5-2010

The Effectiveness of Worksite Breastfeeding Programs on Breastfeeding Inititation, Duration, and Exclusivity

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THE EFFECTIVENESS OF WORKSITE BREASTFEEDING PROGRAMS ON BREASTFEEDING INITIATION, DURATION, AND EXCLUSIVITY

by

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Bachelor of Science, Minot State University, 2001

An Independent Project

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Master of Science

Grand Forks, North Dakota

May

2010

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ACKNOWLEDGMENTS

I would like to thank the faculty in the College of Nursing at the University of North Dakota who have supported and enabled me throughout this educational experience. I would especially like to thank Dr. Julie Anderson for all of her support, guidance, and patience over the past two years. I would also like to thank all of my classmates for their friendship and support.

Finally, I would like to thank my family and friends for all of their love and support. A very special thanks to my husband, Neil, for taking on extra household and parenting responsibilities in my absence; I owe you.

And to my daughter, Madisyn, you have sacrificed so much over the last two years. I hope it was not in vain. May you understand and appreciate the importance of education.

To my Daughter, Madisyn Lily

I will love you forever and like you for always

Abstract

Breastfeeding can benefit the health of mothers and infants. While breastfeeding rates in the Unites States are increasing, breastfeeding rates are still falling short of the goals set by Healthy People 2010. Breastfeeding is complex and is affected by many variables, including demographic, biological, psychological, and social variables. One of the deterrents associated with breastfeeding continuation is the worksite. Over time, little has changed with employment practices and accommodations related to breastfeeding support. To ensure that the Healthy People 2010 goals are achieved, programs and policies designed to support working mothers who choose to breastfeed must be continued and strengthened; health care organizations should be leaders in this goal.

An extensive literature review of current research on worksite breastfeeding programs was conducted. There were 10 areas of focus in the literature review: effects of work status on breastfeeding initiation, duration, and exclusivity; demographic effects on breastfeeding initiation, duration, and exclusivity; the effects of maternity leave on breastfeeding initiation, duration, and exclusivity; types of jobs that effect breastfeeding duration; the effects of worksite breastfeeding programs on breastfeeding duration; breastfeeding experiences among working women; public beliefs about worksite breastfeeding policies; employer attitudes about breastfeeding and worksite breastfeeding programs; worksite breastfeeding legislation and worksite accommodations that support breastfeeding.

The evidence discussed in this literature review illustrates the positive effects of worksite breastfeeding programs on breastfeeding continuation. The research supports the need for community awareness about the positive effects of worksite breastfeeding

programs, including the health benefits for women and children and the economic benefits for society. At the culmination of the project, a presentation was given to administrators of a Midwest community hospital with recommendations of a breastfeeding policy or a breastfeeding room for the facility.

CHAPTER I

INTRODUCTION

Breastfeeding is important to the health of both mothers and infants. According to the American Academy of Pediatrics (AAP, 2005), breast milk is the most "superior" form of infant feeding (p. 496). Studies have shown that breastfeeding can decrease the risk of viral and bacterial illnesses in children including, respiratory tract infections, gastroenteritis, otitis media, bacterial meningitis, and necrotizing enterocolitits (AAP). In addition, preliminary research has shown that breastfeeding may reduce the incidence of sudden infant death syndrome, type 2 diabetes, and obesity among children (AAP). In women, breastfeeding has been associated with decreased incidences of osteoporosis, post-partum hemorrhage, and ovarian and breast cancers (AAP).

The benefits of breastfeeding have been promoted by health officials and health organizations around the world. The AAP (2005) has proposed that "the breastfed infant is the reference or normative model against which all alternative feeding methods must be measured with regard to growth, health, development and all other short-and long-term outcomes" (p. 1035). Furthermore, the AAP (2000) recommends children be breastfed for at least the first year of life and breastfeeding should be continued as long as desired by the mother and child. Comparatively, the World Health Organization (WHO, 2009) recommends infants be exclusively breastfed for the first 6 months and that breastfeeding continue into the second year of life or longer.

The United States Federal government has also recognized the importance of increasing breastfeeding rates by making it a national health priority in its Health People 2010 Initiative and has slated it as an objective of Healthy People 2020 (Centers for Disease Control [CDC], 2009a; United States Department of Health and Human Services [USDHHS], 2009). The breastfeeding goals for Healthy People 2010 are that 75% of all new mothers initiate breastfeeding, 50% continue to breastfeed for at least six months, and 25% continue to breastfeed for at least one year (CDC, 2009a). However, the breastfeeding relationship between mothers and infants is a complex physiological and psychological process that involves many variables (Thulier & Mercer, 2009). In order for the United States to reach the goals developed by the WHO, AAP, and Healthy People 2010, healthcare professionals must recognize the variables associated with breastfeeding initiation, duration, and exclusivity and advocate for women and their families (Thulier & Mercer, 2009).

Clinical Problem

Prior to the 1950s, almost all infants were breastfed in the United States (Weimer, 2001). After World War II, infant formula was developed and marketed (Weimer). In addition, the number of women entering the workforce increased by 178% between 1950 and 1985 (Weimer). Subsequently, formula became a popular feeding practice and by 1967, only 25 percent of infants in the United States were being breastfed (Weimer).

In 2006, breastfeeding rates in the United States were the highest they have been prior to World War II. The Centers for Disease Control reported that among children who were born in 2006, 74% initiated breastfeeding (CDC, 2009a). This was only 1% below the Health People 2010 goal of breastfeeding initiation (CDC). However, even though

the United States has seen in increase in breastfeeding initiation rates, the breastfeeding duration and exclusivity rates still fall substantially below the goals of the Healthy People 2010 initiative (CDC). In 2006, 43% of infants were breastfeeding at 6 months, while only 23% were breastfed at 12 months of age (CDC). Approximately 33% of infants born in 2006 were exclusively breastfed through 3 months of age, but only 14% were exclusively breastfed at 6 months of age (CDC).

As previously discussed, there are many variables associated with breastfeeding. These include demographic, biological, psychological, and social variables (Thulier & Mercer, 2009). Women may choose not to breastfeed or continue to breastfeed for a variety of reasons. Aggressive formula marketing campaigns, knowledge deficits, maternity hospital practices, and cultural attitudes are just some of the reasons that breastfeeding rates in the Unites States are low (Weimer, 2001). Many women have cited that lack of support from family and friends and lack of public acceptance have been barriers to breastfeeding (Weimer). In addition, working and lack of worksite support are social variables that have been shown to negatively affect breastfeeding initiation, duration, and exclusivity (Thulier & Mercer). Furthermore, breastfeeding and working outside the home are thought to be "incompatible" and is often cited as a contributor to low breastfeeding rates (Weimer, p. 1).

According to the CDC, mothers are the fastest-growing population of the labor force in the Unites States (CDC, 2009b). Approximately 56% of women with children under the age of one are employed (Bureau of Labor Statistics [BLS], 2009). Worksite breastfeeding programs may be a way to increase breastfeeding rates in the United States. Legislators and communities must be educated about the benefits associated with

breastfeeding and the importance of breastfeeding support. According to Thulier and Mercer (2009), "the public must be educated not only about the health benefits for women and infants, but also regarding the environmental and economic benefits of breastfeeding for all of society" (p. 266).

Moreover, health care reform is at the forefront of our nation's agenda. Health promotion and disease prevention will play an increasingly important role. According to a study on the economic benefits of breastfeeding, breastfeeding can provide economic benefits "reducing both direct and indirect costs" (Weimer, 2001, p. 3) In the United States, approximately 3.6 billion dollars could be saved if the breastfeeding exclusivity rates recommended by Healthy people 2010 were to be attained (Weimer). This figure may be an underestimate of the costs associated with breastfeeding because it only accounts for the healthcare savings from the treatment of three childhood illnesses (Weimer). The cost also does not include costs of over the counter medications, physician charges, and the savings associated with reduced long-term morbidity (Weimer).

Worksite breastfeeding programs may also lead to significant costs savings to employers. Worksite breastfeeding programs can save employers money in healthcare costs (Angelietti, 2009). In addition, breastfeeding mothers tend to have fewer absences related to child illnesses (Angelietti). Worksite breastfeeding programs can also reduce turnover rates and improve employee morale (Angelietti). Research has shown that employers could save $3 to every $1 dollar invested into worksite breastfeeding support (Polston Mills, 2009).

Purpose of the Project

One potential way to increase breastfeeding duration is to ensure that adequate worksite facilities and support are available to breastfeeding mothers. The purpose of this project was to review current literature to evaluate if worksite breastfeeding programs increase breastfeeding rates and to increase awareness of the importance of worksite breastfeeding programs. Appropriate worksite accommodations and support that are needed in order to promote breastfeeding duration and exclusivity will also be explored. Evidence to support worksite breastfeeding programs will be presented to administrators of a Midwest hospital in an effort to educate them on the employer and employee benefits of worksite breastfeeding programs.

Conceptual/Theoretical Framework

The theoretical framework used for this independent project is the Theory of Planned Behavior (TPB) by Ajzen and Fishbein. The TPB argues that an individual's behavior is directly related to their intention (Ajzen, 1991). According to Ajzen, "intentions are the motivational factors that influence behavior" (p. 181). An individual's intention will determine how hard they will try to perform or change a behavior (Ajzen). Ajzen and Fishbein discovered that intention is influenced by an individual's attitude toward a specific behavior, their subjective norms, and their perceived behavioral control over the specific behavior (Ajzen).

First, attitudes are an individual's positive or negative ideas about performing the behavior (Ajzen, 1991). Next, subjective norms are defined as an individual's belief about how others may perceive a specific behavior (Ajzen). Finally, an individual's perceptions of their ability to perform a given behavior will influence their acceptance of

a particular behavior (Ajzen). If an individual has a positive attitude and a positive subjective norm toward the behavior, they in turn will have a greater perceived control over the behavior. All of these predictors will lead to intention and thus cause a specific behavior.

The advantages of the TPB are that it allows one to identify the underlying beliefs that differentiate between those who perform or are receptive to a particular behavior and those who are not (Bai, Middlestadt, Peng, & Fly, 2009). Subsequently, by utilizing the TPB, one can gain an understanding of an individual's behavior by becoming aware of the underlying beliefs that cause the behavior or lack thereof (Bai et al.). When the underlying beliefs are identified, education may further influence an individual's beliefs which in turn will influence one's behavior (Bai et al.). It is the intent of this project to identify an employer's preconceived notions or attitudes about breastfeeding, their subjective norms, and their perceived behavioral control about breastfeeding and worksite breastfeeding programs in order to influence them to consider the importance of worksite breastfeeding programs and policies (Ajzen, 1991; Rojjanasrirat, 2004).

Definitions

In this paper the following terms will frequently be discussed: breastfeeding initiation, breastfeeding duration, breastfeeding exclusivity, and worksite support for breastfeeding mothers. Breastfeeding initiation is defined as infants who were ever breastfed; initiation is usually within the first week of life (Dabritz, Hinton, & Babb, 2009). According to Dennis (2002), there are many definitions of the term breastfeeding duration. Breastfeeding duration can mean the length of exclusive breastfeeding or the length of breastfeeding in combination with formula supplementation (Dennis). This can

lead to difficulty when interpreting results or comparing and contrasting results of studies (Dennis). For this paper, breastfeeding duration will be defined as length of breastfeeding with or without supplementation. Breastfeeding exclusivity refers to infants who only receive breast milk (no formula supplementation), either via breast or via pumped breast milk in a bottle (Dabritz et al., 2009). According to the CDC (2009b), worksite support of breastfeeding,

> includes several types of employee benefits and services, including writing corporate policies to support breastfeeding women; teaching employees about breastfeeding; providing designated private space for breastfeeding or expressing milk; allowing flexible scheduling to support milk expression during work; giving mothers options for returning to work, such as teleworking, part-time work, and extended maternity leave; providing on-site or near-site child care; providing high-quality breast pumps; and offering professional lactation management services and support (p. 7).

Summary

Low breastfeeding rates negatively affect the health of women and children. In addition, low breastfeeding rates may contribute negatively to the economic status of communities and the nation. Given the positive effects of breastfeeding on the health of women and children, ways to promote breastfeeding in the United States must be closely examined in order for the Healthy People 2010 goals to be realized. In addition, due to the substantial increase of working mothers in the United States, the effects of work status on breastfeeding continuation must be studied, including a review of the literature regarding the impact of worksite breastfeeding programs on breastfeeding initiation,

duration, and exclusivity. Healthcare providers, policymakers, and business administrators may be influential in the promotion of breastfeeding in the worksite.

CHAPTER II

REVIEW OF LITERATURE

A comprehensive review of the literature was completed to determine the effectiveness of worksite breastfeeding programs on breastfeeding initiation, duration, and exclusivity rates. There are 10 main focus areas of this review: effects of work status on breastfeeding initiation, duration, and exclusivity; demographic effects on breastfeeding initiation, duration, and exclusivity; the effects of maternity leave on breastfeeding initiation, duration, and exclusivity; types of jobs that effect breastfeeding duration; the effects of worksite breastfeeding programs on breastfeeding duration; breastfeeding experiences among working women; public beliefs about worksite breastfeeding policies; employer attitudes about breastfeeding and worksite breastfeeding programs; and worksite breastfeeding legislation. Worksite accommodations that support breastfeeding were also reviewed.

Effects of Work Status on Breastfeeding Initiation, Duration, and Exclusivity

Initiation

Fein and Roe (1998) explored the relationship between work status and the initiation of breastfeeding of 2,615 women and found that expecting to work part-time does not increase or decrease breastfeeding initiation. However, women who expect to work full-time after maternity leave had a 14.3% ($p < .05$) lower initiation rate than mothers who did not plan to go back to work (Fein & Roe). Similar findings in a national study by Ryan, Zhou, and Arensberg (2006) showed that unemployed mothers

(n=63,897) had the higher breastfeeding initiation rates compared to mothers were employed (n=61,885). In addition, mothers who worked part-time (n=21,870) had consistently higher breastfeeding initiation rates (36%) than those who worked full-time (26%, n=40,015) (Ryan et al.). Conversely, Kimbro (2006) found that expecting to work in the infants first year of life does not significantly impact initiation in low-income mothers (N=569).

Flower, Willoughby, Cadigan, Perrin, and Randolph (2008), also found that unemployed women were more likely to initiate breastfeeding compared to employed women (N=30). In addition, the researchers found that a majority of women in their study cited returning to work (n=8) as a reason for not initiating breastfeeding (Flower et al.). Women who work from home are also 17% more likely (N=1506) to initiate breastfeeding (Jacknowitz, 2008). Ogbuanu, Probst, Laditka, Liu, Baek, and Glover (2009) found that "not liking breastfeeding" was the most frequent reason cited for not initiating breastfeeding (48.2%, n=24,525) followed by returning to work or school (30%, n=15,264) (p.114).

Duration

Fein, Mandal, and Roe (2008) found that women continue to breastfeed for an average of 26 weeks after returning to work (N=810). Comparatively, Fein and Roe (1998) found that the average duration of breastfeeding was 24 weeks after returning to work (N=2615). The reasons women most frequently cited for early breastfeeding discontinuation were sore nipples, inadequate milk production, and that their infant was not satisfied with breastfeeding (Ahluwalia, Morrow, & Hsia, 2005). However, women

who discontinue breastfeeding after four weeks, cited work or school as their reason for stopping (35%, n=5617) (Ahluwalia et al.; Flower, et al., 2008).

Women who worked fewer hours upon returning to work have longer breastfeeding duration (Fein et al., 2008; Ryan et al., 2006). Also directly feeding the infant (n=250) or pumping and directly feeding the infant (n=75) are strategies that are associated with the longest duration of breastfeeding, 31.4 and 32.4 weeks respectively ($p < .001$) (Fein et al.) Women who do not pump or breastfeed at work (n=128) have the shortest breastfeeding durations (14.3 weeks); these women have a 12 week decrease in breastfeeding duration (Fein et al.).

In a study comparing breastfeeding cessation among 1,322 low-income women, 38.9% (n=514) of the women discontinued breastfeeding after one month postpartum (Racine, Frick, Guthrie, & Strobino, 2009). By six months postpartum, 82.6% (n=1092) of the women had discontinued breastfeeding (Racine et al.). The women in the study cited "returning to work or school" (Racine et al., p. 244), followed by lack of social support as the most common reasons for cessation of breastfeeding. This study also, found that the number of hours per week that a woman worked affected how long she breasted (Racine et al.). Compared to non-working mothers, women who worked 20 hours a week or less, had a 29% greater risk of discontinuing breastfeeding compared to mothers who worked 21 to 40 hours a week who had a 47% greater risk of discontinuing breastfeeding (Racine et al.).

Exclusivity

Little research has been conducted studying on the relationship between breastfeeding exclusivity and employment (N=25). The qualitative study by Bai et al.

(2009), found that having to return to school or work was reported as the most common barrier to breastfeeding exclusivity (80%, n=20) (Bai et al.). In addition, many women find disapproval from co-workers as a barrier of breastfeeding exclusivity (60%, n=15) (Bai et al.). Bai et al. found that forty percent (n=10) of the women they studied believed that being stay-at-home mothers would facilitate breastfeeding exclusivity. Twenty percent (n=5) felt that having flexible work schedules and or a flexible work environment would facilitate breastfeeding exclusivity.

Demographic Effects on Breastfeeding Initiation, Duration, and Exclusivity

Factors that are associated with longer breastfeeding durations include women who are older aged, of caucasian race, married, have a higher income, and are educated (Dabritz et al., 2009; Fein et al, 2008; Guendelman, Kosa, Pearl, Graham, Goodman, & Kharrazi, 2009; Jacknowitz, 2008; Kimbro, 2006; Flower et al., 2007; Ogbuanu, et al., 2009; Ryan et al., 2006; Slusser, Lange, Dickson, Hawkes, & Cohen, 2004). Fein and Roe (1998) also concluded that income had a positive association with breastfeeding initiation and duration, except in the instances of influences from other variables such as "medical, social, and health promotional" variables (p. 1045). Their study suggested that women who have higher incomes and are influenced by these variables (Fein & Roe). Subsequently, these women are less likely to initiation breastfeeding, because missing work to breastfeed would have more of an impact on the family's household income (Fein & Roe).

Researchers has shown that women who are on the Women, Infant, and Children program (WIC) have decreased breastfeeding initiation and duration rates (Dabritz et al., 2009; Flower et al., 2007; Jacknowitz, 2008; Ogbuanu, 2009; Racine et al., 2008; Ryan et

al., 2006). Women who are enrolled in WIC receive free formula so this is possibly why these women have lower breastfeeding initiation and duration rates. Furthermore, women enrolled in the WIC program have low household incomes. There were no studies found that focused on breastfeeding exclusivity.

Effects of Maternity Leave on Breastfeeding Initiation, Duration, and Exclusivity

Women who experienced maternity leaves of less than six weeks are four times as likely to not initiate breastfeeding; these women also experience decreased breastfeeding durations related to short maternity leaves (Guendelman et al., 2009; Jacknowitz, 2008). Guendelman et al. concluded that maternity leaves of less than twelve weeks were associated with a decreased initiation and duration rates among breastfeeding women ($n=216$, $p < .0001$). Comparatively, Flower et al. (2007) found that women who were returned to work by two months had decreased breastfeeding initiation rates. A study focusing on Australian mothers ($n=260$) showed that employment in the first six months following childbirth had a negative impact on breastfeeding duration (Cooklin, Donath, & Amir, 2008). In fact, researchers discovered that mothers who return to work full-time within three months after giving birth ($n=91$) had a more than "double the odds" of breastfeeding cessation before six months postpartum compared to non-employed mothers ($n=1616$) (Cooklin et al., p. 622).

In the United States, the Family Medical Leave Act mandates that women be allowed to take 12 weeks of unpaid leave (United States Department of Labor, 2010). Many women in the United States have hourly paid positions or are receiving minimum wage; subsequently, unpaid maternity leave may not be an option for some women (Ryan et al., 2006). Galtry (2003) compared maternity leave practices and policies of the

United States and Sweden. Sweden has a government sponsored 480 day paid maternity leave policy (Galtry). Consequently, breastfeeding initiation rates in Sweden are 97% and duration rates at six months were 73% (Galtry). Galtry concluded that longer paid maternity leaves may positively influence breastfeeding rates. Because it is unlikely that the United States would adopt Swedish maternity leave policies, Galtry suggests that making workplaces more "breastfeeding –friendly" (p. 175) for new mothers is imperative to increasing breastfeeding initiation, duration, and exclusivity rates.

Types of Jobs that Effect Breastfeeding Duration

Women in managerial positions or women who have positions with increased autonomy are more likely to establish breastfeeding (Guendelman et al., 2009; Kimbro, 2006; Witters-Green, 2003). In addition, mothers with professional jobs have similar breastfeeding duration rates to stay-at-home moms (Kimbro, 2006). In one study, researchers discovered that women who were salaried (n=194) were 15% more likely to express milk at work compared to those who are paid hourly (n=157) (Ortiz, et al., 2004). Women who describe their jobs as "fulfilling" are also more likely to establish breastfeeding (Guendelman et al., p. e40).

Dabritz et al. (2009) found an association between educational attainment and job flexibility. Their research showed that women who were more highly educated tend to have greater "flexibility and control" over their work schedules and subsequently had an easier time scheduling breaks for milk expression (Dabritz et al.; Kimbro, 2006). Conversely, stressful or nonflexible jobs are associated with decreased breastfeeding durations (Guendelman et al.; Kimbro, 2006). Women who work set shifts do not

perceive themselves as having a flexible schedule compared to those who work a rotating schedule (Jacknowitz, 2008)

The Effects of Worksite Breastfeeding Programs on Breastfeeding Duration

Cohen and Mrtek (1994) were the first to conduct studies focusing on the effects of worksite breastfeeding programs on breastfeeding duration. They found that of the 100 women who were enrolled in worksite breastfeeding programs, 75% continued to breastfeed until the child was at least 6 months old; the average breastfeeding duration of the women was 8 months (Cohen & Mrtek). At the time of the study, the women had breastfeeding duration rates which were similar to those who were unemployed (Cohen & Mrteck).

Ortiz et al. (2004) studied 462 women who were employed by corporations who had employer sponsored breastfeeding programs. Breastfeeding was initiated by nearly 98% (n=336) of participants and 58% (n=194) of the women continued breastfeeding for at least 6 months (Ortiz et al.). Furthermore, the researchers found that there was no difference in breastfeeding duration between women who worked part-time to those that worked full-time (Ortiz et al.). Ortiz et al. concluded that supportive work environments can significantly increase breastfeeding initiation and duration. Comparatively, Jacknowitz (2008) found that the mothers who were employed at worksites that offered employer-sponsored child care also had increased breastfeeding duration rates.

A problem with worksite breastfeeding programs is that many employees aren't aware of their employer's breastfeeding policies (Brown, Poag, & Kasprzycki, 2001). California enacted worksite breastfeeding legislation in 2002 (Dabritz et al., 2009). Businesses in California must provide a designated space for milk expression and

adequate breaks for expression (Dabritz et al.). Dabritz et al. evaluated companies and educational institutions compliance with California's lactation accommodation laws by interviewing 201 women about their breastfeeding experiences after returning to work. Women with lower educational levels were nearly 30% less likely to have access to a lactation room than those women with higher educational levels (Dabritz et al.). The researchers also learned that 33% (n=67) of the women they study were not aware of their workplace breastfeeding policy (Dabritz et al.).

Breastfeeding Experiences among Working Women

To successfully breastfeed while at work, women need an accepting work environment (Rojjanasrirat, 2004). Bai et al. (2009) concluded that women value and understand the health benefits associated with breastfeeding, but generally feel a lack of approval and support from society. Women reported that combining breastfeeding and employment is easier if they have supportive co-workers and employers (Bai et al., 2009; Kosmala-Anderson & Wallace, 2006; Rojjanasrirat; Stevens & Janke, 2003; Witters-Green, 2003). Women also reported that flexible schedules allow them to continue to breastfeeding (Kosmala-Anderson & Wallace; Rojjanasrirat). Women need time allowances and adequate nursing facilities to successful combine breastfeeding and employment (Rojjanasrirat; Slusser, Lange, Dickson, Hawkes, & Cohen, 2004). Stressors such as time restraints, inadequate facilities, and stressful working environment are all discentives women have cited that have lead to breastfeeding cessation (Jacknowitz, 2008; Kosmala-Anderson & Wallace; Rojjanasrirat).

Two of the studies in this review focused specifically on active duty military women. The women in these studies had similar constraints; they expressed the need for

breastfeeding support among employers and peers, comfortable sanitary rooms for pumping and storing milk, and more time to express milk (Stevens & Janke, 2003; Uriell, Perry, Kee, & Burress, 2009).

Public Beliefs about Worksite Breastfeeding Policies

Few studies have researched public beliefs regarding breastfeeding. Li, Hsia, Fridinger, Hussain, Benton-Davis, and Grummer-Strawn (2004) researched public beliefs about breastfeeding policies in various settings using data from a 2001 national health survey of 3,714 adults. Approximately 50% (n=1854) of the people surveyed believed that establishing worksite breastfeeding policies, including lactation facilities were acceptable and needed in society (Li et al.). The researchers found that nearly 43% (n=1565) of people believed that employers should provide flexible work schedules to accommodate breastfeeding mothers (Li et al.) The population surveyed also believed that employers should extend maternity leaves and also provide a room for milk expression (Li et al.).

Employer Attitudes about Breastfeeding and Worksite Breastfeeding Programs

Limited research has been conducted to assess employer attitudes about breastfeeding. Supportive employers and supervisors are important for breastfeeding success (Rojjanasrirat, 2004; Stevens & Janke, 2003; Witters-Green, 2003). Research shows that there are varied attitudes toward breastfeeding among employers (Libbus & Bullock, 2002; Witters-Green, 2003). For example, there seems to be some willingness to facilitate breastfeeding in the workplace, however, few employers reported understanding the actual value of supporting and encouraging breastfeeding at the work site (Dunn, Zevela, Cline, & Cost, 2004; Libbus & Bullock). Employers may allow

breastfeeding in the worksite, but may not take time to promote it nor establish policies that support it (Brown, Poag, & Kasprzycki, 2001; Libbus & Bullock). Research has found that employers do not generally see the benefits or value of worksite breastfeeding programs (Dunn et al; Libbus & Bullock; Witters-Green). In addition, a small qualitative study (N=14) found that many employers did not believe breastfeeding was a worksite issue and that mothers would miss more work if they chose to breastfeed (Witters-Green). Libbus and Bullock discovered differences between the attitudes of male (n=26) and female employers (n=59). Men were 26% more likely than women to believe that breastfeeding at work interferes with productivity (Libbus & Bullock).

There may be a relationship between the size of a business and breastfeeding support. A study of 157 Colorado businesses discovered that there are significant differences in worksite breastfeeding support between large and medium sized businesses (Dunn et al., 2004). Larger businesses (n=44) had better facilities and more available benefits such as job sharing, part-time employment options and flexible scheduling (Dunn et al.).

Worksite Breastfeeding Legislation

Currently, twenty-four states have laws supporting breastfeeding in the worksite (National Conference of State Legislatures, 2009). Findings suggest that state breastfeeding laws are generally ineffective (Chertok & Hoover, 2009; Jacknowitz, 2008). As previously discussed, this may be partly because research has shown that many employers do not implement the policies in the worksite (Dabritz et al., 2008). However, according to Chertok and Hoover, the states with the highest breastfeeding rates all have legislation regarding breastfeeding and employment.

Another reason breastfeeding laws may be ineffective is that many state laws are vague and do not mandate that employers provide worksite accommodations for their employees; rather, they provide incentives for employers who offer these services. For example North Dakota's law states,

> the act of a woman discreetly breastfeeding her child is not in violation of indecent exposure laws. The law allows a woman to breastfeed her child in any public or private location where the woman and child are otherwise authorized to be. The law allows an employer to use the designation "infant friendly" on its promotional materials if they adopt a workplace breastfeeding policy that includes a flexible work schedule that provides time for expression of breast milk; a convenient, sanitary, safe and private location other than a restroom to allow privacy for breastfeeding or expressing breast milk; and other policies (National Conference of State Legislatures, ¶ 36).

Consequently, North Dakota is a state with relatively low breastfeeding rates which may in part be related to efficacy of the law (Chernok & Hoover, 2009). Minnesota has higher breastfeeding rates compared to its neighboring state, 81% versus 71% (Chernok & Hoover). Minnesota's breastfeeding legislation includes "the right to breastfeed, decriminalization, and breastfeeding and maternal employment laws" (Chernok & Hoover, p. 51). Minnesota's laws were enacted over 10 years ago, while North Dakota just recently enacted breastfeeding legislation.

California is another state with high breastfeeding rates which is also possibly related to the state's more comprehensive breastfeeding legislation. California's law mandates that women have a sufficient amount of time to breastfeed or express milk,

have a private place to express milk or breastfeed, and have a supportive breastfeeding environment (Chertok & Hoover, 2009). In addition, the state of California also enforces civil penalties, such as fines and tax increases, to employers who are in violation of the law (Chertok & Hoover).

Worksite Accommodations that Support Breastfeeding

Worksite breastfeeding programs should be designed to promote breastfeeding by providing facilities and support to breastfeeding mothers. Employer-sponsored child care that is either provided on-site or is located near the worksite is beneficial (Jacknowitz, 2008; Witters-Green, 2003). Flexible work scheduling so that a breastfeeding woman can adjust her work schedule or hours is also beneficial (Jacknowitz). Flexibility also includes allowing women a sufficient amount of time to breastfeed or express milk (CDC, 2009b; Jacknowitz; Slusser et al., 2004). Women need approximately two 30 minute breaks to allow for adequate expression of milk (Slusser et al.). If possible, allowing women to work from home would greatly enable a breastfeeding woman (Jacknowitz).

In addition, women need comfortable accommodations to pump or breastfeed; women also need a place to store breast milk (CDC, 2009b). Employers should provide a room in which 2 women could pump or breastfeed at the same time (Click, 2006). The room should include comfortable chairs, tables, privacy partitions, wastebaskets, cleaning solutions, a refrigerator, and a sink with running water (Click).

Providing a hospital-grade pump would be useful; hospital-grade pumps would allow a woman to simultaneously pump both breasts (Click, 2006; Rojjanasrirat, 2004). Ortiz et al. (2004) found that women who have access to a worksite lactation room with

hospital-grade pumps have longer breastfeeding durations than most working in the United States. According to Click, it could be cost-effective for employers to offer breast pump purchase and or rental programs for employees. Employers could fully pay for a pump, partially pay for a pump, offer a payroll deduction program, or rent pumps to employees (Click).

Summary

The studies in this review have various focuses including how the worksite and or maternity leave practices affect breastfeeding initiation, duration, and exclusivity rates, public and employer attitudes about breastfeeding, experiences among working breastfeeding women, and laws affecting breastfeeding. The evidence supports the need for continued research on the effects of the worksite on breastfeeding practices. In addition, the evidence supports the need for worksite policies and accommodations for working breastfeeding women in order to increase breastfeeding rates in the United States. Policy makers and business administrators may need more education regarding the positive influence worksite breastfeeding policies and programs have on breastfeeding rates.

CHAPTER III

METHODS

Working breastfeeding mothers face greater challenges than mothers who are unemployed. Women who work full-time are more likely to cease breastfeeding earlier than those who work part-time. Research has shown that worksite breastfeeding programs are effective in increasing breastfeeding initiation and duration rates. More research is needed regarding the effects of worksite breastfeeding programs on breastfeeding exclusivity. The purpose of this project was to determine the current evidence supporting the positive effects of worksite breastfeeding programs on breastfeeding initiation, duration, and exclusivity rates. At the culmination of this project, employers at a Midwestern health care facility will be educated about the current evidence and guidelines supporting the implementation of worksite breastfeeding programs.

Population

The target population of the project was healthcare professionals, employers, and breastfeeding mothers and their families. This project was focused primarily on increasing employers' awareness of the benefits of worksite breastfeeding programs. A presentation on the importance of breastfeeding, current breastfeeding rates, evidence supporting worksite breastfeeding programs, and benefits of worksite breastfeeding

programs for employers and employees was developed as a short in-service to administrators of a Midwestern health care facility.

Process

A rigorous review of current literature was performed using several databases and other resources. The databases included: CINAHL, SCOPUS, PubMed, and The Cochrane Library. Key terms used for the literature search were as follows: breastfeeding, lactation, worksite, work, working, work environment, initiation, duration, exclusivity, and health promotion. The CDC, AAP, and WHO websites were also searched.

Evaluation of Presentation

The "Benefits of Worksite Breastfeeding Programs" presentation was developed based on findings from the extensive review of the literature (Appendix A). The objectives of the presentation included recognizing the importance of breastfeeding to the health of mothers and children; identifying the problems associated with breastfeeding; identifying the needs of working mothers; and recognizing the employee and employer benefits associated with worksite breastfeeding programs. The presentation included breastfeeding recommendations from the WHO, AAP, and Healthy People organizations; breastfeeding statistics were also provided. In addition, evidence to support the effectiveness of worksite breastfeeding programs was discussed. The cost-savings associated with breastfeeding was another main focus of the presentation; in particular, cost-saving benefits employers experience when worksite breastfeeding programs are implemented. Finally, information regarding necessary worksite breastfeeding accommodations was provided.

Invitations to the presentation were given in person or by telephone two weeks prior to the presentation. There were four people in attendance; they included the director of nursing, two nurse managers, and an individual from the employee education department. Administrators from the human resource department were also invited, but they did not attend the presentation. Each member of the audience was given a hard copy of the presentation; a list of references was also included. The audience received a printed resource and website information from the CDC which gives step by step instructions on policy development and necessary worksite accommodations (CDC, 2005).

An evaluation of the presentation was completed by the audience (N=4) following the presentation (Appendix B). The evaluation consisted of five statements in which the attendees rated each of the five statements using a Likert scale. The evaluation also included a section for written comments. The evaluation rated the presenter's preparation and knowledge of the material being presented, the delivery of the presentation, and the importance of the information being presented. The evaluation also asked the attendees to decide whether they would be more apt to consider implementing breastfeeding policies and programs in there institution after listening to the presentation.

Expected Outcomes

The expected outcome of this project was to bring awareness to employers of the current evidence and benefits of worksite breastfeeding programs. It was expected that the hospital administrators in attendance would develop an increased awareness of the needs of working breastfeeding mothers. It was also expected that employers would recognize the benefits of worksite breastfeeding programs to employees and employers.

The response from the presentation was positive. All four of the attendees "strongly agreed" with each of the statements except for the statement regarding the implementation of a breastfeeding policy. While they "agreed" with the statement concerning worksite breastfeeding policies, they were apprehensive about guaranteeing time for lactation or breastfeeding for personnel such as nurses who are in charge of direct patient care. However, all of the attendees related that they saw the benefits of implementing a breastfeeding policy and or accommodations. The maternity ward has been slated to be remodeled in the near future, and according to the attendees, a breastfeeding room may be considered in the plans.

Because the attendance was small, an additional presentation may be necessary. The presentation was given at the hospital; the human resource department is not located in the hospital so this may be the reason why people from this department did not attend the presentation. Another presentation may need to be held in their offices. The director of nursing also suggested that the president of the hospital be present at a future meeting, especially if a breastfeeding policy and or program were to be considered.

Summary

There are many challenges associated with breastfeeding including returning to work. Women are entering the workforce at an increasing rate, which may further negatively impact breastfeeding rates. Many of the challenges associated with combining work and breastfeeding can be alleviated by a relatively small investment of time, money, and support from employers. Research, education, and advocacy are vital to the addition of successful worksite breastfeeding programs in communities.

CHAPTER IV

DISCUSSION

Introduction

Working mothers face multiple barriers to breastfeeding continuation. Employment has been shown to negatively affect breastfeeding rates. Worksite breastfeeding programs can benefit both mothers and employers. Worksite breastfeeding programs can allow mothers to continue to nurse their infant for longer durations and employers will receive financial benefits from implementing worksite breastfeeding programs. It was determined by the literature that often employers are hesitant to implement worksite breastfeeding programs. Hence, there is a need for education regarding the effectiveness of worksite breastfeeding programs.

Project Theoretical Framework

The presentation was developed using Ajzen's and Fishbein's, Theory of Planned Behavior as the theoretical framework. The Theory of Planned Behavior contends that one's behavior is directly related to one's intentions or motivation to perform the behavior (Ajzen, 1991). The focus of the presentation was to inform the audience about the importance of worksite breastfeeding programs and policies, while specifically focusing on the employer benefits associated with the programs. The focus was also to determine the employers' acceptance of breastfeeding and their willingness to support breastfeeding in the worksite. The presentation was intended to be persuasive in order to

motivate the employers to implement a breastfeeding accommodations and policies in the worksite. The evaluation of the presentation reflected the theory by centering on the audiences' preconceived notions and their specific intentions related to breastfeeding programs and policies, identify their views about the importance of breastfeeding, and identify their motivation to initiate the programs and policies.

Implications for Nursing

The information summarized in this review significantly impacts nursing practice, education, and research. The implications of this review also reflect the need for breastfeeding policy development at the community, state, and national level. Nurses will play an increasingly important role in breastfeeding promotion and policy development. Nurses need to advocate for mothers and children by raising social awareness about the health benefits associated with breastfeeding and the need for more effective breastfeeding support.

Practice

The findings of this project have a direct affect on public health nurses, nurses working in clinical areas, and advanced practice nurses, especially those caring for the obstetric and pediatric populations. Nurses in these areas play a primary role in health promotion education and awareness. Nurses may also play a positive role in influencing mothers' feeding decisions, which allows them a unique opportunity to provide information about the benefits of breastfeeding (Ortiz et al., 2004). In order to achieve the Healthy People 2010 goals, it is necessary that nurses understand the factors that influence breastfeeding.

Prenatal breastfeeding promotion, including counseling about the barriers associated with breastfeeding, should be a priority. According to Ortiz et al. (2004), "the view that working mothers cannot provide breast milk for their infants may foster a self-fulfilling prophecy: mothers who have been led to believe that pumping at work cannot be done without considerable stress might, therefore, not even consider the possibility" (p. 116). Nurses need to identify these issues and give patients appropriate advice and education about the positive aspects associated with combining work and breastfeeding. Women must also be educated about the barriers associated with combining work and breastfeeding (Johnson & Esposito, 2007; Witters-Green, 2003). Nurses should assist mothers in developing a strategic plan for breastfeeding and or milk expression before they return to work and provide continued support beyond the initial postpartum period (Johnston & Esposito; Rojjanasrirat, 2004).

Education

In addition to educating mothers about the benefits of breastfeeding, the primary goal of the comprehensive literature review, project, and presentation is to educate employers and employees about the benefits of worksite breastfeeding policies and breastfeeding accommodations. These include reduced employee turnover, reduced absenteeism, and improved employee morale (Dunn et al., 2004). Nurses need to help employers in developing policies and breastfeeding facilities (Dunn et al.). Furthermore, promoting the important health benefits of breastfeeding and facilitating optimal breastfeeding practices through education is a vital role of the nursing profession.

Although the focus of this project was to educate employers about the benefits of worksite breastfeeding programs, it is just as imperative that nurses educate the public

about the benefits of breastfeeding and the variables associated with breastfeeding cessation. Public support is necessary when implementing any changes in the social environment (Li et al., 2004). When public support is gained, breastfeeding and support for breastfeeding mothers will become the norm and thus employers will be more apt to establish policies and provide breastfeeding facilities.

Policy

Nursing's foremost goal is to advocate for patients and their families. Nurses need to advocate for breastfeeding in the worksite by educating communities and encouraging legislators to form and enact effective state and national worksite breastfeeding policies. In addition, nurses can give businesses anticipatory guidance in how to support breastfeeding employees. Nurses must raise awareness about the barriers associated with breastfeeding. Nurses must also understand the importance of creating social awareness about the importance of worksite programs and breastfeeding support. Nurses need to be encouraged to advocate for the creation of worksite policies and programs to support the continuation of breastfeeding. The studies in this review can be used to create new worksite breastfeeding policies or change current policies.

Research: Current and Future

Current research indicates breastfeeding duration and exclusivity rates can increase when breastfeeding accommodations are available in the worksite. While there have been many studies on breastfeeding and the worksite, most of the studies include many variables and the results are very complex. More studies are needed that specifically focus on investigating worksite accommodations and the affects of these accommodations have on breastfeeding initiation, duration, and exclusivity. Also, more

research is needed on working mothers who successfully breastfed. Many of the studies that provided evidence supporting the positive effects of worksite breastfeeding programs go back as far as the early 1990s, however, breastfeeding duration rates have only increased slightly. Perhaps more research is needed on why employers and legislators have not implemented worksite breastfeeding policies and practices.

Summary

Breastfeeding can have a significant impact on the health of working mothers and their families. Unfortunately, breastfeeding mothers face many barriers including combining employment and breastfeeding. Employers can play a critical role in improving breastfeeding environments for women. Nurses must motivate employers to develop policies and to create worksite breastfeeding programs. As more worksites establish onsite breastfeeding programs, more women will be encouraged to initiate and continue breastfeeding.

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