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The Impact a Nurse's Work Environment has on Breastfeeding

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The Impact a Nurse's Work Environment has on Breastfeeding

by

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Abstract

Breastfeeding is a global health initiative, as defined by the World Health Organization (WHO), because of its numerous health benefits to mothers and infants. Despite breast milk's documented benefits to mothers and babies, many women are not choosing to breastfeed their infants. A lack of paid maternity leave policy within the United States influences postpartum responsibilities, physically, and psychologically. This paper presents nurses' responses to the Workplace Breastfeeding Support Scale survey regarding their workplace environment support of breastfeeding. Nurses providing direct patient care for more than 50% of their shifts revealed 45.5% disagreed in some variance with their comfort in taking breaks to pump breast milk, 50% could not find a quiet place besides a bathroom to pump, 59.1% of facilities did not have a breast pump available for use, 18.2% did not have a source of refrigeration for breast milk, and 77.3% of facilities did not have an on-site daycare. Thus, nurses who were breastfeeding upon returning to work were not supported by their workplace environment.

Keywords: nurses, breastfeeding, work environment, support

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Table of Contents

List of Figures

List of Tables

CHAPTER I

Introduction

Infant nutrition should be considered a public health concern rather than a lifestyle choice (Tully & Ball, 2014; Valizadeh et al., 2017; AAP, 2012). The American Academy of Pediatrics (AAP) (2012) recommends infants be exclusively breastfed for the first six months of life and breastfed until they are at least one year old because of breast milk's nutritional and non-nutritional health benefits to children's growth and development as well as mothers' health and prevention of diseases. Breastfeeding provides infants with a nutrition source rich in vitamins, minerals, and antibodies to help strengthen their immune systems. Not only does breastfeeding provide infants with a nutrition source but also lowers infants' risk of Sudden Infant Death Syndrome (SIDS), asthma, obesity, diabetes mellitus I and II, enterocolitis, otitis media, respiratory tract infections, and leukemia by breastfeeding (AAP, 2012; Chuang et al., 2010). Furthermore, mothers who breastfeed experience a quicker reduction in the size of their uterus, and therefore, lowered risk of bleeding. Moreover, breastfeeding mothers have lowered risk of breast and uterine cancer as well as cardiovascular disease, hypertension, and hyperlipidemia (AAP, 2012). Because breastfeeding provides so many health benefits, one Healthy People 2020 objective desires 46.2% of infants be exclusively breastfed until three months and 25.5% until six months of age (Centers for Disease Control and Prevention, 2017).

Despite the documented benefits of breastfeeding, no standard maternity leave policy exists in the United States, leaving mothers returning to work at various time intervals, some as soon as three or four weeks and others as soon as 12 weeks postpartum

(Steurer, 2017). Nurses are no exception and return to work as other mothers in 12 weeks postpartum or less; yet, they encounter suboptimal working environments for breastfeeding including: 12 hours shifts, stress, various physical and psychological demands, limited and unpredictable break time, lack of peer support, and exposure to infectious diseases and biohazard materials.

Significance

If 90% of mothers exclusively breastfeed their infants for six months, more than 900 infant lives can be saved in the United States, according to the AAP (2012). Any consumed amount of breastfeeding reduces infant risk of contracting a deadly childhood disease, and the longer infants consume breast milk, the more protection they receive. Breastfeeding can not only improve public health and disease prevention but also the economy as annual estimates of $13 billion can be saved, if 90% of mothers exclusively breastfeed their infants for six months (AAP, 2012). This financial figure does not account for money saved from decreased absenteeism from work and deaths from childhood acquired diseases (AAP, 2012).

Compared with other economically developed countries, mothers in the United States return to work sooner than health care professionals recommend and sooner than breastfeeding habits are well established (Earle, Mokomane, & Heymann, 2011; Chuang et al., 2010). Both parents are employed in the majority of United States' households to provide necessities for their families (Earle et al., 2011). In 2011, the Bureau of Labor Statistics confirmed 70.9% of women with children less than 18 years old are working (Thomas-Jackson et al., 2016). Full-time employment in the United States is negatively associated with the initiation and duration of breastfeeding because mothers who intend

to return to work full-time report being less likely to exclusively breastfeed (Mandal, Roe, & Fein, 2010; Thomas-Jackson et al., 2016; Chuang et al., 2010).

Without adding the additional stressor and responsibility of breastfeeding, nurses returning to work encounter rigorous 13 hour or longer shifts, continuous movement and heavy lifting, collaboration of care for multiple patients among multiple disciplines, decreased staffing with increased expectations, and mandatory call and overtime shifts within their work environment (Unruh, Raffenaud, & Fottler, 2016; Han, Trinkoff, & Geiger-Brown, 2014). Nursing is a demanding profession in every humanistic aspect: physically, psychologically, emotionally, and spiritually (Unruh et al., 2016). Stress arises in nurses as they attempt to manage work and family responsibilities, especially if nurses have little support or assistance at home or work (Unruh et al., 2016; Valizadeh et al., 2017). Managing various commitments results in nurses not attaining an adequate amount of sleep with the average nurse sleeping only five hours prior to working a 12-hour shift (Han et al., 2014). Breastfeeding requires significant dedication, patience, and time commitment from a mother (Earle et al., 2011; Mirkovic, Perrine, & Scanlon, 2016). Sleep deprived nurses may choose not to pump breast milk and sleep instead, which may limit their breast milk production, and therefore, decrease their ability to breastfeed (Tully & Ball, 2014).

Many mothers stop breastfeeding soon after returning to work because they have little or no support from employers, co-workers, or family, insufficient time to pump, and inadequate breast milk storage at work (Bai, Peng, & Fly, 2008; Tsai, 2014). Initiation rates of breastfeeding are equivalent for stay-at-home mothers and those who work outside their homes; however, full time employed mothers who breastfeed their infants at

six months of age is 22.8% compared with stay at home mothers at 35.4% (Bai et al., 2008).

Problem Statement

Working environment, amount of support, family dynamics, and work-family responsibilities play a significant role in the duration nurses choose to breastfeed their infants (Earle et al., 2011; Chuang et al., 2010). Numerous infants and mothers do not experience the full health benefits of breastfeeding due to encountered barriers when nurses return to the workplace to help support their families (Chuang et al., 2010). It is imperative to research more about workplace barriers for hospital-based nurses to encourage and facilitate recommended breastfeeding practices to support optimal health to both mother and baby.

Purpose

Limited research has been performed to determine the impact returning to work has on nurses' duration of breastfeeding their infants until 12 months of age (Mirkovic, Perrine, Scanlon, & Grummer-Strawn, 2014; Valizadeh et al., 2017). The purpose of this MSN Thesis was to identify nursing encountered barriers to breastfeeding upon returning to work and explore methods to support hospital-based nurses to breastfeed their infant for the recommended 12 months of age.

Theoretical Framework

The middle-range theory developed by Afaf Meleis, Transitions Theory directed this study because it considers health and illness, organizational, developmental, and situational transitions individuals' experience (Meleis, Sawyer, Im, Messias, & Schumacher, 2000). Personal, societal, and/or communal factors influence one's ability

to transition (Meleis et al., 2000). The decision to breastfeed is influenced by personal beliefs as well as societal beliefs and the beliefs of mothers' support systems. According to Meleis et al. (2000) transitions involve awareness, engagement, change and difference, time spans, and critical points and events. Mothers who are nurses cope with multiple, complex transitions upon returning to work as they experience guilt for leaving their child, recognize the need to help provide for their families, and desire to fulfill their career goals. Understanding the barriers hospital-based nurses face when attempting to breastfeed will help enable mothers to experience a positive transition into their new role of mother and nurse.

Thesis Question

What workplace support and/or barriers to breastfeeding do nurses experience upon returning to work?

Definition of Terms

A barrier is defined as an obstacle that prevents one from completing a task or goal. Breastfeeding is defined as the expression of milk from a woman's breast(s), either from an infant's sucking, an electric breast pump, or by hand expression with the intention to nourish her child. A nurse in this research study is defined as a mother who has a licensed practical nurse license or registered nurse license, works in an acute care setting, and has a child who she breastfed or attempted to breastfeed for any length of time, while working in a hospital.

Breastfeeding is a natural, healthy method to nourish infants, strengthen their immune systems, and protect infants from childhood diseases. Nurses' working conditions hinder them from balancing work and family responsibilities, especially

breastfeeding, which is often stopped upon returning to work (Valizadeh et al., 2017). Despite evidence-based advantages of breastfeeding, nurses, who promote health and wellness, are ironically unable to promote their child's and their own health through the recommended duration of breastfeeding due to workplace barriers (Valizadeh et al., 2017).

CHAPTER II

Research-Based Evidence

Post-partum nurses returning to work in hospital-based facilities encounter atypical workplace accommodations, support, and environments than mothers in other occupations. Hospital-based facilities are composed of unique environments that encompass various physiological and psychological requirements, unpredictable shift hours and break times, tension and stress, limited co-worker support, and transmittable disease and biohazard material exposure. A mother's working environment, along with work and family support, largely determine the duration mothers choose to breastfeed their infants (Chuang et al., 2010). One Healthy People 2020 objective is to increase the percentage of mothers who exclusively breastfeed their infants for six months to 25.5% (CDC, 2017). Many infants and mothers forego breastfeeding's health benefits due to inadequate breastfeeding duration derived from lack of support (social, familial, and workplace), role conflicts, and workplace environment (Chuang et al., 2010). Currently, mothers in the United States exclusively breastfeed their infants for six months at a rate of 24.9%, indicating the need for further improvement (CDC, 2017).

Limited research has been performed to determine whether a nurse's work environment and support affect the duration nurses choose to breastfeed (Mirkovic et al., 2014; Valizadeh et al., 2017). The purpose of this MSN Thesis was to identify nurses' workplace support of breastfeeding upon returning to work and identify processes to support hospital-based nurses to breastfeed their infants for the recommended six to 12 months of age.

Review of Literature

The following databases were utilized to conduct this literature review: ProQuest, Cumulative Index of Nursing and Allied Health Literature (CINAHL) Complete, Science Direct, Sage Publications, British Library Document Supply Centre Inside Serials & Conference Proceedings, and Family & Society Studies Worldwide. Key search words included are breastfeeding, mothers, nurses, work environment, duration, support, and barriers. By searching these key identifiers, the themes of importance of breastfeeding to both infants and mothers as well as the barriers mothers encounter through lack of support, self-efficacy, work environment, and family dynamics were reviewed. The research articles utilized to conduct the literature review were scholarly, peer-reviewed, and ranged in publication from 2008 to 2018. Both national and international research studies were discovered within the literature, indicating breastfeeding is a global health concern.

Various workplace factors must be considered and negotiated as nurses return to work to accomplish their breastfeeding goals. A review of literature revealed breast milk's health benefits, impact of workplace and family support for breastfeeding, insufficient breastfeeding friendly facilities, nurses' challenging work environments, and nurses' role conflicts of pursuing their career while mothering. Few research studies in the United States have addressed workplace support and/or barriers nurses encounter when pursuing breastfeeding goals. Breastfeeding mothers in hospital-based environments have the capacity to generate optimal health benefits to future generations with sufficient family and workplace support as they transition into new roles.

Meleis' Transition Theory Applied to Breastfeeding

Meleis' Transition Theory provided the theoretical framework for this research study as mothers learn to juggle and maintain multiple roles by transitioning from an employee to a mother to an employed mother. Meleis et al. (2000) middle range Transition Theory is multifaceted and considers health and wellness as well as situational, developmental, and organizational changes individuals' experience. Working, breastfeeding mothers experience numerous changes and manage various responsibilities as they transition into their new roles of working mothers. Personal, societal, and/or communal factors influence one's ability to transition into healthy breastfeeding habits (Meleis et al., 2000). Mothers who are nurses encounter different views of their work environment upon transitioning back to work. Time, stress, support, and associated medical risks may never have been considered important prior to breastfeeding and may have a major impact on a mother's ability to breastfeed and pump in her work environment. Hard work and dedication to expressing breast milk at home could be negated in a poor work environment, if a mother does not recognize and allow herself to transition into her new responsibilities and multiple roles.

Breastfeeding benefits. Recommendations for duration of breastfeeding have varied over time with the development and advancement of infant formula. To date the AAP (2012) and World Health Organization (WHO) endorse exclusive breastfeeding for six months and breastfeeding supplemented with solid food until an infant is at least 12 months old to improve infant health outcomes. Breast milk provides numerous neurological, physiological, and immunological protection for infants (Bartick et al., 2016).

Reductions in childhood illnesses such as acute lymphoblastic leukemia (ALL), gastrointestinal diseases, pneumonia, respiratory tract infections, and otitis media were significant when comparing infants breastfed for four months versus six months, indicating the importance of breast milk for an infant's immunity (AAP, 2012). With the use of Markov-chain Monte Carlo simulations, 10,000 simulations were completed consisting of 100,000 women and their infants in the United States, and significant differences in childhood acute otitis media, acute lymphoblastic leukemia (ALL), gastrointestinal infections, necrotizing enterocolitis, and lower respiratory tract infections requiring hospitalization were revealed in mothers who did not breastfeed their children for the recommended six months (Bartick et al., 2016). Because of inadequate breastfeeding duration, non-Hispanic African Americans had 1.7 times more acute otitis media, 3.3 times more necrotizing enterocolitis, 2.0 times more Sudden Infant Death Syndrome (SIDS) cases, and 2.2 times more childhood deaths compared to non-Hispanic Caucasians (Bartick et al., 2016). Furthermore, Hispanics had 1.4 times gastrointestinal infections and 1.5 times more childhood deaths in comparison to non-Hispanic Caucasians (Bartick et al., 2016). Non-Hispanic African Americans who did not breastfeed their infants for the recommended six months accrued more health care costs than non-Hispanic Caucasians with a statistically significant difference of $1,780 vs $1,380 (Bartick et al., 2016). Socioeconomic costs and disease outcomes were calculated based upon 90% of children being breastfed for the recommended six months of age to determine economic effects of breastfeeding (Bartick et al., 2016). Not only do infants receive health benefits from breast milk, but so do mothers (AAP, 2012). Mothers who breastfed at least the recommended six months experienced fewer diagnoses of

hypertension, myocardial infarction, type II diabetes mellitus, and breast cancer (Bartick et al., 2016).

Hospital-based practices are being addressed to reduce supplementation with formula during an infant's first two days of life to meet Healthy People 2020 breastfeeding objectives (AAP, 2012). The Joint Commission is considering exclusive breastfeeding rates as a Perinatal Care Core Measure because of the associated risks infants encounter when not receiving immunization support through breast milk (AAP, 2012). Breast milk has been researched thoroughly in numerous articles with the same conclusion: breast milk provides the best health outcomes for babies and mothers. Yet, not all mothers have been thoroughly educated about breastfeeding or supported in their endeavors to breastfeed, especially mothers who are returning to work (Forster & McLachlan, 2010; Tarrant, Dodgson, & Wu, 2014; Tully & Ball, 2014).

Breastfeeding support. Employer and co-worker support of breastfeeding has been associated with decreased stress in mothers who are working and breastfeeding as well as decreased absenteeism, increased employee loyalty, and increased productivity (Kozhimannil, Jou, Gjerdingen, & McGovern, 2016). Employees who receive adequate time to express breast milk at work perceive their jobs as supporting their life goals, and consequently, have increased job satisfaction (Jantzer, Anderson, & Kuehl, 2018). Mothers who intend to return to work full time could benefit from discussing breastfeeding policies and goals with their employer and healthcare provider to establish a plan to meet their goals (Jantzer et al., 2018).

Semi-structured, qualitative interviews of 18 Iranian women who returned to work postpartum exposed mothers' feelings of guilt, shame, and even mothering alone

due to unsupportive spouses and/or inability to maintain all responsibilities within the home and work environment (Valizadeh et al., 2017). As they learned to juggle mothering responsibilities and employment responsibilities, Iranian mothers cited harsh, comments from their spouses, "husband is not kind to me….my soul cracks from inside and my heart breaks" employers, "we have a staff shortage and my hands are tied…there is nothing I can do," and co-workers, "unfriendly and hostile attitudes...so bad that I would tolerate painful engorgement and let my baby go hungry to avoid tension" (Valizadeh et al., 2017, pp. 107-108). Few women received support from family members, employers, and co-workers, which assisted them in returning to work and transitioning in their new roles with more positive comments about meeting their needs and making them less stressed (Valizadeh et al., 2017).

Mothers were influenced to exclusively breastfeed and/or work through breastfeeding challenges in correlation with the timing (acute versus routine) of their support avenues as evidenced by semi-structured interviews of 12 women in a qualitative study (Pounds, Fisher, Barnes-Josiah, Coleman, & Lefebvre, 2017). Receiving acute support during the first two weeks postpartum played an essential role in mothers choosing to breastfeed as habits were established (Pounds et al., 2017). An early, firm foundation in breastfeeding was discovered to assist mothers psychologically and emotionally in balancing full-time work, infant care, and longer duration of exclusive breastfeeding (Pounds et al., 2017). Sources of support named in the qualitative study were: the baby's father, mothers and/or grandmothers, friends, breastfeeding mothers, and caregivers (Pounds et al., 2017). Support persons are those willing to attend prenatal breastfeeding classes, provide encouragement and tips before and after breastfeeding

habits have been established, care for the baby during mothers' times of stress and anxiety, and store and feed children pumped breast milk (Pounds et al., 2017).

Societal views of breastfeeding and cultural practices have an impact on the amount of support mothers receive when choosing how to nourish their babies (Forster & McLachlan, 2010; Tarrant et al., 2014). During a randomized, controlled trial with previous Attachment to Breast and Family Attitudes to Breastfeeding (ABFAB) trial data, mothers' perception and views of breastfeeding ranged widely from positive to negative and with mixed emotions (Forster & McLachlan, 2010). First-time mothers who had previously completed one controlled, educational intervention of breast feeding techniques or attitudes toward breastfeeding revealed 44% of those women were unhappy with the duration of their breastfeeding (Forster & McLachlan, 2010). Eighty-eight percent of the participants lived with a partner or husband, indicating they had support available (Forster & McLachlan, 2010). The qualitative interviews of 981 primiparous women were completed during the mothers' hospital stay and six months postpartum (Forster & McLachlan, 2010). The data indicated 96% of mothers were breastfeeding their infants at two to four days old and 53% of mothers were feeding their infants at least some breast milk at six months of age (Forster & McLachlan, 2010). Of the 981 participants, 665 women expressed positive comments, with 53% of those women expressing only positive comments stating phrases such as "worthwhile," "rewarding," "convenient," and "wonderful" (Forster & McLachlan, 2010, p. 119). The remaining 47% had positive and negative comments such as "amazing…good for them…but exhausting" and "couldn't find breastfeeding rooms…easy to feed at home" (Forster & McLachlan, 2010, p. 119). Women expressed their concerns of breastfeeding in public, regardless of

a short or long duration of breastfeeding with statements such as “bit embarrassed…didn’t do it until he was about four months old,” “felt paranoid…but did it once and was fine,” “fearful of going out…use formula when out,” and “wouldn’t go out if a feed was due” (Forster & McLachlan, 2010, p. 121-122).

Breastfeeding self-efficacy. Mothers are influenced by both external and internal support of breastfeeding. Psychosocial factors play a vital role in a mother’s choice to breastfeed her infant exclusively for six months as evidenced by de Jager, Broadbent, Fuller-Tyszkiewicz, & Skouteris (2014) use of the Breastfeeding Self-Efficacy Scale, Body Attitude Questionnaire, Fetal Health Locus of Control Scale, COPE brief scale, and Depression Anxiety and Stress Scale in an online, retrospective, exploratory research study. The sample included 174 Australian women older than 18 years of age who gave birth within six months to two years of the study (de Jager et al., 2014). Body-image, self-efficacy, maternal intentions, and attitudes toward breastfeeding were believed to help predict breastfeeding duration; however, breastfeeding self-efficacy was the only variable directly related to exclusive breastfeeding duration in the study (de Jager et al., 2014). Australian women who exclusively breastfed for at least six months had significantly higher scores of intention to breastfeed exclusively ($p<0.01$) and significantly higher breastfeeding self-efficacy, comfort breastfeeding, breastfeeding in public, and perceived postpartum strength (all $p<0.001$) (de Jager et al., 2014). Fewer women reported breastfeeding difficulties when exclusively breastfeeding their infants for six months, if they had higher reported self-efficacy (de Jager et al., 2014). Mothers who experience small breastfeeding accomplishments early postpartum increase their confidence and perseverance with breastfeeding (de Jager et al., 2014).

Individuals' perceptions of breastfeeding, its benefits, and acceptable breastfeeding duration are influenced by the education and promotion, or lack thereof, healthcare professionals provide to mothers and family members (Tarrant et al., 2014; Tully & Ball, 2014). Societal and psychosocial factors should be addressed during breastfeeding education (Forster & McLachlan, 2010; Thomas-Jackson et al., 2015; Tarrant et al., 2014). During a qualitative study of 12 women, mothers reported shorter breastfeeding durations if supporters endorsed formula feeding or reassured mothers it was okay to quit breastfeeding after a short attempt (Pounds et al., 2017). In contrast, paternity leave and flexible schedules in Japan allowed fathers to provide more support to mothers for breastfeeding, which resulted in a longer breastfeeding duration of 4.418 months in a retrospective, longitudinal study (Kobayashi & Usui, 2014). Similarly, in a quantitative, descriptive study of 160 participants aged 18 to 41 who delivered full-term babies and were breastfeeding, married participants were more likely to exclusively breastfeed their infants and less likely to return to work (Thomas-Jackson et al., 2016). Thus, supportive persons influenced a mother's choice to initiate and continue breastfeeding.

Healthcare professionals should be active proponents of breastfeeding who not only answer questions and provide healthcare support, but who also inform mothers of community resources to support breastfeeding such as purchasing supplies to express breast milk while at work, support groups, and lactation consultants (Kozhimannil et al., 2016; Forster & McLachlan, 2010). To increase the proportion of mothers who breastfeed, healthcare professionals should provide mothers with information concerning all aspects of breastfeeding and not focus solely on the nutrients in breast milk and its

importance for the baby (Forster & McLachlan, 2010; Thomas-Jackson et al., 2016; Tsai, 2014; Tarrant et al., 2014; Tully & Ball, 2014). Qualitative, semi-structured open interviews involving 115 women on a postnatal unit in England revealed 80.9% of mothers who had cesarean sections intended to breastfeed their infants (Tully & Ball, 2014). Sixty-one of 85 participants claimed they experienced at least one obstacle when breastfeeding during their hospital stay such as tiredness, decreased mobility, incisional pain, difficulty with infant latching, and perceived infant lack of interest and satiation, especially during nighttime hours when fewer visitors were available to assist them and mothers were too tired to seek assistance (Tully & Ball, 2014). Of the mothers who breastfed infrequently (seven of 42 interviewed in second study), they reported only infants benefit from breastfeeding (Tully & Ball, 2014). Thirteen of those 86 mothers ceased breastfeeding their infants prior to leaving the hospital, while the remaining 73 mothers claimed they would continue breastfeeding because of both infant and maternal benefits (Tully & Ball, 2014). The need for more comprehensive education about breastfeeding and all it encompasses physically, mentally, emotionally, and socially is well substantiated to encourage exclusive breastfeeding (Forster & McLachlan, 2010; Thomas-Jackson et al., 2016; Tsai, 2014; Tarrant et al., 2014; Tully & Ball, 2014).

Breastfeeding initiation & duration. One hundred twenty-eight women participated in a longitudinal, quantitative study completed in two phases that showed a significant difference in breastfeeding duration and maternal age (Brown, Rance, & Warren, 2015). Mothers who had higher body image concerns reported shorter planned and actual breastfeeding durations and indications to formula feed (Brown et al., 2015). Data revealed pregnancy body image concerns, dieting during pregnancy, prospective

body image, and weight change were predictive of breastfeeding duration with significant values of $p=0.02$, $p=0.001$, $p=0.01$, and $p=0.015$, respectively (Brown et al., 2015). Overweight women were not the only individuals who reported shorter breastfeeding durations; rather, women's body image played a larger role in the choice to breastfeed (Brown et al., 2015). Thus, Brown et al. (2015) concluded minimal breastfeeding duration is not always related to undesirable breastfeeding experiences but rather perception of body image.

In Hong Kong, approximately 85% of mothers initiate breastfeeding practices compared to the United States' initiation rate of 76.5% and Australia's initiation rate of 96% (Tarrant et al., 2014). Despite the breastfeeding initiation rate in Hong Kong, 24 mothers who participated in an exploratory, qualitative study had prematurely weaned their infants from breast milk (Tarrant et al., 2014). Mothers in Hong Kong discontinued breastfeeding practices prior to the recommended six months of age, with a mean duration of 2.4 weeks, resulting in 27% of mothers continuing to breastfeed until their infant was six months of age (Tarrant et al., 2014). Mothers interviewed exposed the themes of unfulfilling experiences, uncertainty, lack of support, unnatural expectations, and guilt versus relief (Tarrant et al., 2014). Mothers claimed they were expected to breastfeed but were not supported by healthcare workers or family members and left to "figure it out" (Tarrant et al., 2014, p. 1091). Mothers further expressed the difficulties they encountered because it was stressful and did not come as easily or as naturally to them or their infants, which led them to stop breastfeeding (Tarrant et al., 2014). Furthermore, participants expressed a sense of relief when they stopped breastfeeding because they were no longer solely responsible for nurturing their infants and could

receive assistance from other family members when their infant wanted to feed frequently (Tarrant et al., 2014). Among the primary contributing factors to early breastfeeding discontinuation were lack of antenatal education, lack of breastfeeding support, and lack of family support (Tarrant et al., 2014). Thus, the interviewees' responses concluded one-on-one breastfeeding support, especially during initiation, and psychological and emotional support after hospital discharge is needed to increase breastfeeding duration (Tarrant et al., 2014).

Breastfeeding intentions, initiation, and duration correlate with a mother's return to work (Thomas-Jackson et al., 2016; Tsai, 2014; Mirkovic et al., 2014). Mothers cite struggles working both full-time and breastfeeding (Thomas-Jackson et al., 2016; Tsai, 2014). A longitudinal survey of 1,172 employed women conducted between 2005 and 2007 revealed 28.8% of mothers did not meet their intention of breastfeeding for three months (Mirkovic at al., 2014). Mothers who returned to work full-time prior to six weeks postpartum were 2.25 times more likely not to meet their breastfeeding intentions, and those who returned to work full-time were 1.82 times more likely not to achieve breastfeeding intentions (Mirkovic at al., 2014). In a retrospective, longitudinal study conducted in Japan, mothers who quit their jobs postpartum breastfed their infants 1.712 months longer than mothers who worked fewer hours postpartum, 1.643 months longer than mothers who worked similar hours pre and postpartum, and 1.162 months longer than mothers who worked more hours postpartum (Kobayashi & Usui, 2014).

A quantitative, descriptive study involving 160 women in the United States who were less than 48 hours postpartum concluded women with definite plans to return to work had intentions to breastfeed their infants for a shorter duration in comparison to

women not intending to work (Thomas-Jackson et al., 2016). Lack of access to their child, insufficient time, and an inappropriate environment to express breast milk were cited as reasons not to breastfeed for longer durations when returning to work (Thomas-Jackson et al., 2016).

Returning to work full-time, especially 12 weeks post-partum or less, has resulted in a decline of exclusive breastfeeding, with many women ceasing breastfeeding prior to returning to work or choosing not to breastfeed at all (Thomas-Jackson et al., 2016; Valizadeh et al., 2017; Mirkovic at al., 2014). A cross-sectional, retrospective study in Taiwan of 715 working mothers in an electronics manufacturing plant revealed 88.8% (635 of 715) initiated breastfeeding after their child's birth, while 49.8% (356 of 715) continued breastfeeding for one month upon returning to work, and 39% (279 of 715) discontinued breastfeeding within one month of returning to work (Tsai, 2014).

Mothers who were breastfed as infants or attended a breastfeeding class showed more positive correlation with breastfeeding initiation compared to mothers' availability of maternity leave in a longitudinal, retrospective study of 1,470 mothers in the United States (Mandal et al., 2010). Returning to work within 12 weeks postpartum and working 20-34 hours per week resulted in a breastfeeding duration of 32 weeks, while working greater than 35 hours per week resulted in a breastfeeding duration of 28 weeks in comparison to unemployed mothers' breastfeeding duration of 43 weeks (Mandal et al., 2010). Moreover, a significant difference ($p<0.005$) was noted between mothers working full time and part time with breastfeeding durations of 33 weeks and 41 weeks, respectively (Mandal et al., 2010). Thus, full time employment resulted in lower

breastfeeding initiation and duration rates compared to non-employed mothers' rates, suggesting full-time employment was a barrier to breastfeeding (Mandal et al., 2010).

An ongoing prospective, longitudinal study of 21,248 Taiwanese women revealed a breastfeeding initiation rate of 83.7%; however, mothers who returned to work one-month post-partum initiated breastfeeding at 77.5%, and only 25.4% were still breastfeeding their infants at six months of age (Chuang et al., 2010). Returning to work prior to 12 months post-partum resulted in no initiation of breastfeeding or significantly early weaning from breast milk in comparison to mothers who did not return to work (Chuang et al., 2010). A total of 78.8% of women breastfed their infants for six months or less (Chuang et al., 2010). When interviewed six months postpartum, 4,402 of the 16,877 mothers who initiated breastfeeding continued breastfeeding their infants, indicating 73.9% of mothers had quit with reasons cited as inconvenience within the workplace because of the inconvenience of pumping milk at work and insufficient milk supply (Chuang et al., 2010). Maternity leave length and timing played a role in breastfeeding initiation and continuation, according to Chuang et al. (2010). A significant breastfeeding cessation rate was discovered in women who returned to work within two months postpartum, with the average maternity leave length in Taiwan being eight weeks (Chuang et al., 2010). Chuang et al. (2010) concluded employment is a consistent barrier for Taiwanese mothers.

Adequate time to pump breast milk at work was discovered to help women achieve their breastfeeding duration goals in a quantitative, descriptive United States' study involving 87 women from a rural area (Jantzer et al., 2018). A workplace's accommodations and amount of breastfeeding support predicted the likelihood of

mothers' breastfeeding duration accurately for up to 20 months, depending on a mother's perception of workplace support in a retrospective, quantitative United States study consisting of 550 participants (Kozhimannil et al., 2016).

Mirkovic et al. (2016) completed a quantitative, longitudinal study of 1,384 women in the United States that revealed mothers who receive at least 12 weeks of paid maternity leave were 2.83 times more likely to initiate breastfeeding (66.7% breastfeeding initiation with no paid leave compared to 87.3% initiation with 12 weeks of paid leave) and 2.26 times more likely to continue breastfeeding their child at six months of age (24.9% breastfeeding for at least six months with no paid leave compared to 50.1% breastfeeding at least six months with 12 weeks or greater of paid leave). Of the 1,384 women included in the study, 7.7% of women received at least 12 weeks of paid leave, 23.1% received six to 11 weeks paid leave, 11.6% received one to five weeks paid leave, and 28.5% (majority of sample) received no paid leave (Mirkovic et al., 2016). After comparing 167 countries data from the International Labor Association, the United States is one of three countries that does not offer standardized paid maternity leave, of these three countries, the United States is the only economically, developed country (Mirkovic et al., 2016). Initiation and duration of breastfeeding is influenced by various avenues including social, cultural, economic, psychological, and employment factors.

Work environment. Mothers returning to work do not initiate or continue breastfeeding practices as long as mothers who remain home with their infants (Mandal et al., 2010). The Organization for Economic Co-operation and Development (OCED) works to resolve economic problems, one of which is maternity leave; OCED participating countries have an average paid maternity leave of 36 weeks, compared to a

world average of 16 weeks paid leave (Thomas-Jackson et al., 2016). In contrast, the United States, has one of the lowest maternity leaves (six to 12 weeks maximum), of which most is unpaid (Thomas-Jackson et al., 2016). The United States is the only country that does not offer a standardized paid maternity leave policy, according to a global examination of the world's top 15 most economically competitive countries (Earle et al., 2011). Other than the United States, the lowest duration of paid leave is 14 weeks (Switzerland and Singapore), and the highest duration of paid leave 146 weeks (Austria) (Earle et al., 2011).

A retrospective, quantitative United States study of 550 women revealed 40% of employed women had access to private areas and sufficient break times to express breast milk after the passage of the Patient Protection and Affordable Care Act (Kozhimannil et al., 2016). Furthermore, single mothers and those with low-income (less than $52,300 household income) were 50% less likely to receive adequate break times or privacy to pump breast milk in comparison to women with an income within the range of $52,301 to $102,000 (Kozhimannil et al., 2016). Women residing in households with annual incomes greater than $102,001 were three times more likely to have privacy and adequate accommodations in their place of employment (Kozhimannil et al., 2016). Consequently, women with sufficient breaks exclusively breastfed their infants 2.6 times longer and breastfed their infants with some supplementation 3.0 times longer six months postpartum in comparison to women whose employers did not provide sufficient break time or space for breast milk expression (Kozhimannil et al., 2016). Women who had both sufficient break time and private areas for breast milk expression were 2.3 times

more likely to exclusively breastfeed their infants for six months or longer (Kozhimannil et al., 2016).

Full-time employed mothers' breastfeeding initiation and duration rates revealed a negative correlation with working (Mandal et al., 2010; Tsai, 2014). A retrospective, cross-sectional study in Taiwan revealed 36.2% of mothers who worked eight hours shifts or longer per day used breast-pumping breaks, despite the facility's compliance with offering mothers' lactation rooms and two mandated 30 minute breaks (Tsai, 2014). Mothers working in the electronics manufacturing facility reported taking pumping breaks would decrease their efficiency (40.9% had this perception), and 38.6% of women believed taking two breaks to breast pump would affect their supervisors' evaluations of their job performance (Tsai, 2014). Thus, simply providing adequate resources and time does not provide women the reassurance to take sufficient breaks to breast pump; rather, support from supervisors and directors plays an essential role in women's comfort to take breast-pumping breaks (Tsai, 2014). Mothers working part-time (less than 35 hours per week) or taking more than 12 weeks of maternity leave revealed increased breastfeeding duration in a national, longitudinal study of approximately 1,470 mothers utilizing the Infant Feeding Practices Study II (Mandal et al., 2010). Mothers who expected to work full-time hours postpartum initiated breastfeeding at a significantly lower rate of 81.9% compared to mothers working 20-34 hours/week (83.1% initiation), one-19 hours/week (88.8% initiation), and unemployed postpartum (87.5% initiation) (Mandal et al., 2010).

Increased workplace support, regardless of a company's size, employees' work status, or employees' years of service was found necessary to help mothers continue breastfeeding their infant for the recommended timeframe (Mandal et al., 2010; Tsai,

2014). Ninety percent of the rural United States' participants who participated in a descriptive, quantitative, self-report study were educated with a Bachelor's degree or higher and 86.4% were married; yet, only 2.3% of the sample reported exclusively breastfeeding their infants six months postpartum (Jantzer et al., 2018). Flexible work schedules and ample break times were discovered to increase employee satisfaction, retention, and morale among 87 women who worked in a rural area of the United States (Jantzer et al., 2018). No single type of support revealed a significant indicator of workplace interference with personal life (Jantzer et al., 2018). A hierarchical, linear regression model revealed time to pump predicts workplace enhancement of personal life, which increases job satisfaction (Jantzer et al., 2018).

A descriptive, qualitative study consisting of semi-structured interviews revealed 18 employed, Iranian mothers experienced lack of support from their work environment and expressed the need for work policy revisions (Valizadeh et al., 2017). The 18 Iranian participants expressed government work policies should be changed to include longer, paid maternity leave, adequate facilities to express breast milk, accommodating work schedules, part-time work opportunities, and child care facilities to reduce their stress and provide family-friendly workplace environments (Valizadeh et al., 2017). Mothers expressed shiftwork resulted in irregularity in their lives including mental exhaustion, lack of sleep, and disrupted routines (Valizadeh et al., 2017).

Only since passing federal legislation in 2010 have American women been guaranteed breast feeding breaks with appropriate facility access, according to an exploration of the world's most economically competitive countries (Earle et al., 2011). The United States allows breastfeeding breaks for a maximum of one hour daily until a

mother's infant is one year of age, while the exploration revealed not all countries allow mothers breastfeeding breaks or paid leave to care for their children (Earle et al., 2011). Despite the passage of the Affordable Care Act in the United States, only 40% of the 500 working mothers surveyed had experienced sufficient break times and private areas to pump breast milk at their workplace (Kozhimannil et al., 2016). Kozhimannil et al. (2016) asserts additional federal policies should be created to hold companies accountable for adherence to breastfeeding policies and accommodations for breastfeeding mothers.

Nursing work environment. Facilities may meet workplace standards for breastfeeding mothers as outlined in the Patient Protection and Affordable Care Act, but the job itself may not allow mothers to participate in breaks or have privacy for pumping sessions. Hospital-based nurses experience various physiological and psychological demands during long, 12 hour or greater shifts that induce fatigue, which impairs nurses' cognitive and physiological functioning (Han et al., 2014; Farquharson et al., 2013). From the retrospective data from Nurses Sleep Study, 80 full-time, direct-care, medical-surgical, and intensive care nurses were surveyed with the Occupational Fatigue Exhaustion Recovery scale, Job Content Questionnaire, and Copenhagen Psychosocial questionnaires, which exposed unfavorable work schedules and environments, need for fatigue management, and nurses' inability to obtain adequate or quality sleep (Han et al., 2014). Han et al. (2014) revealed statistically significant data of nurses with increased levels of acute fatigue with each of the following variables resulting in $p <$ or $= 0.01$: more psychological demands, increased quantitative demands, decreased social support, and less feedback from colleagues and supervisors, which resulted in lower job

satisfaction. Exhaustion, lack of energy, lack of sleep, and rotating shifts in nursing resulted in acute and chronic fatigue, which lent itself to poor work performance, poor patient outcomes, and lack of support for co-workers (Farquharson et al., 2013). Mothers who are fatigued and stressed are less likely to endure breastfeeding challenges and/or pump breast milk.

To understand the causes of nurses' stress and its effects on nurses' psychological and physiological health, 100 medical-surgical nurses were observed in a real-time, repeated measures study and were asked questions about their perceived stress levels in relation to nursing tasks performance (Farquharson et al., 2013). Farquharson et al. (2013) utilized Actiheart monitors to assess the nurses' heart rates and activity associated with the stressors of nursing tasks. Many sources of nursing stress are derived from organizations downsizing services and increasing pressure on nurses, leaving little time to accomplish their tasks, much less time to take breaks (Farquharson et al., 2013).

A 2011, cross-sectional study of 153 female nurses revealed 33% of participants experienced poor sleep quality, poor health, and decreased quality of life because of workplace stress and increasing workload in Germany (Kunzweiler et al., 2016). Moreover, participants cited disproportionate workload allocations based on a questionnaire using guidelines of the World Health Organization (Kunzweiler et al., 2016). Reduction of stress was the greatest indicator to create healthier work conditions by ensuring regular, reliable break times, limiting overtime, developing stress management classes, and implementing mentor and manager support to optimize nurses' work environments (Kunzweiler et al., 2016). Coupled with being a mother, coping with

family and work life results in overly stressed, fatigued nurses with numerous responsibilities, of which, breastfeeding may be the least important.

Work-family dynamics. The desire to continue breastfeeding after returning to work resulted in substantial stress for mothers as they learned to manage and cope with additional responsibilities (Thomas-Jackson et al., 2016; Jantzer et al., 2018). Mothers faced conflicting demands when providing infant care and relying on a source of income, both of which affected breastfeeding duration (Thomas-Jackson et al., 2016). A lack of workplace support resulted in emotional distress and feelings of guilt due to the inability to fulfill both roles in a semi-structured, qualitative interview consisting of 12 employed mothers (Pounds et al., 2017). Jantzer et al. (2018) discovered providing adequate time to express breast milk at work enhances a mother's perception of workplace support as well as enhances her personal life by helping meet her breastfeeding goals. Nursing responsibilities are many, as are mothering responsibilities. When a woman serves in both roles as a nurse and mother, conflict arises as she attempts to perform at her maximum capacity in both commitments (Unruh et al., 2016).

One quantitative, descriptive study of 533 newly licensed nurses (licensed within the past two years) in Florida assessed personal factors and antecedents that caused nurses to leave their jobs (Unruh et al., 2016). It was discovered that work interferes more with family than vice-a-versa due to irregular hours, inflexible schedules, overtime demands, increased workloads, weekend requirements, and rotating or night shifts (Unruh et al., 2016). Sixty four percent of participants revealed their job interferes with home responsibilities at least one to three days per month or more; while 70.5% asserted their job prevents time with family greater than one to three days per month of which

21.1% claim one to two days per week (Unruh et al., 2016). Aforementioned demands result in nurses with low job satisfaction, increased stress, and desire to leave their jobs to find a work environment more conducive to their family schedules (Unruh et al., 2016).

Strengths and Limitations of Literature

Upon review of literature, the majority of research articles involving breastfeeding, breastfeeding initiation and duration, and work environment had small sample sizes, and therefore, inhibit generalization to the United States' population. Because breastfeeding's complexity and numerous determining factors for choosing how to nourish infants, qualitative data would provide additional insight and understanding of more factors influencing mothers' decisions. Few research studies have been conducted in the United States related to mothers returning to work who are breastfeeding their infants; thus, further research may help support and implement new policies for working mothers. Moreover, many supporting articles were from multiple countries, which have various breastfeeding and employment policies. Further United States breastfeeding research studies could provide comparison to other countries and commonalities among mothers worldwide to determine the reasons more mothers are not breastfeeding their infants.

CHAPTER III

Methodology

Introduction

Returning to work post-partum presented many challenges, especially for mothers who are breastfeeding as additional time, energy, and responsibilities are required. Support from employers, colleagues, and family, one's work environment, and competing responsibilities between work and family influenced the duration nurses breastfeed their infants (Earle et al., 2011; Chuang et al., 2010). Identifying support systems, resources, and barriers hospital-based, bedside nurses may encounter within their work environments may help facilitate breastfeeding for the recommended duration of 12 months by the AAP (2012).

A descriptive, quantitative study was utilized to help address the research question: What workplace support and/or barriers to breastfeeding do hospital-based, bedside nurses experience upon returning to work? Data was collected from hospital-based, medical-surgical nurses via submission of an online Likert-scale survey entitled Workplace Breastfeeding Support Scale (WBSS). Descriptive statistics were derived from each survey question as well as from the entire survey.

Study Design

Upon review of literature, multiple qualitative studies have been conducted to assess breastfeeding support and barriers. Multiple international studies have researched the workplace environment's effect on breastfeeding mothers; however, few studies research the same topic within the United States. Moreover, research studies have been

conducted on nurses' work environments and stressors; but, combining both nursing work environment and breastfeeding upon returning to work has had limited research.

Because of the nature of breastfeeding and demanding schedules of nurses, a descriptive, quantitative study via an online survey provided the greatest source of data about nurse's workplace support for breastfeeding. Time constraints prevented mothers who work full time, especially in an acute care hospital as a bedside nurse, from being willing to participate in qualitative or longitudinal research that required extensive time and effort. Because breastfeeding is a worldwide initiative, an online survey had the potential for participation globally to better represent and understand the magnitude of the initiative. Scores of less than four indicated a nurse's work environment negatively affected breastfeeding practice and could explain why mothers have not yet met the Healthy People Objectives 2020 for breastfeeding six months exclusively. Scores of greater than four indicated a positive, supportive nursing work environment with regards to breastfeeding, which could reveal the need for further research as to why mothers, especially full-time working mothers are unable to attain the Healthy People Objectives 2020 for breastfeeding six months exclusively.

Setting

The research study was completed in an online format, and therefore, had the potential to include participants world-wide who were members of the online Academy of Medical-Surgical Nurses (AMSN) organization. AMSN members are nurses seeking to grow professionally and personally and are dedicated to advancing nursing care as well as connecting with and mentoring other nurses (Academy of Medical-Surgical Nurses, 2017). The AMSN organization strives to promote the specialty of medical-surgical

nursing by providing members with resources to create a healthy, enriching work environment, and engaging nurses in leadership and professional development (AMSN, 2017).

Sample/Participants

A consecutive sample was obtained from members of the Academy of Medical-Surgical Nurses through an informational/recruitment e-mail sent by the organization. The informational/recruitment e-mail invited nurses to participate in the voluntary, research study. It was anticipated the sample size would consist of approximately 50 individuals who would respond to the survey and meet the following criteria:

- active nursing license (LPN or RN)
- working or worked in hospital-based, direct patient care for greater than 50% of her shift when breastfeeding
- breastfeeding her infant when returned to work (does not have to be currently breastfeeding).

Because of the participant criteria, an accurate power analysis was unable to be calculated because no definitive method existed to predict how many individuals had a child and were breastfeeding. To maintain participant anonymity and confidentiality, no demographic information was obtained from participants.

Measurement Methods

Permission was obtained from Dr. Yeonkyung Bai for the utilization and modification of her Workplace Breastfeeding Support Scale (WBSS), which consists of 12 questions that measure an individual's perception of workplace support for breastfeeding on a 7-point Likert scale (Bai et al., 2008). WBSS was modified to include

both present and past tense verbs in each question in efforts to include more participants and obtain a larger sample. Since the survey was disseminated online, participants read each question and selected the score that most appropriately indicated their perception of workplace support when they are or were breastfeeding. A score of one indicated strongly disagree (negative workplace support) and score of seven indicated strongly agree (positive workplace support). Scores of greater than four, as four is considered a neutral score indicated the participant perceived workplace support for breastfeeding positively.

WBSS can be subdivided into four categories: peer support, technical support, breastfeeding friendly environment, and facility support (Bai et al., 2008). The WBSS was examined for content validity by four experts in scale development, nutrition, lactation, and survey instrument development (Bai et al., 2008). An internal consistency known as Cronbach's α of 0.77 and a split-half reliability of r equivalent to 0.86 was established for the WBSS (Bai et al., 2008). Construct validity via factor analysis revealed a KMO measure of 0.71 indicating an adequate sampling of data (Bai et al., 2008).

Data Collection Procedures

With permission from Dr. Yeonkyung Bai, her Workplace Breastfeeding Support Scale instrument was modified to include both present and past tense verbiage. Following, the WBSS instrument was converted into an electronic survey through Google Forms. After Institutional Review Board approval from the researcher's academic institution and AMSN, AMSN distributed the Google Forms link to the Workplace Breastfeeding Support Scale to its active organization members via e-mail. The e-mail

provided AMSN members with the following comprehensive information regarding the study: purpose of the research study, potential risks and benefits associated with the study, instructions for survey completion, protection of the participant's anonymity, confidentiality of submitted data, timeframe of survey completion, and completion of the survey will imply informed consent.

Participants were required to click on the link provided in their informational e-mail that connected them to the WBSS survey on Google Forms. Prior to beginning the survey, participants were provided with a detailed informational statement describing the research's purpose. Informed consent was obtained via agreement to participate in the survey by selecting the "Next" option provided on the bottom of the page. Participants were then asked the following qualifying, descriptive questions:

- Do you have an active Licensed Practical Nurse or Registered Nurse license?
- Are you currently working or worked in hospital-based, direct patient care for greater than 50% of your shift when breastfeeding?
- Were you breastfeeding your infant when you returned to work? (You do not have to be currently breastfeeding.)

The survey provided a "Submit" option, if any of the three qualifying questions' answers did not meet research qualifications. This stopped and closed the survey, and the participant was not allowed to continue survey participation. The 12-question Likert scale survey was submitted anonymously through Google Forms and was available for completion for approximately four weeks or until 50 participants completed the survey.

The researcher accessed Google Form survey once weekly to monitor participation. Upon survey completion, data was collected and generated into a

spreadsheet by the researcher. Data was analyzed to determine the most common themes of work environment supports and/or barriers hospital-based, direct patient care nurses encounter when breastfeeding. After collecting data, the entire survey was analyzed by calculating an aggregate score for all items on the survey. The aggregate scores were analyzed with descriptive statistics, mean scores, and bar graphs.

Protection of Human Subjects

Participation in this research study posed no more than minimal risk. Participation in the study was voluntary and no penalties occurred for non-participation or partial completion of the study. If a participant elected not to complete the survey, she could end participation by closing the survey. Furthermore, participation was completely anonymous, and the researcher nor the organization knew who participated or chose not to participate in the study. Confidentiality was maintained because no identifying or demographic information was obtained from participants in this research study. During the conduction of the study, data was protected via a password-protected computer. Reports were generated with aggregate scores of data in which no individual could be identified. Within 60 days of the survey closing period, the Academy of Medical Surgical Nurses were provided a copy of the research data, which they could elect to publish to its members on their secured website. The researcher's academic institution will maintain secure storage of data for three years, at which time the data will be destroyed.

Data Analysis

Submitted data was stored within a secured, encrypted database in Google Forms upon completion of the survey. Each question from the survey was analyzed and compared to report descriptive statistics from a spreadsheet. After collecting data, the entire survey was analyzed by calculating an aggregate score for all items on the survey. The aggregated scores were analyzed with descriptive statistics, mean scores, and bar graphs.

CHAPTER IV

Results

Sample Characteristics

The final sample size for the Workplace Breastfeeding Support Scale survey included 30 participants, of which 22 completed the survey in its entirety. All survey participants were members of AMSN. All participants were active LPNs or RNs, worked in direct patient care for at least 50% of their shift, and breastfed their infants upon returning to work. Eight participants did not meet all qualifications for participation, and therefore, were unable to complete the survey. There was no method to determine nonresponses and withdrawals, as individuals were given the option to close a web browser, if they decided not to continue participation in the survey.

Major Findings

Nurses were asked to complete the WBSS survey by agreeing or disagreeing with 12 statements based on a 7-point Likert scale. The 7-point Likert scale allowed participants to select from the following options: 1= Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6=Agree, and 7=Strongly Agree.

Statistics revealed 26.7% of nurses who attempted to complete the survey were not breastfeeding upon returning to work, which prevented them from answering the survey. Thus, answers were provided by 73.3% of nurses who opened the survey. Furthermore, 80% of nurses were working at least half of their shift in direct patient care while breastfeeding, indicating 20% of nurses were deemed ineligible to complete the survey. The sample size was small and limited but provided national data from the online

population of AMSN members as they answered 12 statements comprising the Workplace Breastfeeding Support Scale. Figure 1.

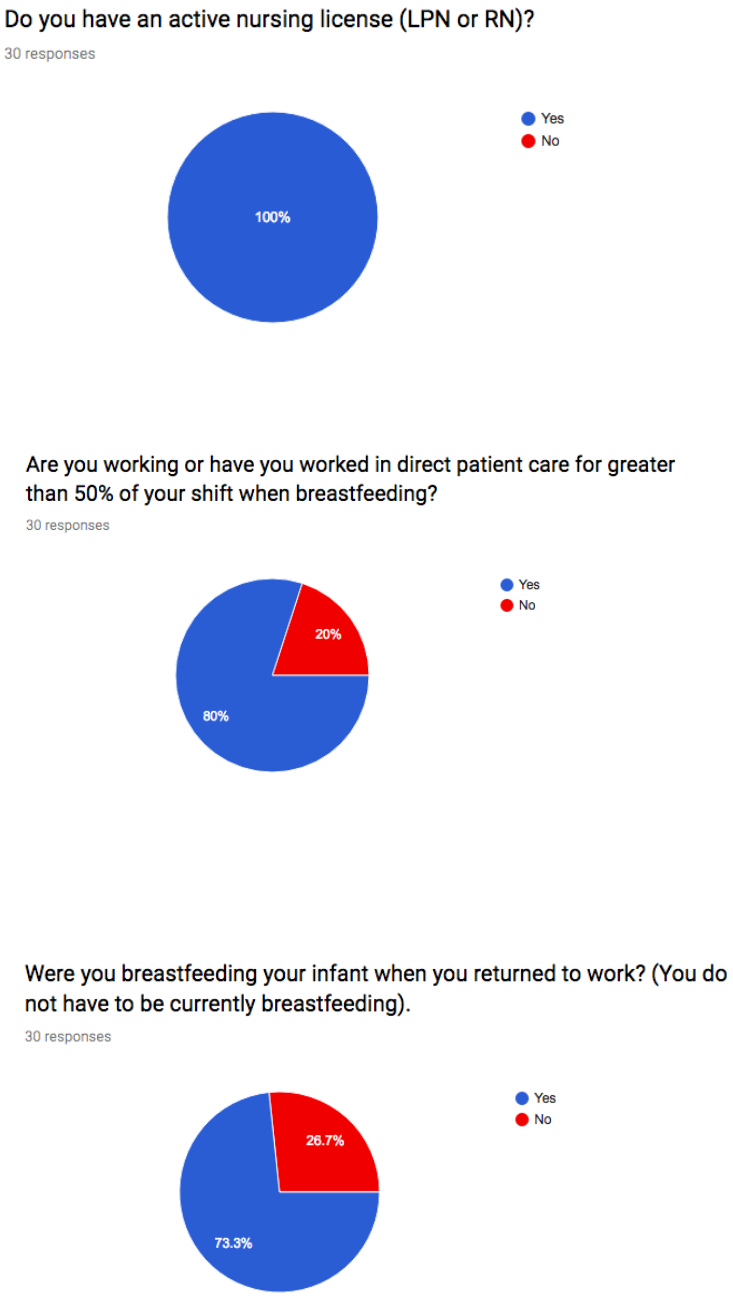

Figure 1. Eligibility Criteria

Statement one asked participants to reveal their co-workers thoughts about breastfeeding and formula in relation to a baby's health. Eleven participants (50%) strongly agreed that breastfeeding was better for a baby's health in comparison to formula feeding. A total of 81.8% of participants revealed their co-workers favored breastfeeding and believed it was better for babies' health in comparison to formula feeding, as indicated by scores of 5 or greater, with a mean score of 5.68. Overall, nurses' co-workers believed breastfeeding was better for a baby's health than formula feeding. (As shown in Figure 2, 3, and Table 1)

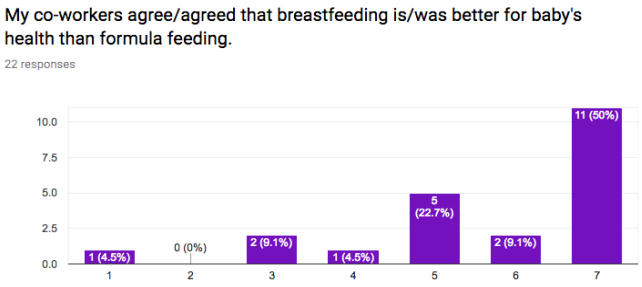

Figure 2. Statement One

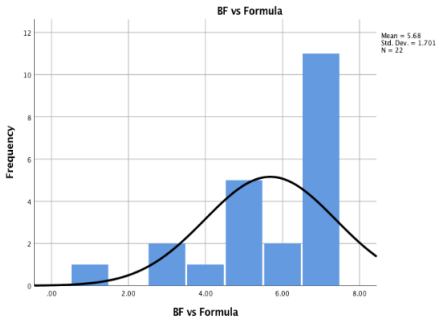

Figure 3. BF vs. Formula

Table 1

BF vs. Formula

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	3.3	4.5	4.5
	3.00	2	6.7	9.1	13.6
	4.00	1	3.3	4.5	18.2
	5.00	5	16.7	22.7	40.9
	6.00	2	6.7	9.1	50.0
	7.00	11	36.7	50.0	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement two asked about the support the nurse received from her co-workers by covering her patients while she pumped breast milk. Co-workers were willing to cover mothers while they had breast milk pumping breaks, which was revealed with a mean score of 5.45. Nine AMSN members (40.9%) strongly agreed their co-workers were supportive and covered for them to take breaks to pump their breast milk, while six participants somewhat agreed. Only three participants (13.6%) somewhat disagreed and revealed their co-workers were not supportive by covering for them to take breast pumping breaks. Nurses perceived their co-workers as supportive and willing to cover their job requirements during breast pumping breaks. (As shown in Figures 4, 5, and Table 2)

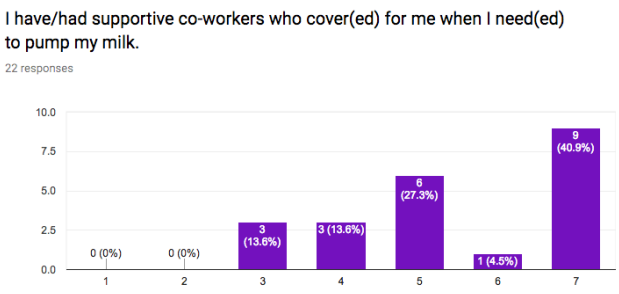

Figure 4. Statement Two

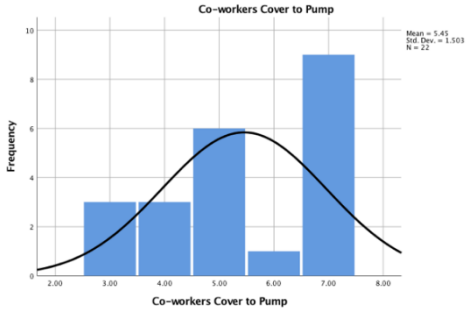

Figure 5. Co-workers Cover to Pump

Table 2

Co-workers Cover to Pump

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	3	10.0	13.6	13.6
	4.00	3	10.0	13.6	27.3
	5.00	6	20.0	27.3	54.5
	6.00	1	3.3	4.5	59.1
	7.00	9	30.0	40.9	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement three asked participants if co-workers made fun of them if their breast milk leaked on their clothing. The majority of nurses (65%) strongly agreed their co-workers did not make fun of them, if they leaked breast milk through their clothing; however, 15% of nurses did reveal they were made fun of for leaking breast milk through their clothing. The mean score was 5.4, which indicated co-workers were mostly respectful if a mother leaked breast milk through her clothing. (As shown in Figures 6, 7, and Table 3)

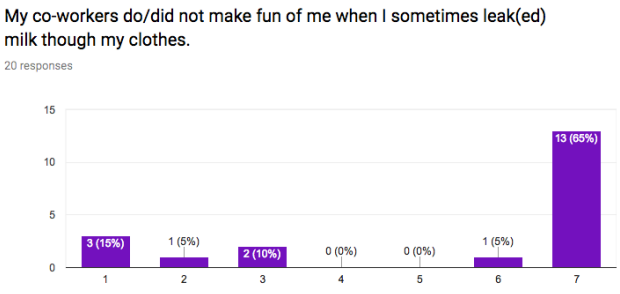

Figure 6. Statement Three

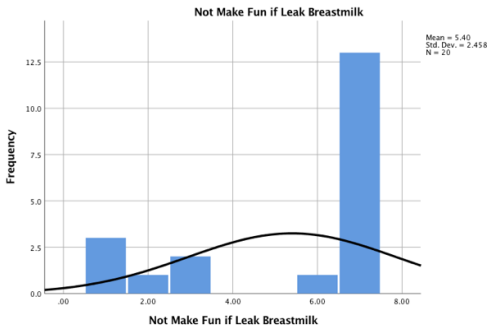

Figure 7. Not Make Fun if Leak Breastmilk

Table 3

Not Make Fun if Leak Breastmilk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	3	10.0	15.0	15.0
	2.00	1	3.3	5.0	20.0
	3.00	2	6.7	10.0	30.0
	6.00	1	3.3	5.0	35.0
	7.00	13	43.3	65.0	100.0
	Total	20	66.7	100.0	
Missing		10	33.3		
Total		30	100.0		

Statement four asked participants if breastfeeding was common in their workplace. Breastfeeding was common in a nurse's workplace, as evidenced by 68.2% of participants somewhat agreeing to strongly agreeing with scores of five or greater. The mean score of breastfeeding's commonality in the workplace was 5.0. Four participants (18.2%) selected neutral answers, which denotes their perception of breastfeeding in the workplace was neither common nor uncommon, while only one individual strongly disagreed that breastfeeding was common in the workplace. (As shown in Figures 8, 9, and Table 4)

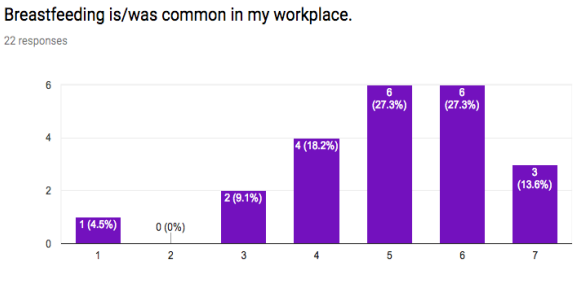

Figure 8. Statement Four

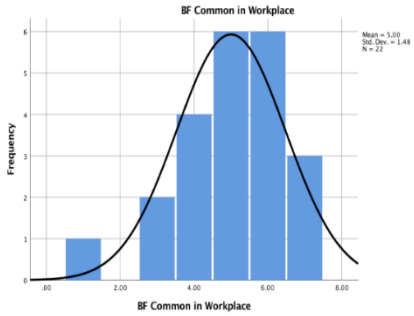

Figure 9. BF Common in Workplace

Table 4

BF Common in Workplace

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	3.3	4.5	4.5
	3.00	2	6.7	9.1	13.6
	4.00	4	13.3	18.2	31.8
	5.00	6	20.0	27.3	59.1
	6.00	6	20.0	27.3	86.4
	7.00	3	10.0	13.6	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement five asked participants if their supervisor was supportive of breastfeeding. Nursing supervisors were perceived as supportive of mothers who breastfed as evidenced by 11 participants (50%) strongly agreeing with the statement and five more participants somewhat agreeing to agreeing for a total of 16 participants (72.7%). Three individuals (13.6%) disagreed in some regard about their supervisor being supportive of breastfeeding, while three participants (13.6%) remained neutral regarding the statement. Overall, the mean score revealed participants agreed their supervisors were supportive of breastfeeding with a mean score of 5.55. (As shown in Figures 10, 11, and Table 5)

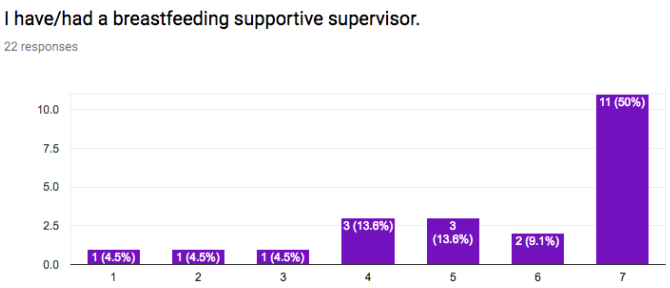

Figure 10. Statement Five

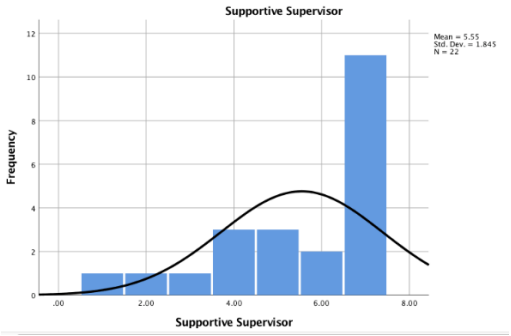

Figure 11. Supportive Supervisor

Table 5

Supportive Supervisor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	3.3	4.5	4.5
	2.00	1	3.3	4.5	9.1
	3.00	1	3.3	4.5	13.6
	4.00	3	10.0	13.6	27.3
	5.00	3	10.0	13.6	40.9
	6.00	2	6.7	9.1	50.0
	7.00	11	36.7	50.0	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement six asked if co-workers listened to participants talk about their breastfeeding experience. The majority of participants (86.4%) or 19 participants somewhat agreed, agreed, or strongly agreed their co-workers listened to them talk about their breastfeeding experience. However, one individual (4.5%) disagreed that her co-workers listened to her talk about her breastfeeding experience, and two participants provided a neutral answer. The statement concerning nurses whose co-workers listened to them talk about breastfeeding had a mean score of 5.77, which indicated an overall agreeance to the statement. Thus, nurses perceived their co-workers as willing to listen to them talk about breastfeeding. (As shown in Figures 12, 13, and Table 6)

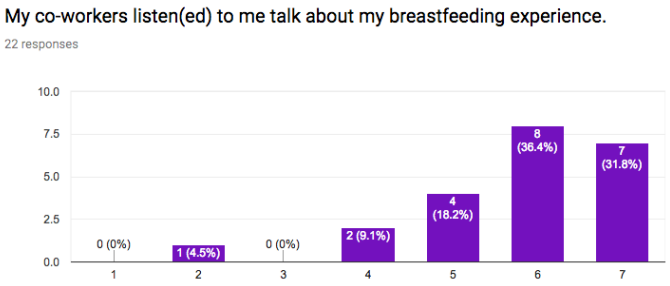

Figure 12. Statement Six

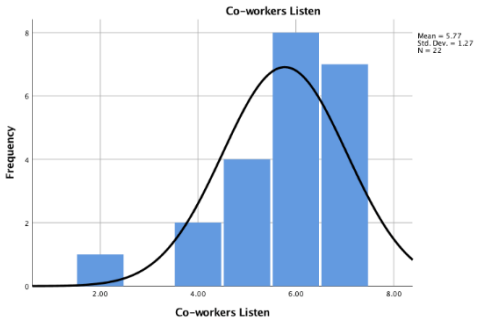

Figure 13. Co-workers Listen

Table 6

Co-workers Listen

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	1	3.3	4.5	4.5
	4.00	2	6.7	9.1	13.6
	5.00	4	13.3	18.2	31.8
	6.00	8	26.7	36.4	68.2
	7.00	7	23.3	31.8	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement seven asked participants if they were comfortable taking several breaks to pump their breast milk. Ten nurses (45.5%) somewhat disagreed, disagreed, or strongly disagreed about their comfort taking several breaks during work hours to pump their breast milk, while four nurses (18.2%) provided a neutral answer. Eight nurses (27.2%) agreed in some variance about their comfort level taking several breaks during work hours to pump breast milk. Overall, the mean score of nurses' comfort level taking multiple breaks to pump breast milk during work hours was 3.86, which indicated nurses somewhat disagreed with the statement. (As shown in Figures 14, 15, and Table 7)

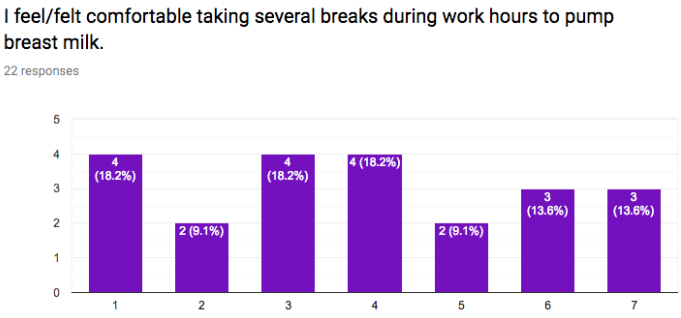

Figure 14. Statement Seven

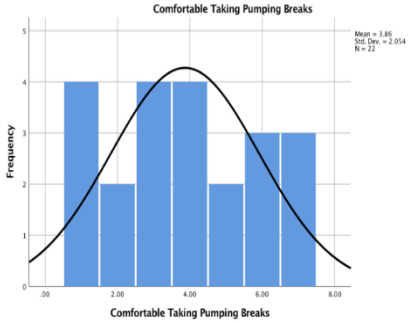

Figure 15. Comfortable Taking Pumping Breaks

.

Table 7

Comfortable Taking Pumping Breaks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	4	13.3	18.2	18.2
	2.00	2	6.7	9.1	27.3
	3.00	4	13.3	18.2	45.5
	4.00	4	13.3	18.2	63.6
	5.00	2	6.7	9.1	72.7
	6.00	3	10.0	13.6	86.4
	7.00	3	10.0	13.6	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement eight asked if nurses were provided a designated space or nursing room to pump breast milk at their workplace. Six participants (27.3%) strongly agreed that a designated space or nursing room was available to nurse their baby or pump breast milk, and six participants (27.3%) strongly disagreed with the statement. Seven individuals (31.8%) somewhat agreed or agreed about a designated space or nursing room availability for pumping and breastfeeding, and three individuals (13.6%) somewhat disagreed or disagreed about a designated space. The mean score was 4.36 for the designated space statement, which revealed more individuals agreed with the statement than did not. Thus, a designated space was available for pumping and breastfeeding in most facilities. (As shown in Figures 16, 17, and Table 8)

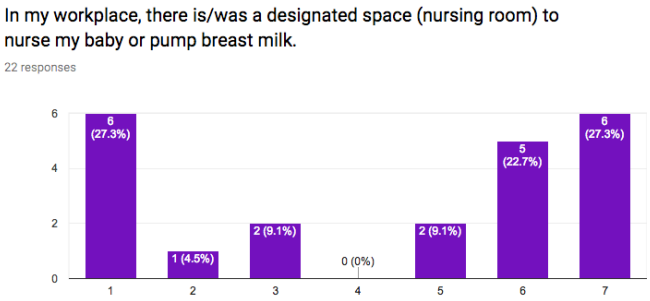

Figure 16. Statement Eight

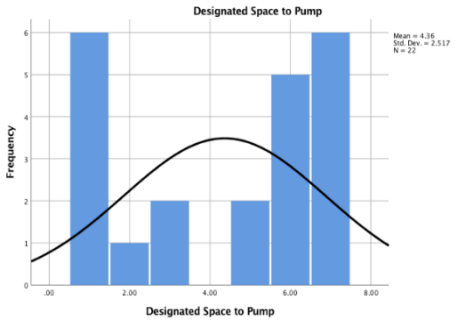

Figure 17. Designated Space to Pump

Table 8

Designated Space to Pump

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	6	20.0	27.3	27.3
	2.00	1	3.3	4.5	31.8
	3.00	2	6.7	9.1	40.9
	5.00	2	6.7	9.1	50.0
	6.00	5	16.7	22.7	72.7
	7.00	6	20.0	27.3	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement nine asked participants if a quiet place other than a bathroom could be easily found at their workplace to pump breast milk. Nine individuals (40.9%) strongly agreed with the statement, and an additional two participants agreed with the statement. Thus, half (50%) of the participants revealed a quiet area could be found to pump breast milk besides a bathroom. The other half (50%) of participants disagreed in some variance with the statement, which revealed a quiet place could not be easily found other than a bathroom. Hence, the mean score was 4.36 for easily locating a quiet place to pump breast milk besides a bathroom. (As shown in Figures 18, 19, and Table 9)

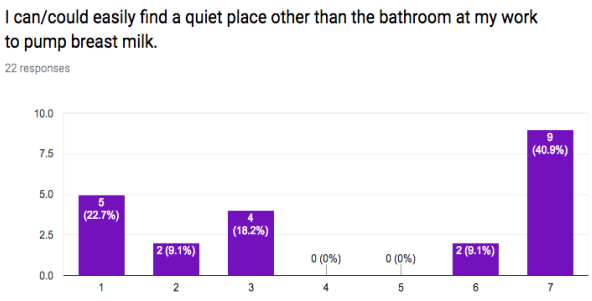

Figure 18. Statement Nine

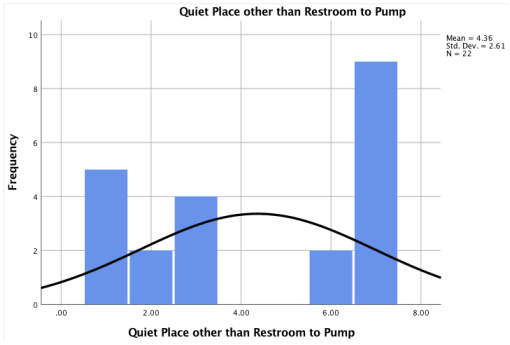

Figure 19. Quiet Place other than Restroom to Pump

Table 9

Quiet Place other than Restroom to Pump

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	5	16.7	22.7	22.7
	2.00	2	6.7	9.1	31.8
	3.00	4	13.3	18.2	50.0
	6.00	2	6.7	9.1	59.1
	7.00	9	30.0	40.9	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement ten asked participants if a refrigerator was available to store their breast milk. Ten participants (45.5%) strongly agreed with the statement concerning availability of refrigeration for breast milk, while six participants (27.2%) agreed or strongly agreed with the statement. Four participants (18.2%) disagreed or somewhat disagreed with the statement about the availability of a refrigerator for breast milk storage at their workplace. Two individuals (9.1%) selected neutral answers for the refrigeration statement. The mean score for the refrigeration statement was 5.5, which indicated refrigeration was available for most nurses at their place of employment. (As shown in Figures 20, 21, and Table 10)

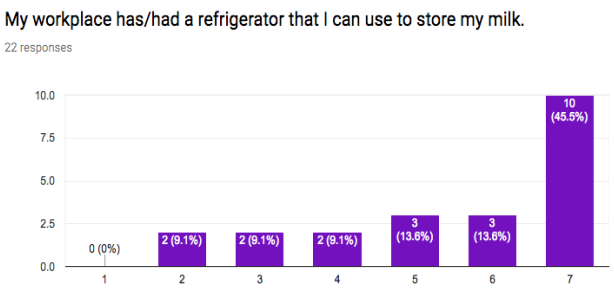

Figure 20. Statement Ten

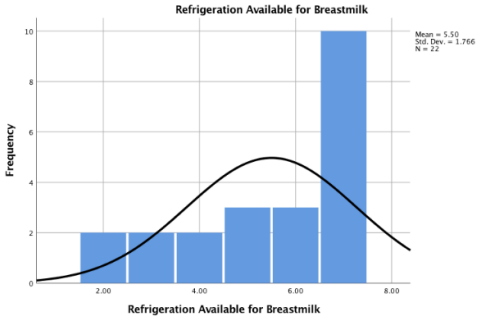

Figure 21. Refrigeration Available for Breastmilk

Table 10

Refrigeration Available for Breastmilk

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	6.7	9.1	9.1
	3.00	2	6.7	9.1	18.2
	4.00	2	6.7	9.1	27.3
	5.00	3	10.0	13.6	40.9
	6.00	3	10.0	13.6	54.5
	7.00	10	33.3	45.5	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement eleven asked participants if a breast pump was available for use at their workplace. Thirteen nurses (59.1%) disagreed in some variance, with the majority of those nurses (45.5%) with the statement concerning the availability of a breast pump for use at their workplace. Four individuals (18.2%) strongly agreed that a breast pump was available at their workplace, while four participants (18.2%) somewhat agreed or agreed that a breast pump was accessible. The mean score was 3.23, which revealed many nurses disagreed that a breast pump was available at their workplace. (As shown in Figures 22, 23, and Table 11)

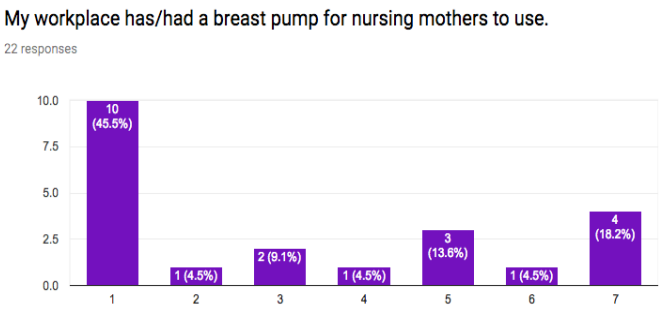

Figure 22. Statement Eleven

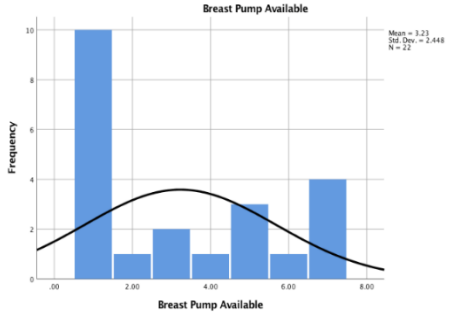

Figure 23. Breast Pump Available

.

Table 11

Breast Pump Available

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	10	33.3	45.5	9.1
	2.00	1	3.3	4.5	
	3.00	2	6.7	9.1	18.2
	4.00	1	3.3	4.5	27.3
	5.00	3	10.0	13.6	40.9
	6.00	1	3.3	4.5	54.5
	7.00	4	13.3	18.2	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Statement twelve asked participants if an on-site daycare was available at their workplace. Seventeen participants (77.3%) strongly disagreed with the statement concerning an on-site daycare availability at their workplace, with one participant (4.5%) also disagreeing with the statement for a total of 81.8% of participants that did not have an on-site daycare at their workplace. Four individuals (18.2%) did have access to an on-site daycare at their place of employment. The mean score for an on-site daycare statement was 2.14, which indicated most nurses do not have access to an on-site daycare at their workplace. (As shown in Figures 24, 25, and Table 12)

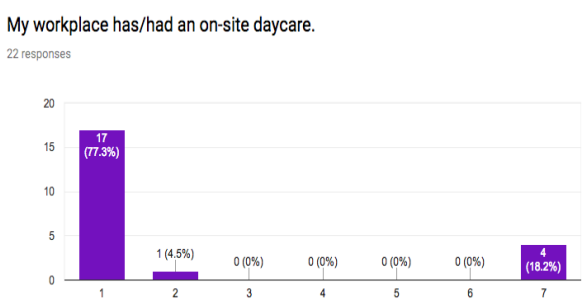

Figure 24. Statement Twelve

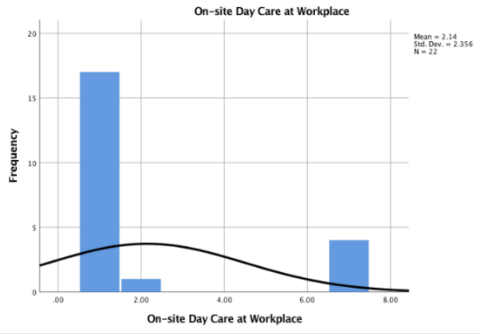

Figure 25. On-Site Daycare at Workplace

Table 12

On-Site Daycare at Workplace

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	17	56.7	77.3	77.3
	2.00	1	3.3	4.5	81.8
	7.00	4	13.3	18.2	100.0
	Total	22	73.3	100.0	
Missing		8	26.7		
Total		30	100.0		

Summary

Upon completion of the Workplace Breastfeeding Support Scale (WBSS), nurses revealed breastfeeding was common in their places of employment. Nurses' co-workers believed breastfeeding was better for a baby's health than formula feeding. Nurses indicated their co-workers were supportive of their breastfeeding experience by being willing to listen, covering their tasks while taking breast pumping breaks, and respecting them if breast milk leaks through their clothes. Furthermore, nurses revealed their supervisors were supportive of breastfeeding, and refrigerators were available to store their expressed breast milk in most facilities. However, a nurses' workplace environment was not as breastfeeding friendly as indicated by disagreeing statements and lower means in reference to designated nursing rooms, quiet places other than bathrooms to pump, breast pump availability, and on-site daycare availability. Not all nurses' workplaces provided these minimal accommodations for mothers to pump breast milk. Overall, nurses indicated they were not comfortable taking breaks to express breast milk during their shift work. Therefore, data supported that a nurse who was breastfeeding upon returning to work, and worked greater than 50% of her shift in direct patient care, received moderate emotional support from co-workers and supervisors. However, that nurse was not fully supported by her physical workplace environment. (As shown in Figure 26 and Table 13)

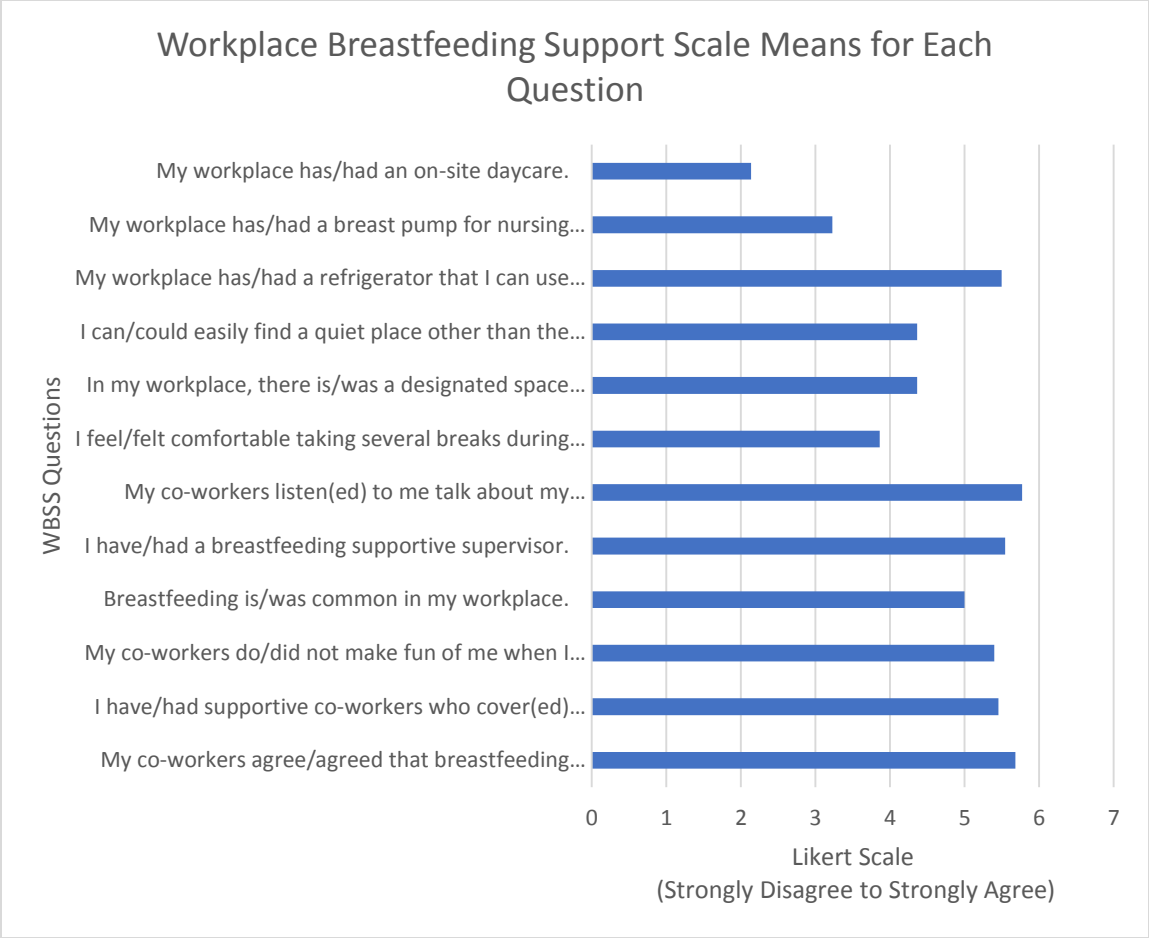

Figure 26. Workplace Breastfeeding Support Scale Means for Each Question

Table 13

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
BF vs Formula	22	1.00	7.00	5.6818	1.70116
Co-workers Cover to Pump	22	3.00	7.00	5.4545	1.50324
Not Make Fun if Leak Breastmilk	20	1.00	7.00	5.4000	2.45807
BF Common in Workplace	22	1.00	7.00	5.0000	1.48003
Supportive Supervisor	22	1.00	7.00	5.5455	1.84461
Co-workers Listen	22	2.00	7.00	5.7727	1.26986
Comfortable Taking Pumping Breaks	22	1.00	7.00	3.8636	2.05393
Designated Space to Pump	22	1.00	7.00	4.3636	2.51747
Quiet Place other than Restroom to Pump	22	1.00	7.00	4.3636	2.61034
Refrigeration Available for Breastmilk	22	2.00	7.00	5.5000	1.76608
Breast Pump Available	22	1.00	7.00	3.2273	2.44816
On-site Daycare at Workplace	22	1.00	7.00	2.1364	2.35626
Valid N (list wise)	20				

CHAPTER V

Discussion

Implication of Findings

Breastfeeding was common in nurses' places of employment; yet, the WBSS revealed nurses were not supported by their work environment in their breastfeeding endeavors. Nurses did not have adequate access to a quiet space to pump their breast milk other than a bathroom, nor did they have access to a breast pump for use in their workplace. Because the United States does not have a standardized maternity leave policy, nurses return to work within approximately 12 weeks (Streurer, 2017). The lack of environmental support from the workplace may hinder mothers' abilities to continue breastfeeding. Nurses did not feel comfortable taking breaks during their scheduled work hours to pump breast milk, which left the mother at risk for infection and pain and their infants at risk for malnourishment. Furthermore, on-site daycares were not available for nurses. Pumping or expressing breast milk is different than breastfeeding an infant, which mothers may be more apt to do, if they could spend time with their baby rather than a machine to maintain their breast milk supply.

Nurses conveyed support was available from co-workers and supervisors but did not strongly agree with supportive statements about co-workers and supervisors, indicating a need for further breastfeeding education. It has been deemed a global initiative for mothers to exclusively breastfeed their infants until they are six months of age (AAP, 2012). Yet, working mothers in the nursing profession are unsupported by their work environment. Descriptive statistics revealed additional breastfeeding education and policies were needed in the United States to help nursing mothers meet

global breastfeeding initiatives, as many of them are employed. Nurses have not been provided with minimal necessities in their workplace environment to pump breast milk and maintain their milk supply for their infants. When health care professionals are unable to implement worldwide health standards, modifications should ensue.

Application to Theoretical/Conceptual Framework

Meleis et al. (2000) claimed nurses were essential to transitioning because they serve as a source of hope, help, comfort, and coping. Individuals encounter social-cultural, developmental and lifespan, and health and illness transitions in which nurses play a vital role (Meleis et al., 2000). As female nurses experience lifespan transitions of pregnancy and motherhood, they should be able to rely on support from other nurses (co-workers). Meleis et al. (2000) asserts periods of transition include: awareness, engagement, change and difference, time span, and critical points and events. Environmental and personal factors influence how an individual experiences a healthy transition (Meleis et al., 2000). Transitions are unique, personal, multi-dimensional, and complex (Meleis et al., 2000). Transitions require an individual to be cognizant of a significant event, accept the change(s) it causes overtime, and incorporate those changes into her lifestyle (Meleis et al., 2000).

Motherhood generates numerous family responsibilities coupled with work responsibilities. Nurses experience a unique transition upon returning to work as they learn how to manage and balance their new lifestyle. Physical, mental, and emotional support are indispensable during transitions of which nurses reported a moderate amount of workplace support. However, nurses choosing to breastfeed were not supported in their transition by their schedules, lack of break time, and physical work environment.

Meleis et al. (2000) claims engagement in an activity as well as its time span must occur for healthy transitions. While nurses are expected to help clients cope and transition with their new lifestyle, social, or cultural experiences, they themselves are unable to transition in their new role of breastfeeding mother and nurse because of their workplace environment.

Limitations

The AMSN population who received surveys may not have checked their e-mail or deleted their e-mail before reading it in its entirety. Nurses had access to survey completion via AMSN's website; however, they may not have accessed the website during the timeframe of the survey. Nurses may have breastfed during their maternity leave but not upon returning to work, and therefore, were unable to provide their input about breastfeeding in the nursing workplace. Individuals who answered the survey may have primarily worked on day shift or night shift, which may have skewed results. The sample size was small, and therefore, its results cannot be generalized to larger populations. No demographic data was obtained from participants but may be helpful in future research studies to denote the differences in a medical-surgical work environment versus and emergency department, intensive care, or medical office environment.

Implications for Nursing

Nurses who choose to breastfeed their infants need additional workplace environment support. Nursing shift work, tasks, responsibilities, and sporadic break times comprise a suboptimal environment for mothers who need to express breast milk during work hours because they desire to continue breastfeeding their infants. Breastfeeding coaches and liaisons should be available to nurses to help ensure a nurse's

work environment is supportive of breastfeeding, and she has adequate facilities and resources. Standardized maternity leave policies and break times should be implemented to ensure nurses can pump or express their breast milk during work hours, as evidenced by nurses' disagreement with the statement of comfort taking multiple breaks to pump. Facilities should be equipped with designated nursing areas (per federal policy), refrigeration for proper breast milk storage, and breast pumps with electrical sources. Nurses receive support from their co-workers and supervisors, so why does their environment not support them?

Recommendations

It would be beneficial in future qualitative studies to explore what factors led nurses to quit breastfeeding. Do nurses quit breastfeeding right before returning to work because they believe their work environment or job responsibilities will not support their efforts? Nurses working on different units were not differentiated in the research survey. Future studies that include demographics would provide statistics relevant to each nursing unit, and allow supervisors to better support nursing mothers. Nurses who did not work more than 50% of their shift in direct patient care were not allowed to answer survey questions, but their answers would have been interesting for comparison to nurses working at the bedside. Longitudinal studies would provide information about a nurse's day to day routine and inclusion of breast pumping breaks and their feasibility. These longitudinal studies would help researchers determine if co-workers, supervisors, the work environment, or nursing tasks and responsibilities assisted or hindered mothers from pumping and/or breastfeeding. Moreover, researchers could decipher how long nurses are able to maintain breastfeeding upon returning to work. Are mothers

breastfeeding their infants until they return to work and ceasing to breastfeed because of their lack of support, lack of break time during work hours, or other psychosocial factors?

Conclusion

Breastfeeding is becoming more common and growing in popularity; however, an insufficient number of women globally are exclusively breastfeeding their infants. By studying breastfeeding mothers in the nursing profession, they have indicated they work with supportive supervisors and co-workers but lack support from their workplace environment. Statistics from this study revealed workplace policies must change to better support nurses in their endeavors to continue breastfeeding upon returning to work by facilitating a breastfeeding friendly environment. Further research among health care professionals is indicated, particularly mothers in the nursing profession who choose to breastfeed their infants. Health care professionals are expected to promote the health and well-being of all populations and society; however, they are unable to promote their infants' health and well-being as well as their own.

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