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The Birthing Effect

Shantell Guyton
Western Oregon University

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By
Shantell Guyton

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Dr. Siobhan Maty,
Thesis Advisor

Dr. Gavin Keulks,
Honors Program Director

Western Oregon University
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Abstract

In the United States obstetric care is the most common used provider method for prenatal and labor services currently. Often women are not aware of the various options they may have, or that they have an option other than an obstetrician at all. This thesis explores the various options that women have for their prenatal and childbirth care. As the use of midwives becomes more common, the benefits of their care are being explored. This thesis takes an in-depth look at the benefits and risks of four types of pregnancy-related care providers (obstetricians, midwives, doulas and birthing partners) and discusses why women should consider using a midwife for their pregnancy-related care.

Pregnancy-Related Care Options

When it comes to childbirth, there are many options that women can choose from for their pregnancy-related health care. Every woman has a right to know all of her options and which option would be best for her and her child. The options include: Obstetrician/ gynecologist, midwife, doula, and birthing partner. Each of these options is defined below, and the risks and benefits of each approach also are described.

Obstetrician

An obstetrician/gynecologist (OB/GYN) is a medical doctor that has specialized in women and women's reproductive health. Typically, obstetricians work specifically with pregnancy and birth, while gynecologists work with the overall female reproductive systems (Stickler, 2015). The training of an OB/GYN follows the same path as that of a primary care physician. The two differ when it comes to the specialty that is chosen during residency. Medical students wishing to become OB/GYNs go through an approved OB/GYN-specific residency program for a minimum of four years. During their residency they do rotations between obstetrics, gynecology, gynecologic oncology, reproductive endocrinology, and ultrasonography (College of Medicine at Chicago).

Obstetricians are known for performing standard hospital births across the globe. The benefits of giving birth in a hospital setting are not often reported, although there are many benefits for choosing this option. Planned in-hospital births are associated with fewer odds of perinatal death than planned out-of-hospital births (Snowden, 2016). Planned in-hospital births also have been associated with reduced odds of neonatal death in comparison to planned out-of-hospital births. Compared to planned out-of-hospital births, planned in-hospital births have shown a decreased odds of maternal blood transfusion. When a mother has planned to deliver her child in a hospital setting there have been reports of lower rates of depressed Apgar[1] scores for five minutes postpartum, as well as, lower rates of neonatal seizures. Having a planned in-hospital birth offers mothers many benefits for her and her child (Snowden, 2016).

Much evidence also exists, however, about adverse outcomes associated with the use of obstetric care. Obstetrician-led births among adolescent mothers has been associated with an 11.52% chance of pre-eclampsia, a 24.85% chance of cesarean section and a 3.6% chance of vaginal instrumental delivery (Das, 2016). Compared to midwifery care, obstetric care is shown to have higher rates of cesarean sections (15.1% compared to 4%), higher rates of neonatal intensive care

[1] An Apgar is a test performed on a baby after 1 minute postpartum to test how well they tolerated the birthing process, and 5 minutes postpartum to test how well they are doing outside the womb. The test examines the baby's breathing, heart rate, muscle tone, reflexes, and skin color. The test is scored on a one to ten scale, scores of seven, eight or nine is normal. (Neil, 2016)

unit admission (19.35% compared to 7.9%), and longer maternal hospital stays (59.47 hours compared to 29.04 hours) (Harvey, 2002). Obstetricians also have been said to ignore, frown upon and discourage the use of a birth plan, which allows the mother to explicitly express her wishes for how she would like her child birthing process to occur (Chee, 2012).

Midwifery

A midwife is a care provider that is specialized in women and women's reproductive health in a nonsurgical environment. Midwives are known for traditional and home birth options. Their complementary style of care offers a host of positive benefits for both the mother and the child in a lower risk pregnancy environment. Midwives are a great option for those women who have low risk pregnancies and for those that enjoy a complementary style of care (Stickler, 2015).

In order to become a midwife there are many paths that can be taken. The most widely known path is the nurse midwife route. In order to complete this route, one must go through a typical nursing program and then get the certified midwife education required by the state in which the nurse wishes to practice midwifery. Some programs offer nursing and midwifery education in one combined bachelor's program, while others require a bachelor in nursing degree followed by extended midwifery training.

The least common accepted route is to become a certified midwife. To become a certified midwife, typically one obtains a bachelor's degree that is not in nursing and goes through graduate education in midwifery in order to take the midwifery certification exam. Currently, the only states that allow certified midwives to practice are Delaware, Montana, New Jersey, New York and Rhode Island (American College of Nurse-Midwives).

Midwife-led births offer women the ability to have a good, full conversation about their pregnancy-related care and their care plan (Iida, 2014). During these conversations women are more likely to be provided with sufficient information on the physical and emotional changes that come with pregnancy, as well as what are considered warning signs for complications, than they would if they received care from an obstetrician (O-Brien, 2011). Midwives are also more likely to educate mothers on what to expect during labor and birth, how husbands and partners can be of support, medication-free pain management and options, the side effects that can come with many of the medications that can be used during labor and birth, as well as different tests that can be done during pregnancy (O-Brien, 2011). Women who utilize a midwife during the pregnancy are more likely to have the same provider for both prenatal care and delivery, than women who utilized a different type of provider (O-Brien, 2011). During the prenatal period, mothers who utilize a midwife are more likely to attend prenatal classes, have at least five more prenatal

visits than other patients using other providers, and to have overall higher satisfaction of care rates (O-Brien, 2011; Iida, 2014). Midwife-led births are more likely to be vaginal (79% compared to 71.6% of obstetrician-led births), less likely to have induced labor (34% compared to 47.5% of obstetrician-led births and 42.8% of family practitioner-led births), and are seven-times more likely to have medication-free pain management than obstetrician-led births (O-Brien, 2011). After the delivery of their child, mothers who used a midwife, on average, had a shorter hospital stay (an average of 1.2 days compared to 2.2 days with an obstetrician-led birth and two days with a family practitioner-led birth), were more likely to initiate breastfeeding and breastfeed either in combination with other nutrients or exclusively at three and six months, and were less likely to have Apgar scores under seven points at 1 minute postpartum (on average there is one infant with this score compared to an obstetrician's three) (O-Brien, 2011; Iida, 2014). Overall, mothers who used a midwife tended to have higher levels of care satisfactions with antenatal care, labor and birth care, and postpartum care compared to those mothers who did not use a midwife (Iida, 2014).

Midwives are known to have many benefits that support the mother and her child; however, there also are adverse outcomes that can be associated with having a midwife attend the birthing process. With any birth there is the potential for risk. In a study discussing planned-out-of-hospital births, it was found that the rates of

neonatal seizures were higher than those who had planned-in-hospital births. Planned-out-of-hospital births were also associated with higher odds of perinatal death and neonatal death than births that were planned-in-hospital. Finally, planned-out-of-hospital births were associated with a slight increase in the odds of maternal blood transfusion when compared to planned-in-hospital births. (Snowden, 2016).

Doula

Doulas are trained companions for the labor process. They are not qualified to physically help deliver a child, however their primary role is to give the mother emotional and physical support while she is in labor. Doulas are trained to give support throughout the pregnancy, to be involved during labor and delivery, and to offer support and advice after the birth of the child (Stickler, 2015). In order to become a certified doula, training and certification are required. Typically, childbirth education, breastfeeding education, birth doula classes, and attendance in a select number of births are required. Official certification is not always required for a doula to practice, however certification tends to provide a wider range of career possibilities (Natural Healers).

Doulas support the mother in her physical and emotional needs, including providing a hand to squeeze and offering positive encouragements. Doula's allow

the mother to feel prepared when it comes time to go into labor by helping to plan for any procedure that may be experienced at the designated hospital and by informing the mother of the hospital protocols that may interfere with any birthing plan that is in place (Chee, 2012). The doula is able to provide all the support a mother may need during labor due to the extensive experience they have in understanding and anticipating the physical and emotional needs that she may have (Chee, 2012). Having a doula present during birth can reduce the number of things the mother has to worry about during labor, including having to have conversations with hospital staff. By helping the mother to write her birth plan so that it is more likely to be read, respected and followed, Doula's allow the mother instead to focus on how her body is doing in the moment (Chee, 2012). During the labor process, doula's have the ability to speak to medical staff on the behalf of the mother when it comes to supporting the mother's wishes. This allows the mother's focus to remain on the labor process and not be shifted to decisions medical staff are asking to be made, such as the mother's birth plan. Doula's have the ability to provide a mother with empowerment to communicate her needs to her medical provider and make her dreams of a healthy, positive birth experience a reality (Gruber, 2013).

Not only do doulas provide emotional and mental benefits, they are also shown to have medical benefits for the mother and child. Doula-supported births are

less likely to have C-sections, operative vaginal birth[2], induction with oxytocin, and use of epidurals (Paterno, 2011). Births that are supported by a doula also are associated with high Apgar scores, fewer low birth weight babies, fewer complications for the mom or baby (Gruber, 2013) and a decrease in postpartum depression (Mottl-Santiago, 2014) compared to births that were not supported by a doula. The potential to lower rates of gestational hypertension in Medicaid beneficiaries (3.8% versus 7.8%) and to decrease preterm birth rates (6.1% versus 7.3%) has been seen with the use of doulas (Kozhimannil, 2013). Mothers and infants are not the only ones that benefit from the presence of a doula; research has shown that the fathers (or partners) benefit from their presence as well. With the support of a doula fathers are provided a chance for relief so that they are able to eat, rest, take breaks, and even sleep, while knowing that their wife is in capable and supportive hands (Koumouitzes, 2006). Overall, women who utilize a doula during pregnancy and labor have been shown to have high feelings of respect and a rise in confidence (Gilliland, 2011).

Although doulas are there for support and not to aid in the physical delivery process, there are still negative situations that are associated with the use of doulas. For many women, the cost that is associated with having the extra support from a doula is a prohibiting factor to their use (Declercq, 2012). Doulas work to ensure

[2] Operative vaginal birth: Caesarean section, vacuum or forceps delivery (de Jonge, 2015)

stress is minimized and help mothers advocate for themselves and their children. Therefore, the inability to afford the extra support a doula provides would make it challenging for the mother to avoid stressors and may minimize her confidence. There have been reports of doulas having trouble separating their passion for natural childbirth with their role as a supportive person to the mother. The passionate beliefs of the doula may cause her/him to offer unsolicited advice or direction in response to decisions made by the mother. (Meadow, 2014). Doulas tend to be activists for the natural birth option, with this comes the potential that the doula will identify too heavily with their activist model and forget that their role is to support the mom in choosing her own path. In an extreme sense, the doula may argue that the imbalance of power between the mother and the medical staff/system is too great and the construction of the health care system limits the autonomous choices of the mother, causing the doula to distrust the medical system (Meadow, 2014).

Birthing Partner

A birthing partner is similar to a doula in that they are there to provide support to the mother. However, a birthing partner does not need any training and can be anyone from a spouse or partner to a good friend (Stickler, 2015). Birthing partners, like doulas, provide mothers with much needed emotional and physical support during labor. Compared to mothers with minimal labor support,

mothers who have continuous support during the labor process have higher rates of spontaneous vaginal births and reduced need of induced labor (Green, 2014). The continuous support of birthing partners often leads to fewer cesarean sections, fewer instrumental vaginal births, reduced use of epidurals and other pain management medication, and shorter labors (Green, 2014). Infants born to mothers who are given continuous support during the birthing process are less likely to have low Apgar scores compared to infants born to mothers without continuous support (Green, 2014). Whether they are a trained professional, like a doula, or a supportive friend or family member, having a support person available throughout the labor process is beneficial for both the mother and the child.

What is the Best Option for Pregnancy-Related Care?

The provider a woman uses for her pregnancy and birthing experience is her own choice. After being informed of her options, it is up to her to choose the provider that is best for her and her situation. After researching each birthing option, it is clear that some options are better for certain situations. For adolescent girls it seems there are many negative outcomes associated with an obstetrician-led birthing process (Das, 2016). Due to the risk of these negative outcomes, there may be a need for adolescent mothers to utilize the tailored support of midwives and doulas rather than an obstetrician. For women who are dealing with other health

issues while pregnant, a midwife may not be the best choice for them. When complications occur during labor a midwife will send the mother to the hospital to be assisted by a physician. Thus, if a woman is aware that she already has a condition(s) that could complicate her birth experience, it may be best for her to begin her pregnancy-related care with an obstetrician. The positive effects of doula support have been noted to be greater in women who a socially disadvantaged, low income, unmarried, have no companion to accompany them in the hospital, or have experienced language and cultural barriers (Gruber, 2013). For this reason, having the support of a doula could be extremely beneficial for these women. No matter the mother's situation, it is always recommended that they make the decision that is best for them and for their current situation. In order to make this decision in an informed manner, it is important that all available options are given to mothers.

Why Midwifery?

It is important that women are aware that they have more options for pregnancy and childbirth care than the standard obstetrician care. Across the globe, and throughout history, midwives have been used during pregnancy and childbirth. There has been countless research discussing the history and the evolution of the midwifery profession and how women have utilized their services. The number of benefits and positive outcomes that stem from the use of midwives is extensive.

The profession of midwifery has evolved throughout history. In order to become a certified midwife there is an education process that must be followed, however, there are programs that offer degrees in certified midwifery and there are other programs that offer degrees in certified nurse midwifery. When viewing these different programs, there is no conversation as to which program is better or why there are two different titles for the profession. In order to understand where the line is drawn between certified midwife and certified nurse midwife, the history of the midwifery profession must be reviewed.

A Brief History of Midwifery

When the New World was first developing, the majority of babies that were being delivered were delivered by midwives in response to ideas that men should not be delivering children and that women needed to remain modest and decent around men, even if these men were doctors. Although midwives were considered to be prominent member of the community, there were states that felt midwives should be required to obtain licensing in order to continue delivering children. In 1716, New York was one of the first states to create an ordinance that required midwives to become licensed; Virginia agreed with this idea and required licensing around the same it. Even with requirements to become licensed existing in some

states, midwifery still flourished and was the dominate form of childbirth care provider. (Radosh, 1986)

The dominance of midwife-led birth experiences slowly began to fade as medical schools began admitting students into their new found programs in 1765. As medical training became popular, the medical establishment developed the notion that only doctors were able to ensure a safe childbirth. As this notion expanded, midwives were gradually replaced by physicians in the delivery process. The only students being admitted into medical training programs were men due to women being barred from the programs due to admission requirements that women often did not have and pressures placed upon them by other students. Medical schools were creating more educated men and made the ability for the public to access a physician more available, which decreased the level of community support midwives were receiving. The shift from midwives dominating the childbirth process to physicians dominating the process did not become noticeable until the 1780s, as medical schools and physicians became increasingly known and available. (Radosh, 1986)

In the 20th century, the use of physicians during childbirth as opposed to a midwife was still in effect, and had become even more prominent. During this time, the profession of midwifery was targeted to be eliminated in the 20th Century medical reform movement. It is said that this attempt by the medical establishment

to abolish midwifery, in part, may have been due to the belief that midwifery was symbolic of the "dirty indigents who needed to be upgraded" (Radosh, 1986). Therefore, in order to make midwifery legitimate in the eyes of the medical world, and end the attempts to eliminate the profession during the medical reform movement, something needed to be done. (Radosh, 1986)

In 1925, Mary Breckenridge began the Frontier Nursing Service (Radosh, 1986). Through this program, Breckenridge and several other women who were trained in the fields of midwifery and nursing would provide home midwifery services. . Breckenridge and the women that served with her in the Frontier Nursing Service were the first to combine these two professions (Radosh, 1986). They believed that having combined expertise in nursing and midwifery would ideally suit maternal and child health care. Combining nursing and midwifery training generated health providers who better met the needs of women wishing to have home births as nursing was an accepted, predominantly female job, while midwifery was being abolished in many states and midwifery licensure was becoming increasingly hard to obtain (Ventre, 1995). They early nurse midwives primarily worked in poor, inner city neighborhoods, rural communities and patients' homes. After some time, nurse midwives made their way to larger cities and into teaching hospitals. Although Breckenridge and the Frontier Nursing Service made nurse midwifery a new profession, nurse midwives initially were not working independently from

obstetricians due to the slow licensing process of nurse-midwives (Ventre, 1995). Ultimately, nurse midwives had to sacrifice their autonomy in order to gain credibility and access to the health care system (Burst, 2005). It was not until 1955, when the American College of Nurse-Midwives was created, that nurse-midwifery took on professional importance.

Despite the increasing knowledge and acceptance of nurse midwives, not everyone supported the profession. In the late 1960s and 70s, the flower children, "hippies," student activists and political radicals that were reaching their childbearing years wanted to reinvent women's health with the idea of women being in control of their health and health care (Ventre, 1995). As a mechanism to exert their control, women were choosing to have home births. However, physicians would not respond to these requests and nurse midwives were unavailable to legally provide home birth services. Due to these issues surrounding the availability of a professional to attend their home births, women would have the fathers of their children; friends or birth educators oversee their home births, which would, in turn, provide these helpers education in the process of giving birth. With their new found education of the birthing process, these individuals were given the title of midwives in the underground community network, from which the term lay midwife stems Lay midwives differed from nurse midwives in that they had no formal training in clinical childbirth processes. Women often became childbirth educators and were then

drawn into the home birth movement. Ultimately they became lay midwives because they empathized with home birth-oriented couples and because they were willing to take responsibility for providing home births that obstetricians refused to attend and nurse midwives were unable to conduct (Ventre, 1995).

Lay midwives were drawn to the idea of natural childbirth and wanted to know more about the process of childbearing and related decision-making. Using a feminist perspective, the natural childbirth movement and the creation of breastfeeding groups raised awareness of birthing alternatives, including where birth should take place. Women were given resources and linked to networks that helped them establish the foundation for lay midwifery and to express their dissatisfaction with the dominance of hospitals as the place of birth. Hospitals were seen as places that had the routine invasive procedures, impersonal attitudes and an increasing devotion to technology. This went against the beliefs of lay midwives who viewed the technological aspects of childbirth as inhumane and unnecessary. When they tried to voice their concerns to hospitals and hospital staff, they were ignored. So, for lay midwives, homebirth became the answer for them to oppose the traditions of birth in hospitals. (Ventre, 1995)

In order to provide women with natural, technology-free home births, women joined the midwifery revival and began practicing midwifery in an underground network. Their practice was often illegal and many were confronted and threatened

with legal action. The Santa Cruz Birth Center in California started in 1971 and ran a weekly prenatal clinic and midwives there attended up to twelve births every month (Ventre, 1995). The Center ran successfully for three years until a pregnant undercover agent and her husband trapped them. In this situation, the agents sought services at the Birth Center and then falsified the woman's labor. The attending midwives were subsequently arrested for practicing midwifery without a medical doctor present, as they had attempted to help the undercover agent with her early labor without urging her to go to the hospital for care. This incident led to many civil actions being taken and other midwives being harassed by law enforcement. (Ventre, 1995)

In the early 1970's, in order to make their profession seen as legitimate, lay midwives had to unite as a cohesive group and gathered as much knowledge about pregnancy and the birthing process as possible. They educated themselves using obstetrician texts, old midwifery books, observation of births and workshops. Older lay midwifery practitioners, patient-oriented family physicians and counterculture obstetricians supported their education and mission. Lay midwives would meet in study groups, practice their techniques on each other, and attend each other's births in enhance their knowledge and skills in midwifery. While they learned, these lay midwives also wrote. They wrote about the things they were learning in order to bind lay midwives together emotionally, to provide lay midwives the opportunity for

self-learning, and to critique the then current United States birthing system. As lay midwives began organizing, more opportunities presented themselves. For example, the El Paso Maternity Center in Texas began providing training apprenticeships for those around the country that wished to become lay midwives. The Seattle Midwifery School, registered under the Washington State Educational Services act, began training lay midwives as well. In 1974, the HOME (Home Oriented Maternity Experience) organization was founded to support and assist mothers who wanted to give birth at home. They provided a network and a series of informative meetings for the mothers. They even produced a quarterly newsletter and an informative book that outlined their workshops on home birth for those who could not attend the workshops. (Ventre, 1995)

Lay midwives were able to come together and support each other, which helped them gain respect. However, many lay midwives eventually decided to go to school for nurse midwifery in order to gain better access to the health care system, however, not all lay midwives gave in to the appeal of credibility that nurse midwifery offered. Those lay providers that eventually became nurse midwives sought to provide women with the empowering experience of midwifery, and wanted to do so without any legal consequence and with the respect and credibility of the medical system; in order to do this they needed the legitimacy of nursing behind them (Ventre, 1995).

Global Support for Midwifery

Women across the globe have benefited from having a midwife support them during their pregnancy and birth. The benefits that have been studied have focused on both the positive medical outcomes, as well as the experiences the mothers have had with their midwives. It has been reported that in the Netherlands 85% of women begin their pregnancy care with a midwife, and of all women 51% begin labor in the care of a midwife (de Jonge, 2015). In Canada, midwives have had reports of mothers being more satisfied with all aspects of their care compared to mothers who had an obstetrician provide their care. Women in Canada also have reported to perceive that they were provided more information on the warning signs of complications when cared for by a midwife then when cared for by an obstetrician. Canadian women reported that the thing they liked most about having a midwife was that they had the same provider for both their prenatal care and their delivery care (O'Brien, 2011). In a study in Denmark, 57% of the women who used a midwife rated their care experience as outstanding compared to 35% of women who used an obstetrician. None reported having a negative experience with their midwife (Overgaard, 2012). When breaking down their experience, the Danish mothers were asked to rate different aspects of their care on a scale of one to six; one being unacceptable and six being optimal. For overall experience, attention to

psychological needs, consideration for birth wishes and suggestion for pain relief, mothers in Denmark rated their experience with midwives higher than those with obstetricians. Midwives received an average score of 5.5 for overall experience compared to obstetricians' average score of 5. In satisfaction for the care if their psychological needs mothers gave midwives an average score of 5.4 compared to a 4.9 for obstetricians. In satisfaction for consideration for the mother's birth wishes, midwives received an average score of 5.6 compared to 4.9 for obstetricians. Finally, in satisfaction for suggestions for pain relief, midwives received an average score of 5.3, while mothers gave obstetricians an average score of 4.7 (Overgaard, 2012). In Japan, women were asked to rate their satisfaction with the care they received from their obstetrician or midwife on a scale of 1-10. When asked their level of satisfaction during their antenatal care women, on average, gave their midwife a 9.1, while giving obstetricians an average score of 7.2. Women were asked about their satisfaction with their care during their labor and birth process, on average midwives were given a score of 9.7, while obstetricians were given an average score of 8.7. Satisfaction with their after birth care was also measured, women, on average, gave their midwife care a score of 9.7 and their obstetrician care a 7.7 (Iida, 2014). Studies in Japan have shown that women were induced less often when cared for by a midwife in comparison to an obstetrician, they were induced 0% of the time compared to 10.7% of obstetrician-led care. Instrumental births utilizing a vacuum or

forceps were fewer in midwife-led care (0% of births) compared to obstetrician-led care (8.4% of births) in Japan. Japanese studies also show fewer premature membrane ruptures when in the care of a midwife (14.9% of births) compared to when in the care of an obstetrician (25.2% of births) (Iida, 2014).

A Cochrane systematic review was conducted and found that women who experienced midwife-led care had fewer interventions during their childbirth experience, as well as increased levels of satisfaction. The Cochrane review also found that newborns had higher Apgar scores and fewer resuscitation when born with the assistance of a midwife in compassion with other provider types (O'Brien, 2011). In the Netherlands, research states that midwife-led childcare led to fewer instances of severe maternal morbidity (2.1 per cases per 1,000 women) compared to obstetrician-led care (4.1 in 1,000 women). They also reported that there were fewer instances of postpartum hemorrhage with midwife care (35.3 in 1,000 women) compared to obstetrician-led care (59.1 per 1,000 women). (de Jonge, 2015).

In countries around the world, midwives frequently are used during prenatal and birth care. Women in numerous countries have reported high levels of satisfaction when their care is provided by a midwife. Studies done across the globe have reported countless benefits and positive outcomes for both mothers and children when cared for by a midwife. The history of midwifery runs deeper than the

history of other prenatal and delivery providers. The benefits of the care of midwives can be found throughout history and their utilization and benefits continues to grow. So, why midwifery? History and clinical evidence shows that midwifery practice "…confers benefits and shows no adverse outcomes" (O'Brien, 2011).

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