that the same actors would play the roles of the caregivers and families in both stories. The intricacies of human interaction are difficult to control if we were to create videos or use videos from real births.

The role of lighting and sound also plays an important role in the evocative nature of videography, which is a barrier to internal validity in a psychological study, but important in the differences between a hospital birth and a home birth especially in the context of evolutionary psychology and evolutionary mismatch. The wide variety of variables that might be noticeable in a video of a hospital birth or a home birth are important because there are so many contributing factors that could make a person's birth experience feel comfortable. The artificial lighting, sounds of machines, and bustling sounds of medical professionals in the hospital could all contribute to the internalization of the medical model of birth, the belief that birth requires

medical assistance and supervision. The medical model may also impact a birthing person's sense of bodily autonomy when they are within the medical setting of the hospital, a doctor's place of work, compared to a birthing person's home where they are most comfortable taking up space.

Even with the limits of this study, we have gained insight about the basic birth beliefs of a population of 337 people who participated in a study through the Psychology Department at SUNY New Paltz. Birth is a transformative experience physiologically and psychologically. The experience of birth and pregnancy is the most unique and life changing human experience. All people deserve reproductive rights and access to quality healthcare, bodily autonomy, respect, and informed choice. Informed choice in healthcare means that patients are educated about all of their options before making a decision about what happens to their bodies, and always having the ability to ask questions about alternatives, consequences, and what would happen if they just say no. Reducing stigma of all options is necessary to achieve bodily autonomy where people will not feel shame about their reproductive choices. Stigma of reproductive health choices is prominent in both natural and medical settings. Home birth and unmedicated birth is stigmatised as well as medicalised birth. Having full bodily autonomy means having the freedom to make choices about one's medical care without the influence of public stigma or internalized stigma.

I would like to thank the Honors Program at SUNY New Paltz, the Psychology Department, my advisors Dr. Glenn Geher, Dr. Patricia Sullivan, and Dr. Greta Winograd, and all of the participants who responded to the Qualtrics survey. I would like to thank my family for supporting me in my passions and my collegiate education. I would like to thank Yiska Obadia for inspiring and supporting me in starting my doula career.

Appendix

Group Statistics

	condition	N	Mean	Std. Deviation	Std. Error Mean
birth_attitude	1.00	164	31.9268	4.86071	.37956
	2.00	173	33.0000	4.69537	.35698

Independent Samples Test

		Levene's Test for Equality of Variances				
		F	Sig.	t	df	Sig. (2-tailed)
birth_attitude	Equal variances assumed	.405	.525	-2.062	335	.040
	Equal variances not assumed			-2.060	332.418	.040

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