

WORKPLACE SUPPORT FOR LACTATING MOTHERS:

A Study of Benefits Provided by Employers

in the Hudson, Wisconsin Area

by

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ABSTRACT

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Nationwide statistics reveal that women face barriers in their attempts to combine work and breastfeeding (Blum, 1993; Cohen & Mrtek, 1994; Lindberg, 1996a; Ryan & Martinez, 1989; Thompson & Bell, 1997). In this study I attempted to determine the amount and types of workplace support that Hudson, Wisconsin area employers currently provide for hourly paid and salaried working mothers who decide to breastfeed their infant. The study identified employers who recognize a need to support women who decide to breastfeed while continuing to work or returning to work. The Survey of Workplace Support for Lactating Mothers (SWSLM), sent to human resource personnel in Hudson and surrounding communities in St. Croix County, was used to determine the number of women who took advantage of such programs during the years

1994-1999 in participating workplaces. The human resource personnel represented small, medium, and large workplaces in the following sectors: wholesale/retail, educational, government, health services, and manufacturing. The researcher was available by phone to offer explanations or clarification of questions. A SASE was included for the participants to return the survey. Participants were informed that they may be contacted by telephone for clarification of their responses upon return of the surveys. The SWSLM is a self-report instrument designed by the researcher for the purposes of this investigation. Part one consists of demographic questions including: the number of employees at the company, a breakdown of this number by gender, hourly versus salaried workers, number of female employees who had babies in the years of the study, number of female employees who breastfed their infants, and ethnic and racial categories. Part two contains a list of typical lactation provisions and benefits in the following categories: lactation provisions, flexible time arrangements, dependent care assistance, and traditional benefits. Personnel directors were asked to check off those available to employees in their workplace. In part three, short answer, open-ended questions provide personnel directors the chance to elaborate on these answers and discuss benefits and difficulties experienced by their company. Demographic data was analyzed with descriptive statistics. Responses to open-ended questions were coded according to themes found in the data. Local health care providers, social service agencies, and counselors who work with women and families will be able to use the information in this study to help women have realistic expectations about returning to work or to brainstorm ways to successfully combine employment and breastfeeding. Using this description of benefits that are available to employees in one area of Western Wisconsin, breastfeeding advocates in Wisconsin will be better informed when they determine strategies for increasing breastfeeding rates by helping employers provide lactation friendly workplaces. Releasing the results of this report to regional media may further the local focus on this issue.

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TABLE OF CONTENTS

LIST OF TABLES	vi
CHAPTER ONE: Introduction	1
CHAPTER TWO: Literature Review	6
CHAPTER THREE: Methodology	41
CHAPTER FOUR: Results and Discussion	44
Appendix A: Survey Cover Letter	60
Appendix B: Consent Form	61
Appendix C: Survey of Workplace Support for Lactating Mothers	63
References	66

LIST OF TABLES

Table 1	<u>Reported Births and Women Known by Employers to Combine Employment and Breastfeeding (BF)</u>	page 46
Table 2	<u>Range and Mean Leave of Employees who Gave Birth</u>	page 47
Table 3	<u>Percentage of Workplaces Providing Lactation Provisions</u>	page 49
Table 4	<u>Percentage of Workplaces Allowing Flexible Time Arrangements</u>	page 50
Table 5	<u>Percentage of Workplaces Providing Dependent Care Assistance</u>	page 50
Table 6	<u>Percentage of Workplaces Providing Traditional Benefits</u>	page 51

CHAPTER ONE

Introduction

The large number of women in the workforce and the implementation of social policies such as W-2 indicates that there is a societal expectation for women to successfully combine work and family while caring for young children. Research shows that the number of women with children under one year of age who are employed outside of the home has grown (Blum, 1993; Cohen and Mrtek, 1994; Dodgson and Duckett, 1997; Lindberg, 1996a; Ryan and Martinez, 1989; Thompson and Bell, 1997). Recent statistics show more than half of women with children under one year of age are in the labor market (Dodgson and Duckett, 1997; Lindberg, 1996a; Thompson and Bell, 1997). The majority of this group of women, 66%, are employed full time (Blum, 1993). Recently, there has been increased attention on the importance of breastfeeding during the first year of the infant's life, with new guidelines issued by the American Academy of Pediatrics (AAP) in December of 1997. The AAP recommends exclusive breastfeeding for at least the first year of life (American Academy of Pediatrics Workgroup on Breastfeeding, 1997). The National Organization of Women (NOW) responded to this recommendation with a press release warning of the undue stress and pressure this places on working mothers. Many women cannot meet this recommendation due to financial or logistical obstacles. NOW urged that mothers should not be judged as good or bad by their decisions about breastfeeding (Suarez, 1998). While in general, breastfeeding rates for American women have risen in recent decades, the disparities in the statistics comparing working postnatal mothers and unemployed postnatal mothers indicate that women face barriers in their attempts to combine work and breastfeeding (Cohen & Mrtek, 1994; Lindberg, 1996a; Thompson & Bell, 1997).

Many large corporations have started to provide employee benefits that include a breastfeeding support program. Programs that aim to remove work as a barrier to breastfeeding appear to be successful. According to research by Cohen and Mrtek (1994), mothers tend to maintain breastfeeding at rates found among women who are not employed outside of the home

with the support of onsite lactation programs. No studies, however, have been conducted of lactation programs in the Hudson, Wisconsin area.

Statement of the Problem

The purpose of this study was to develop a description of the amount and types of support that Hudson area employers currently provide for working mothers who decide to breastfeed. Personnel directors of workplaces in Hudson, Wisconsin and adjacent townships were surveyed regarding their lactation support for employees during the years 1994-1999. They received a questionnaire during the Spring semester of 1999. The study included employers from health care, educational, retail, government, and manufacturing workplaces that returned the survey.

Proposed Use of Findings

This study can become incorporated into public dialogue about issues that arise when women combine work and family. Current trends point to employer interest in providing work-life benefits to employees. This is a term that is broader than the work-family concept as it involves recognizing the impact of work on personal life for all employees, parents and nonparents alike (Galinsky, Bond, & Friedman, 1996). Still, benefits that help balance work and family impact directly on the equality of women. Women continue to make less money than men. Many factors combine to produce this situation, from the concentration of women in pink collar jobs, to the amount of pay that women lose when they decide to use alternative work arrangements or take unusual career paths. Part time work reduces incomes and temporarily dropping out of the work force to concentrate on child care results in lowered salaries when women return. Discussions about employee benefits that will help women achieve equity often produce opposing opinions. For example, if flexible work hours or reduced work hours are

available for parents, will these benefits be used mainly by women? Will accepting reduced work hours relegate a woman to a lower paying or a less advanced career position? Working mothers who are lactating have physical, emotional, and privacy needs. They also want to meet the demands of the workplace. This study can supply information to those interested in meeting the needs of postpartum working women and the needs of the workplace.

While public policy is made at the national and not the local level, the local dialogue about this issue can influence future public policies. The Family Leave Act of 1993 is one example of public policy. Since that act went into effect, women who are employed by companies with fifty or more employees are guaranteed twelve weeks of leave with job security. This leave can be beneficial to women who plan to breastfeed and return to work. Later entry into postpartum employment is associated with longer durations of breastfeeding (Lindberg, 1996a, 1996b; Thompson & Bell, 1997). However, not every woman can afford an unpaid leave of even 12 weeks. The women at most risk for difficulty in combining work and parenting are low income women and young women (Harwood, 1988). Public policy debate continues to be played out in legislatures as low income women with young children enter the work force in entry level positions and welfare is replaced by W-2 and workfare programs.

The lactation programs of several corporations have been studied and published by Rona Cohen and Marsha Mrtek (1994). Laura Duckett (1992) from the University of Minnesota, who has published studies on the issues of breastfeeding and employment, has researched Minnesota workplaces. Within the past year, Ben Anderson, Laurie Fisk, and Kathryn Hoffman conducted a study of workplaces in the Chippewa Valley of Wisconsin. A study of the Hudson area will add to the research done in this area of the country. Research and networking among health care professionals has led to the implementation of the Minnesota Department of Health's Lactation Friendly Workplace Program. In this Minnesota program, Community-based Health Agencies help employers provide a lactation friendly workplace. The present study can further the efforts of breastfeeding advocates in Wisconsin by describing the benefits that are available to

employees in one area of Western Wisconsin. Asking questions may spur further support by employers. Releasing the results of this report to regional media may further the local focus on this issue. Local health care providers, social service agencies, and counselors who work with women and families can use the information gained in this study to help women have realistic expectations about returning to work. For some women, succeeding at both breastfeeding and work fits into the superwoman image. For women who find they cannot live up to this ideal, the study results can be used to help reduce self-blame. If a woman does not have benefits at her workplace, these results may help her brainstorm ways to successfully combine employment and breastfeeding.

Objectives of the Study

The specific research objectives were to:

1. Identify employers who recognize a need to support women who decide to breastfeed while continuing to work or returning to work.
2. Determine the types of support available for hourly paid workers and salaried workers.
3. Determine the number of women who took advantage of such programs during the years 1994-1999 in the particular companies that are part of the study.

Definition of Terms

The following terms are defined for use in this study:

Breastfeeding: The standards set by the Women, Infant, and Children (WIC) program are used in this report. Women are defined as breastfeeding if they nursed their infants at least once per day (Thompson & Bell, 1997).

Hourly workers: Workers who are paid for each hour that they perform duties for the employer.

Lactation: The ability of a woman's body to produce milk after the birth of a baby or after stimulation to produce milk for an adopted infant.

Leave: A guaranteed time away from all of the responsibilities of work with the right to return to the same position with the same pay.

Postpartum employment: A woman at work within one year of the delivery of her child participates in postpartum employment.

Salaried workers: Workers who are paid a given amount to perform duties for their employer. The amount of time needed to complete duties or projects varies. Usually professional employees fall into this category.

Work: Employment outside of the home is used to define this term. Women in this study worked if they were actively working for their employer, but not if they were on leave.

Assumptions

This study assumed that the personnel directors gave accurate information and were comfortable answering questions about lactation programs. This study also assumed that Hudson area companies employ women who desire to combine breastfeeding and employment outside of the home.

Limitations

By surveying the personnel directors, this study does not provide the story of the women who work in the companies. The study did not address whether women feel free to use the benefits that are available on paper. The de facto rules of work may differ from the formal rules. Personnel directors may want to emphasize the benefits that their company provides to employees as opposed to the negative aspects of working for their company.

While data was collected to determine how many women use such benefits in Hudson area companies, the sample was limited to companies that agreed to participate. The results cannot be generalized to all working women who desire to breastfeed in the Hudson area. Also, the number of benefits provided by workplaces described in the results cannot be generalized to all workplaces in the region.

CHAPTER TWO

Literature Review

Introduction

This review includes studies of the social and psychological factors which influence rates of breastfeeding initiation and duration. Studies addressing factors that interact with combining postpartum employment and breastfeeding are of special interest.

Two out of three mothers work outside of the home and the age of their children when they return to work has become younger in recent decades (Suarez, 1998). According to a Bureau of National Affairs Special Report and a report by Maume, the fastest growing segment of the labor market today is composed of mothers of infants and toddlers (cited in Cohen & Mrtek, 1994). O'Connell reported that more than half of women with children under one year of age are in the labor market (cited in Lindberg, 1996a). "At least 50% of women who are employed when they become pregnant return to the labor force by the time their children are 3 months old" (Klerman & Leibowitz, cited in Cohen, Mrtek, & Mrtek, 1995, p. 149). American women increased their rates of breastfeeding in the decades from 1968-1986. This increase occurred for all women, those who remained home and those who were employed outside of the home (Lindberg, 1996a). According to the American Academy of Pediatrics (AAP) (1997), breastfeeding rates have risen since 1990. However, rates are still lower than they were in the mid 80's. Estimates of new mothers who were breastfeeding in 1995 were reported at 59.7%. This was an increase from 51.5% in 1990. However, by the time their infants reach six months the percentage of those breastfeeding fell to 21.6% in 1995 (AAP, 1997; Ryan, 1997; Thompson & Bell, 1997). Under the program Healthy People 2000, the U.S. Department of Health and Human Services has set a targeted rate for breastfeeding at 75% of women upon hospital discharge and 50% at six months postpartum by the year 2000 (AAP, 1997; Thompson & Bell, 1997). In 1995, women who worked outside of the house and those who did not were breastfeeding their infants at almost equal rates when they left the hospital. By the end of the infant's sixth month, however, only 14.3% of full time employed mothers continued

breastfeeding their infants, while this figure was 25% for women who were not employed (Ryan, 1997).

Factors Influencing the Decision to Breastfeed

Demographic Characteristics

While all of the social and cultural influences on a woman's choice of infant feeding are not fully understood, statistics reveal that the women who are most likely to initiate breastfeeding fit a specific demographic profile. The women most likely to breastfeed are white, older, more educated, and of a higher socioeconomic class (Cooper, Murray, & Stein, 1993; Dusdieker, Booth, Ekwo, & Seals, 1984; Ryan, 1997; Ryan, Rush, Kreiger, & Lewandowski, 1991). They are also likely to be caring for an infant of normal birth weight, not working outside the home, and living in the Mountain or Pacific regions of the United States (Ryan, 1997; Ryan et al., 1991). Other reports linked youth, low socioeconomic class, and poverty with the decision to bottle feed (AAP, 1997, Foster, Slade, & Wilson, 1996, Wright, Holberg, and Taussig, 1988). The women who fit the breastfeeding profile remained less vulnerable when breastfeeding rates declined from 1982 through 1989 (Ryan et al., 1991). As breastfeeding rates rose again in the 90's, initiation of breastfeeding remained highest for these more privileged mothers. While this group had the smallest increase in breastfeeding rates between 1989 and 1995, the rates were relatively high in the first place (Ryan, 1997).

In 1989, the largest decrease in initiating breastfeeding occurred among women who were black, under twenty-five years of age, making less than \$15,000, having no more than a grade school education, primiparous, having a low birth weight child, not employed, a Women, Infants, and Children supplemental food program (WIC) participant, and living in the East North

Central region of the US (Ryan et al., 1991). In 1995, the largest increases occurred in groups with similar demographic features (Ryan, 1997).

Ryan and his associates (1991) calculated that the odds for breastfeeding in the hospital were three times higher for a white woman than a black woman in 1989. Women with at least some college education were two and one-half times more likely to initiate breastfeeding than women with no college education. While the 1995 statistics provide hope that the gap is decreasing, large differences still exist. Even though black women increased their in-hospital breastfeeding rates by 60.9%, only 37% of black mothers breastfed in the hospital compared with over 60% of white or Hispanic women. Almost three out of four women with some college education initiated breastfeeding in the hospital. With no college education, fewer than one in two women breastfed in the hospital.

As regional differences continued to be prominent, Alan Ryan of the laboratory that conducts the Ross Laboratories Mothers' Survey concluded that culture and attitudes have a broad impact on maternal decisions to breastfeed. Ryan (1997) states,

It is clear that attitudes about breastfeeding vary considerably in different populations and regions of the United States. Regardless of socioeconomic status, mothers living in the western states are more likely to breastfeed than those who reside elsewhere. Therefore, the western states provide a cultural setting that promotes the breastfeeding experience. In these regions of the country new mothers are encouraged to breastfeed and feel comfortable doing so (p. E12).

While the national rate for in-hospital breastfeeding was 59.7%, more than three of every four infants in the Mountain and Pacific regions were initially breastfed in 1995.

Social Influences

Studies on the influence of support persons on the decision to breastfeed indicate conflicting results. Support persons have been shown to be important in the prospective mother's decision to breastfeed (Dusdeiker, Booth, Ekwo, and Seals, 1984; Ryan, 1997; Wombach, 1997). Breastfeeding women were more often influenced to breastfeed by the infant's father, friends who nursed infants, and female relatives than were bottle feeding women. Medical personnel and supportive co-workers were not found to be significant in the decision to breastfeed (Dusdieker et al., 1984). On the other hand, a study of lower income women by Jacobson, Jacobson, and Frye (1991) found no relationship between the decision to breastfeed and social support.

Ryan (1997) argues that the sources of social support vary considerably in different ethnic groups. According to a study by Baranowski, Bee, and Rassin (cited in Ryan, 1997), the positive support of close friends was related to the decision to breastfeed among black women. Mexican-American women and non-Hispanic white women were most influenced by the support of male partners and maternal mothers. Research by James (cited in Bauch, 1995) reports that Hmong women often did not initiate breastfeeding if their husbands had a negative attitude toward breastfeeding. Traditionally, Hmong families are patrilineal and the eldest male makes decisions.

In her review of the literature, Bauch reports a striking shift in breastfeeding practices among Southeast Asian immigrant mothers. While breastfeeding is universal when living in Asia, after immigrating, formula feeding becomes the dominant method. The reasons cited for this shift include convenience, the intent to return to work, and the wish to become Americanized. Since Southeast Asian immigrants only see bottle feeding in public in the US, they project that breastfeeding is not practiced in the US. Even though breastfeeding was

commonly practiced in public in their homeland in Asia, over half of the women surveyed by Bauch reported that breastfeeding was embarrassing and should not be done in public. Women's experience may also influence their decision. Their breastfed babies in Asia were thinner and more likely to have died than their formula fed infants in the US. Bauch's own study of Hmong women, however, revealed that 78 - 81% of the mothers knew that breastfed infants will have fewer illnesses than bottle fed infants. The participants of Bauch's study were all WIC participants and may have learned about the benefits of breastfeeding through educational programs provided by the WIC program.

Other researchers found that prenatal classes, peer counseling, and the support of non-health care professionals are important in the mother's decision to breastfeed (Brent, Redd, D'Amico, & Greenberg, 1995; Hartley and O'Connor, 1996; Kistin, Benton, & Sullivan, 1990; Ryan, 1997; Sciacca, Dube, Phipps, & Ratliff, 1995). Prenatal education has a dramatic effect on breastfeeding rates even if the women initially intend to bottle feed (Kistin et al., 1990; Sciacca et al., 1995). Women with prenatal plans to breastfeed are significantly more likely to carry out those plans if they attend group classes where they discuss myths, problems, and benefits of breastfeeding. On the other hand, individual sessions with a health care provider are particularly effective in raising breastfeeding rates among women who initially intend to bottle feed (Kistin, et al., 1990). Bauch (1995) found a significant relationship between breastfeeding knowledge levels of the Hmong women in her sample and the decision to breastfeed. Those women who scored higher on a series of breastfeeding knowledge questions were more likely to choose to breastfeed their infants.

Personal Characteristics

Foster, Slade, and Wilson (1996) reported that British women who were more satisfied with their body shape were more likely to choose breastfeeding for their infant than women who were dissatisfied with the shape of their bodies. A woman's attitude toward her body and not her body's actual size, as measured by the body mass index, predicted feeding choice. The study results validate hunches made after preliminary interviews with pregnant women. Women deciding to bottle feed described breastfeeding as distasteful and feared an adverse effect on their body. These results also indicate that those with eating disorders are not more likely to breastfeed. Anecdotal evidence that women with eating disorders use breastfeeding to control weight and body shape may, therefore, represent rare cases.

Because the women averse to breastfeeding described the fetus as an impostor residing in their body, Foster, Slade, and Wilson also decided to measure maternal fetal attachment. They measured behaviors, such as role rehearsal, that represent an affiliation and interaction with the unborn child. Women intending to breastfeed had higher scores for maternal fetal attachment. The researchers found that maternal fetal attachment was a predictor of feeding intention, but a weaker predictor than body satisfaction.

While this study was conducted in Liverpool, UK, it is likely to be relevant to US populations. British researchers have reported demographic statistics that resemble those in the US. Income levels (Cooper, Murray, & Stein, 1993; Foster et al., 1996), age and class (Cooper, Murray, & Stein, 1993) were all associated with feeding choice.

Jacobson, Jacobson, and Frye (1991) claim that ego maturity and cognitive ability are factors that predict breastfeeding across cultural differences. In their study of two lower income

samples, one black and one white, they found little apparent effect on the decision to breastfeed from maternal depression, life stress, or social support. Maternal ego maturity and cognitive ability, however, were indicators of breastfeeding intention. The authors suggest two interpretations. Women with more ego maturity may decide to breastfeed due to their greater empathy, nurturance, responsibility, and enjoyment of children. This interpretation indicates that mothers who breastfeed are more infant centered than women who choose bottle feeding. According to their second interpretation, ego maturity may be associated with the decision to breastfeed because women with higher ego maturity rates are less authoritarian. Authoritarianism is a personality characteristic negatively related to breastfeeding according to a 1988 study cited by the authors. The average ego maturity scores in their samples fell in the Conformist range and were lower than scores found in white middle class samples. Breastfeeding rates were high for those who scored in the Conscientious or Individualistic levels of the maternal ego level test. “Greater ego strength may be needed to deviate from the community norms regarding infant feeding to adopt breastfeeding practices more characteristic of the white middle class” (page 733). Jacobson et al. also found racial differences between their two samples. Factors that relate to the incidence of breastfeeding in previous studies, such as maternal age, education, and quality of parenting, were associated with choice of feeding in the white lower income sample. However, they did not relate to breastfeeding among the black lower income mothers.

Peterson and Da Vanzo (1992) also speculated that developmental aspects may be involved in the decision to breastfeed after looking at the decisions of young teens. Teenagers are less likely to breastfeed than older women (Peterson and Da Vanzo, 1992; Wiemann, DuBois, and Berenson, 1998). While teenage mothers tend to have educational, income, and marital status characteristics associated with lower rates of breastfeeding, these factors explain

the difference for teenagers aged 16-19 but not for those aged 15 or less (Peterson and Da Vanzo, 1992).

Factors Influencing Breastfeeding Duration

There are many difficulties in comparing studies of breastfeeding duration. Studies looking at breastfeeding duration do not always use the same benchmark. Definitions of duration range from six weeks to one year. An occasional study focuses on longer durations. The definitions also do not include details. The breastfeeding may include mothers who totally breastfeed their infant, as well as mothers who use formula for some feedings. It may also include infants who breastfeed and eat solid foods. These differences can be very important in some research, especially those looking at health benefits for the infant or the mother. It may also be very important information for studies of working mothers. Some mothers combine postpartum employment and breastfeeding by supplementing some feedings with formula. This coping method is mentioned in only one of the reviewed studies. In addition, many studies include women who combine breastfeeding and postpartum employment, but do not separate out the statistics for each group. When looking at social influences, it is particularly hard to make conclusions about the importance of personal versus workplace factors.

Demographic characteristics

While the majority of the women who initiate breastfeeding in the hospital discontinue this feeding method by six months postpartum (Ryan, 1997), breastfeeding duration statistics have followed a pattern similar to that of initiation statistics. Just as the number of American women initiating breastfeeding peaked in 1982, so did the number of women breastfeeding at six months postpartum. In a similar fashion, the steady decline from 1982 to 1989 reversed as the decade turned. All demographic categories in the 1995 RLMS showed increases from 1989 in

breastfeeding rates at 6 months postpartum. For all women, the rates rose from 18.1% to 21.6% of infants who were breastfed at six months -- a 19.3% increase. This is a strong rise from 1971 when only 5.4% of infants breastfed at six months. However, it is still below the highest rate of 27.1% achieved in 1982 (Ryan, et al., 1991). Echoing previous statistics, the women with the highest rates of breastfeeding at six months postpartum were over 35 years old, college educated, with a total family income over \$25,000, and living in the Mountain and Pacific regions of the United States.

During the 80's, there was a greater decline in duration than in initiation of breastfeeding (Ryan, et al., 1991). As a sign of changing trends, most demographic categories had a higher percentage increase in duration rates than initiation rates from 1989 through 1995 (Ryan, 1997). While the increases are encouraging, they fall far short of the established national goal of at least 50% of women continuing to breastfeed until their babies are 5 to 6 months old (AAP, 1997). According to the 1995 statistics, 63% of women who initiated breastfeeding in the hospital discontinue this feeding method by six months. Even in the categories with the highest rates, such as women from Western regions, well over 50% of the mothers who begin breastfeeding in the hospital cease breastfeeding behaviors by 6 months postpartum (Ryan, 1997).

Educational status

While education appears to be strongly linked with breastfeeding duration (Cooper, et al., 1993; Dusdieker, Booth, Ekwo, and Seals, 1984; Ryan, 1997; Ryan, et al., 1991), some studies indicate a more complicated relationship between educational level and breastfeeding duration. Jacobson, et al. (1991) found education to be related to longer duration rates in a low-income white sample, but not in a low-income black sample. Education was one of the biggest predictors of breastfeeding duration in a study by Wright, et al. (1988). However, this relationship was not

significant for Hispanics who participated in the study. Wright and her associates suggest that education and ethnicity are strongly related. Ethnicity, however, is not simply a factor that can be substituted for education in studies. Cultural influences may have a stronger influence on duration than does educational level.

Age

Several studies have linked youth with early termination of breastfeeding (Cooper, et al., 1993; Dusdieker, Booth, Ekwo, and Seals 1984; Hill & Aldag, 1996; Ryan, 1997; Ryan, et al., 1991). Cooper, et al., however, found a difference related to social class. Lower class women were more likely to discontinue breastfeeding despite their age. For middle class women, those under 25 were more likely to quit than were older women.

Social class

Low total family income was associated with early cessation of breastfeeding in a study conducted by Cooper, Murray, and Stein (1993) in Great Britain. In fact it was a predictor of early cessation in one of their two samples. The researchers recruited their first sample of 483 women from a hospital clinic in Oxford. The second sample consisted of 674 women recruited at a maternity hospital in Cambridge. In both Oxford and Cambridge semi-structured interviews were conducted with a random sampling from each group. The women were asked about the feeding of their baby, social class information, psychiatric history, and the woman's support network. Psychiatric status was also measured. In Oxford, low income was defined as total family income below 4,000 pounds per year. Duration of breastfeeding was defined as 8 weeks. In the Oxford sample, a low total family income was the only social factor found to be significantly associated with early cessation of breastfeeding. Income levels were not determined

for the Cambridge sample and social variables were not found to be related to the duration of breastfeeding.

Marriage and household composition

Some researchers have found an association between marital status and longer breastfeeding duration (Hill & Aldag, 1996; Wright, et al. 1988). Wright, et al. found in their middle class sample that married women were more likely to breastfeed and for a longer duration than the single women. If there were other adult women in the household, the mothers were less likely to choose breastfeeding and less likely to breastfeed for six months. A larger percentage of Hispanic women than white women in their sample lived in households that included another adult woman.

Parity

Women with more than one child are more likely to be breastfeeding at 6 months postpartum than women with one child (Piper and Parks, 1996; Ryan, 1997; Ryan et al., 1991). This is the case despite the fact that hospital breastfeeding rates reported in the RLMS do not differ greatly when looking at parity (Ryan, 1997; Ryan et al., 1991). Prenatal confidence in ability to breastfeed leads to longer duration rates, according to Wambach (1997). Prior breastfeeding experience, therefore, may explain the difference between primiparous and multiparous women. In a study of HMO participants by Wright et al. (1988), first babies were more likely to be breastfed at two months, but subsequent babies were breastfed longer. This pattern was statistically significant for the Anglo-American infants but not, however, for the Hispanic infants in the study. On the other hand, a study of women in Great Britain by Cooper, Murray, and Stein (1993) found that the number of children made no difference in the duration of breastfeeding. The gap between first time mothers and those with previous mothering

experience in the US may be closing. The 1995 rates for primiparous mothers at 6 months increased 29.1% over the 1989 rates (Ryan et al., 1991; Ryan, 1997). This dramatic increase may be due to increased educational efforts by health care providers as well as other social and cultural factors.

Personal characteristics of the mother

Jacobson, Jacobson, and Frye (1991) found that maternal verbal ability was associated with longer breastfeeding durations among low-income women. Higher levels of ego maturity were associated with longer breastfeeding durations in a low-income black sample, but not in a low-income white sample.

Parenting styles that included increased physical contact with the baby led to later weaning in a study by Vandiver (1997). In addition, mothers who rated themselves as more flexible caregivers and also perceived their baby as easy to care for weaned later.

Intended duration

Piper and Parks (1996) found that mothers were more likely to breastfeed for more than six months if they were consistent in their prenatal intent to breastfeed. Wambach (1997) cites several studies that find intended duration to be a significant predictor of actual duration. In her own study, however, intention had only a weak influence on breastfeeding duration. To measure duration, Wambach examined breastfeeding rates at six weeks rather than six months postpartum.

This short time span may have influenced her results.

Smokers

Cigarette smoking is associated with early cessation of breastfeeding (Hill & Aldag, 1996; Piper & Parks, 1996). Using data collected between 1989 and 1991 from the National

Maternal-Infant Health Surveys, Piper and Parks (1996) found that nonsmokers were more likely to breastfeed longer than six months. In a survey of 610 women at eight weeks postpartum, Hill and Aldag (1996) found that women who smoked were more likely to report insufficient milk as a reason for terminating breastfeeding than the nonsmokers. This was true for women with low-birth-weight infants, as well as those with term infants.

Type of birth experience

According to Cooper, Murray, and Stein (1993), mothers who experienced a difficult birth and mothers who experienced an easy birth breastfed for similar durations. The method of delivery and maternal and infant health failed to significantly affect breastfeeding durations.

The influence of Hispanic culture

Wright, et al. (1988) found that Hispanics were less likely to breastfeed exclusively and breastfed for shorter durations than the Anglo-Americans in their study. Anglo-Americans were significantly more likely to breastfeed at each measured point throughout the first postpartum year. At two months postpartum, 75% of the Anglo-American women were breastfeeding while less than 50% of the Hispanic women were breastfeeding. The average Anglo-American infant was breastfed for 6.9 months and the average Hispanic infant for 5.7 months. Hispanics tended to introduce other foods earlier than did the Anglos. Employment was not related to duration for the Hispanic women in the sample. The trend of higher education leading to higher breastfeeding rates was not significant for Hispanics. Duration was not affected by any predictor variables for the Hispanics. These results lead Wright et al. to conclude that ethnicity itself is a predictor of breastfeeding duration and that the importance of ethnicity has been underestimated.

Two cultural beliefs of Hispanics may affect a woman's breastfeeding decision. The first is that a fat baby is a healthy baby. Babies tend to gain more weight when they are formula fed

than when they are breastfed. European Americans, on the other hand, tend to think that a fat baby may become an obese adult. Secondly, Hispanic culture values modesty in women. Wright, et al. cite two studies from the late 70's which link attitudes about breastfeeding in public with feeding choice. Such attitudes may inhibit Hispanic women from choosing to breastfeed. Wright, et al., however, did not measure these beliefs.

Social support

Breastfeeding support can take the form of informational, emotional, and instrumental assistance rendering studies of support hard to compare. While informational and emotional support may affect a woman's attitudes toward breastfeeding, instrumental support may affect her actual ability to engage in breastfeeding behaviors. Wambach (1997) claims empirical evidence shows that "postpartum breastfeeding support which reflects available resources positively impacts breastfeeding duration" (p. 53). With support, women have actual control over their breastfeeding behaviors, not just intended or perceived control.

Dusdieker, Booth, Ekwo, and Seals (1984) measured the perceived influence of various support persons on the mother's decision to continue breastfeeding at 5-6 months postpartum. The amount of childcare help by the father and how important the mother perceived the help in her decision to continue breastfeeding were also measured. "Although the infant's father was very supportive for all durations of complete breastfeeding, neither his support nor that of female relatives, health care providers, friends who had nursed their own infants, nor organizations such as La Leche League was significantly associated with the mother's decision to continue to breastfeed longer" (p. 124). A small group of women reported that the father felt left out because of the breastfeeding decision. Three out of four women who reported this as a serious problem weaned early. Paternal help with childcare also was not associated with the duration of

breastfeeding. While the researchers expected that more support would be important for longer durations due to the large number of women who returned to work, they did not report statistics on maternal employment. Their sample was also limited to women who successfully breastfed for six weeks. This decision may have excluded women who stopped breastfeeding early due to lack of support or due to an early return to work. In addition, over half of the breastfeeding women in the sample breastfed for six months or more, representing a rate higher than the national average. These factors limit the ability to use this sample to make generalizations about the importance of instrumental assistance by the father or others close to the mother.

Educational interventions

Several studies have documented the positive effects of prenatal education or counseling on breastfeeding duration rates in low-income populations (Brent, Redd, Dwoortez, D'Amico, and Greenberg, 1995; Kistin et al., 1990; Piper and Parks, 1996). Using statistics from the National Maternal-Infant Health Survey, Piper and Parks discovered that participation in childbirth education predicted longer breastfeeding.

Characteristics of the infant

Characteristics of the infant, such as easy or difficult temperament, may influence breastfeeding duration. The studies that focused on the mother's perceptions of the infant's temperament found mixed results. The mother's perception that her child was easy to manage did not affect breastfeeding duration in Cooper, Murray, and Stein's (1993) study. Vandiver (1997), however, found that mothers who perceived their infants as having easier temperaments weaned later.

The gender of the child may be a factor in breastfeeding duration for some socioeconomic and ethnic groups of women. Vandiver (1997) studied middle-class primiparous

women. The gender of the infant made a large difference in duration of breastfeeding. Boys were breastfed longer. Sixty-five percent of girl infants, but only 15% of boy infants were weaned early. While other infant characteristics were measured in the study, no others were found to be significantly related to duration of breastfeeding. The infant characteristics were measured by trained observers. While infant boys cried more than girls, this was not a significant factor. Neither infant alertness nor infant fussiness altered weaning status. Jacobson, et al. (1991) also found that gender was a factor in their study. While low-income white women were more likely to breastfeed boys than girls, low-income black women did not show this preference. A relationship between gender and duration, however, was not explored.

Women's postpartum employment and breastfeeding

Initiation of breastfeeding and employment status

Using statistics from the 1989 RLMS, Ryan, et al. (1991) calculated that the odds of breastfeeding in the hospital were 1.3 times higher for unemployed women than for women in the labor force. The gap appears to be closing according to 1995 statistics. Whether a mother was employed full time, part time, or not employed, in-hospital breastfeeding rates were close to 60%. The largest percentage increase occurred among women employed full time (Ryan, 1997). Statistical significance was not calculated. The effect of a woman's employment status on her decision to initiate breastfeeding may be changing in the last decade of the twentieth century.

According to Lindberg (1996b) other studies linking the initiation of breastfeeding to a woman's employment status have found mixed results. Lindberg's analysis, using statistics collected in 1988 for the National Survey of Family Growth, calculated the predicted probability of initiating breastfeeding by hours of postpartum employment. Among both black and non-black women, full time employment compared with not working postpartum reduced the

probability of breastfeeding. Lindberg found that the negative association between employment and breastfeeding appeared stronger for black women than non-black women. Non-black women employed part time, however, were significantly more likely than women who did not work to initiate breastfeeding. This positive relationship between part time employment and breastfeeding was an unexpected finding of her study. Statistics for black women revealed the same pattern, but the results were not statistically significant. Among women surveyed by Bauch (1995) overwhelmingly reported that they could not work and breastfeed their baby. Of the women who had breastfed at least one infant, 74.5% responded “true” to the statement, “I can’t work and breastfeed my baby.” For those who had not breastfed, 62.1% marked this statement as true.

Ryan and Martinez (1989) found that the mothers most likely to combine breastfeeding and full time employment were women over 25 years of age with at least some college education and an income over \$25,000 living in the western part of the US. This finding suggests that regional and cultural differences are important in the decision to combine employment and breastfeeding.

Postpartum employment and breastfeeding duration

Entrance into postpartum employment has been found to influence the duration of breastfeeding. According to Lindberg (1996a), one quarter of women who worked postpartum also breastfed while they were working. Since 1968, the number of women engaged in combining both behaviors has grown. The duration of combining both behaviors has also grown. Many women, however, combine these two activities only in the month of transition to work. The majority of women employed postpartum do not both breastfeed and work at the same time. In addition, women are most likely to stop breastfeeding in the month they enter employment.

Lindberg concluded, “Thus most women engage in concurrent behaviors for a short period of time, although there is evidence of increasing durations” (p. 200).

Employment, however, interacts with race and ethnicity. According to Lindberg (1996b), “the dynamic of work-family conflicts differs” by race (p.242). The probability of breastfeeding cessation was highest within one month of the transition to employment for non-Black women. For Black women there was a similar increase in weaning during the transition to work, but the probability was less strong. Black women, however, were more likely to stop breastfeeding when continuing to work full time than non-Black women (Lindberg, 1996b). Lindberg concluded that Black women may be less likely to have jobs compatible with breastfeeding.

While Wright, et al. (1988) discovered that maternal employment was the best predictor of duration for women in their study, employment did not affect duration for Hispanics. Although employed Hispanic women were less likely to breastfeed at four months than employed European-Americans, duration was not affected by maternal employment.

Availability of maternity leaves

Many studies (Cohen and Mrtek, 1994; Duckett, 1992; Lindberg, 1996a, 1996b; Ryan and Martinez, 1989) found mothers who fed breast milk had longer maternity leaves than mothers who formula fed. In Cohen and Mrtek’s study, those breastfeeding averaged 3.4 months of maternity leave, while those who formula fed averaged 2.3 months. Several studies have found that delayed return to work postpartum is associated with longer breastfeeding durations (Auerbach & Guss, 1984; Duckett, 1992; Piper and Parks, 1996). Measures of duration differ from study to study rendering them difficult to directly compare. Piper and Parks found that delayed return to work predicted breastfeeding duration of longer than six months. In a study with a mean weaning age of 14 months, women who returned to work after sixteen weeks

achieved longer breastfeeding durations (Auerbach & Guss, 1984). While the majority of women returned to work before 13 weeks, the likelihood of early weaning increased when a woman returned to work before 16 weeks. In this study, timing had a greater effect on duration than the number of hours worked.

According to Lindberg (1996b), a woman who starts full time work in the first month postpartum is 4.26 times more likely to stop breastfeeding than a woman who is not at work. If she returns to work at eight to thirteen months postpartum, she is 1.36 times more likely to stop breastfeeding. However, after 14 months, full time workers are less likely to stop breastfeeding than women who are not employed.

Delayed return to work may lead to longer breastfeeding because it facilitates frequent breastfeeding during the early postpartum. The intensity of feeding during early postpartum relates to breastfeeding duration. “Mothers were more likely to breastfeed for longer than six months if they fully breastfed during the first month postpartum” (Piper and Parks, 1996, p.7). Mothers who breastfed their infants more frequently than every two hours in the early weeks were more likely to still be breastfeeding at 12 weeks. In another study, Vandiver (1997) also found that later weaning mothers fed more frequently. Later weaning mothers also interacted more frequently with their infants than early weaning mothers. Increased physical contact with the infant may lead to more frequent feeding. According to Vandiver, increased physical contact with the baby stimulates the neurohormonal mechanisms of breastfeeding, therefore promoting breastfeeding duration.

While maternity leaves may be important for establishing breastfeeding before returning to work, employers who offer maternity leaves and provide an electric breast pump when the new mothers return to work may find that the women take shorter maternity leaves. In a study by

Katcher and Lanese (1985), postpartum female employees of a hospital that allowed 3 months or more of maternity leave returned to work sooner after an electric breast pump program was implemented. The support program included a pump and time during work shifts to utilize the pump. Before the start of the support program, women who breastfed averaged 3.9 months of maternity leave. After the start of the support program, the average maternity leave for breastfeeding employees was 3.5 months.

Not all women have access to maternity leaves. Under the Family and Medical Leave Act (FMLA) of 1993, employers must offer eligible employees up to 12 weeks of unpaid medical and family leave annually. Those eligible for FMLA benefits are employees who have been employed by their current employer for at least a year, have worked at least 1250 hours during the preceding year, and are employed at a work site with at least 50 employees. According to Galinsky et al. (1996), “employed mothers have less access to leave through this law than employed fathers: approximately 41% of mothers are covered by FMLA compared with 49% of fathers” (p. 118). Many mothers who work part time do not meet the eligibility requirement because they have worked less than 1250 hours during the preceding year. Galinsky et al. also claim that many employees believe using leave time or flexible time policies could jeopardize their careers. They fear they will be seen as less committed workers. According to Galinsky et al., a 1993 study from the Families and Work Institute indicates that a generous official leave policy can be changed to a very short actual leave policy. Supervisors and co-workers can make it clear that a paternity leave of one week is the norm if you value your job and have ambitions to advance. While a company may allow six months off for the birth or adoption of a child, the clear defacto leave policy for fathers at the company may become five working days. These dynamics, of course, can also be present for women.

Availability of part time work and breastfeeding duration

Although definitions of duration are not consistent, studies have found that women who worked part time achieved longer duration rates than those who worked full time (Auerbach & Guss, 1984; Duckett, 1992; Lindberg, 1996b; Thompson & Bell, 1997). Confirming other studies

cited in her article, Duckett found that mothers who returned to work for 20 hours or more were at risk for weaning earlier than average. Auerbach and Guss found that women who worked part time were more likely to nurse for more than one year. Weaning before one year was highest among the mothers who returned to work full time and before 16 weeks postpartum.

According to Lindberg's (1996b) analysis of data from 1980 to 1986, significantly more women who were employed part time were likely to breastfeed and for longer durations than women employed full time. All women were more likely to stop breastfeeding in the month they entered employment. However, the odds of stopping breastfeeding during the month of transition to work were greater if the mother was employed full time than if employed part time. Women who worked full time were three times more likely to stop breastfeeding in the month of transition to work as mothers who were not employed.

Lindberg offered both a physiological and an attitudinal explanation for her findings about women who work part time. Physiologically, women who work part time are able to maintain their milk supply more easily than women who work full time because they are less likely to miss feedings. In addition, "part time employment, itself, suggests that a woman holds attitudes that emphasize the importance of combining both maternal and work roles" (1996b, p. 248).

Lactation rooms and availability of breast pumps

Auerbach and Gus (1984) conclude, “Maternal employment alone appeared to influence weaning age less than how the mother managed her breastfeeding experience while employed” (p. 960). According to their research, mothers who pumped for missed feedings were more likely to nurse longer. Studies by Katcher and Lanese (1985) and Cohen and Mrtek (1994) also showed that duration rates were longer when women were given the opportunity to use electric pumps at work. Katcher and Lanese (1985) found that when an employer offered an electric pump, a place to pump, and time to pump their breast during the work shift, a higher proportion of their employees returning from maternity leave nursed their infants for a longer period of time. With the implementation of a pump program, duration rates increased from 6.0 months to 11.7 months. Before the availability of the pump at work, 44% of the mothers who decided to nurse their infants discontinued nursing before they returned to work. In sharp contrast, after a pump became available, none of the mothers who started to nurse at home discontinued when they returned to work. In Cohen and Mrtek’s (1994) study, when employers provided lactation rooms equipped with electric breast pumps as part of a support program, women were able to achieve breastfeeding duration rates that matched women who did not work. Since the start of the lactation support programs, approximately 75% of the mothers who returned to work breastfeeding continued to breastfeed their infant until the child was at least six months old. These rates are impressive when compared to national figures -- 10% of full time employed mothers and 24% of unemployed mothers continue breastfeeding until six months of age. The average duration of breastfeeding for mothers who participated in the lactation programs was 8.1 months. While this was not an experimental study, the results seemed to “indicate that a worksite lactation program can increase breast-feeding rates among employed women to a level

comparable to rates among women not employed outside the home” (Cohen and Mrtek, 1994, p.441).

The lactation rooms in the two companies studied by Cohen and Mrtek were equipped with electric breast pumps and women were provided with portable cooler cases for storing pumped milk, storage bottles, and collecting equipment. The rooms were small, convenient, and had electrical outlets, ventilation, and a comfortable chair and footstool. Privacy was assured with an outward opening, lockable door. Portable pumps were used for off-site locations, travel, and home use. The participation rates were higher in the company with connected buildings than in the company where employees worked in many buildings and in the field on shift-based service crews. The use of a private room and electric pumps appeared to facilitate breastfeeding more than portable pumps with unspecified pumping locations.

Women who did not pump their breasts and provided formula for missed feedings gave a variety of reasons (Auerbach & Gus, 1984). Often they worked where it was difficult to obtain time for a pumping break. Some were uncomfortable handling their breasts. Others reported that the minimal amount of milk produced in early attempts at pumping left them discouraged. According to Cohen and Mrtek (1994), the absence of an easily accessible, safe, and private site for pumping and the absence of breast pumps at work were major obstacles to mothers who wanted to collect breast milk at work. In a related study by Thompson and Bell (1997), women who were interviewed also identified breast pumps, a private room, and storage facilities as essentials to successful breastfeeding contingent with work. According to Morse, rest rooms were not adequate sites due to the possibility of bacterial contamination (cited in Thompson & Bell, 1997).

The link between pumping for missed feedings and duration suggests that instrumental assistance at the workplace may be very important to breastfeeding durations for working mothers. For mothers who pump at work when they miss a feeding, a place to pump and an efficient pump are essential to success.

Flexible work schedules and suitable policies regarding the use of break time

Adequate breaks and flexibility were also important to counteract the difficulties of continued breastfeeding according to the women interviewed by Thompson and Bell (1997). Time was the second most frequently cited difficulty for the women in their study. The amount of time that breastfeeding requires and the amount of time that the participants worked were both barriers for many women. The ability to use the breast pump when needed was influenced by timing and scheduling of breaks. “The ability to pump their breasts at work was important, not only for maintaining their milk supply, but also for comfort” (p. 6). Flexibility of the work environment contributed to successfully continuing breastfeeding. Women who worked part time (four hours a day) used flexible work schedules to go home to feed their infants. Cohen and Mrtek also cited inflexible work schedules and restrictive company policies about employee use of break time as barriers to breastfeeding at work.

Second in frequency to pumping, women interviewed by Thompson and Bell (1997) listed eating and drinking well as essential to maintaining a milk supply for their baby. Eating nutritional foods and drinking plenty of fluids is easily accomplished for most women at work. Eating in the cafeteria or bringing their lunch takes care of the food. Additional liquids can be consumed during breaks for pumping. Flexible and adequate break time facilitates meeting the additional nutritional and fluid needs of lactating women.

Occupation of the mother

Auerbach and Guss (1984) found that the occupation of the mother did not predict when babies were weaned. This self-selected sample of mothers who combined breastfeeding and work reported a variety of occupations, including: postal workers, factory workers, secretaries, police officers, flight attendants, teachers, and nurses. Other studies, however, point to unique difficulties in combining breastfeeding and work for women in some occupations. Cohen and Mrtek (1994) found that fewer women who worked in the field for a utility company breastfed for six months than women who worked on site for an aeronautics company. Both sets of women had equal access to a comprehensive lactation support program at their workplaces. Fewer women in the utilities company, however, chose to participate in the corporate lactation program. While women in both companies breastfed for average durations longer than six months, those working for the utilities company breastfed for shorter average durations.

Studies of professional women provide mixed results. In a study by Kearney and Crohenwatt (cited in Duckett, 1992), Black and White professionals were found to have longer breastfeeding durations than sales or technical employees. Miller, Miller, and Chism (1996) studied female resident physicians who graduated from medical school in 1990. The results of their survey indicated that 80% of the residents who delivered a child during her residency initiated and continued to breastfeed for the duration of their maternity leave. The mean maternity leave was 7 weeks. With a return to employment, 50% of those who initiated breastfeeding discontinued. By 6 months postpartum, the breastfeeding rate dropped to 15%. The most common reason for discontinuing breastfeeding was the residency work schedule. Of the women who returned to work and continued to breastfeed, 83% pumped breast milk during work shifts, 79% felt there was insufficient time during work, and 42% reported no appropriate place

at work to express milk. In other words, while a large percentage of these women continued to pump, they felt pressured by insufficient time and many were using rest rooms or other inadequate places to pump. Of those who continued, 54% felt supported by attending physicians for their efforts to breastfeed their infant, and 67% felt their colleagues were supportive. While this group showed higher than average initiation rates, the six month rates were consistent with national rates indicating that 14.3% of mothers working full time continue breastfeeding until six months (Ryan, 1997). The six month rates are much lower than the rates achieved in the study of lactation support programs reported by Cohen and Mrtek (1994). The demands of a medical residency do not appear to be supportive of long breastfeeding durations for most women residents.

Lindberg (1996b) suggests that women who hold jobs with less autonomy are at more risk for stopping breastfeeding. Jennifer Glass has also theorized that female dominated occupations are less flexible, provide less break time, and require working faster, harder, and longer than jobs in male-dominated fields (cited in Blum, 1993). These job characteristics do not facilitate breastfeeding. More research that looks at rigid control of time, space, and activity, versus job autonomy is needed. Quality studies have not yet been conducted.

The role of support

Are both social and workplace supports important for women who combine breastfeeding and work? What type of support is the most important for achieving six month and longer durations of breastfeeding? These questions are difficult to answer from the current research. Some studies measure the support of the father but not support at the workplace. Some measure emotional support, while others also include instrumental support. The definitions and parameters of instrumental support are not always clear. Often, women who return to work are

not separated from those who do not. In short, there are no studies that look specifically at working women and the relative importance of emotional and instrumental support at work and in the close social network.

Support by lactation professionals and a support network for lactating employees

Emotional and educational workplace support appear to be important for women to achieve longer durations while employed. Employed women who participated in the lactation support program at their workplace, which included the support of a lactation professional, breastfed for longer durations (Cohen & Mrtek, 1994). Cohen and Mrtek stated, “The availability of a lactation professional to provide advice and answer questions is matched in importance only by the understanding and support which the lactating mother receives from her partner and family” (p. 437). The two lactation programs studied by Cohen and Mrtek involved support by a lactation professional during three phases: prenatal, perinatal, and return-to-work. Prenatal classes addressed parenting, breastfeeding, and support services available at the company. Fathers were encouraged to attend because their importance to the success of the program was recognized. Classes were held during lunch hours or after work and lasted 30 to 45 minutes. During the perinatal phase, a corporate lactation consultant was available to the woman and her family. The consultant helped with questions about building an adequate milk supply, nutrition, and rest. During a two-week orientation period before the woman returned to work, she was provided with an electric breast pump and instructions. The final step of this phase was a return-to-work site visit. The visit included a visit to the lactation room and an orientation on care of the equipment and the schedule for using the room. A meeting was scheduled with the employee’s supervisor to clarify issues about the next phase of the program. The maintenance phase, which started the first day the woman returned to work, was marked by individual support

from the lactation specialist. The professional was available to support the woman in issues of nutrition, fatigue, stress reduction, working with the supervisor, and balancing work and family issues. As mothers continued to work, lactation professionals helped them manage overnight business trips or understand child development issues.

Supportive supervisors

A supportive employer was a key ingredient for success. Many women in Thompson and Bell's study (1997) identified "a boss who was not understanding" as the biggest impediment to maintaining a milk supply. Cohen and Mrtek (1994) listed non empathic supervisors in their list of obstacles to success. A supportive boss who was flexible about this issue was critical, not only for successful breastfeeding, but also to reduced levels of workplace stress. Job-related stress can hinder a woman's ability to express milk and store it for later use by the infant (Cohen & Mrtek, 1994; Thompson & Bell, 1997). Women in Thompson and Bell's (1997) study suggested that other women should discuss issues related to breastfeeding with their supervisors before the baby is born. The women participating in the lactation programs in the Cohen and Mrtek (1994) study met with their supervisors before returning to work and discussed issues regarding this transition back to work. A lactation specialist was present at the meeting to advocate for the woman's needs. Other studies suggest that work-family education for supervisors is important and effective. Two years after such training, employees viewed their supervisors as significantly more supportive (Galinsky et al., 1996). Thompson and Bell (1997) concluded that helping professionals should educate workplace managers about the advantages breastfeeding provides to both employers and employees. In a supportive environment, women will be happier and more productive. Women who breastfeed have less absenteeism because their infants are healthier

(Cohen, Mrtek, & Mrtek, 1995). This results in reduced medical costs and more productivity for corporations.

Daycare needs

On-site daycare or daycare in close proximity aided women who were more successful at combining this type of feeding and work, according to Thompson and Bell (1997). There are no studies that compare mothers who pump at work and mothers who are able to breastfeed their infant at an on-site daycare. It is possible that average duration rates would be enhanced with the presence of the baby. Breastfeeding manuals have many tips for success at pumping. The tips include relaxation exercises and having pictures of the baby nearby to help stimulate the mother's letdown reflex (Dana & Price, 1987). The ability to interact with the live baby may prove more effective for long durations than relaxation techniques or the use of imagery.

Coping strategies used by women

Thompson and Bell (1997) asked women to list the advice they would give to a woman who was breastfeeding and ready to return to work. They grouped many comments into the theme of attitude. A positive attitude and a good sense of humor appeared to be coping mechanisms that worked for many women. Women reported being teased by fellow employees. "One example given had to do with comments made by peers about the noise the electric breast pump made when one of the women went to the rest room to pump her breasts" (p. 7).

Postpartum Depression, Lactation, and Postpartum Employment

The many benefits of breastfeeding for both the mother and infant are well documented. "These include health, nutritional, immunological, developmental, psychological, social, economic, and environmental benefits" (AAP, 1997, p. 1035). When the mother's well-being is enhanced, employers benefit with increased productivity and employee loyalty. Employers also

benefit with reduced health care costs and reduced absenteeism for sick child care. Therefore, strategies that increase breastfeeding duration for working women are worthwhile for not only the society at large, but also for employers.

While studies indicate that lactating women have reduced risks of hip fractures and ovarian and breast cancers (AAP, 1997), the benefits of breastfeeding to the mental well-being of the mother are not conclusively documented or researched. While one research team found no relationship between the decision to breastfeed and maternal depression (Jacobson, et al., 1991), relatively little attention has been paid to the relationship between depression and duration of breastfeeding (Aurbach & Jacobi, 1990; Cooper, et. al., 1993). Cooper, Murray and Stein (1993) found opposing views in the research. Two research groups suggest that hormonal changes associated with breastfeeding may contribute to the onset of postpartum depression. Other researchers maintain that endocrinological changes brought on by breastfeeding or weaning may contribute to depression. Others argue that giving up breastfeeding early is in part a consequence of depression. Cooper, Murray, and Stein (1993) found that depression during the postpartum was a predictor of early termination of breastfeeding. Their results were replicated in two different samples. As women experienced higher levels of depression, they ceased breastfeeding earlier. In the majority of the cases, the onset of depression preceded the termination of breastfeeding. This study calls into question role of hormonal changes brought upon by breastfeeding or its cessation in the onset of depression. The causation of the depression was not experimentally determined.

After reviewing studies of depression and breastfeeding mothers, Auerbach and Jacobi (1990) concluded that depression may be a consequence of feeding problems rather than the feeding method. In one study, mothers identified as depressed according to scores on Beck's

Depression Inventory had greater difficulty breastfeeding. In another study, Mothers who started to breastfeed but stopped by 3 months had significantly higher levels of depression than mothers who were still breastfeeding at three months postpartum. The authors conclude:

Unfortunately, the literature on postpartum depression and the literature on lactation intersect so infrequently and so poorly that it is impossible at this time to identify clearly the relationship between the two elements and/or which influences the other... And, to conclude that breastfeeding mothers are at greater risk for postpartum depression *because* their hormone levels are abnormally high in some cases and abnormally low in others requires acceptance of a faulty assumption: that lactation is an abnormal state. Lactation is the *normal postpartum state* for which every woman's body is prepared to function after the birth of the baby (p. 383).

Postpartum depression affects a large number of postpartum women. Walther (1997) claims that the estimated rates for major postpartum depression range from ten to twenty percent of postpartum women. She states that postpartum blues, or the "baby blues", affect up to fifty percent of postpartum women and peak around the fifty postpartum day. According to Pfof, Lum and Stevens (1989), "postpartum depression is a fairly common and clinically significant disorder (p. 424)."

Several authors recommend social support from a broad network as a buffer to postpartum depression (Auerbach & Jacobi, 1990; Berthiaume, M., David, H. Saucier, J., & Borgeat, F., 1996; Hall, Kotch, et al., 1996; Koniak-Griffin, 1993; Leathers, Kelley, & Richman, 1997; Walther, 1997). Berthiaume, et al. claim that the results of their study "give support to a conception of postnatal depression as a disorder that is influenced by sociodemographic factors

as well as by the quality of relationships within the immediate family and close social network (p. 797).

Although studies looking at postpartum depression, breastfeeding, and support at work are lacking, several studies look at two of these factors and point toward a positive role for support of the postpartum woman in the workplace. Chezem, Montgomery, and Fortman (1997) studied the feelings of working women at the time of weaning. Employed women who do not meet their breastfeeding goals reported significantly stronger feelings of sadness/depression, and guilt than mothers who fed their infants as planned. Fifty-eight percent of the sample weaned their infants before six months postpartum. The most common reasons for cessation were returning to work (19%), inconvenient (19%), and baby won't suck (19%). It is hard to decipher whether breastfeeding was considered inconvenient when combined with employment or inconvenient for other personal reasons. Because the measurements of feelings were not related to any depression scales it is impossible to know the number of women who experienced clinically depressive symptoms. The sample was small and privileged with a high rate of breastfeeding at six months postpartum. It would be interesting to see this study repeated with additional measurements using the Beck Depression Inventory and a larger, more inclusive sample.

Looking at supportive bosses and postpartum depression in both mothers and fathers, Leathers, et al. (1997) found that women experienced more postpartum depression when they had an unsupportive boss. A supportive boss was not associated with depressive symptomatology for men, however. Perceptions of low emotional support from the partner and low control and social gratification at work were also significant predictors of higher depressive symptomatology when men and women were analyzed together. Social gratification at work was

more important for women who were working than for men. Depressive symptoms were measured with the Center for Epidemiologic Studies Depression rating scale (CES-D) at six months postpartum. Although feeding methods were not part of this study, a supportive boss has been mentioned earlier as important to breastfeeding duration.

While it may be easier for women who do not return to work to breastfeed their infant, plans to return to work are beneficial to the mother's well-being, according to Pfof and associates (1989). After measuring depression with the Beck Depression Inventory during the eighth month of pregnancy and again at four weeks postpartum, they concluded that work plans buffer women from postpartum depression. While the strongest predictor of postpartum depressive symptomatology (BDI scores of 10 or above) was clinical depression before the birth, lack of plans to return to work also predicted women vulnerable to postpartum depression. Their findings "indicate that lack of or loss of a job and vocational identity ... can contribute to postpartum depression; it also suggests that solutions to, and not merely friction between, caretaker and career roles mediate postpartum depression" (p. 430).

Studies examining plans to return to work with more detail can be helpful in guiding workplace policies. For instance, this study only looked at the woman's intention to return to work at some unspecified future date using one true-false item. Do women who sit down and discuss specific postpartum work plans with a supervisor experience lower levels of postpartum depression than those who do not? Do women who intend to combine breastfeeding and work benefit from specific plans that are prearranged with their employer?

This is a new area of study in need of quality research. Research that can be compared would be helpful. Among the research on postpartum depression, the methods of measuring depressive symptoms vary. Some researchers use the BDI while others use the CES-D or some

other method of measurement. The timing of measurement is also inconsistent, generally ranging from one to six months postpartum. When measuring the relationship of work support and breastfeeding, many factors can combine to affect the woman's mental well-being. The length of maternity leave, type of support provided by the supervisor and the workplace, and breastfeeding goals of the mother are just a few of the factors to consider.

In conclusion, studies appear to indicate that breastfeeding durations increase with support at work that includes a lactation room and time to pump. Additionally, measurements of depressive symptoms are lower with a supportive boss and when women are able to be successful with their chosen feeding method. The demographic statistics showing higher breastfeeding rates in Western states also indicate that breastfeeding rates increase in a climate of acceptance and social support. Work support is a crucial part of the social matrix for women who decide to combine postpartum employment and breastfeeding. This review of the literature indicates that a culture of support for postpartum women would be beneficial for the well-being of the working mother. A supportive workplace culture must be part of the whole picture. Workplace support that includes instrumental support for women who choose breastfeeding for their infant will likely lead to increased breastfeeding rates and durations, as well as lower rates of depression among postpartum women. The good news for employers is that

the same job and workplace factors that are associated with employee well-being are also associated with positive work outcomes ... employees who reported greater job autonomy, control over work schedule, supervisor support, supportive workplace culture, and opportunity to advance unimpeded by race and gender discrimination were willing to work harder to help their companies succeed, were more loyal to their employers, were more likely to want to continue with their

current employers, were more satisfied with their jobs and took more initiative on the job than other workers, outcomes clearly related to the bottom-line concerns of employers (Galinsky, et al., 1993, p. 133).

CHAPTER THREE

Methodology

Introduction

This chapter includes a description of the subjects under study and how they were selected for inclusion in this study. In addition, the instrument used to collect information is discussed as to its content, and the rationale for the content. Data collection and analysis procedures are presented. The chapter is concluded with some of the methodological limitations.

Description of Subjects and Selection of Sample

Population and Sample

The population consisted of human resource personnel in workplaces in Hudson and surrounding communities in St. Croix County, Wisconsin. Potential participants were identified with a list of employers in St. Croix County available at the Placement and Co-op Services office at the University of Wisconsin-Stout. Surveys were mailed to 149 small, medium, and large workplaces including the following sectors: wholesale/retail, educational, government, health services, and manufacturing. Usable surveys were returned by 17 of the employers. Manufacturing represented 58.8% of the workplaces responding to the survey. Health services, service industries, and other types of industries each represented 11.8% of the respondents. Wholesale and retail made up the final 5.9%. No educational workplaces are represented in the final sample. Workplaces participating in the survey employed an average of 62.5 employees. The number of employees ranged from 5 to 180.

Development of Instrument

Stimulus Materials

A questionnaire, the Survey of Workplace Support for Lactating Mothers, was developed by the researcher through examination of published research discussing corporate lactation programs, the barriers to breastfeeding while employed, and factors that facilitate breastfeeding while employed. Research on workplace conditions where parents had less stress and coped

better was also reviewed. This is a self-report instrument that consists of three parts. Part one poses demographic questions spanning the years 1994-1999. The demographic questions include the number of employees at the company and a breakdown of this number by gender, hourly versus salaried workers, number of female employees who had babies in the years of the study, number of female employees who breastfed their infants, and ethnic and racial categories. Part two contains a list of typical lactation provisions and benefits in the following categories: lactation provisions, flexible time arrangements, dependent care assistance, and traditional benefits. Personnel directors were asked to check those available to employees in their company. The list of lactation benefits included: paid leave, unpaid leave, lactation room, availability of breast pumps, refrigeration, availability of a lactation specialist, education for supervisors that included information on lactation, and policies for working with an employee and her supervisor during the postpartum period. In part three, short answer, open-ended questions provided personnel directors the chance to elaborate on these answers and discuss benefits and difficulties experienced by their company.

Procedure

The researcher mailed the Survey of Workplace Support for Lactating Mothers with a cover letter to personnel or human resources directors of workplaces on the list. The researcher was available by phone to offer explanations or clarification of questions. None of the recipients of the surveys called. A stamped, addressed envelope was included for the participants to return the survey. Participants were informed that they may be contacted by telephone for clarification of their responses upon return of the surveys. None of the participants were contacted after receiving the completed surveys.

Data Analysis

Demographic data was reported with descriptive statistics. Responses to open-ended questions were coded according to themes found in the data.

Limitations

Due to the small size of the sample and the self-selection process of those who participated, the sample was not representative of all employers in the region. Since the questionnaire was directed at employers and not at employees, the results did not reveal which benefits or characteristics were perceived as most important by the female employees.

CHAPTER FOUR

Results and Discussion

Demographic Statistics

Workplaces participating in the survey employed an average of 62.5 employees. The number of employees they reported ranged from 5 to 180. The workplace respondents reported an average of 12 salaried employees and 55.67 hourly wage employees per workplace. They reported an average of 54.93 full time employees and 10.5 part time employees. The total number of salaried employees ranged from 0 to 40 employees with 9 as the median. Hourly wage employees ranged from 2 to 172 with 32 as the median. Full time employees ranged from 0 to 169 with 36 as the median. Part time employees ranged from 0 to 40 with 5.5 as the median. Only 3 companies reported one employee as temporary or other.

Sixty-four percent of all employees at participating workplaces were females. The number of females employed by participating workplaces ranged from 1 to 165 employees. The median was 19. Participants employed an average of 39.4 female employees with an average of 5.25 salaried female employees and an average of 35.88 females in hourly wage positions. Salaried positions held by female employees ranged from 0 to 23 employees. The median number was 3. Females were reported to hold 0 to 161 of hourly wage positions with a median of 11. Females comprised 46.6% of the salaried employees and 68.74% of the hourly wage employees. Among full time employees, females held an average of 33.53 positions per participating workplace. Workplaces reported a range of 0 to 141 females employed full time with a median of 12. Part time female employees ranged from 0 to 40 with 2 as the median number. Female employees held an average of 8.27 of the part time positions. A large majority of the part time workers, 84.35%, were female employees.

Participating workplace personnel reported a range of 0 to 5 African American female employees, 0 to 7 Asian American female employees, and 0 to 5 Hispanic female employees, all

holding hourly positions. Lower numbers of Native American female employees and other ethnic backgrounds were reported in hourly positions at several work sites. When asked if the ethnic proportions of employees had changed in the last five years, 82.4% of respondents replied “no”. Only 5.9% reported more minority and fewer European American employees than five years ago. A slightly higher percentage of employers, 11.8%, reported fewer minority employees.

Births and Breastfeeding

During the years 1994 -1999 there were 49 births to female employees in the participating workplaces. Participants reported 15 births to salaried workers and 34 births to hourly wage employees. When asked if they knew the number of female employees who returned to work and breastfed their infant, 64.7% responded “yes”. Because the remaining 35.3% did not know if women at their workplace combined employment and breastfeeding during those years, it is impossible to know the percentage of women employees with new infants who combined the behaviors of employment and breastfeeding. The statistics in Table 1, therefore, give only an approximate picture of the number of women in the sample who combined breastfeeding and work.

Among salaried workers, there were years in which none of the women who had an infant were known to combine work and breastfeeding. In other years, using the data of the employers who were aware of employees who breastfed newborn infants, salaried workers who had an infant combined these two behaviors at a rate of 20% to 100%. In some years, as many as 55.6% of the postpartum female hourly wage employees were known to combine the two behaviors. Considering all of the surveyed years, 26.6% of salaried workers and 26.5% of hourly wage employees who gave birth were known to combine breastfeeding and work.

Table 1

Reported Births and Women Known by Employers to Combine Employment and Breastfeeding (BF)

Year	Salaried		Hourly wage	
	Births	Work + BF	Births	Work + BF
1994	3	1	2	0
1995	2	0	4	2
1996	5	1	5	0
1997	2	1	7	1
1998	1	1	9	5
1999	2	0	7	1
Total	15	4	34	9

Maternity leaves

Participating workplace personnel reported the average leave of employees who gave birth between 1994 and 1999. The leaves of salaried workers ranged from 0 to 12 weeks and the leaves of hourly wage workers ranged from 0 to 16 weeks. While the leaves of hourly wage workers spanned a wider range than that of salaried workers, their average leave was always less than that of the salaried workers. This statistic was due to the larger number of women who chose to take no leave. There were women who chose to take no leave in both types of employment situations. Among salaried women who gave birth during the surveyed years, two

of the fifteen or 18.1% took no leave time. The percentage was higher among hourly wage employees. Eleven of thirty-four, 32.4%, did not take a leave.

Table 2

Range and Mean Leave of Employees Who Gave Birth

Year	Salaried		Hourly wage	
	Range	Mean	Range	Mean
1994	0 - 12	6.6	0 - 6	3
1995	6 - 7	6	0 - 9	5.5
1996	0 - 12	6.4	0 - 8	2.8
1997	8 - 12	10	0 - 9 ^a	3.8
1998	14	14	0 - 16	5.9
1999	6 - 12	9	0 - 12	5.1

Note. The values represent weeks.

^a 1 employee did not return to work and is not included in the calculation.

Employee Benefits

Forty-seven percent of the surveyed employers reported offering a paid leave for salaried workers while 52.9% did not offer a paid leave. For hourly wage employees, 35.3% offered a paid leave. Unpaid leaves were offered to salaried employees by 52.9% of the participants and to hourly wage earners by 76.5% of the participating employers. The length of paid leave was not specified.

For hourly wage earners, 17.6% of the participating employers offered a lactation room while 11.8% offered the availability of electric breast pumps. Salaried workers were offered these benefits at the rate of 5.9% each. Refrigeration for milk storage was offered to both salaried and hourly wage earners by 52.9% of employers.

When asked if they had a policy in place regarding employees pumping their milk or breastfeeding their infant while at work, only 5.9% indicated that such a policy was in place for salaried employees, while 17.6% indicated a policy for hourly wage employees. Participants were asked if they had education for supervisors that included information on lactation. For salaried workers, 5.9% indicated yes and 11.8% indicated yes for hourly wage earners. Five and nine tenths percent of the sample indicated that policies for working with an employee and her supervisor during the postpartum period were in place for both categories of employees. One participant, 5.9% of the sample, indicated that a lactation specialist was available for salaried employees. The same rate was reported for hourly wage employees. When asked if a support network was available among lactating employees, 5.9% of the participants indicated “yes” for salaried employees, and 17.6% marked “yes” for hourly wage employees.

Adequate breaks, which were defined as 15 to 30 minutes, three times per day, were offered by 47.1% of participants to both hourly wage and salaried workers. Flexible breaks were indicated 58.8% of the time for salaried workers, and 52.9% of the time for hourly wage employees.

Table 3

Percentage of Workplaces Providing Lactation Provisions

Provisions supportive of lactation	Salaried	Hourly wage	5 years ^a
Paid leave	47.1	35.3	35.35
Unpaid leave	52.9	76.5	52.9
Lactation room	5.9	17.6	5.9
Electric breast pump available	5.9	11.8	5.9
Refrigeration	52.9	52.9	35.3
Pumping or breastfeeding policy	5.9	17.6	0
Lactation specialist	5.9	5.9	0
Lactation education for supervisors	5.9	11.8	0
Postpartum work policy	5.9	5.9	11.8
Adequate breaks	47.1	47.1	35.3
Flexible breaks	58.8	52.9	29.4
Lactation Support network	5.9	17.6	0
Other	0	5.9	0

^aAvailable for 5 or more years.

Table 4
Percentage of Workplaces Allowing Flexible Time Arrangements

Flexible time arrangement benefits	Salaried	Hourly wage	5 years ^a
Part time work or job sharing	41.2	47.1	17.6
Extended lunch breaks	29.4	35.3	17.6
More hours one day, fewer the next	47.1	52.9	17.6
Flextime	35.3	41.2	5.9
Flexplace ^b	11.8	11.8	5.9

^aAvailable for 5 or more years.

^bAbility to work at home on a regular basis.

Table 5
Percentage of Workplaces Providing Dependent Care Assistance

Dependent care assistance	Salaried	Hourly wage	5 years ^a
Child care resources and referral	17.6	17.6	5.9
On-site child care	0	0	0
Child care vouchers	5.9	5.9	5.9
Flexible child care spending accounts	41.2	47.1	11.8
Family sick leave	41.2	52.9	17.6

^aAvailable for 5 or more years.

Table 6

Percentage of Workplaces Providing Traditional Benefits

Traditional benefit	Salaried	Hourly wage	5 years ^a
Health care for employee and family	76.5%	94.1%	64.7%
Pension plan	58.8%	76.5%	52.9%
Vacation days - paid	76.5%	94.1%	64.7%
Vacation days - unpaid	52.9%	76.5%	52.9%

^aAvailable for 5 or more years.

As shown in Table 4, most benefits that offer flexible time arrangements were offered by less than half of the participating workplaces. One exception was the ability to work more hours one day and fewer the next, which was offered to hourly wage employees by 52.9% of the participating work sites. The ability to work more hours one day and fewer the next was the most frequently offered flexible arrangement, followed closely by part time work or job sharing. Flexplace, the ability to work at home on a regular basis, was offered least frequently. A number of the workplaces have added these benefits in the past five years.

As shown in Table 6, participating workplaces offered specific traditional benefits to salaried workers at 58.8% to 76.5% of the workplaces. Higher percentages, 76.5% to 94.1%, were reported for hourly wage earners.

Comments by survey participants

Part three of the survey provided space for comments on several questions. The first question asked, “How does support of employees who decide to breastfeed their infants benefit

your workplace?” Ten respondents replied with supportive and positive attitudes toward women employees who combine breastfeeding and work. Several mentioned better employee retention and morale. Some respondents described their workplaces to be family friendly workplaces concerned with contributing to the work/life balance of their employees. Other positive aspects of providing lactation support included: earlier return to work, fewer complications and issues, less absenteeism for sick baby care, a sense of fairness in the workplace, and the mother’s satisfaction with caring for her child through breastfeeding reflects positively on her work. There was one respondent with a negative attitude toward the idea of women combining breastfeeding and work. The last page of the survey was filled with comments that included, “Women who breastfeed baby’s [sic] should stay home. When you come to work that is what you should do. If women want to play with tits they should work on a dairy farm. We work at different locations each day. No place or time for this....”

The second question asked, “What difficulties or problems have you encountered in supporting women who are breastfeeding their infants?” Eight respondents answered “none” due to the lack of employees breastfeeding at their workplace. Two responded “not much”. They indicated that not many women breastfed babies at their workplace. One respondent claimed no problems and one reported that providing a place to pump or breastfeed was a difficulty.

Question three asked about difficulties in providing a place for employees to pump milk or breastfeed their infants. Three respondents indicated space as a limitation. Two respondents reported the use of restrooms. A positive attitude toward trying to find space was indicated by three participants. One commented, “If the need arises, we’ll provide one.” Another stated, “We would need to do some brainstorming to come up with some ideas.” Two participants had comments that indicated negative attitudes about their ability to provide a space. One respondent

reported that there was not enough use to justify the expense of a separate room. At this workplace, three babies were born to women in five years.

Some comments were personal. Several respondents mentioned their own experiences with breastfeeding and the workplace. One participant claimed that she was open about the fact that she was breastfeeding her infant when she returned to work. She realized, however, that her workplace has few policies to make it easier for others.

Discussion

Women employees at the sampled workplaces who gave birth and were known to combine breastfeeding and employment did so at rates that exceeded the national statistics for full time employees or even unemployed women at six months postpartum (see Ryan, 1997). While the survey did not address breastfeeding duration rates for the female employees, the need for workplace lactation support for postpartum women employees in St. Croix County is shown by the high percentages of postpartum women who attempted to successfully combine work and breastfeeding. While many of these women may have combined breastfeeding and work only during their first month of return to work as indicated by Lindberg's (1996a) research, the high duration rates of corporate lactation support programs indicate that long durations are possible. While the percentage of women employees who give birth in any one year is small, the overall presence of a supportive policy can mean success for the individual women involved.

The median number of employees at the participating companies was 45, which meant that slightly over 52.9% of the companies were not legally bound to offer twelve weeks of unpaid leave by the Family and Medical Leave Act. Exactly 52.9% of the workplaces provided unpaid leave to salaried workers. More workplaces than those required by law, 76.5%, offered unpaid leave to hourly wage earners. The survey, however, did not address the length of leave

offered. The ability to take a paid leave, however, may explain the longer average leaves taken by salaried employees and the higher percentage of hourly wage workers who took no leave. Salaried workers were offered a paid leave by almost half of the workplaces and hourly workers were offered a paid leave by approximately a third of the workplaces.

Despite the difference in leave time, the percentage of women who attempted to combine breastfeeding and employment was fairly equal in both wage categories. Because the survey only addressed those women who were known by personnel directors to breastfeed and not at the duration of the activity, it impossible to know if the length of leave had any effect on duration as it did in the review of the literature.

Most workplaces in the sample lack a majority of specific instrumental supports for lactation. Unpaid leave, refrigeration, and flexible breaks are the only provisions offered by over 50% of the participants. Flexible breaks and refrigeration were offered by close to 50% of workplaces. In considering provisions supportive of lactation provided by the employer, a workplace pumping or breastfeeding policy, the availability of a lactation specialist, lactation education for supervisors, and a lactation support network among employees were provisions added within the past five years by a small number of employers. Within the past five years, more workplaces have added the availability of refrigeration, unpaid leave for hourly wage employees, paid leave for salaried employees, flexible breaks, and adequate breaks. This seems to indicate that while lactation support is not highly prevalent in workplaces, support is growing among employers in St. Croix County.

The issue of providing a private space for a lactation room appears to be a problem for many smaller companies. Only 5.9% and 17.6% reported providing this space for salaried and hourly wage workers, respectively. While many workplaces indicated that they had little or no

experience with this issue, they seemed willing to find space for a lactation room if the need arises. Several, however, indicated that restrooms were adequate. Unsanitary conditions and an atmosphere not conducive to the letdown response can continue to be barriers to success for women in such situations. While some participants indicated a willingness to find solutions to this problem, a workplace that had three employees attempt breastfeeding did not find the cost of a separate room worth the additional expense. Most of the literature describing lactation rooms concern large corporations or hospitals. Solutions at workplaces tight on space must be publicized. The Minnesota Department of Health's Lactation Friendly Workplace Program provides three estimates for the cost of furnishing a lactation room. The minimum accommodation, a private space with a door that locks, can be furnished for \$145.00. A medium accommodation can range from \$340.00 to \$840.00. The maximum accommodation lists amenities that add up to \$1055.00 (Minnesota Department of Health, 1997).

The survey reveals that adequate breaks and flexible breaks can be a barrier to successful breastfeeding after return to work for women at approximately half of the workplaces in the sample. According to Dodgson and Duckett (1997), a hospital quality electric pump "reduces the time needed for pumping from 30 to 40 minutes to 10 to 20 minutes" (p. 292). Over half, 52.9%, of the respondents did not provide an adequate break, 15 to 30 minutes, three times per day. If a woman does not have a hospital quality electric breast pump available, she may need up to 40 minutes to pump adequate amounts for the baby and for her own comfort. Only two of the workplaces reported an electric breast pump available for hourly employees and only one for salaried women. Unless the employee is able to afford to rent her own electric breast pump, she probably does not have enough time for pumping even in most of the workplaces that provide adequate breaks. As part of their Lactation Friendly Workplace Program, the Minnesota

Department of Health has recruited community health agencies that can rotate breast pumps among participating employers as the need arises at a workplace (Minnesota Department of Health, 1997). Some type of cooperation among small businesses in St. Croix County could help provide pumps to more working women. The addition of a pumping or breastfeeding policy and a policy for working with postpartum women could help employees and supervisors work out flexible break times. The postpartum period represents a small percentage of a woman's entire working career. The special supports needed can make a difference in both her long term productivity and the health of her child. With its proximity to Minnesota and the influx of people from the Twin Cities, St. Croix is the fastest growing county in Wisconsin ("Fastest growing," 1999). In the current tight labor market, employers in St. Croix county should be motivated to keep up with amenities provided in the Twin Cities Metro Area.

Most types of dependent care assistance were also offered at rates well below 50%. In this sample, 18% of participants offered child care resources and referral services to employees. A study by Galinsky and her associates (1996) using a national sample found that 20% of employees had access to this benefit. In this national sample, 10% of employees had access to employer-sponsored child care on or near the work site. Because on-site child care was not available for any women employed by participating workplaces in the current study, future widespread breastfeeding success depends heavily on the availability of electric breast pumps for women at these workplaces. One participant wrote that she was fortunate enough to find daycare within two miles of the workplace and her infant was brought to her at lunchtime. This situation is unique and difficult for most women to find. Still, near-site daycare may be a viable option for several cooperating workplaces in one area.

More salaried workers than hourly wage workers were offered a paid leave and slightly more were able to take flexible breaks. Hourly wage earners, however, were more often offered unpaid leave, a lactation room, availability of a breast pump, a formal pumping or breastfeeding policy, lactation education for supervisors, and the availability of a lactation support network. Several provisions were offered equally to both, such as, refrigeration, a postpartum work policy, and adequate breaks. Some of the flexible time arrangements were also offered at a slightly higher rate to hourly wage workers than to salaried workers. The same was true of flexible child care spending accounts and family sick leave. All of the traditional benefits, including health care for employee and family, were offered at higher rates to hourly wage employees than to salaried employees. Hourly wage earners appear to have access to more formal provisions. Since salaried workers presumably have more control over their work and time, there may be a perception that formal provisions are not necessary. This perception, however, can cause complications for salaried women with high job expectations and few formal policies about the postpartum period and breastfeeding at work.

The large number of comments that indicated a positive attitude toward providing lactation support bodes well for future increases in breastfeeding rates. On the other hand, the self-selection process of those who returned the surveys may have contributed to the large number of positive comments. The personal experiences of women personnel directors may also influence workplace policies. Because the sample included many smaller workplaces, the positive attitude of personnel directors is important for the women who work there. Breastfeeding advocates would do well to continue their outreach efforts to women in these positions. Female personnel directors may be supportive of lactating employees, but unaware of all of the options available. As one participant indicated, while she combined breastfeeding and work, there were no policies at her workplace to make it easy for others. The one hostile attitude toward women who wish to combine breastfeeding and employment is indicative of the uphill battle many women still face in a culture that objectifies women's bodies.

The results of this study, due to the small sample size and the self-selection process of those who responded, cannot be generalized to all workplaces in St. Croix county. The low response to the survey could be due to its length. The survey may have looked prohibitive for many busy human resource managers. Also, a large number of the manufacturing businesses on the list appeared to be types of workplaces unlikely to hire many women. Several unanswered surveys were returned noting that there were no female employees or only one woman under 60 years. While surveys were sent to educational institutions in the county, none replied. Based on personal conversations with teachers, there appears to be a perception that these matters are handled within individual buildings, not through personnel directors. One survey was returned with a note that the workplace would be reviewing these matters in the next year. The small rate of return, therefore, is not necessarily indicative of negative attitudes toward the topic.

Corporations and small workplaces can work to change their work environments by training supervisors in supportive attitudes. Workplaces can ensure that work-family training includes education about lactation. Women anticipating a return to work and breastfeeding would do well to approach the subject with supervisors and bosses well in advance. Counselors working with women who are at risk for difficulties combining work and family issues (depressed, low income, young, experiencing marital or relationship difficulties, and experiencing a stressful life event) can coach women to approach their supervisor. Role playing may be helpful. Counselors can take a proactive stance and intervene at work sites on behalf of a client. A group meeting may be particularly helpful. A counselor taking on the role of consultant and educator may deal effectively with supervisors.

This researcher may have fallen into the trap of writing about breastfeeding in mechanistic and sanitized terms. In speaking about the role of employers in promoting breastfeeding, it is difficult to include descriptions of the process that emphasize it as a warm, pleasurable, and relational experience for the mother and the child. Future research is needed to discern which benefits provided by employers are most significant to breastfeeding duration. Such research may reveal, similar to the Galinsky, et al. (1996) research, that specific benefits

are less significant than supportive supervisors and work characteristics of autonomy.

Breastfeeding, however, is one human activity that does require specific provisions. While the provision of a private room and an efficient pump is important for the logistics of pumping or breastfeeding at work, studies that compare pumping mothers with those who have their babies present for breastfeeding during the working day through on-site childcare or other convenient arrangements may reveal differences in breastfeeding duration, self-esteem, and overall satisfaction. If research pointed to this solution as the best facilitator of breastfeeding duration, broad cultural changes in the way that we view the workplace would be needed in order to implement breastfeeding at work as the norm.

Appendix A

Survey Cover Letter

April 26, 1999

Dear Employer:

I am a graduate student in the Master's Program in Mental Health Counseling at the University of Wisconsin-Stout. I am asking your assistance with a study about women who return to work after giving birth or adopting a child. The specific objectives of the study are to:

1. Identify employers who recognize a need to support women who decide to breastfeed while continuing to work or returning to work.
2. Determine the types of support available for hourly paid workers and salaried workers at these workplaces; and
3. Determine the number of women who take advantage of such programs in the particular workplaces that are part of the study during the years 1994-1999.

The lactation programs of several corporations have been described in the literature and the benefits to both the women and the companies have been documented. Similar surveys have been conducted in Minnesota and in the Chippewa Valley of Wisconsin. However, a study of the lactation support in the Hudson area is lacking. I hope to draw attention to the positive contributions of employers in the Hudson area through the regional media. This attention may spur further support from other local employers. Local health care providers, social service agencies, and counselors who work with women and families can use the information in this study to help women have realistic expectations about returning to work.

This questionnaire is being sent to workplaces in the Hudson area that are likely to hire women. I am asking your support in completing the enclosed questionnaire. I will call you to confirm receipt of the questionnaire and may call for clarification of the open-ended questions. The results will not be used to identify any particular employee in your company. Any information that could identify particular individuals, such as race, ethnic identity, or salary will be reported in the aggregate. Statistics comparing salaried to hourly wage employees will be reported in the aggregate and your company will not be identified. However, I would like to offer you the option of allowing your company's name to be identified in the report and in the regional news media to recognize the positive steps you have taken to support women as they return to work with an infant at home. With your permission, if your company does something unique, I would like to be able to describe this in the report.

Please return the enclosed questionnaire and consent form by April 15, 1999. Thank you in advance for your cooperation. Please feel free to reach me by telephone at 715-836-9164 or by fax at 715-839-1040 for explanations or clarification of survey questions. If you have any questions about the research, call me at the above number or my research advisor, Dr. Helen Swanson at 715-232- 2784. You may also contact Dr. Ted Knous, Chair of the UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 11 HH, UW-Stout, Menomonie, WI, 54751, phone (715) 232-1126.

Sincerely,

Christina M. Yocca

Appendix B

Consent Form

WORKPLACE SUPPORT FOR LACTATING MOTHERS: A Study of Benefits Provided by Employers in the Hudson Area

I, Christina Yocca, am conducting the research project described here. This project will fulfill part of the requirements for the Master of Science Degree with a major in Guidance and Counseling: Mental Health Concentration at the University of Wisconsin-Stout. I would appreciate your participation in this study.

RISKS

It is not anticipated that this study will present any medical or social risk to you or your employees. The information will not be used to identify any particular employee in your company. Any information that could identify particular individuals, such as race, ethnic identity, or salary will be reported in the aggregate. Statistics comparing salaried to hourly wage employees will be reported in the aggregate and your company will not be identified. These responses will be confidential. Only my advisor and I will have access to the raw data.

OPTIONAL

I would like to offer you the option of allowing your company's name to be identified in the report and in the regional news media to recognize the positive steps you have taken to support women as they return to work with an infant at home. Your participation in the project will be greatly appreciated whether or not you agree to this option. With your permission, if your company does something unique, I would like to be able to describe this in the report. The only information that I would release would be the total number of employees, the number of female employees, the number of years you have offered lactation support, and particular benefits that you provide to lactating employees.

BENEFITS

The results of this study may be of benefit to your company and potential employees. Your company may receive some positive media coverage if the local papers report the results about the supportive steps your company has taken to assist women employees who are breastfeeding.

RIGHT TO WITHDRAW OR DECLINE TO PARTICIPATE

Your participation in this study is completely voluntary. You may also omit any question you prefer not to answer. If at any time you wish to withdraw participation in this research, you may do so without coercion or prejudice, by informing the researcher. Once the study is completed, the final report would be available for your information. In the meantime, if you have any questions, please contact the researcher or research advisor.

Questions or concerns about the research should be addressed first to the researcher, Christina Yocca (715) 836-9164, or research advisor, Dr. Helen Swanson at (715) 232- 2784, and second to Dr. Ted Knous, Chair of the UW-Stout Institutional Review Board for the Protection of Human Subjects in Research, 410 BH, UW-Stout, Menomonie, WI, 54751, phone (715) 232-1126.

Code _____

**WORKPLACE SUPPORT FOR LACTATING MOTHERS:
A Study of Benefits Provided by Employers
in the Hudson Area**

Please return this form and the survey to me in the enclosed SASE by **May 12, 1999**.

If you choose not to participate, please return the blank survey with this form.

I will
 will not
 participate in the study, Workplace Support for Lactating Mothers: A Study of Benefits
 Provided by Employers in the Hudson Area. If yes, please sign below.

If yes, I agree
 I do not agree
 to allow the researcher to use the name of my workplace to identify the positive steps we
 have taken to facilitate breastfeeding as described on the previous page.

I have read and understood the description of this study, including potential risks, benefits, and my
 right as a participant, and all of my questions about the study have been answered to my
 satisfaction. I hereby give my informed consent to participate in this research study.

Signature _____ Date _____

Employer: _____

Appendix C

Survey of Workplace Support for Lactating Mothers

Code _____

PART I: Demographic Statistics: Please provide statistics about your company in the spaces provided. If the information is not available, please indicate with the letters NA.

1. Type of industry: (Check the most appropriate answer.)

- | | | |
|---|--------------------------------------|--|
| <input type="checkbox"/> wholesale/retail | <input type="checkbox"/> educational | <input type="checkbox"/> government |
| <input type="checkbox"/> health services | <input type="checkbox"/> utilities | <input type="checkbox"/> manufacturing |
| <input type="checkbox"/> construction | <input type="checkbox"/> service | <input type="checkbox"/> other _____ |

2. Number of employees at the company:

_____ total number of employees
 _____ full-time

3. Number of female employees:

_____ total number
 _____ full-time

4. What is the ethnic background of your current female employees?

	Total	Salaried	Hourly wage
European American	_____	_____	_____
African American	_____	_____	_____
Native American	_____	_____	_____
Asian American	_____	_____	_____
Hispanic	_____	_____	_____
Other	_____	_____	_____
Total # of females	_____	_____	_____

(#'s should agree with totals in #3)

5. Have the ethnic proportions of your employees changed in the past five years? Check the best response.

- More European American and fewer minority employees.
 More minority and fewer European American employees.
 Stayed about the same.

6. Consider your salaried and hourly wage female employees. How many births per year were there for female employees who worked at your workplace during each of the following years? What was the average length of maternity leave taken?

Salaried female employees		Hourly wage female employees	
# of births	average leave	# of births	average leave
_____ 1994	_____ 1994	_____ 1994	_____ 1994
_____ 1995	_____ 1995	_____ 1995	_____ 1995
_____ 1996	_____ 1996	_____ 1996	_____ 1996
_____ 1997	_____ 1997	_____ 1997	_____ 1997
_____ 1998	_____ 1998	_____ 1998	_____ 1998
_____ 1999 (to date)	_____ 1999 (to date)	_____ 1999 (to date)	_____ 1999 (to date)

7. Do you know the number of female employees at your workplace who returned to work and breastfed their infant?

- yes
 no - Skip to Part II.

8. Consider your salaried and hourly wage female employees. How many combined employment and breastfeeding an infant during each of the following years?

Salaried _____ Hourly wage _____

_____ 1994	_____ 1994
_____ 1995	_____ 1995
_____ 1996	_____ 1996
_____ 1997	_____ 1997
_____ 1998	_____ 1998
_____ 1999 (to date)	_____ 1999 (to date)

PART II: Employee Benefits

The following is a list of lactation provisions and other benefits provided by various companies in the United States. Check off those available to employees at your workplace. There are two columns, one for salaried workers and one for hourly wage workers. In the space next to those that you check, please provide additional information. Please indicate the year you first offered this benefit or provision. If you have offered this benefit for five or more years, you may check that column. A space is provided for any other additional comments you wish to offer.

<i>Available to:</i>		Available for	First year offered / Comments	
salaried	hourly wage employees	5 or more years		
_____	_____ paid leave	_____	_____	_____
_____	_____ unpaid leave	_____	_____	_____
_____	_____ lactation room - a private room for pumping (not a rest room or lunchroom)	_____	_____	_____
_____	_____ availability of electric breast pumps	_____	_____	_____
_____	_____ refrigeration for milk storage	_____	_____	_____
_____	_____ policy regarding employees pumping their milk or breastfeeding their infant while at work	_____	_____	_____
_____	_____ availability of a lactation specialist	_____	_____	_____
_____	_____ education for supervisors that includes information on lactation	_____	_____	_____
_____	_____ policies for working with an employee and her supervisor during the postpartum period	_____	_____	_____
_____	_____ adequate breaks (15 - 30 minutes, 3 times per day)	_____	_____	_____
_____	_____ flexible breaks	_____	_____	_____
_____	_____ support network among lactating employees	_____	_____	_____
_____	_____ other (please specify)	_____	_____	_____

Flexible time arrangements:

_____	_____ part-time work or job sharing	_____	_____	_____
_____	_____ extended lunch breaks	_____	_____	_____
_____	_____ ability to work more hours one day, fewer the next	_____	_____	_____
_____	_____ flextime	_____	_____	_____
_____	_____ flexplace - ability to work at home on a regular basis	_____	_____	_____

Dependent care assistance:

_____	_____ child care resources and referral	_____	_____	_____
_____	_____ employer sponsored on-site child care	_____	_____	_____
_____	_____ child care vouchers	_____	_____	_____
_____	_____ flexible spending accounts for child care	_____	_____	_____
_____	_____ family sick leave	_____	_____	_____

Traditional Benefits:

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