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Combining Breastfeeding and Employment: The Salient Beliefs of Nurses Working Shift Work in a Hospital

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Abstract

Background: The return to work is often a problematic time for breastfeeding mothers. Registered nurses (RN) working shift work in an acute care facility, often struggle to maintain a balance between employment obligations and maternal desire. This study identifies the salient beliefs of RNs to maintain lactation, upon return to work after maternity leave, using the Theory of Planned Behavior as the theoretical framework.

Methods: Interviews were conducted with 17 registered nurses using a semi-structured question-set aimed at identifying the behavioral, normative, and control beliefs related to combining employment and breastfeeding for at least six months after return to work. Breastfeeding normative, behavioral, and control beliefs were assessed and categorized.

Results: Breastfeeding is believed to be beneficial, yet requires a lot of planning, time, and effort for the RN at work. Registered nurses struggled with balancing their responsibilities at work with their maternal duties. This role-conflict was evident as feelings of guilt, worry, anxiety, and stress emerged during the interviews. Lactating RNs require a supportive environment with sufficient staffing to ensure patient care, desirable pumping location, and ample break time.

Conclusion: The beliefs identified by this study can potentially facilitate the RN's ability to continue lactation upon return to work. Future interventions in this population could be aimed at creating supportive breastfeeding environments, providing convenient pumping locations, and ensuring adequate time for lactation maintenance.

Keywords

Breastfeeding, Lactation, employment, Registered nurses (RNs), Rhift work, Theory of Planned Behavior

Well Established

Most RNs understand the benefits of breastfeeding; however, many variables create difficulty to maintaining lactation once the nurse returns to work. Personal beliefs are direct contributors of the intention to perform a certain behavior and eventual behavioral action.

Newly Expressed

The maternal/nurse role-conflict is a powerful factor in a RNs ability to maintain lactation upon return to work; balancing patient needs with motherly responsibilities can be problematic. Successful lactation depends on personal conviction, perceived support, and the ability to pump at work.

Combining Breastfeeding and Employment: The Salient Beliefs of Nurses Working Shift Work in a Hospital

Background

Combining breastfeeding and employment has been a struggle for mothers for many years [1-5]. Working mothers are pressed to find a balance between employment responsibilities and the duties of motherhood [6]. Until recent legislation, the Patient Protection and Affordable Care Act of 2010, there were essentially no federal regulations to protect a woman's breastfeeding rights; even the latest legislation is far from inclusive toward the protection of a woman's liberty to maintain lactation once she returns to work [1]. In 2011, United States (U.S.) Surgeon General Regina M. Benjamin put forth *The Surgeon General's Call to Action to Support Breastfeeding*, a compilation of efforts between multiple governmental agencies that encouraged a community-wide approach, toward the support of breastfeeding [7]. One recommendation, under the employment category is for employers to "establish and maintain comprehensive, high-quality lactation support programs for their employees" (Lowe, p. 388t) [7], which may offer breastfeeding mothers the additional support needed to maintain lactation after returning to work. But, what are the determinants for women to maintain lactation after they return to work?

Breastfeeding Benefits

Human milk is considered the optimal infant nutrition source for a variety of health-related, economical, and environmental reasons [8]. There is overwhelming evidence that ingestion of human milk improves cognitive development and decreases the incidences of infectious diseases, sudden infant death syndrome, diabetes, some childhood cancers, overweight, and obesity which the AAP has endorsed. In addition, evidence indicates a decreased risk for

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developing ulcerative colitis, Crohn's disease, high cholesterol, and hypertension over the lifespan of human milk-fed infants (Association of Women's Health, Obstetric and Neonatal Nurses [9].

Breastfeeding offers specific benefits not only for the infant, but also for the mother and society as a whole [1,6,8]. For the mother, the benefits from breastfeeding are not as clearly delineated as those for the infant, as significant research findings are not easily quantified; nonetheless, a decreased incidence of breast and some reproductive cancers, type 2 diabetes, cardiovascular disease, post-partum depression, long-term obesity, and rheumatoid arthritis are potential advantages [8-10]. Some immediate benefits to the mother include a swifter uterine involution following birth and decreased blood loss, both effects of the increased uterine contractions resultant from amplified oxytocin levels as the hormonal response to breastfeeding (AAP) [8]. Societal benefits are even more difficult to quantify, however, decreased public and private health care expenditures, reduced work and school related absenteeism, and lessened environmental resource usage point to breastfeeding as having probable causation [8,9,11].

Breastfeeding Goals

The literature supports that breastfeeding enhances the wellbeing for both the infant and the mother [8,9,11]. Though reports show some trending improvement, unfortunately the rates of breastfeeding initiation and duration in the U. S. continue to fall below the *Healthy People 2020* national recommendations [12,13]. The *Breastfeeding Report Card—United States, 2012* show that as a nation, we have failed to reach the breastfeeding recommendations at initiation, duration, and exclusivity [12]. In order to attain these breastfeeding goals, we must make significant strides in the promotion of breastfeeding.

Breastfeeding in the healthcare workplace

Research has previously explored women in general, employed women as a group, women of lower socio-economic status, or nurses in other countries to potentially identify and quantify the variables affecting breastfeeding initiation and duration [3,4,14]. Traditionally, women comprise a majority of the healthcare workforce, and the overall employment rates of women have increased significantly over the past 30 years. In 2010, almost 60% of women contributed to the workforce, with over 2.8 million employed as registered nurses [15], many of them in hospitals. The large population of women in their childbearing years working as hourly hospital employees signifies that maintaining lactation at work is a significant issue for this group. While most RNs understand the benefits of breastfeeding, many variables pose difficulty to maintaining lactation once a nurse returns to work or prepares to return to work from maternity leave. The unique variables that RNs face when they return to work as hourly employees in acute care hospitals warrants a deeper understanding of the beliefs and convictions important to breastfeeding decisions (salient beliefs). Before an intervention can be developed to improve breastfeeding intention upon return to work, the salient beliefs must be elucidated.

Objectives

The purpose of this study was to discover the salient breastfeeding beliefs of hourly acute care nurses upon return to work. The question driving the research was: "What are the salient beliefs of RNs who work shift work in a hospital related to breastfeeding continuation (for at least six months) after the return to work from maternity leave? The answers to the research question will provide the groundwork from which future intervention studies can be developed.

Methods

Design

The research design was a quasi-qualitative descriptive study; used to elicit the salient beliefs of hourly nurses, working shift work, in an acute care facility related to breastfeeding continuation after return to work. Based on the theoretical premises of Icek Ajzen's Theory of Planned Behavior [16], the descriptive nature of this study will "…facilitate an understanding of a human experience as a whole through in-depth engagement with study participants…" [17].

Theoretical framework

The TPB encompasses "the idea that behavioral performance is determined jointly by motivation (intention) and ability (behavioral control)" [18]. Ajzen reports that the indirect measures of the theory are specific to the population studied, must be elicited from the population, and are not transitory to all groups in general [16]. Therefore, to understand the beliefs of women who wish to maintain lactation upon return to work, the indirect measures of behavioral beliefs, normative beliefs, and control beliefs must be elicited from the women themselves [19]. Behavioral beliefs encompass the positive and negative thoughts regarding the consequences of a behavior and influence the attitude regarding the behavior. Normative beliefs focus on the credence of social referents and result in the perceived subjective norms. The opinions of the partner, family members, friends, co-workers, and society as a whole all contribute to a person's perception of a behavior. The supposed ability to enact a certain behavior and the barriers and facilitators to achieving the action contribute to the control beliefs (Ajzen). See Figure 1 for a schematic diagram of the model.

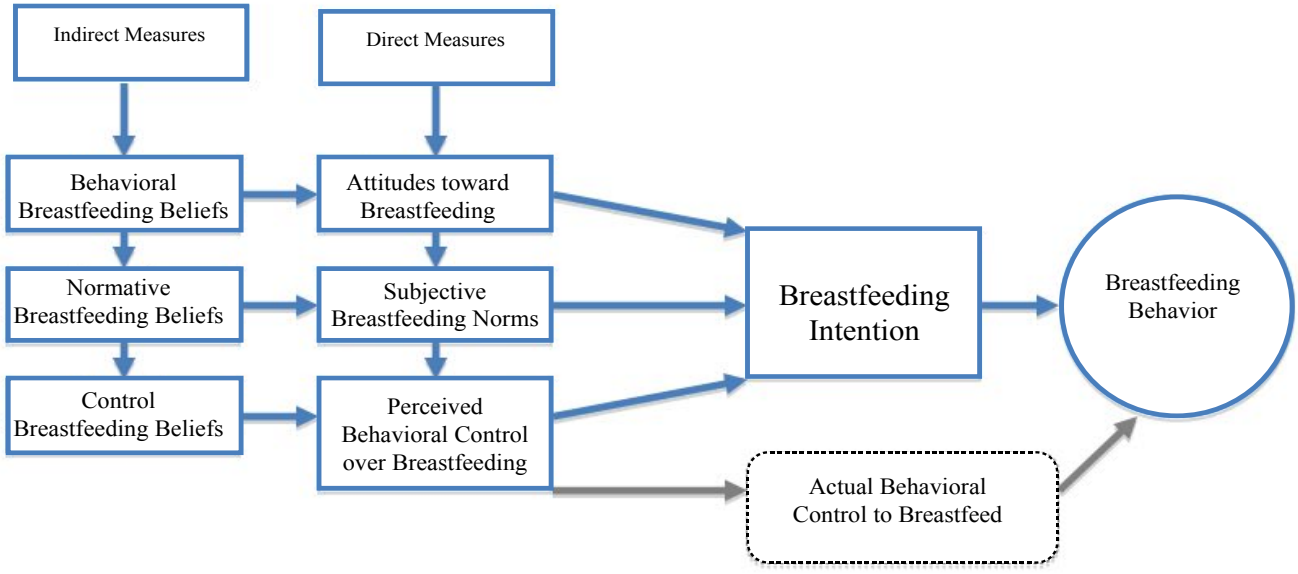

Figure 1: Theory of planned behavior in regards to breastfeeding (adapted from Ajzen, 2006).

Table 1: Questions asked during elicitation interviews, derived from Ajzen's TPB questionnaire construction for eliciting salient beliefs [16].

Behavioral Outcomes
1. What do you see as the **advantages** of breastfeeding your infant, following your return to work from leave, for at least six months?
2. What do you see as the **disadvantages** of breastfeeding your infant, following your return to work from leave, for at least six months?
3. What else comes to mind when you think of breastfeeding your infant, following your return to work from leave, for at least six months?
Normative Referents[a]
1. Please name the individuals of groups who would **approve** of think you **should** breastfeed your infant, following your return to work from leave, for at least six months.
2. Please name the individuals or groups who would **disapprove** of think you **should not** breastfeed your infant, following your return to work from leave, for at least six months.
3. Sometimes, when we are not sure what to do, we look to see what others are doing. Please name the individuals or groups that would be **most likely** to breastfeed their infants after returning to work from leave, for at least six months.
4. Please name the individuals or groups that would be **least likely** to breastfeed their infants after returning to work from leave, for at least six months.
Control Factors
1. Please name any circumstances or factors that would make it **easy** or **enable** you to breastfeed your infant, following your return to work from maternity leave, for at least six months.
2. Please name any circumstances or factors that would make it **difficult** or **prevent** you from breastfeeding your infant, following your return to work from maternity leave, for at least six months.
Concluding Question
Is there anything else that you would like to add on the topic?
[a]Participants were read the following statement prior to being asked the Normative Referent questions: For the next group of questions I will ask about individuals or groups who may or may not support breastfeeding. I do not intend for you to tell me the person's actual name, just his or her relationship or role to you; for example, mother, spouse, friend.

Sample/Inclusion/Exclusion Criteria

The sample of participants included hourly RNs, ages 18 and older that either worked at Our Lady of the Lake Regional Medical Center (OLOLRMC) or were graduate students at Southeastern Louisiana University (SLU). Only hourly employees were included in this study to eliminate RNs who may have special accommodations that come with a salaried position. The participants all work a minimum of 36 hours per pay period. Sampling continued until saturation was achieved.

Sampling procedure

RNs were recruited to participate in this study through the use of a colorful flyer placed in the unit break rooms of the hospital and/or by an email sent to practicing nurses at a major medical center. They were instructed to notify the principal investigator or sub-investigator if they would like to participate in the study. The researcher made individual appointments and interviewed each participant in a private room to maintain confidentiality. All of the participants were practicing nurses in a major medical center, two of which were also graduate students.

Instrumentation/Interview questions

Inherent to the TPB, beliefs are specific to the population from which they are derived with the interview questions being developed using the TPB core principles of: *target* (Hourly RNs), *action* (Continuation of lactation after the RN returns to work), *context* (acute care hospital) and *time* (six months) [20] (Table 1). As directed by the theorist, items were developed to elicit the salient beliefs of nurses who sought to maintain lactation after their returned to work. Each item was written by the lead researcher and reviewed by a TPB expert to maintain content validity.

Study procedures

The elicitation interviews of hourly RNs were audiotaped, conducted in a private room and lasted no more than 10 minutes each. The lead author later transcribed the sessions of each interview verbatim. The lead researcher as well as the sub-investigators evaluated each transcript, coded them individually, and then triangulated their individual findings to obtain thematic consensus. Based on the coded consensus, the salient beliefs from each interview were categorized into the three theoretical categories: behavioral outcomes, normative referents, and control factors [16]. The data was further subdivided within each category to identify the inherent salient beliefs. In congruence with the theorist's recommendations, items were deemed salient when mentioned by at least 20% of the participants [21].

Table 2: Salient breastfeeding behavioral, breastfeeding normative, and breastfeeding control beliefs

	Frequency[a] (N = 17)	Responses (%)
Behavioral Breastfeeding Beliefs		
Advantages		
Bonding/Connection to baby	8	47
Benefits to baby	7	41
Immune benefits	7	41
Health benefits	6	35
Nutritional benefits	6	35
Maternal benefits	4	24
Disadvantages		
Balancing Nurse/Maternal Role	10	59
Inconvenience	9	53
Time consuming	9	53
Increased effort	7	41
Scheduling time to pump at work	7	41
Matching feeding/pumping schedule	4	24
Pumping frequency during shift	4	24
Infrequent pumping→decreased supply	4	24
Increased workload for coworkers	4	24
Normative Breastfeeding Beliefs		
Approval		
Husband/Spouse	13	76
Friends	9	53
Mother	8	47
Other Family	8	47
Co-workers/Other Nurses	7	41
Parents	5	29
Management	4	24
Disapproval		
Co-workers/Other Nurses	9	53
"No one"	6	35
Management	4	24
Breastfeeding Control Beliefs		
Facilitators		
Designated pumping location	13	76
Private room	7	41
Feeling Supported	7	41
Allotted break time	6	35
Nurse to watch patients	5	29
Location convenient/close to unit	4	24
Barriers		
Inadequate break time	10	59
Not having an acceptable pumping location	9	53
Guilt/Role-conflict	7	41
Lack of support	5	29
No place to store breast milk	4	24
[a]Frequency is the number of RNs who stated the recorded belief.		

Ethical Considerations

This study was approved by Southeastern Louisiana University's Institutional Review Board and was conducted according to the ethical standards set forth by the institution. Participation was completely voluntary and consent forms were obtained prior to conducting the interviews. Confidentiality was maintained by removing any names mentioned during the interviews for the transcription records and

identifying records were destroyed following the conclusion of the study.

Results

A final sample of 17 RNs participated in the elicitation interviews. Following a scrupulous analysis of the data, four major themes emerged (1) benefits of breastfeeding; (2) maternal/nurse role-conflict; (3) time/effort associated with maintaining lactation at work; and (4) ability to pump at work. Table 2 exhibits the salient breastfeeding behavioral, normative, and control beliefs in their entirety.

Benefits of breastfeeding

"Bonding with infant" or "connection to baby" was the most commonly reported benefit of breastfeeding; being mentioned by 47% of participants. Respondents saw the ability to maintain the maternal/infant relationship through breastfeeding, after they went back to work, as advantageous. One participant stated "It's a continued bonding, I think, with the baby, whenever you have to go back to work and then you're able to come back home and breastfeed, it just allows a little continued bonding and nurturing…". The general "benefits to the baby" and "better immunity or antibodies" garnered equal weight amongst participants at 41%. "Health benefits" and "nutritional benefits" also received equivalent responses from 35% of the RNs. Women used words and phrases such as "natural," "organic," "human milk for a human baby," and "good for them" when speaking of breastfeeding. Lastly "maternal benefits" were asserted by 24% of participants, encompassing both the physical and mental aspects of maternal health.

Maternal/Nurse role-conflict

It became evident during the interview process that RNs struggle with combining their roles as nurse and mother. Ten of the 17 participants touched on this maternal/nurse role-conflict (59%), one of the most frequent responses. At work, the RN assumes utmost responsibility for her patients and nursing duties, often displacing her personal needs. Yet, her maternal requirements to provide milk for her infant require the RN to balance this triad (nurse-infant-patient). Feelings of "guilt", "stress", and "anxiety" emerged from some nurses as they discussed their struggles of maintaining lactation through difficult circumstances. When asked "what else comes to your mind when you think of breastfeeding your infant…" one RN responded

I guess try…the stress of trying to juggle it all. Trying to be a good mother, provide her the best nutrition; and also being a good employee at work and taking your time with your patients at work, and also trying to find the time to pump and balance all that out… just, uh, busy and stressful.

Another participant spoke of the difficulty of combining women's desires of economic independence with her new role as a mother stating

…All these women have kinda entered into bein independent and havin these jobs that require, you know, so many hours and you know, your obligations at work are kind of in the front of your mind, cause that's the way that I am now, work is very important when I'm here I like to be focused and I'm afraid that, that thinking about an infant at home (deep breath), and breastfeeding at work, and taking care of patients is a lot on a new mom's mind.

For some nurses, the disadvantages associated with pumping at work outweighed the advantages of breastfeeding and RNs rationalized the choice to discontinue breastfeeding through such statements as "to me it's not a good, I mean good, it's good to breastfeed, but it's just not worth it to me…to pump at work…its just too complicated," and "it's just a big hassle".

Time and effort associated with maintaining lactation at work

The majority of the disadvantages to combining breastfeeding and employment were in regards to the time and effort related to pumping at work, and all of the variables that contribute to the practice. Maintaining lactation at work was noted for being "inconvenient" and "time consuming" by 53% of respondents, respectively. The "increased effort" associated with having to pump at work and "scheduling time to pump at work" were deterrents for 41% of the RNs. Though the process was termed "labor intensive", "hard to do", "challenging", "a struggle" and "a lot of work" many participants felt the benefits would outweigh the difficulties. Accounts of "good memories/experience," "glad I did it," "definitely worth it," "importance," "enjoy breastfeeding," and "can't imagine it any other way" were revealed.

Trying to "match the pumping schedule with feeding schedule," the "pumping frequency during each shift," and "increased workload for coworkers;" all were stated by 4 of the 17 (24%) participants as disadvantages to the practice. One RN spoke of the fact that co-workers must assume additional responsibilities for someone else to pump at work

…You having another obligation…that doesn't always, uh, fall at convenient times and so those groups of people, I could see where, ok, 'if you were gonna be a stay at home mom and breastfeed then why didn't you just plan to be a stay at home mom and breastfeed and not come back'…and although understanding…I wouldn't say that they would definitely be like 'yes, absolutely, go for it, we would support you 100 percent,' because it's not, it's not convenient for anybody.

Trying to schedule one's own time to pump and not having a designated pumping schedule dissuaded RNs, as one recounted

…If you had a designated time where you could leave your assignment to go do it, and they had somebody covering your assignment while you were doing it, so when you come back you're not like, you got all kinds of stuff left to do, that would make it a lot easier for someone to breastfeed…if I go leave for 30 minutes to pump, nobody's watching my patients…and then when I come back there's, everything's a mess, cause nobody was watching my people…

While the time and efforts related to pumping at work were mostly seen as disadvantageous, on the flip side, having "allotted break time" and the presence of another "nurse to watch your patients" were facilitators of breastfeeding at work, being noted by 35% and 29%, respectively. When discussing circumstances that would enable one to breastfeed one RN attributed a work environment that "allots the space and time…" and has "…enough people to cover you…" as facilitators.

Ability to pump at work

The capability to pump at work hinged a lot on the RN's support system. Seventy-six percent of respondents credited their "husband/spouse" as approving of the practice. The support systems also consisted of "friends" (53%), "mother" (47%), "other family" (47%), "coworkers/other nurses" (41%), "parents" (29%), and "management" (24%). "Feeling supported" whether by the facility, co-workers, or management, or having a strong support system appeared from 41% as well as having "no one" (35%) who would disapprove were perceived to be supportive of breastfeeding behaviors.

Having a "designated pumping location" was important to nearly all (13 of 17) of the study participants, and ranked as the most salient facilitator of combining breastfeeding and employment. It was specified that the space should be a "private room" (41%), in a "location convenient/close to unit" (24%). When asked about factors or circumstances that would make it easy to continue breastfeeding, after returning to work, one RN said

A secure, private, identified space, at wherever you're working, you know, kind of off to the side, quiet, low lit, where you can get a key and just go, um, I think that you don't wanna go sit in the bathroom, you know…

Conversely, a "lack of support" (29%) created by unaccommodating "co-workers/other nurses" (53%) or "management" (24%) who

demonstrated disapproval impacted the nurses' beliefs. "Inadequate break time" (59%), "not having an acceptable location" (53%), "no place to store breast milk" (24%), and "infrequent pumping leading to decreased supply" (24%) were the remaining barriers to maintaining lactation at work.

Discussion

This study sought to identify the salient breastfeeding behavioral, normative, and control beliefs of hourly paid hospital RNs in regards to combining lactation and employment. Although the return to work has been described as problematic, the fact that many RNs must return to their jobs in the hospital and still desire to breastfeed their infants or provide breast milk for their infants necessitated the exploration of continued lactation.

The behavioral belief of "help me bond with baby" was identified by 68% of respondents in Bai et al.'s study and was the most salient behavioral response in that study, as well as in this study [5]. Crediting breastfeeding with "building baby's immunity" and "providing good nutrition" were also congruent with the results of this study [5]. The broad health benefits of breastfeeding for the infant and mother also serve as a motivating factor to continue lactation upon return to work [22,23].

The findings of this study are congruent with previous research in that merging the roles of breastfeeding mom and staff RN is often complicated [6,24]. The conflict between work and lactation supports the findings of Chao-Hua [24], thereby creating role overload (Stewart-Glenn) [6]. RNs are forced to balance their patient loads with their personal needs to express milk multiple times each shift. This process requires not only an acute mental ability to multi-task, but also an emotional strength to resist being overwhelmed at the enormity of the daily demands. This role-conflict was evident in both the behavioral and control belief systems.

Individuals or groups who would approve of the continuation of breastfeeding included; "husband or spouse," "friends," "mother," "other family," "co-workers/other nurses," "parents," and "management" as integral participants in the RNs support system. Social or normative referents are thought to affect one's intention and ability to successfully breastfeed [3,14]. The response that "no one" would disapprove alludes to the fact that the respondent has such a strong support system that disapproval is either not recognized or overpowered by the positive influences. The perception of a supportive work environment further support the benefit of a corporate lactation program [2].

For the breastfeeding control beliefs, the recurrent facilitators were "designated location," that is "private," and "convenient/close to unit." Those concepts were echoed by Chau-Hua et al. [24]. Having "allotted break time" and "privacy" demonstrated salience in this study and were also integral aspects of a workplace lactation program as described by Angeletti [25]. Multiple nurses mentioned the presence of a "lactation room," however the distance from the RN's unit, or the lack of privacy in the room caused RNs to use the unit break room or bathroom for pumping. A "lack of support," "inadequate break time," no place to pump and/or store breast milk, and the guilt associated with leaving the infant to return to work were all barriers to combining breastfeeding and employment for RNs. In other research, the structural variable of workplace flexibility (Angeletti) [25] and the participant's personal conviction were both predictive indicators of breastfeeding success [26].

Results from this study can be used to develop lactation programs to support lactating mothers in their return to the nursing workforce. By promoting the facilitators and minimizing the barriers, more RNs may be able to attain their personal breastfeeding goals. Educating all hospital staff on the importance of breastfeeding may facilitate a more supportive working environment. Providing scheduled break time and adequate staffing to accommodate the RN's absence during pumping will also less the burden on the lactating RN. Ensuring all RNs have access to a designated lactation room, in close proximity to the unit where they work could offer multiple advantages. The pumping process will be more convenient and the time the nurse must be away from the unit for each session will be decreased, thus, lessening the guilt associated with being off the unit.

Limitations

Participation for this study was strictly voluntary, and therefore, the majority of the respondents that volunteered to participate supported breastfeeding. Most participants described an overall positive experience of combining breastfeeding and employment. Thus, it is possible that the barriers, disadvantages, and negative aspects of breastfeeding were underrepresented.

By asking structured questions in regards to combining breastfeeding and employment over at least six months, some ideas or opinions may have not been addressed, as a more open format would have been more lenient. Also, the data reached saturation prior to a "second call" for participants. If potential participants were holding back, assuming study participation would be sufficient, their opinions were left out.

Conclusion

This study used an elicitation question-set to discover the salient breastfeeding beliefs of 17 acute care RNs. These RNs revealed the advantages, disadvantages, facilitators, and barriers to sustaining lactation at work. The benefits of breastfeeding and the perception of a good support system both inside and outside of the workplace positively influenced RNs to breastfeed for at least six months. The time and effort that accompanies pumping at work, whether not having time to take a break or not having coverage your patients; and the perceived inability to pump at work, encompassing inadequate pumping/storing arrangements and a lack of support, determines whether the nurses continues lactation or not. The salient beliefs elicited from this study could be used in the future development of an instrument designed to predict breastfeeding intention and duration among lactating nurses and furthermore for the development of interventions aimed at increasing RNs' ability to combine breastfeeding and employment.

Declaration of Conflict of Interest

The authors declare there is no conflict of interest in regards to the research or publication.

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