

Successful Implementation of Breastfeeding at Workplace: Review of Practical Knowledge and Skill for Female Workers

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Abstract

Introduction: Working mother has less time to breastfeed, increasing the risk of breastfeeding discontinuation and exclusive breastfeeding. This can impact the health of both mother and child.

Objective: This review aims to discuss the factors for successful breastfeeding in working mother

Discussion: The factors influencing breastfeeding practices among working mothers are exclusive breastfeeding practice and workplace factors. The mother's intention to breastfeed is the most critical factor in ensuring successful breastfeeding for working mothers. Preparation required when breastfeeding mothers return to work are breastfeeding strategic plan, stress management, attitude towards breastfeeding, family support, support from the work environment, and expressing breastmilk. Meanwhile, the things that need to be prepared when mothers breastfeed at work are pumping and storing equipment, supporting work environment and facilities, hygiene practices, breastfeeding schedule, and adequate nutrition intake.

Conclusion: To support the implementation of breastfeeding at workplace, there are several things that need to be prepared, both from the mother, family, and work environment. The preparation include knowledge, attitude, psychological, devices for express and storage breastmilk, pumping schedule, good quality nutrition intake, and understanding lactation management. In addition, breastfeeding work environment also support the success of breastfeeding among working mothers.

Keywords: breastfeeding, working mothers, workplace, knowledge and skill

Abstrak

Pendahuluan: Ibu yang bekerja memiliki lebih sedikit waktu untuk menyusui, sehingga akan meningkatkan risiko penghentian pemberian ASI dan ASI eksklusif. Hal ini dapat berdampak pada kesehatan ibu dan anak

Tujuan: Tinjauan ini mendiskusikan faktor keberhasilan menyusui pada ibu bekerja

Diskusi: Faktor-faktor yang mempengaruhi praktik menyusui di ibu bekerja adalah praktik ASI eksklusif dan tempat kerja. Intensi ibu untuk menyusui adalah faktor paling penting dalam memastikan keberhasilan menyusui bagi ibu bekerja. Persiapan yang dibutuhkan ketika ibu menyusui kembali bekerja, seperti rencana strategis menyusui, manajemen stres, sikap terhadap menyusui, dukungan keluarga, dukungan lingkungan kerja, dan memerah ASI. Sementara itu, hal-hal yang perlu dipersiapkan saat ibu menyusui di tempat kerja adalah peralatan memompa dan menyimpan ASI, lingkungan dan fasilitas kerja yang mendukung, praktik kebersihan, jadwal menyusui, dan asupan nutrisi yang cukup.

Kesimpulan: Untuk mendukung pelaksanaan pemberian ASI di tempat kerja, ada beberapa hal yang perlu dipersiapkan, baik dari sisi ibu, keluarga, maupun lingkungan kerja. Hal-hal yang perlu dipersiapkan antara lain pengetahuan, sikap, psikologis, alat untuk memerah dan menyimpan ASI, jadwal memompa, asupan nutrisi yang berkualitas, dan memahami manajemen laktasi. Selain itu, lingkungan kerja yang mendukung juga turut mendukung keberhasilan menyusui pada ibu bekerja.

Kata kunci: menyusui, ibu bekerja, tempat kerja, pengetahuan dan keterampilan

Introduction

Human milk is widely regarded as the gold standard in infant nutrition. The benefits of breastfeeding extend beyond the properties of human milk. A complex of nutritional, environmental, socioeconomic, psychological, and genetic interactions results in a long list of benefits for the breastfed infants and breastfeeding mother's health.¹ Breastmilk contains a variety of bioactive molecules that aid in immune maturation, organ development, and healthy microbial gut colonization, as well as ensuring a proper immune response that protects the new-born from infection and inflammation.^{2,3} The American Academy of Paediatrics recommends exclusive breastfeeding (EBF) for approximately the first six months of life, followed by continued breastfeeding as complementary foods are introduced, with breastfeeding continuing for one year or longer if both mother and infant desire it.⁴ Breastmilk has been designated as the gold standard for infant nutrition during the early postnatal period. Breastfeeding must provide nutritional support for the newborn, according to the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

Mothers' employment outside home, particularly full-time employment, has a detrimental effect on the duration of breastfeeding.⁵⁻⁷ Working mothers need to balance between breastfeeding and working, thus increasing the risk of premature breastfeeding cessation in general and exclusive breastfeeding. A significant factor contributing to early breastfeeding cessation among working mothers is inflexible work hours.^{8,9} Advance planning sufficient knowledge and skill on lactation management can help avoid complications that could result in breastfeeding being discontinued during the stressful transition period.¹⁰ Lactation management is necessary to increase breastfeeding rates and to assist mothers in achieving the lactation duration desired by both mothers and babies. Nevertheless, most of mothers, especially first-time mom, do not have sufficient knowledge on what are the basic or important aspect of lactation management. It is very important that breastfeeding female workers have sufficient knowledge and understand the benefit of breastfeeding, proper practice of lactation management including in the workplace when it is time for them to return to works.

Benefits of breastfeeding and breastmilk (mother and infant)

It is critical to provide your precious baby with the best nutrients possible. Breastfeeding is a highly effective method of ensuring a child's health and survival. Breastmilk is the ideal infant food. It is safe and sterile and contains antibodies that aid in the prevention of a variety of common childhood illnesses. Breastmilk provides infants with all the energy and nutrients they require. However, the benefits of breastfeeding are not limited to the infant's health. Breastfeeding is also beneficial to mothers' health.

Maternal outcomes

Lactation is critical for the long-term metabolic health of a mother. Milk production, which requires approximately 500 kcal per day for an exclusively breastfed infant, decreases maternal obesity, results in less visceral obesity, and results in smaller waist circumferences later in life.^{11,12} In a covariate-adjusted study of over 14,000 postpartum women, mothers who breastfed exclusively for more than 6 months lost 1.38 kg compared to those who did not breastfeed.¹³ Breastfeeding is a physical experience for women that has an effect on their bodies. Breastfeeding appears to influence women's thoughts and feelings about their bodies, as well as their sense of identity.¹⁴ Gillen et al. concluded that women who were breastfeeding had not only a greater awareness and appreciation of bodily functionality, but also a greater appreciation for their bodies in general, rated themselves as more satisfied with their appearance, and worried less on their appearance compared to women who were not breastfeeding.¹⁵

Breastfeeding has also been shown to have a significant effect on cancer rates. Breast cancer is more prevalent in non-breastfeeding mothers. According to a meta-analysis of 47 studies, each year a mother breastfeeds reduces her risk of developing invasive breast cancer by more than 4%.¹⁶ Ovarian cancer is also more prevalent in non-breastfeeding mothers. Mothers who never breastfed were 32 percent more likely to develop ovarian cancer, according to a meta-analysis of five prospective cohort studies and 30 case-control studies.¹⁷ Breastfeeding also suppresses gonadotrophin levels. This suppression results in low estrogen levels and anovulation, followed by a period

of lactational amenorrhea (LAM), and has thus been investigated as a possible risk factor for ovarian cancer development.^{18,19} Breastfeeding also contributes to natural contraception with lactational amenorrhea for mothers who exclusively breastfeed and frequently delay the introduction of solid food.²⁰ Endometrial cancer risk reduction can be added to the list of breastfeeding benefits for mothers. Jordan et al. conducted analyses on 8,981 women diagnosed with endometrial cancer and 17,241 women who served as controls. Breastfeeding exclusively was associated with an 11% reduction in the risk of endometrial cancer.²¹ Breastfeeding reduces the risk of endometrial cancer in Japanese women by threefold.²² Quite astonishingly, mothers who breastfeed for just one month have a significantly lower risk of developing diabetes later in life than mothers who do not breastfeed at all.²³ Breastfeeding for more than 12 months was associated with a 30% reduction in the relative risk of diabetes and a 13% reduction in the relative risk of hypertension.²⁴ Multiple hormones are produced during lactation, including oxytocin, prolactin and cortisol, all of which have an effect on blood pressure. In a cohort study, mothers who never breastfed were found to be 29 percent more likely to develop hypertension than mothers who breastfed according to national guidelines, even after adjusting for lifestyle factors and family history.²⁵ When compared to formula-feeding mothers, breastfeeding mothers report lower levels of anxiety, negative mood and stress.²⁶ Breastfeeding mothers also have longer and higher-quality sleep patterns than formula-feeding mothers. Specifically, research indicates that breastfeeding was associated with an increase of approximately 45 minutes in sleep and decreased sleep disturbance at three months postpartum,²⁷ suggesting that breastfeeding may have an (increase) effect on mothers' endogenous oxytocin levels. This is consistent with oxytocin's established role during breastfeeding and is supported by research demonstrating an increase in maternal oxytocin levels during breastfeeding.²⁸ According to previous research, breastfeeding mothers exhibit a more positive mood, less stress and a more effective emotional response to others, all of which are likely to influence their maternal behaviours positively.^{29,30}

Baby outcomes

The study's significant reduction in sudden infant death syndrome (SIDS) mortality adds to the body

of evidence demonstrating that breastfeeding reduces the risk of SIDS, and that this protection persists for the duration of breastfeeding.³¹ A minimum of two months of breastfeeding appears to be necessary to confer a significant protective effect against SIDS, almost halving the risk. Breastfeeding's protective benefits increase with duration.³²

Breastfeeding aids in the development of the child's brain. These benefits may be a result of nutritional differences between breastmilk and infant formula, as well as differences in maternal–infant interactions.³³ Infants who were exclusively breastfed until 4 months of age and then switched to mixed breastfeeding had improved communication and social interaction at 6 months, and improved cognition, communication, and social interaction at 12 months, compared to infants who did not breastfeed at all. Breastfeeding exclusively for the first four months of an infant's life, followed by mixed breastfeeding, may maximize the effects of infant development during the first year of infant's life.³⁴

Breastfeeding reduces the neonatal intestinal mucosa's early exposure to microbes and inhibits bacterial translocation through the gut mucosa. This may be a significant reason for breastfeeding's efficacy in protecting against neonatal septicaemia and several other infections.³⁵ Antibodies in breastmilk, specifically secretory IgA (sIgA) levels that are higher in colostrum, confer immunoprotection by inhibiting pathogen adhesion to or penetration of the gastrointestinal (GI) tract, as well as phagocytosis or cytotoxicity of pathogens, which could significantly reduce the risk of dying from diarrhoea in breastfed children by 14–24 times.^{36,37} Breastfeeding results in a favourable gut microbiome that protects the infant from pathogenic bacteria and has also been linked to decreased asthma and obesity rates in children.³⁸ Breastfeeding reduced the risk of type 2 diabetes by nearly 40% compared to formula feeding and may also reduce the risk of developing type 1 diabetes later in life.^{39,40} Finally, it has been demonstrated that breastfeeding a female infant results in a 25% reduction in the risk of developing breast cancer later in life.⁴¹

Key factors of successful breastfeeding

A breastfeeding education program is the most effective intervention for promoting breastfeeding initiation. A systematic review and meta-analysis determined that for every three to five women enrolled in an educational

program, one additional mother would initiate and continue breastfeeding for up to three months. Educational sessions on the benefits of breastfeeding, lactation principles, myths, common problems and solutions, as well as skills training, appear to have the greatest single effect.⁴² Education is critical during the immediate postpartum period to ensure breastfeeding success. According to a 2003 Cochrane review, immediate skin-to-skin contact between mother and newborn improves breastfeeding outcomes and prolongs breastfeeding duration.⁴³

Breastfeeding education is typically provided during the prenatal and postpartum stages. It should be led by someone who is knowledgeable about or has received training in lactation management. It may be offered in a hospital or clinic setting, as well as in libraries, community centres, churches, schools, and places of employment. Education is primarily consisted of knowledge and resources. Although the audience is typically comprised of pregnant or breastfeeding women, it may also include fathers and others who assist the breastfeeding mother, such as family.⁴⁴

The WHO and UNICEF established the Baby-Friendly Hospital Initiative (BFHI) in 1991 to support and recognize hospitals and birthing centres that provide an optimal level of care for infant feeding.^{45 46}

Successful breastfeeding for working moms

According to a qualitative study conducted in Ghana, two major factors influencing breastfeeding among working mothers are exclusive breastfeeding practice (knowledge and understanding of exclusive breastfeeding, as well as experience with exclusive breastfeeding) and workplace factors (length of maternity leave, closing time, absence of maternity policy in organization, inadequate institutional support, and family work-live balance).⁴⁷

The most critical factor in ensuring successful breastfeeding for working mothers is the mother's intention to breastfeed postnatally. It is a highly predictive factor for breastfeeding initiation, with a nearly 12-fold effect.⁴⁸ Despite widespread awareness of child feeding recommendations and the benefits of EBF, the need for mothers to return to work following maternity leave presents many challenges, including a lack of support for and experience with milk expression, which renders breastfeeding impossible for the mother.⁴⁹ Breastfeeding cessation following return to work is

partly due to a lack of knowledge especially in blue-collar worker, prenatal education and preparation.^{50,51}

Return to work

It is essential to reassure new mothers that they can continue breastfeeding after returning to work and to assist them in developing a plan for doing so.⁵² A breastfeeding strategic plan can assist the working mother in anticipating logistical issues and developing a practical pumping schedule, as well as in determining where and how frequently the mother can feed or pump breastmilk, the break schedule and work hours, time management, maintaining milk supply, physical health, and any obstacles the mother may face while breastfeeding or pumping breastmilk in the workplace.^{10,52}

The stress of the workplace was a significant impediment to continued breastfeeding. This mental anguish included guilt, stress, and the need to make sacrifices. Women who return to work while breastfeeding should also learn about stress management, as stress is a commonly described emotion among women who work and breastfeed. Prenatal breastfeeding education classes and discharge planning for new mothers in postpartum units can incorporate stress management instruction.⁵² The findings of O'Brien et al. confirm that psychological factors are significant breastfeeding duration predictors. Statistically significant relationships exist between the duration of breastfeeding and levels of optimism, breastfeeding self-efficacy, faith in breastmilk, breastfeeding expectations, anxiety, planned duration of breastfeeding, and the time of the infant feeding decision.⁵³

The attitude was described in terms of the women's determination, commitment, assertiveness, dedication, and belief in breastmilk's benefits for the infant. Those mothers who felt positively about breastfeeding and described the personal value of breastfeeding also believed in the benefits of breastfeeding and continued to breastfeed while at work.⁵²

Before returning to work, breastfeeding mothers should make certain preparations. Family support, particularly from the father, is critical. One study demonstrated a strong desire to collaborate with and support partners during the breastfeeding experience. However, the father felt a lack of knowledge, comprehension, and ability. Rather than focusing exclusively on the mother, education and support

should also be given to the father.⁵⁴ According to a previous study, breastfeeding education and access to a lactation consultant may increase a woman's likelihood of initiating and continuing breastfeeding her newborn.^{52,55,56} Rojjanasirrat (2004) explains that emotional, instrumental and informational support for breastfeeding mothers are essential to ensure they continue breastfeeding while working. Employers must understand the importance of creating a baby-friendly workspace and a supportive work environment for breastfeeding working mothers in order to increase breastfeeding success.⁵²

Having the support of supervisors or coworkers, then allowing flexible scheduling to facilitate milk expression at work, and finally having written policies to support breastfeeding mothers. Giving mothers options for returning to work, such as teleworking or part-time work, was the least common intervention.⁵⁷ In Uruguay, 35 percent of companies have a breastfeeding room on their premises and 76 percent allow their employees to leave their workplace to breastfeed or express milk whenever they need to.⁵⁸ Sweden have the same rule too, female employees are also entitled to nursing breaks without specific duration of times. This means breastfeeding breaks during working hours can be taken as long as the female employee continues to breastfeed.⁵⁹

The support of their spouses and families influences the decision of working mothers to breastfeed. Employers have a responsibility to provide a support system and facilities for mothers to express and store breastmilk in the workplace. Internal and external support are required for mothers to overcome obstacles and achieve breastfeeding success.⁶⁰

It is important to establish a sufficient milk supply by exclusively breastfeeding the baby for 4-6 weeks.⁶¹ Effective milk drainage from the breast is critical, even more so if increased milk production is desired. To ensure effective drainage, the infant must be properly attached and positioned.⁶²

A cohort study conducted by Win et al. found that mothers who express breastmilk are more likely to continue breastfeeding for six months. This is because mothers who express breastmilk are more likely to return to work and continue breastfeeding.⁶³ According to a descriptive study by Clemons et al., women express for a variety of reasons, but primarily to increase their milk supply and facilitate their return to work. Electric breast pumps were the most common (66%) and preferred method of breastmilk expression (54%). Nonetheless,

a number of women reported that breast pumps caused discomfort and nipple damage. In this study, only a few women preferred hand expression, and the researchers hypothesized that breast pump marketing may be the cause.⁶⁴

Around two weeks prior to returning to work, the mother should begin pumping milk. This allows her to practice using the pump and contributes to increase the supply. Choosing the best breast pump devices is an important part of preparation, as a breast pump may be the most effective method of maintaining a mother's milk supply when she works outside the home. Mothers should practice pumping and storing equipment, as well as proper storage and cleaning techniques.¹⁰

Mothers favored high-quality, double-sided breast pumps over manual pumps that took longer and consumed valuable pumping time.⁵² Breastfeeding mothers must comprehend the "supply and demand concept" of milk supply. Positive feedback stimulates the breast to produce additional milk. Prior to returning to work, the mother can establish a milk supply by emptying her breasts more frequently or thoroughly, and bottle feeding should be delayed until the milk supply is established and should be initiated only if there are no breastfeeding difficulties. Until this time, cup feeding is an option.¹⁰

At workplace

To breastfeed successfully while working, a mother requires five items: a breast pump, a private room, adequate pumping breaks, a refrigerator to store the milk, and, most importantly, a supportive employer.⁶⁵ With regards to break time, lactating mothers must breastfeed or express milk frequently in order to maintain an adequate supply of milk to continue breastfeeding, the more pumps the more milk will produce. For breastfeeding mothers, time is critical. Pumping breaks should occur when the infant normally feeds or every 3 to 4 hours. Pumping and breastfeeding during the workday are associated with a longer duration of breastfeeding in working women.^{66,67}

In Bangladesh, there is a supporting program named Mothers@Work (a UNICEF and Better Work Bangladesh Program (BWB) partnership). Through this special initiative, BWB seeks to protect the wellbeing of mothers and ensure that their children receive key nutrients to support a baby's healthy development. BWB Enterprise Advisors interact with factory management

and workers – especially new mothers on a regular basis to help boost awareness of breastfeeding's benefits. They also ensure that policies and procedures relating to breastfeeding and maternity protection are followed while also supporting factories to set up breastfeeding rooms in line with UNICEF recommendations and the labour law. In addition to breastfeeding rooms and a workplace environment supportive to breastfeeding, Mothers@Work focuses on paid maternity leave, health protection, cash and medical benefits, child care and employment protection and non-discrimination in the workplace. These minimum standards guide employers to ensure the rights of women and children are respected and withheld in the workplace.⁵⁸

Before expressing or handling breastmilk, the CDC recommends that mothers wash their hands with soap and water or an alcohol-based hand sanitizer (min 60 percent alcohol). Breastmilk can be expressed by hand or with a breast pump. If using a breast pump, ensure that the pump kit and tubing are clean. Immediately discard and replace moldy tubing. Use breastmilk storage bags or clean food-grade containers to store expressed breastmilk after mother has expressed milk. Never store breastmilk in disposable bottle liners or plastic bags not designed for breastmilk storage. Label expressed breastmilk with the date it was collected. Always defrost the oldest milk break first. Keep in mind first in, first out. Because the quality of breastmilk can diminish over time. Once breastmilk has been brought to room temperature or warmed, it should be used within two hours, and it should never be frozen after it has thawed. Clean, sanitize, and store pump equipment, baby bottles, and other feeding items with care to prevent contamination of your breastmilk.⁶⁸

Having to express milk in a toilet stall may prevent breastfeeding from continuing after a return to work

and may result in premature weaning. Employer must provide a breastfeeding location that is clean (not a toilet stall or adjacent to a bathroom), private, close to the workplace, and secure.⁶⁹ Breastmilk (fresh expressed) can be stored at room temperature for six hours or in an insulated cooler with ice packs for 24 hours before being returned home to be frozen.⁷⁰ To make human milk always in decent condition, time limit for breastmilk storage should be followed (Table 1).

Mothers who return home from work must continue to work in order to maintain their milk supply. Breastfeeding mothers should breastfeed 8 to 12 times per day to establish and maintain milk production. Breastfed infants commonly feed at night until they are 6 months old. These night feeds can be the most frequent in a 24-hour period, accounting for up to 20% of total milk intake.⁷¹ Continuing direct breastfeeding with the baby on demand while at home can increase milk supply and bonding time for the baby.⁶²

The duration of lactation was a significant factor influencing milk composition, and a diet rich in red meat, cereals and eggs was associated with higher levels of protein, total dry matter, and energy in breastmilk. These findings demonstrate that the dietary habits of lactating women can influence the macronutrient composition of breastmilk and provide a basis for improving child health.⁷²

Lactating mothers who have adequate nutrition experience an increase in their daily energy needs, which can be satisfied by a moderate increase in the variety and balance of their diet.⁷³ Despite the fact that the dietary reference intakes for breastfeeding mothers are the same as or even higher than those for pregnant women, there is no standard recommendation for mothers to take supplements while they are breastfeeding. During breastfeeding, it is advised by a great number of

Table 1. Human milk storage guidelines⁶⁸

Types of Breastmilk	Storage Location and Temperatures		
	Countertop 77 °F (25 °C) or colder (room temperature)	Refrigerator 40 °F (4 °C)	Freezer 0 °F (-18 °C) or colder
Freshly Expressed or Pumped	Up to 4 hours	Up to 4 days	Within 6 months is best Up to 12 months is acceptable
Thawed, Previously Frozen	1-2 hours	Up to 1 day (24 hours)	Never refreeze human milk after it has been thawed
Leftover from a Feeding (baby did not finish the bottle)	Use within 2 hours after the baby is finished feeding		

medical professionals to keep taking prenatal vitamin supplements.⁷⁴ To ensure that there is an adequate concentration of preformed DHA in the mother's milk, the mother's diet should include an average daily intake of between 200 and 300 milligrams of the omega-3 long-chain polyunsaturated fatty acids known as docosahexaenoic acid (DHA). A daily caloric intake of no less than 1800 calories is required for mothers.⁷⁵

Conclusion

Breastfeeding has numerous advantages for both the mother and the baby in both the short and long term. Because breastmilk is an ideal source of nutrition for infants, this liquid is essential. Employed mothers can still have a successful breastfeeding time if they properly prepare their knowledge, attitude, psychological preparation, devices for express and storage breastmilk, pumping schedule to maintain milk supply and good quality nutrition to produce the best quality breastmilk before returning to work after maternity leave and understand lactation management. Breastfeeding work environment also support successful breastfeeding working mother.

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