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Nurses' Breastfeeding Knowledge and Confidence after Educational Session

Thesis presented by Anna C. Tillman

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Abstract

Background: Education is an essential part of the nursing profession. Nurses should be teaching their patients every day, ensuring they understand the most reliable evidence-based practices. In breastfeeding education, however, there is a lack of education to expectant mothers on common breastfeeding methods, how to overcome common barriers, and general breastfeeding knowledge. If nurses can be effectively educated in breastfeeding knowledge and build their confidence in teaching their patients, then mothers will receive more thorough and helpful breastfeeding education. The hope in educating both nurses and mothers is to increase breastfeeding exclusivity rates to meet Healthy People2020 goals.

Objective: The purpose of this study is to examine the effects of a breastfeeding education session on the knowledge and confidence of pediatric ambulatory care clinic nurses.

Methods: Local pediatric clinic nurses (N=11) completed a pre-survey to evaluate baseline knowledge and attitude toward breastfeeding. Breastfeeding education was completed through a presentation by a board certified lactation consultant and advanced practice nurse and a PowerPoint slideshow. Afterward, participants completed a post-survey to evaluate any growth in knowledge or change in attitude. Independent t-test was used to compare pre-education to post-education data.

Results: Data showed insignificant results in attitude toward healthcare provider involvement as well as attitude toward breastfeeding for the post-education group, possibly due to the inability to track individual change. However, there was significant improvement in knowledge about breastfeeding in the post-education group.

Conclusion: The goal of this study was to increase breastfeeding education among nurses in hopes to consequentially increase patient breastfeeding education and raise breastfeeding adherence and exclusivity rates.

Background and Significance

Nursing is a profession of skill, technique, therapeutic communication and therapeutic touch, but teaching is also an essential component. Patient education is a core characteristic each nurse must prioritize in their routine practice of care. Vital to the quality and reliability of patient education is the nurse's use of current evidence based practice (EBP) and its incorporation into patient education.

In recent years, breastfeeding benefits, methods, and adherence rates have become a popular topic of research and review, creating extensive resources for nurses to update their EBP knowledge. Regardless, breastfeeding rates are shockingly low, reportedly because mothers do not feel competent to interpret their baby's behaviors in response to breastfeeding, and feel ill-equipped to overcome basic breastfeeding challenges (Wood, Woods, Blackburn, & Sanders 2016). It should be the responsibility of healthcare staff to bridge this knowledge gap, and educate mothers on breastfeeding. Because nurses are patient advocates and educators, they should use education as a primary intervention to assist mothers in breastfeeding successfully.

In order for nurses to do this effectively, they must feel competent in their knowledge of breastfeeding, successful methods, and common problem-solving techniques. Research indicates a lack of healthcare staff knowledge and poor execution on patient education in this area. Understanding this deficit, this study poses the question: "Does a structured breastfeeding learning module increase the breastfeeding knowledge and the confidence of staff nurses employed by ambulatory care clinics in Northwest Arkansas (NWA)?" In the study, participating nurses completed a pre and post-survey before and after listening to the educational session, tracking the effectiveness of the delivered education.

The research is abundant concerning the many benefits of breastfeeding for both mother and baby. The Joint Commission (TJC), Healthy People 2020, the American Academy of Pediatrics (AAP), World Health Organization (WHO), and Academy of Breastfeeding Medicine Board of Directors all unanimously support breastfeeding for the first six months of life (Seibenhener, 2016;

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Wood et al., 2016). Research reveals early breastfeeding intervention, especially on the individual level, leads to higher rates of partial or exclusive breastfeeding in mothers (Patnode, 2016). Even so, breastfeeding is not currently a priority in the education and training of many healthcare workers. Researchers confirmed that mothers accept advice and instruction from healthcare staff more readily than from others, such as friends or family (Seibenhener, 2016). Being aware of this, nurses must not ignore their unique position to perform effective patient education.

Additionally, studies show that ongoing education for nurses is effective in increasing knowledge and confidence in teaching with patients. However, most research has focused on the mothers' perspective of difficulties in initiating and continuing breastfeeding, particularly during the first six months. Conversely, this study aims to address the problem prior to the mother-baby breastfeeding interaction. The competence and confidence of nurses in the clinical setting must first increase in order to educate mothers on basic breastfeeding methods, common problems, and their resolutions. If the issue of non-satisfactory breastfeeding rates is traced to its root, one can see a lack of confidence in mothers to continue breastfeeding once they encounter any uncertainties or obstacles. Women often discontinue breastfeeding because they are not adequately taught how to address these common breastfeeding challenges in real situations (Wood et al., 2016). Nurses can empower these mothers with helpful information. In order for nurses to do this well, they must be competent and confident enough to teach.

Concerning the various approaches of breastfeeding education to healthcare staff, there is a gap in the literature on the most effective method (Gavine, 2017). Options include a one-time session, a series of meetings, online educational videos, practical sessions, or organized courses to teach breastfeeding education to health care staff. The method of choice in this study was a concise one time face-to-face training period to provide quality teaching.

One study by Wood et al. (2016) reported that despite efforts to increase breastfeeding adherence in the first six months, through efforts such as "Baby Friendly Hospitals", success rates

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have been less than satisfactory. It concluded that in order to change the breastfeeding rates, mothers must first understand infant behavior and reactions to breastfeeding attempts and how to respond appropriately. Wood's concept was incorporated into the educational session with participating nurses so that they can, in turn, teach mothers, creating a chain of confidence and competence.

In a qualitative study by Garner (2016), health professionals were interviewed regarding personal experiences in breastfeeding education with women. Their findings exposed a lack of coordination among health care staff regarding not only who performed the education, but when, and what exactly was communicated. Consequently, women received varying forms of information with varying levels of reliability and thoroughness. Taking Garner's discovery into account, one goal of the educational session is to bring participating staff to a standardized level of breastfeeding knowledge, encouraging consistency and accountability within the clinics.

Studies have shown that attitudes of health professionals' and their support for breastfeeding positively effects mothers' breastfeeding rates. In a study by Ekström (2015), health professionals, including midwives and pediatric nurses, were put into either: an intervention group with a process training focused on EBP in breastfeeding, parenting, group discussion, and personal beliefs reflection, or a control group without this training. Mothers then interacted with these health professionals not knowing which group they were in. The study's conclusion showed many positive results for mothers paired with the intervention group, concluding that the nurses' additional education and training did indeed positively affect the mothers breastfeeding confidence, problem-solving, and success rates (Ekström, 2015).

Methods

Overview

This study was performed after receiving approval from the University of Arkansas Institutional Review Board. We received a letter of support from the participating NWA clinic.

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Participants also signed an informed consent before beginning the pre-survey.

Design

The design of this study is experimental through pre and post-testing to determine the effect of the interventional breastfeeding education session with NWA clinic nurses. Originally, we proposed an online Medela module to use as the training tool but were unable to receive permission prior to the implementation date. An hour long presentation, based on current evidence-based breastfeeding education principles, was utilized during a face-to-face session with the nurses during their lunch break at the clinic. The educational session consisted of a power point presentation by a certified lactation consultant to improve their knowledge and confidence in teaching breastfeeding to mothers. The pre-survey was given immediately at the beginning of the session. The breastfeeding information within the power point encompasses basic evidence-based nursing interventions including how to tell if a baby has latched, how to know when a baby has had enough to eat, body positioning conducive to successful breastfeeding, and common breastfeeding barriers. It also reviewed the pathophysiology of how milk is made in the mother (lactogenesis), contrasted the benefits of breast milk versus formula in infants, identified breastfeeding myths, and covered contraindications of breastfeeding. The post-survey was implemented to evaluate the nurses' breastfeeding assessment knowledge and confidence in managing breastfeeding education.

Study Population

The population was a convenience sample of all clinic nurses in Northwest Arkansas ambulatory care clinic for children. Eleven nurses participated, with nine completing both pre-survey and the post-survey.

Study Procedures

The pre and post-surveys were adapted versions of the Australian Breastfeeding Knowledge and Attitude Questionnaire Survey used with permission from Dr. Wendy Brodribb (Brodribb, 2008).

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The pre-survey contained eighty questions and the post-survey eighty-one, with an added question asking if the participant completed the encouraged Medela online module. The survey took approximately fifteen minutes to complete. We grouped the questions into three categories for data analysis: attitude toward healthcare provider involvement (7 questions), attitude toward breastfeeding (20 questions), and knowledge about breastfeeding (42 questions). Attitude toward healthcare provider involvement included questions such as whether the participant thinks nurses have an important role in supporting breastfeeding women, opinion on male versus female nurses assisting breastfeeding mothers, when and if nurses should discuss breastfeeding with the expectant mother, and if personal experience with breastfeeding is necessary on the part of the nurse. All responses to questions in this category as well as attitude toward breastfeeding were on a 5-point Likert scale – strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. Some also had a “don’t know” option. Certain questions were reverse coded to make all higher scores reflect a positive attitude toward breastfeeding. There were also five demographic questions asking the participant’s gender, whether they were breastfed by their mother, if they have children, and, if so, if they breastfed them and for how long.

Through the online collection of pre and post-survey responses, all participant information was de-identified. Only aggregate data was analyzed.

Timeline

Pre-surveys and the educational session at the local clinic with participating nurses occurred on November 8, 2017. All post-surveys were received by November 21, 2017.

Statistical Analysis

Eleven pre-surveys and nine post-surveys were analyzed using Statistical Package for the Social Science (SPSS) and converted into meaningful data. An independent T-test was utilized to compare pre-intervention to post-intervention data. A dependent T-test could not be utilized due to

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the lack of connection between each participant's pre and post-surveys. Questions on the survey were divided into three scales: Healthcare Provider Involvement, Attitude Toward Breastfeeding, and Knowledge About Breastfeeding.

Descriptive Statistics

Included at the end of the survey were several demographic questions as well as questions to understand the participants' history with breastfeeding. The population of nurses were all female. Of the eleven that took the pre-survey, five were breastfed by their own mothers. Seven have their own children and all breastfed for varying periods of time. However, only three reported breastfeeding for at least six months, the minimum time recommended by TJC, AAP, WHO, Healthy People 2020, and the Academy of Breastfeeding Medicine Board of Directors.

Results

Unfortunately, there was no significant difference between pre and post groups in Healthcare Provider Involvement ($t(18) = 0.65$, $p = 0.5267$) or in Attitude Toward Breastfeeding ($t(18) = 0.76$, $p = 0.4594$). However, there was a significant difference in Knowledge About Breastfeeding between the pre and post groups ($t(11.436) = 4.03$, $p = 0.0018$). The post group had a higher mean knowledge score ($M = 3.336$, $SD = 0.1612$) than the pre group ($M = 2.5048$, $SD = 0.6599$). This indicates that the breastfeeding education session was beneficial to teach nurses about appropriate methods of breastfeeding.

Attitude toward Breastfeeding Statement	Pre-survey group correct	Post-survey group correct
Breast milk is the ideal food for babies.	9 of 11 (one SD and one NA/D)	9 of 9 agree
Current infant formulas are nutritionally equivalent to breastmilk.	6/11 (4 NA/D and one agree)	7/9 disagree (2 NA/D)
Breast milk is the ideal food for babies.	9/11 (1 SD & 1 NA/D)	9/9 agree
Mothers who smoke should formula feed their babies.	6/11 (5 NA/D)	9/9 disagree

Answer choices were Strongly Agree (SA), Agree, Neither agree nor disagree (NA/D),

Disagree, and Strongly Disagree.

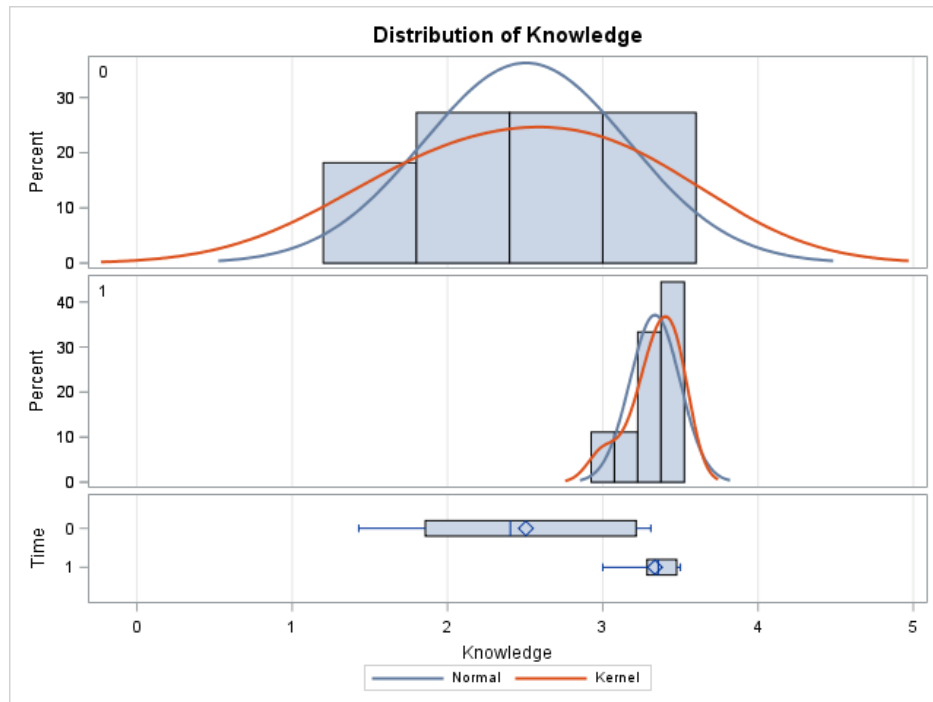


Figure 1 The responses to the breastfeeding knowledge questions were scored on a Likert scale rather than simply “right” or “wrong”. In Figure 1 we see that responses are more condensed at a higher score range in the post-survey group (1) compared to the pre-survey group (0), indicating of the group’s increased knowledge after the educational session.

Discussion

This pilot study adds to current research because it evaluates the effectiveness of an in-person educational session on knowledge and confidence in breastfeeding education of clinic nurses. Because this research intercepts the problem of low breastfeeding rates at its root: the previous lack of emphasis on healthcare staff education, it could impact local availability and quality of breastfeeding assistance by clinic nurses. With positive results showing an increase in breastfeeding knowledge, the expected trajectory of progress would include a better-educated group of mothers who receive care from the nurses in the study’s population. These empowered mothers will know how to breastfeed effectively because the nurses knew first, therefore increasing breastfeeding rates.

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Our research adds to the literature supporting the value and benefit of ongoing nursing education and relating policies, apart from breastfeeding alone.

Limitations

The first limitation was the small sample size. It was difficult to have enough nurses agree to participate. The lack of participants may contribute to the lack of significant results. Additionally, two participants did not complete the post-survey despite encouragement from the clinic administration. Due to the small sample size, results cannot be generalized.

Another limitation was our inability to enforce completion of the Medela breastfeeding module outside of our clinic visit for additional breastfeeding education and training. Five of the nine post-survey participants reported that they did complete the Medela module. The online module we initially intended to use we were unable to get permission for before the clinic visit with the participants. Instead, we used one geared toward students instead of licensed nurses.

Lastly, our inability to see if knowledge and confidence increased on an individual basis limited the study's results. Because data was collected only in aggregate, no direct comparison can be made on each individual nurse response. This increases chances of a type II error, meaning we are less likely to find significance from the data when significance should be found.

Conclusion

The findings of this study show that a breastfeeding education session can at least increase breastfeeding knowledge in nurses. If the sample size had been larger, it is possible more significant results would be seen in the healthcare provider involvement and attitude toward breastfeeding categories. Based on this study, the education module did not improve nurses' attitude or promote healthcare involvement in breastfeeding education.

If this study were to be repeated, we would expand it to multiple clinics to enlarge the sample size. We would also aim to use a more interactive presentation as opposed to a PowerPoint slideshow and lecture. Having more incentive than continuing education hours for the nurses would likely

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encourage more nurses to participate. Lastly, instead of using aggregate data, a comparison needs to be done of each participant to more closely and accurately track changes in attitude and knowledge.

Moving forward, anticipated results from future studies similar to this one could affect clinic practice and policy concerning ongoing breastfeeding education among nurses. Researchers might also look at policy analysis in nursing management affecting nurse education or the difference in new mother versus multiparous mothers in receptivity to nurse teaching. Mothers and their babies will ultimately benefit from the preparedness and ability of better-educated nurses.

This study is important to examine the positive effects an increase in nurse breastfeeding education can have on breastfeeding initiation, exclusivity, and confidence in mothers. The goal of the educational session was to be a thorough and reliable source of breastfeeding knowledge to increase preparedness in nurses, enabling them to confidently teach mothers. Nurses have the potential to be the bridge between a frustrated mother and her successful breastfeeding experience, leading to a healthier mother-baby population. In order to bring change, mothers need proper resources to guide and encourage them in the process of breastfeeding.

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