How Women Manage Their Pain Non-Pharmacologically During Labor Outside the Hospital Setting

S. Christine Schueler

Follow this and additional works at: https://louis.uah.edu/honors-capstones

Recommended Citation
Schueler, S. Christine, "How Women Manage Their Pain Non-Pharmacologically During Labor Outside the Hospital Setting" (2015). Honors Capstone Projects and Theses. 561.
https://louis.uah.edu/honors-capstones/561

This Thesis is brought to you for free and open access by the Honors College at LOUIS. It has been accepted for inclusion in Honors Capstone Projects and Theses by an authorized administrator of LOUIS.
How Women Manage Their Pain Non-Pharmacologically During Labor Outside the Hospital Setting

By

S. Christine Schueler

An Honors Thesis submitted in partial fulfillment of the requirements for the Honors Diploma to Honors College of The University of Alabama in Huntsville

Honors Capstone Director:

Ellise D. Adams, PhD, CNM, Associate Professor, College of Nursing

Advisor (signature) Date

Department Chair (signature) Date

Honors College Dean (signature) Date
# Table of Contents

Acknowledgments........................................................................................................... 3  
Abstract............................................................................................................................ 4  
Introduction....................................................................................................................... 5  
Chapter 1: Review of Literature and Theoretical Framework......................................... 6  
Chapter 2: Methods, Results, and Limitations................................................................ 9  
Chapter 3: Limitations, Discussion and Implications for Nursing Practice................. 21  
References......................................................................................................................... 26  
Appendix A: Institutional Review Board, UAH................................................................. 28  
Appendix B: Non-Pharmacological Pain Management Survey...................................... 29
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Acknowledgements

The researcher would like to thank Dr. Ellise Adams for guidance and perseverance through this study. Acknowledgement goes to several groups who helped with recruitment and gathering data: ICAN National, ICAN of Huntsville, Baby Center Community, Pregnant Chicken, The Green Stork, Birthing Beautiful Ideas and the many others that spread the survey throughout social media. It is important to also recognize the women that put forth their information and completed the survey; their input made this study possible. Finally, to the University of Alabama Huntsville for giving the researcher the opportunity to create this study in the first place.
Abstract

The purpose of this pilot, descriptive, mixed method study is to look at non-pharmacological pain management during labor for women outside the hospital setting and how they received education in hopes to assess effectiveness of how non-pharmacological techniques are taught for those wishing to have a normal birth. A nationally representative survey of United States (U.S.) women over 19 who gave birth outside the hospital using only non-pharmacologic pain management (N=379) was used. The survey inquired about types of techniques used, their effectiveness, methods of learning and advice for others wanting to use non-pharmacologic techniques. The results showed top pain management techniques were position changes (87.9%), breathing (73.1%), and hydrotherapies (69.7%). The majority (81.3%) of participants stated pain management techniques learned were effective. The main form of learning was from a midwife or doula (66.8%), and books/media (62%). Techniques were effective due to personalized combinations, good support systems, research and positive thinking. The changes regarding classes suggested were to talk about doulas and their use, have more information available to class participants regarding normal birth, have less judgment from educators, and more financial-friendly options available. Women need to research and practice different techniques of pain management for labor and have a strong support system to be able to manage the pain and stress of labor and birth in the out of hospital setting. Further research is needed to determine how to incorporate non-pharmacological management education for women in hospital education classes.
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Introduction

As the process of labor and delivery has evolved, so have the options for pain management during labor. However, the average, modern woman has limited knowledge regarding non-pharmacological ways to reduce pain (Lally, Thomson, Macphail & Exley, 2014). Presently, 1% of all births occur in the homebirth setting (MacDorman, Matthews & Declercq, 2014). Beginning in the 1960s, nurses have focused on educating soon-to-be mothers about what to expect during pregnancy, labor and birth (Lothian, 2010). Although the purpose of antenatal classes is to educate women about labor, studies show information given during the class has not been effective for learning about pain management (Lally, et al., 2014). More specifically, “there exists limited documentation of [non-pharmacological methods] of...pain management during childbirth in the United States” (Kozhimannil, Johnson, Attanasio, Gjerdingen & McGovern, 2013, p. 227). The purpose of this study is to explore different techniques of managing pain non-pharmacologically in the United States (U.S.) outside the hospital setting.

Whether women choose to plan a hospital birth or a homebirth, having the knowledge about different pain management techniques can decrease the mother’s anxiety when it comes time to give birth. Births outside the hospital setting, for this study, can be anywhere outside the walls of the hospital, such as a birthing center, a birth house, a car, a hotel and births in a home setting. Homebirths, on one hand, consist of natural labor, without pharmaceutical pain management, in someone’s home while a midwife is present. Hospital births, on the other hand, offer the client an opportunity to use pain-relieving medications. Normal birth is considered a newer term to describe a birth that occurs with no medications used; also known as natural birth (Gerrard, 2013).
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Pharmacological pain management is a specific term, which involves the use of pain-relieving medication. Non-pharmacological pain management is more broadly defined and is considered an alternative way to reduce pain without using medication (Non-pharmacological). Breathing exercises, guided imagery, hydrotherapy, massage, and birth ball are all examples of non-pharmacological pain management. Knowing the types of non-pharmacologic pain management techniques used outside of a hospital in the U. S. can give antenatal educators and intrapartum nurses the knowledge to teach other women these techniques in preparation for birth.

Chapter 1: Review of Literature and Theoretical Framework

Review of Literature

The specific search criteria used for this review were studies written within the last five years (2009-2014); keywords such as “maternal outcomes in hospitals”, “homebirth vs. hospital birth”, “labor pain management in United States”, “non-pharmacological pain management types”, and “pain management in labor in the United States”; peer-reviewed and full text availability. The databases used were CINAHL and EBSCO. Studies were included with women using non-pharmacologic techniques in the hospital, or women who used both pharmacologic and non-pharmacologic pain management. It is important to study how women manage their pain with only using non-pharmacological pain management methods in a variety of settings.

Pain can be greatly influenced by psychological factors such as fear and anxiety of the unknown (Westhuizen, 2011). In a phenomenological study, Merg and Carmoney (2012) interviewed eleven women to gain insight of their homebirth experience after a previous hospital birth. The results indicated that several participants felt more confident
to be a mother and more satisfied with their delivery after the homebirth rather than the
hospital birth. Four participants reported a type of psychological healing process after
trauma that occurred in a hospital setting (Merg & Carmoney, 2012). An inference can be
made that the type of environment and caregiver can reduce the overall level of anxiety
or fear. Further research can be done to determine if there is a connection between
decreased level of anxiety at home and a decreased need for pain management.

A nationally representative survey of 1,382 U.S. women, conducted by
Kozhimannil et al. (2013), identified patterns of non-pharmacological pain management
compared to pharmacological pain management used throughout the United States in the
hospital setting for singleton births, as well as non-medical labor induction methods. The
results of the survey concluded that breathing techniques, position changes, and mental
strategies were the most frequently used non-pharmacological methods throughout the
United States. However, this study showed only 12% of women used solely non-
pharmacologic methods while 58.6% of the sample used both pharmacologic and non-
pharmacologic methods (Kozhimannil et al., 2013). These numbers could have been
influenced by how much education or how little education the client had on different pain
management options. A similar study reviewing pain management strategies of women
giving birth outside the hospital setting could provide an interesting comparison.

Pain is often associated with labor. Determining the patient’s expectations during
labor and respecting the client and her family’s wishes have become increasingly
important to health care workers and educators. This way, the health care provider can
make decisions that do not cause conflict with the patient’s beliefs, values or wishes,
creating a less stressful environment (Lally et al., 2014). Lally et al. (2014) conducted a
qualitative study in England to determine how women make decisions for pain management and how the health care workers and families support the patient’s decisions. The study concluded that many women felt uncertain about their decision regarding pain management due to the unknown amount of pain that would occur during labor. The participants wanted to and did feel in control of the decision-making, but felt uneducated on specific options for managing pain. These participants “reported lacking knowledge on how to use non-pharmacological methods of pain management…” (Lally et al., 2014, p. 11). A possible solution found in this study was offering women detailed information and education about the pain they might experience to include various ways of coping with pain.

Klomp, Mannien, Jonge, Hutton, and Largo-Janssen (2013) studied fifteen women’s expectations of managing labor pain using a qualitative interview process. They discovered the majority of their sample group felt a natural birth was empowering and participants were confident they could give birth using non-pharmacological pain management. This study confirmed the findings of Lally et al. (2014), “health-care workers should try to explore the client’s approach to…pain management and adapt…to the individual…” desires related to labor pain management (Klomp et al., 2014, p. 436).

The purpose of this mixed-method study was to explore the different types of non-pharmacologic pain management across the United States. The research question for this study was: How do women manage labor pain outside the hospital setting in the United States? Results from this study may help childbirth educators learn how to better inform their clients and help the clients feel more comfortable in their decisions regarding
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

pain management; therefore, helping with their overall confidence to give birth outside the hospital setting.

Theoretical Framework

The Science of Unitary Human Beings theory by Martha Rogers (2012) best emphasizes the importance of the environment during childbirth. An environment, for the mother, can relate to the physical surroundings such as her home, a friend’s home, birthing center or hospital. Another type of environment could be the people present at birth such as friends, family, midwives, doulas, and others supporting the soon to be mother. Rogers believes that humans and the environment are constantly interacting, and that the entirety of human health can be affected by changes in environment (“Martha Rogers”, 2012). The labor and birth process is an extremely stressful time, both for the mother and baby. By altering the environment to best suit on the client’s individual needs, the soon-to-be mother can interact with this environment in a more calming way that can potentially benefit her pain management in the birthing process.

Chapter 2: Methods and Results

Methods

In order to answer the research question, “How do women manage labor pain outside the hospital setting in the United States?” a survey was created to ask several different questions regarding pain management. This pilot, descriptive study was designed to explore different pain management techniques women have used outside the hospital setting and how they learned about these techniques. This study can also be described as a mixed method study because both qualitative and quantitative data was gathered and analyzed.
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

The population for this study was women between the age of 19 and 42 who gave birth to a child outside the hospital setting using solely non-pharmacological techniques (N=379). 437 women completed the survey. Fifty-eight of the original total of survey responses were not used because the participants indicated the location of their delivery was not outside the hospital, they were under the age of eighteen, or they lived outside the borders of the United States. The survey was conducted via social media using various blogs, pregnancy forums, and Facebook pages. Some of the sites included, but were not limited to: Baby Center Community, International Cesarean Awareness Network (ICAN) of Huntsville, ICAN National, The Green Stork, The Pregnant Chicken, and Birthing Beautiful Ideas. Snowballing occurred when women on social media used their own sources and shared the survey with other women who not otherwise have access to it. Snowballing, otherwise known as network sampling, assists researcher to increase sample sizes (Grove, Burns, and Gray, 2013). Participants obtained through the method of snowballing were screened to ensure they met the inclusion criteria (Grove, Burns, and Gray, 2013). Therefore, the complete list of sites, forums, blogs and Facebook pages hosting this survey is inaccessible at this time.

Survey questions were created by the researcher following review of literature and content review by the faculty advisor. The researcher was also an assistant on a qualitative study regarding women’s reasons to choosing a homebirth and formed questions from those interviews. The content as well as the study methodology was approved by the UAH Institutional Review Board (IRB) (See Appendix A). The survey was published via the online platform, Qualtrics and was available from February 26th, 2015 to March 15th, 2015.
In the mixed method survey, entitled Non-Pharmacologic Pain Management Survey (see Appendix B), participants consented to participate in the study and were asked demographic data such as their age, ethnicity, region of the United States in which they reside, and personal religious preference. There were other questions concerning the location of the actual birth and who was present at the birth. The types of non-pharmacological methods used by participants as well as whether equipment was required to be purchased was determined by answering certain questions. The final questions explored the types of education the participant experienced and if these types of education were helpful. Finally, participants were asked to express their opinion on how they would change education regarding non-pharmacological techniques. The study was conducted over three months in order to obtain a sufficient amount of participants needed to conduct the survey.

Demographic data and responses that could be coded numerically were analyzed using descriptive statistics. Narrative data was categorized and coded for theme analysis. Themes were discussed and verified with the faculty adviser.

**Quantitative Results**

Three hundred and seventy-nine surveys were completed between February and March of 2015. Demographic data showed the majority of the participants were Caucasian and identified themselves as a part of the Christian religion (See Figures 1 & 2, p. 12). Results showed the majority (33.5%) of the participants were between the ages of 27-30 when they gave birth outside the hospital setting (See Figure 3, p. 12). The majority of the participants (66%) stated they have had one child outside the hospital setting, indicating this was their first child. Others (See Figure 4 p. 13) have had a
number of children from 2 children (24.5%) to 6 children (0.5%). For this survey, 66% of participants have had only one birth outside the hospital setting without any pain medication. There was a wide range of participants from all across the United States with (26.9%) that gave birth in the Midwest (See Figure 5, p. 13).

Figure 1: Ethnicity

![Ethnicity Pie Chart]

Figure 2: Religion

![Religion Pie Chart]

Figure 3: Age when giving birth

![Age Distribution Chart]
Many of the items on the Non-Pharmacologic Survey allowed participants to select all items that related to their pain management. This allowed participants to provide rich and complete data about their birth experience in the out of hospital setting. Two hundred and seventy-nine participants (73.6%) indicated they gave birth in the comfort of a home. Twenty-eight percent birthed in a birthing center (See Table 1, p. 14). A midwife was present to help for 89.4% of the participants’ births (See Table 2, p. 14). Interestingly, the majority (47.5%) of midwives were certified professional midwives, whereas certified nurse midwives were only present for 30.6% of the births. Out of the 339 women that stated they had a midwife present, 21% of those midwives were non-
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

certified (See Table 3). Spouses were present for the majority (90.2%) of the births. Other support people listed by the participants included a doula (37.7%), family (37.7%), friends (7.1%), medical professionals (3.7) and other people (3.2%) as shown in Table 2.

**Table 1, Type of Birth Location**

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Center</td>
<td>28%</td>
</tr>
<tr>
<td>Homebirth</td>
<td>73.6%</td>
</tr>
<tr>
<td>Birthing House</td>
<td>3.4%</td>
</tr>
<tr>
<td>Other</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

**Table 2, Those Present at Birth**

<table>
<thead>
<tr>
<th>Present to help</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwife</td>
<td>89.4%</td>
</tr>
<tr>
<td>Doula</td>
<td>37.7%</td>
</tr>
<tr>
<td>Family</td>
<td>37.7%</td>
</tr>
<tr>
<td>Spouse</td>
<td>90.2%</td>
</tr>
<tr>
<td>Medical professionals</td>
<td>3.7%</td>
</tr>
<tr>
<td>Friends</td>
<td>7.1%</td>
</tr>
<tr>
<td>Others</td>
<td>3.2%</td>
</tr>
</tbody>
</table>

**Table 3, Type of Midwife Used**

<table>
<thead>
<tr>
<th>Type of Midwife</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Nurse Midwife</td>
<td>30.6%</td>
</tr>
<tr>
<td>Certified Professional Midwife</td>
<td>47.5%</td>
</tr>
<tr>
<td>Certified Midwife</td>
<td>11.9%</td>
</tr>
<tr>
<td>Non-Certified Midwife</td>
<td>21.1%</td>
</tr>
</tbody>
</table>

**Table 4: Purchases made**

<table>
<thead>
<tr>
<th>Equipment Purchased</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth Ball</td>
<td>8.4%</td>
</tr>
<tr>
<td>Birth Tub</td>
<td>6.3%</td>
</tr>
<tr>
<td>Learning Resources</td>
<td>1.6%</td>
</tr>
<tr>
<td>Massage Supplies</td>
<td>1.6%</td>
</tr>
<tr>
<td>Aromatherapy</td>
<td>0.8%</td>
</tr>
<tr>
<td>Yoga Supplies</td>
<td>0.5%</td>
</tr>
</tbody>
</table>
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

The top pain management techniques used by participants were position changes (87.9%), breathing techniques (73.1%), and hydrotherapy (69.7%). The most frequently cited method was position changes, which is consistent with the study by Kozhimannil et al. (2013) and their findings of women using position changes most often (42.9%)(p.231). Majority of participants (87.9%) expressed they did not need to purchase any equipment in order to perform these pain management techniques. For those that needed to purchase equipment (see Table 4, p. 14), they needed a birthing ball (8.4%), a birth tub (6.3%), learning resources (1.6%), massage supplies (1.6), aromatherapy (0.8%) or yoga supplies (0.5%). Of all participants, 81.3% stated the pain management techniques they learned were helpful (See Figure 7, p. 16). The main form of learning for this population was learning from a midwife or a doula (66.8%). The other main form of learning came from books/media (62%)(See Figure. 8, p. 16).

**Figure 6: Pain Management Techniques Used**

<table>
<thead>
<tr>
<th>Technique Used</th>
<th>Water tech</th>
<th>Breathing tech</th>
<th>Walking</th>
<th>Position Changes</th>
<th>Birth Ball</th>
<th>Massage</th>
<th>Counterpressure</th>
<th>Hypnosis</th>
<th>Relaxation/distraction</th>
<th>Aromatherapy</th>
<th>Yoga supplies</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>350</td>
<td>300</td>
<td>250</td>
<td>200</td>
<td>150</td>
<td>100</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Qualitative Results

**The effectiveness of non-pharmacologic techniques.**

*Individualized management plan.* The most frequent explanation regarding why techniques used were effective was the participants used a little bit of everything. They used whatever techniques made the most difference at that moment. One participant stated: “we [participant and midwife] combined pieces of many different methods, to create a plan that worked for me to manage the experience and for my husband to
comfort me”. Every woman is different, and her conception of pain is different. Therefore, management for that pain must be individualized. Most if not all women explored different kinds of pain management techniques and practiced them in preparation for labor.

**Mind over matter.** For many women, having the determination to give birth without pain medications actually helped decrease the pain. As one participant stated, “I feel like knowing I wouldn’t have access to pharmaceuticals made my anticipation and expectation of pain very tolerable.” For others, pain was managed by understanding pain and its relationship to the progress of labor. When the participants could focus on relaxation and realized pain was a physical sign and that they were working hard to bring a child into the world, pain was more welcomed as a sign the end was near. As one participant stated, “I just went with mind over matter and, having seen over 100 births, the knowledge that it does end eventually.” Having time to mentally prepare for what happens during labor can decrease anxiety and give a sense of control to the woman.

**Support system and surroundings.** Throughout the surveys, women emphasized the importance of having a support system through labor. Having a support system that agreed with their views on having a normal birth and with their birth plan was especially important. Hiring a midwife or a doula that knows what the woman’s desires are can help her focus on managing her pain. Making sure their spouse was in agreement with a non-pharmacological birth and taking classes as a couple allowed the participants to gain trust in their spouse, and helped “the coach” make suggestions for different pain management options during labor. One particular participant emphasized, “have confidence that if you and your husband "trained" together that he is the best coach, so
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

just turn your decision making over to him and let him guide you through - especially
walk if he suggests walking, even though it'll be the last thing you want to do!” This
“training” can also help the father-to-be share the experience of bringing the child into
the world in his own way.

Being in a comfortable environment, for those in their own home, acted as a pain
management method on its own. One participant mentioned, “the pain perception is so
different when you are in your own comfort zone. Your body will guide you.” For
another participant, she compared it to her hospital birth, “in my personal experience, the
pain and discomfort of labor was much more manageable at home compared to my
hospital birth. Being in an out of hospital setting seemed to be a comfort measure in and
of itself.” Whether a woman gave birth in her own home or a birth house, laboring where
they felt comfort and security provided a more peaceful experience.

Advice.

Knowledge is power. Most participants found that, in order to be fully prepared, they
needed to explore and practice as many different pain management techniques as
possible. As one participant put it, “explore many methods. What works for one mom
may not work for another and you should be armed with many coping methods.
Something may work for a while then stop working. Or you may think it will work but
once you're in labor find that it provides no relief at all.” Another stated, “be open to
switching from what you thought was going to work to what actually does help; let go of
expectations and appearances and let your body work.” Several mentioned reading in
order to learn the various pain management methods. The most frequently mentioned
book was Ina May’s Guide to Childbirth. The most watched documentary was the
Business of Being Born and several participants stated this as a resource for learning pain management techniques.

**Hire a midwife/doula.** Although the presence of a midwife was already discussed as a support system, many participants gave the advice to hire a doula. Especially giving birth at home or in a birth center, having that additional personnel trained in helping with pain management and encouragement was comforting for these women. One participant’s thoughts on a doula were, “hire a doula! They are experts and you/your partner may easily forget what you learned in class.” Over half (66.8%) of this particular group of women learned their pain management techniques from their midwife or doula. Having the same person there that helped them prepare for labor assisted with their actual pain management.

**Independent classes.** Taking an independent class as opposed to a hospital-based class was the consensus among the participants. In other words, “take a class not hosted by a hospital and only surround yourself with truly supportive people.” One participant had her method to share on choosing a class, “ask how many class participants use medication during labor and how many have csections. If either number is over 20% go elsewhere.” Examples of independent classes given by the participants are Bradley Method, Birthing Boot Camp, Hypnobabies, and Lamaze.

**Pain is Progress.** Many participants suggested the importance of being mentally strong. They advised women to remember that women’s bodies were physically made to give birth and to not give up. As one participant stated, “you can do it!! Once the baby is here the pain stops. You forget about how painful it really was.” Many women had different encouraging phrases in order to advise other women not to give up during birth. Other
women advise to look at each contraction as progress and one contraction closer to their baby. One woman’s advice was, “to remain calm and know that each contraction is one you'll never have to go through again. Also this is what a woman’s body is meant to do and this is better for both you and baby. It’s a beautiful and empowering experience that will strengthen you more then you could ever imagine.”

**Suggested changes in learning about non-pharmacologic techniques.**

*Normal birth focus.* Many women emphasized the need to have more normal birthing options and non-pharmacological pain management methods taught in hospital-based classes. One woman stated, “I had previously taken a hospital based class (before my first birth which ended in a C-section). I would have instead taken an independent class such as Bradley or Lamaze which would have offered more information and techniques.”

*Change in class elements.* There were several different class elements that were suggested to be changed or added to both hospital and/or independent classes. One that many women suggested was adding information on doulas: what they are, what they are used for and whether it’s beneficial for every birth. As one participant said, “it was…class that we took before my first (hospital) birth. I wish we had spent more time on the risks of hospital interventions, and on the benefits of doulas. My husband did the best he could, but he wasn't a very good "birth coach". If we had hired a doula, I think our experience would have been better.” Another suggestion was taking group classes instead of private or online classes. That way, women can meet with others that have advice from previous births or other birthing options that they have explored. Learning as a group with return demonstration, as opposed to private lectures or online videos, proved to be more helpful for this group of participants.
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Finally, having more cost-effective and non-judgmental classes was the third most popular recommendation. Participants suggested that all primigravida clients should have some form of education for childbirth, even if they cannot afford all of it. One in particular stated, “make them more affordable and available to all women, not just those in birth circles.” As recommended by some participants, a possible solution could be to shorten the length of the class.

Although they were not explicitly stated related to hospital based classes, some class instructors were seen as judgmental toward those wanting to have a normal birth or those wanting to give outside the hospital setting. Educators should simply, “present all options… (allowing women to) choose without guilt.” This way, women can choose which option is best for them instead of what the educator feels is best. Again, one method might be good for one person but can cause more pain or complications with another.

Chapter 3: Limitations, Discussion and Implications for Nursing Practice

Limitations

There were a few limitations to this study. For example, items on the Non-Pharmacologic survey could have been phrased to improve clarity and additional items would have provided data to assist in answering the research question. For example, questions such as, “Which type of class did you take? Hospital-based? Independent-based?” would have been helpful in better organization of participants’ responses. There would be a clearer picture of whether there was a need for change in hospital-based classes. It would have been beneficial to several participants if hydrotherapy had been defined at the beginning of the study along with examples of hydrotherapy (shower, bath
Many women discussed the benefit of showers and birth tub in the “other” category, yet they did not choose using hydrotherapy. Respondents cited several pain management techniques as other that were not originally included in the responses. For example, (See Figure 6, p. 23) 11.9% of the participants used relaxation and/or distraction as a method of pain management. However, this was not a selection option in the original survey and the data was classified during analysis to include relaxation and distraction as responses for which participants had identified as “other”. It is hypothesized that, if this had been an option in the original survey, then more people would have chosen it and therefore the number would be higher. This is also true for the aromatherapy, counter pressure, hypnosis, and learning from instincts/intuition categories. These limitations will provide guidance for revisions to the Non-Pharmacologic Survey in future studies.

**Figure 6: Pain Management Techniques Used**

<table>
<thead>
<tr>
<th>Technique Used</th>
<th>Water tech</th>
<th>Breathing tech</th>
<th>Walking</th>
<th>Position Changes</th>
<th>Birth Ball</th>
<th>Massage</th>
<th>Counterpressure</th>
<th>Hypnosis</th>
<th>Relaxation/distraction</th>
<th>Aromatherapy</th>
<th>Other</th>
</tr>
</thead>
</table>
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Discussion

This study, based on the literature reviewed, is one of the first to explore the non-pharmacological pain management techniques used outside the hospital and how might childbirth classes change to accommodate more non-pharmacological options. The top three pain management techniques used by women in this study were position changes (87.9%), breathing techniques (73.1%) and hydrotherapy (69.7%). This data resembles the findings by Kozhimannil with their study showing position changes, breathing techniques and mental strategies as the non-pharmacological techniques most used (Kozhimannil et al., 2013). Eight-three percent believed their pain methods were effective. The majority of the participants learned from a midwife or doula (66.8%) while only 40.6% learned from the classroom setting. This study sought to understand why that number is only 40%, and to determine how childbirth class content regarding pain management might be altered to be effective.

Several themes evolved from the participant responses including the importance of having an individualized management plan, calm surroundings, a good support system, a positive mind set, and having a midwife or doula present during labor and birth to ensure as normal a birth as possible. Knowing that the pain does end eventually, having those with the same beliefs to encourage the laboring women throughout her journey and being able to work with many different pain management techniques during contractions are the core factors of what make births outside the hospital so unique. Using the concepts identified in this study and applying them to childbirth class curriculum whether women plan to give birth inside or outside of the hospital could be an important step to assist women with pain management during birth. If women in the hospital setting who
do not want any form of pain management were to be provided education and assistance of physicians and nurses in a judgment free manner, normal birth might become more prevalent.

Based on the results of this study, there are many possible ways classes can change for the better. One option is having educators that have an open attitude and provide comprehensive information so the women can choose their own path regarding pain management. Possible solution for financial problems could be to allow women to pay on a day-to-day basis. Having access to forums where they can ask other women advice would be helpful, especially for first time moms. Being presented with and being able to have a return demonstration during classes on a wide variety of techniques can be proved beneficial when it comes time to deliver. The women would feel prepared, calm, and in control.

Implications for Future Research and Nursing Practice

Education regarding pain medication is constantly changing in the United States. Every day, research is conducted on pain management and the negative effects pharmacological medication can have on the fetus. However, there is still a lack of research into the efficiency of non-pharmacological pain management techniques and a deficient knowledge amongst the public of these techniques. Future studies can be designed to determine specific ways educational classes can improve to provide the perinatal client with a comprehensive knowledge needed to manage the pain of childbirth.

By listening to the voices of the women in this study, perinatal education can be improved. Non-pharmacologic techniques of pain management might benefit clients who
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

take hospital-based classes but want to avoid pain medication. Explaining the definition of a doula and how the presence of a doula can change the birthing process would also be beneficial for those giving birth inside or outside the hospital setting. Finding more financially friendly options for underserved populations can prevent health care disparity related to perinatal education. Perinatal educators can emphasize the usefulness of support groups to women wanting a normal birth. Knowledge is powerful for these women, and “it would be more beneficial to concentrate efforts on better informing women…than expecting them to make firm decision in advance of such an unpredictable event as labour” (Lally et al., 2014).
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

References


MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

the United States, 1990-2012. NCHS data brief, no 144. Hyattsville, MD:


Martha Rogers' Unitary Human Beings. (2012). Martha Rogers' Unitary


http://currentnursing.com/nursing_theory/

Non-pharmacological Pain Management Therapies For Adults - Care Guide. (n.d.).


Stapleton, S. R., Osborne, C. and Illuzzi, J. (2013). Outcomes of

care in birth centers: demonstration of a durable model. Journal of Midwifery &

Women's Health 58(1), 3-14.


Appendix A: Institutional Review Board Approval

Christine Schueler and Ellise Adams
College of Nursing
January 27, 2015

Dear Christine Schueler and Dr. Adams,

The UAH Institutional Review Board of Human Subjects Committee has reviewed your proposal, How Women Manage Their Pain Non-Pharmacologically During Labor Outside the Hospital Setting, and found it meets the necessary criteria for approval. Your proposal seems to be in compliance with this institution's Federal Wide Assurance (FWA) 00019998 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

Please note that this approval is good for one year from the date on this letter. If data collection continues past this period, you are responsible for processing a renewal application a minimum of 60 days prior to the expiration date.

No changes are to be made to the approved protocol without prior review and approval from the UAH IRB. All changes (e.g. a change in procedure, number of subjects, personnel, study locations, new recruitment materials, study instruments, etc) must be prospectively reviewed and approved by the IRB before they are implemented. You should report any unanticipated problems involving risks to the participants or others to the IRB Chair.

If you have any questions regarding the IRB’s decision, please contact me.

Sincerely,

Pam O’Neal PhD, RN
IRB Chair
Associate Professor
College of Nursing, University of Alabama in Huntsville,
207 Nursing Building, Huntsville, AL 35899
phone: 256.824.6100 and fax: 256.824.2850 email: irb@uah.edu
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Appendix B: Non-pharmacological Pain Management Survey:

Recruitment Posting: Attention Mothers!

Your participation is needed in a descriptive study on the different pain management techniques used during childbirth without the use of pain medication outside the hospital. Women over 19 years of age who fit these criteria are asked to fill out a survey. It is predicted to take only 5-10 minutes of your time. This study has the potential of helping reformat education classes regarding labor/delivery, and help others better inform new mothers on different pain management techniques. To participate or invite other mothers to participate, simply click on the link below to access the survey:

THE SURVEY LINK WOULD BE HERE

All participation in this study is considered voluntary. There is a potential for minimal risk of emotional discomfort and loss of time. Any questions can be directed to the investigator by the contact information listed below:

Contact: S. Christine Schueler or Dr. Ellise Adams (Advisor)
University of Alabama in Huntsville, BSN Honors student
Christine: scs0006@uah.edu
Dr. Adams: ellise.adams@uah.edu

Survey Outline:
How Women Manage Their Pain During Labor Outside the Hospital Setting
S. Christine Schueler, Advisor Dr. Ellise Adams
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

Definitions:
Outside the hospital setting: Anywhere outside the hospital
Non-Pharmacologic: Without using any form of pain medication. A fully natural childbirth

1. What was your age when giving birth outside the hospital?
2. What is your ethnicity?
   a. Caucasian
   b. African American
   c. Asian
   d. Hispanic or Latino
   e. Pacific Islander
   f. Other
   g. Prefer not to answer
3. What is your Religious Preference?
   a. Christian
   b. Jewish
   c. Jehovah Witness
   d. Mormonism
   e. Buddhist
   f. Hindu
   g. Atheism
   h. None
   i. Prefer not to answer
4. Where do you live in the United States?
   a. Northwest?
   b. Northeast?
   c. Midwest?
   d. Southwest?
   e. Southeast?
5. Specific State (Optional)
6. Where did you give birth? (Select all that apply)
   a. Birthing Center
   b. Home
   c. Birthing house
   d. Other: (please describe)
7. Who was present to help? (Select all that apply)
   a. Midwife
      i. F/U question for 7a: Certified nurse midwife?
      ii. Certified professional midwife?
      iii. Certified midwife?
      iv. Non-certified midwife?
   b. Doula
   c. Family member
   d. Spouse
   e. Other: (please describe)
MANAGING LABOR PAIN OUTSIDE THE HOSPITAL

8. How many children have you given birth to outside the hospital setting?
9. How many children have you given birth to outside the hospital without using any form of pain medication?
10. What forms of non-pharmacologic pain medication did you use?
    a. Hydrotherapy?
    b. Breathing techniques?
    c. Walking?
    d. Position changes?
    e. Birthing Ball?
    f. Massage?
    g. Other?
11. **F/U question for #10:** Was there any equipment needed to implement these non-pharmacologic methods that you needed to purchase before birth?
    a. Yes:
       i. **F/U question:** Please describe what you needed to purchase
    b. No:
12. Was the method to learn you chose helpful? Why or why not? (Optional)
13. How did you learn about non-pharmacologic pain medication?
    a. Family?
    b. Friends?
    c. Class?
    d. Midwife/Doula?
    e. Online?
    f. Books?
    g. Magazine articles?
    h. Other?
14. **F/U question for #13c:** What would you change about the class/classes you took?
15. What advice would you share with other women who plan to give birth outside of the hospital setting, about managing their pain through non-pharmacologic methods?