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WORKING WOMEN AND BREASTFEEDING: AN INVESTIGATION OF THE FACTORS AFFECTING BREASTFEEDING PRACTICES IN MUZAFFARABAD, AZAD JAMMU AND KASHMIR

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ABSTRACT

Breastfeeding is explained as nourishing the baby or young child with breast milk, which includes expressed milk or from wet nurse. It is very important to ensure the healthy upbringing and reduction of infant death by ensuring child feeding practices. It is recommended by The World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) to exclusively breastfeed (EBF) the babies for the first six months of life. It is important for the health of babies as well as mothers. The study designed to assess the factors influencing breastfeeding practices in working mothers of Muzaffarabad, Azad Jammu and Kashmir, is a cross-sectional study. A total of 100 working women of different professions from both public and private setup of city Muzaffarabad AJK were interviewed by using pre- structured self-administered questionnaire. The questions were asked about socio- demographic information of working mothers, formula initiation, current feeding practices, available workplace breastfeeding support and workplace barriers that are in turn affecting their breastfeeding practices. Results showed suboptimal breastfeeding practices among working women. None of the mothers followed exclusive six-month postpartum breastfeeding. The majority (57%) initiated formula feed from 1 month to 3 months age. Returning to work was strongly associated with cessation of breastfeeding (59%) and use of supplemental feedings. Majority of workplaces were lacking in provision of flexible time for breastfeeding (6/100), task adjustment during lactation period (6/100), separate room for breastfeeding (32/100), nursery for childcare (3/100), breast pump to express breast milk (17/100) and refrigerator to store expressed milk (0/100).

***Keywords**: Breastfeeding, Working mothers, Workplace, Child mortality*

INTRODUCTION

Breastfeeding is defined as the feeding of an infant or young child with breast milk, including expressed milk or from wet nurse (World Health Organization, 2008). It is considered that mother's milk is the best food for newborn babies and infants. Breastfeeding is the normal way of providing newborn babies with the nutrients required for their healthy growth and development (World Health Organization, 2015). According to the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF), exclusive breastfeeding (EBF) is necessary for the first six months of life. EBF is defined that there should be no other food or liquid that maybe water should be given to the baby for a period of 6 months, except ORS drops, syrups which include vitamins, minerals and medicines. It is important for the health of babies as well as mothers. After six months complementary feeding/weaning (introduction foods while breastfeeding should be continued till two years of age) should be started to meet the improved dietary requirements of baby. (World Health Organization, 2016; United Nations International Children's Emergency Fund, 2015).

Feeding practices of babies under two years are impacting their nutritional status and survival. Worldwide, 5.9 million deaths of children below five years occur each year (World Health Organization, 2016). Poor breastfeeding caused the death of 1.4 million children and the left 44 million children disabled around the globe (Black, Allen, Bhutta, Caulfield, De Onis, Ezzati, Mathers, & Rivera, 2008).

Globally, the death of almost 800,000 children who are below five years can be avoided by optimal breastfeeding practices. EBF and adequate complementary feeding have the potential to save 20% of children below five years. These are key strategies for improving child survival. When babies are provided breast milk from the first hour of life about 22% of life can be saved and if it is started within 24 hours 16% of life could be saved (World Health Organization, 2003).

Breastfeeding rates continue to increase in the U.S. In 2013, 81.1% of women were breastfeeding, while 51.8% women kept on breastfeeding till six months age of the baby and 30.7% women went ahead to twelve months. The project "Healthy People" had set the target to increase the percentage of babies who will be fed by 2020 to be 81.9% for children who ever breastfed. (Centers for Disease Control and Prevention, 2016).

Culturally breast feeding is highly acceptable in Pakistan, but unfortunately bottle-feeding rates are highest and EBF rates are at its lowest point in Pakistan. According to the Pakistan Demographic Health Survey (PDHS), percentage of the children who are breastfed risen from 37% in 2006-07 to 38% in 2012-13. Conversely, the rate of bottle-feeding children has increased from 32% in 2006-07 to 42% in 2012-13 (NIPS, 2012).

BENEFITS OF BREASTFEEDING

Benefits for Infants

For infants breastfeeding is beneficial as those provided with breast feeding have better and quick growth than those deprived of it (Hyde, & Modi, 2012). Breast milk protect children against several infections because it has important antibodies that boost the Childs resistance (Ukegbu et al., 2011; Murimi, Doge, Pope & Erickson, 2010). Breastfeeding reduces the incidence of meningitis, malaria, asthma, Respiratory Tract Infections (RTI's), ear infection, diarrhoea, Urinary Tract Infections (UTI's) and atopic skin disorders (Ibadin, Ofili, Morrison, & Nkwuo, 2012;).

Among infants who are either partially or completely deprived of breast milk infections and deaths due to diarrhoea can increase many-fold. Through the initial sixty days of life, infants who were provided with mother's milk are less likely (6 times) to face communicable diseases and die than infants who are not provided with mother's milk. At the age of 2 to 3 months, the children who are provided with mother's milk are 4 times less likely to die as compared to the children who are not provided with mother's milk (Wood, Wiseman, Morales, Gedamke, & Castro, 2000).

In the first 6 months of life, EBF infants are six times less likely to die from diarrhea and 2.5 times less likely to die from acute RTI's. Those who are not exclusively breastfed have more possibility to acquire Gastrointestinal (GIT) infections, not only in developing countries but also in developed world (Kramer & Kakuma, 2002).

Brain development is improved by breastfeeding because of the decreased risk of allergies and food intolerance. Exclusive breastfed children have higher intelligence quotient, less risk of juvenile obesity, mental health issues and diabetes (Davis, Stichler, & Poeltler, 2012). Early breastfeeding decreases child death and illness because of its preventive benefits in reducing long-term diseases (World Health Organization, 2009; United Nations International Children's Emergency Fund, 2015).

Benefits for Mother

Breastfeeding is not only beneficial for infants, but it is also fruitful for mothers. Breast feeding makes sure better reproductive and postmenopausal health (Natural Resource Defense Council, 2005; Murimi et al., 2010), decreases the risk of type-2 diabetes, Postpartum depression and cardiac illnesses. It also reduces the risk of breast, ovarian and endometrial cancers (Labbok, 2001; Huo, Adebamowo, Ogundiran, Akang, Campbell, Adenipekun, & Olopade, 2008). Among females who breastfed their children for initial six months they can have natural contraception for breastfeeding period. Breastfeeding is cheaper compared to formula feed. During breastfeeding, the feeling of bonding is developed between mother and child that is good for mental health of mother (Kuti, Adeyemi, & Owolabi, 2007).

PROBLEM STATEMENT

Working women often encounter significant obstacles in initiating and maintaining breastfeeding practices. Factors such as lack of workplace support, inadequate maternity leave policies, and societal stigma surrounding breastfeeding can hinder a working woman's ability to breastfeed. Furthermore, the physical and emotional demands of work can also impact on a woman's ability to establish and maintain a healthy milk supply. As a result, many working women are forced to abandon breastfeeding earlier than desired, leading to suboptimal breastfeeding rates. Current research aims to explore the issues affecting breastfeeding practices among working women, with a focus on identifying the barriers and facilitators that influence their ability to breastfeed. (Kimbro, 2006).

STUDY OBJECTIVES

- To assess factors affecting breast feeding practices in working mothers of city Muzaffarabad, AJK.
- To evaluate workstation breastfeeding support given to working mothers in city Muzaffarabad, AJK.
- To assess available breastfeeding facilities for working mothers in public and private workplaces of city Muzaffarabad, AJK.
- To create awareness among employers and working women about workplace breastfeeding facilities in city Muzaffarabad, AJK.
- To provide a reference study about workplace breastfeeding facilities in AJK.

RESEARCH HYPOTHESIS

- H1. There is a lack of workplace breastfeeding facilities and supportive environment in public and private workplaces of Muzaffarabad AJK.
- H2. Employment of lactating mothers is associated with working mothers' early initiation of formula/supplemental feed and with the early termination of breastfeeding.

METHODOLOGY

STUDY DESIGN

A descriptive cross-sectional study was used to assess the factors influencing breastfeeding practices in working mothers of Muzaffarabad, Azad Jammu and Kashmir. Study duration was six months (September 2016 to February 2017). Study was conducted in Muzaffarabad AJK and Study population, which was selected through convenient sampling technique, consists of 100 working females who have a feeding child (Doctors, teachers, nurses, paramedical staff, clerical staff, and supporting staff) and working in public and private setup. Pre-structured questionnaire was used to collect data. The questionnaires had

socio-demographic information of working mothers, questions on workplace breast feeding facilities and workplace barriers that are in turn affecting their breastfeeding practices. IBM SPSS Statistics 20 software has been used for coding and analyzing the data collected. Findings were presented in the form of tables and graphs. The Chi-square test was used to check association between different variables.

Inclusion Criteria

1. Working mothers (with feeding baby) 3 to 24 months postpartum who rejoin their work at the time of interview.
2. Lactating working women aged between 18 and 45 years.

Exclusion criteria

3. Having a baby unable to breastfeed due to illness.
4. Twins or more
5. Those not willing to participate in the study.

Results

In this study, the data of 100 working women of the city Muzaffarabad AJK was reported.

Table 1: Sociodemographic characteristics of study participants

Characteristics		N (n=100)	%
Age of respondent	18-25 Years	6	6.0
	26-35 Years	72	72.0
	36-45 Years	22	22.0
Highest level of education	Primary	9	9.0
	Secondary	8	8.0
	Graduation	65	65.0
	Post-graduation	18	18.0
Profession	Teaching	30	30.0
	Nursing	15	15.0
	Doctor	10	10.0
	Allied Health	16	16.0
	Admin/Clerical	14	14.0
	Helping staff	15	15.0
Monthly household income in PKR	<10,000	6	6.0
	10,000-25000	21	21.0
	25,000-50,000	45	45.0
	>50,000	28	28.0
Type of employment	Public	50	50.0
	Private	50	50.0
Number of working hours	<6	1	1.0
	6 hours	21	21.0
	8 hours	33	33.0
	6-12 hours	43	43.0
	>12 hours	2	2.0

Table 1 explains the socio-demographic details of the sample which includes age, education, employment, salary etc.

BREAST FEEDING PRACTICES OF STUDY PARTICIPANTS

First Feed of Baby After Birth

Majority of mothers (56%) reported the use of honey as the first feed for their babies. 11% used dates and Zamzam. Surprisingly 15% used formula milk, and only 18% preferred colostrum as baby's first feed.

Table 2: First feed of baby after birth

Baby First Feed after birth	N (n=100)	%
Colostrum	18	18.0
Honey	56	56.0
Dates and Zamzam	11	11.0
Formula milk	15	15.0

Current Age of Baby by Current Feed

In this study, majority of the babies were of 1-year (12 months) age. Currently most of the women are using Formula milk. The ratio of breast feeding is very low for all ages of babies. some mothers prefer combination of breast and formula from 3 months to 8 months, but majority preferred formula only. Surprisingly, after 8 months breastfeeding was minimal (Table 3).

Table 3: Current age of baby by current feed

Current Age of Baby in Months	Baby's Current Feed				Total
	Formula	Combination of breast and formula	Fresh milk	Combination of breast & fresh milk	
3 months	2	1	0	0	3
4 months	3	5	0	1	9
5 months	7	5	0	1	13
6 months	7	3	5	1	16
8 months	5	5	0	0	10
9 months	4	2	1	0	7
10 months	7	0	1	1	9
12 months	12	1	2	1	16
24 months	4	3	9	1	17

Current Feed of Baby by Sociodemographic Characteristics

In this section we assessed the effects of sociodemographic characters on the current feed of baby. Frist, a correlation is evaluated between profession and current feed of baby. Majority of women, more than 51%, of all professions preferred formula as current feed for their babies. Surprisingly none of the professionals except helping staff are using a combination of breasts & fresh milk. The ratio of using formula as current feed is high among the women aged between 26-35 years. The women aged between 18-25 preferred to use either formula or fresh milk as current feed. Surprisingly none of them are breastfeeding exclusively. Regarding correlation between monthly income and current breast feed we found those women have salaries < 10,000 preferred either fresh milk (3/6) or combination of breast and fresh milk (3/6), while formula feeding is highest among women from higher household income. 60 % (27/45) working women with household income between 25000 to 50,000 are using formula milk and 42% (16/38) of women having income greater than 50,000 are currently feeding formula to their babies. There is no significant difference between public and private sectors regarding combination feeding. Women working in public setup have slightly higher rate of formula feeding (27/50) as compared to women working in private setup (24/50).

Table 4: Sociodemographic characteristics and baby's current feed

Sociodemographic Characteristics		Formula	Combination of Breast & formula	Fresh milk	Combination of breast & fresh milk	Total
Profession	Teaching	18	7	5	0	30
	Nursing	8	4	3	0	15
	Doctor	8	2	0	0	10
	Allied Health	9	6	1	0	16
	Admin/Clerical	8	3	3	0	14
	Helping staff	0	3	6	6	15
Age of Respondent	18-25 Years	2	0	4	0	6
	26-35 Years	4	20	9	1	72
	36-45 Years	7	5	5	5	22
Monthly Household Income in PKR	<10,000	0	0	3	3	6
	10,000-25000	8	4	6	3	21
	25,000-50,000	2	13	5	0	45
	>50,000	1	8	4	0	38
Type of Employment	Public	2	12	9	2	50
	Private	2	13	9	4	50

Formula Initiation

Most mothers (24%) initiated the infant formula at the age of 3 months. About 21% of mothers initiated the infant formula at the age of 2 months. Surprisingly 18% started giving infant formula from day 1. Out of 100 only 16 mothers reported that their babies were never given an infant formula (Table 5).

Table 5: Age of baby when first given infant formula

Age of baby when first given infant formula	N (n=100)	%
1 day	18	18.0
1 week	2	2.0
2 weeks	2	2.0
3 weeks	5	5.0
1 month	12	12.0
2 months	21	21.0
3 months	24	24.0
My baby was never given infant formula	16	16.0
Total	100	100.0

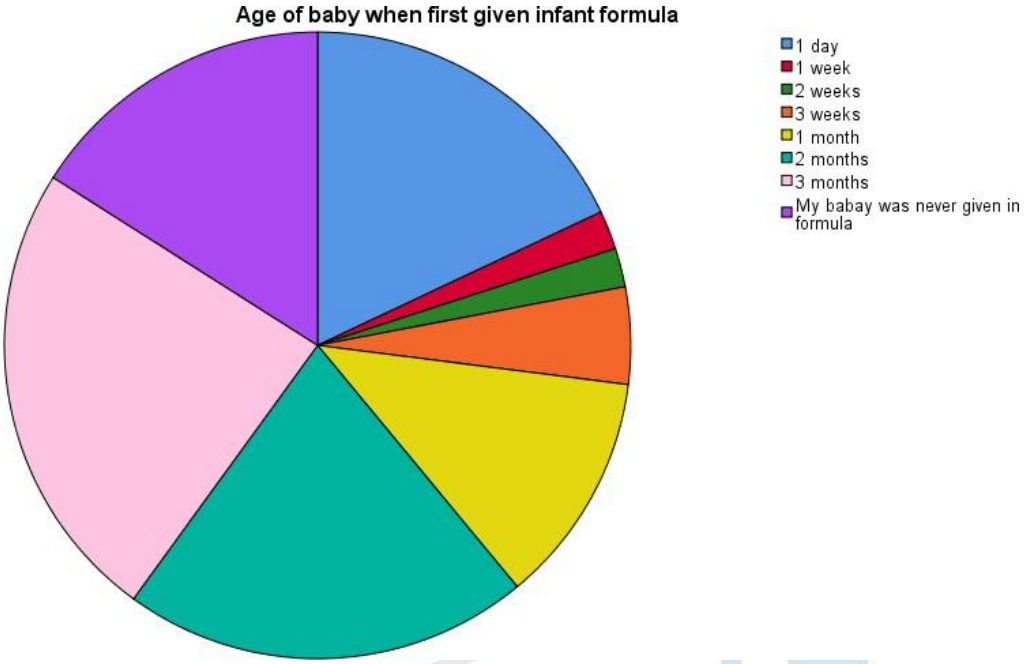

Figure 1: Pie diagram showing age of baby when first given infant formula

BREAST FEEDING FACILITIES

Comparison of Provided Breast Feeding Facilities Between Public and Private Sectors

There was no significant difference regarding available workplace breastfeeding facilities in public and private sectors except for the availability of separate rooms ($P < 0.05$). Separate rooms for lactation were more available to mothers working in public settings as compared to those working in private setup. Workplaces in both public and private settings were lacking almost equally in provision of flexible time, breast pump, refrigerator, nursery for childcare and lighter job during the lactation period respectively ($P > 0.05$).

Table 6: Comparison of provided breastfeeding facilities between public and private sectors.

		Type of Employment			
		Public	Private		
Provided Breast Feeding Facilities				Total	
Flexible Time to express breast milk	Yes	4	2	6	
	No	46	48	94	
Separate room to express breast milk	Yes	21	11	32	
	No	29	39	68	
Breast pump to express breast milk	Yes	10	7	17	
	No	40	43	83	
Separate Refrigerator to store breast Milk	No	50	50	100	
Nursery for Childcare	Yes	2	1	3	
	No	48	49	97	
Task adjustment/Lighter job during lactation period	Yes	3	3	6	
	No	47	47	94	

MOTHERS' PERCEPTION OF WORKPLACE BARRIERS TO BREASTFEEDING

To understand mothers' perspective on support for breastfeeding at the workplace, an open-ended question was asked to describe the factors that affect breastfeeding practices when it comes to work. About 75% of the participants believe that lack of nursery or childcare at workplace is a main barrier to breastfeeding. Nearly 70% of the participants think that lack of organizational support is another barrier to breastfeeding. Majority of participant believe that no lactation breaks/relaxation in working hours (60%), hectic work schedule (55%), unavailability of private place to breastfeed (50%), unsuitable environment for baby (35%), inadequate maternity leave (40%) and night duties/long working hours (30%) are the barriers to breastfeeding at work.

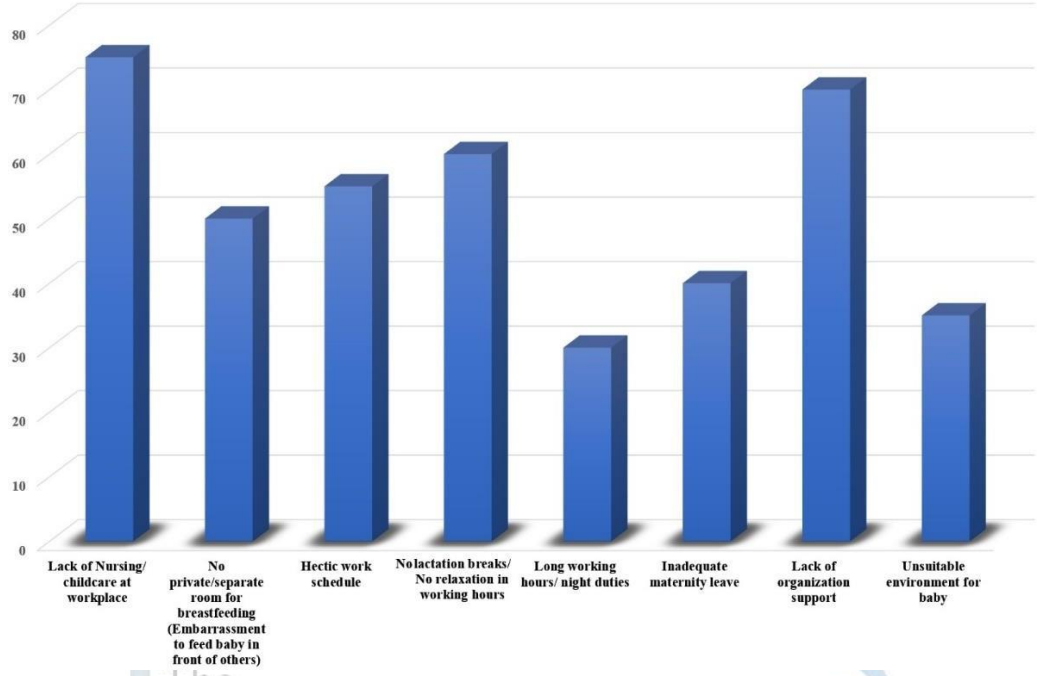

Figure 2: Mother's perception of factors affecting workplace breastfeeding practices

DISCUSSION

Workplace breastfeeding facilities and barriers in urban setup of city Muzaffarabad AJK have not been clearly identified so far. Our study is the first initiative regarding this matter.

Findings of our study revealed substandard breastfeeding practices among working mothers in both public and private setups. Trend of pre-lacteal feeds was highest among study participants irrespective of their education and profession. Use of infant formula and mixed feeding practices were most prevalent. By income status formula feeding was more common in women belonging to higher household income while, use of fresh milk (cow's or goat milk) was common in women with lower household income None of the working mother was feeding exclusively breast milk. Initiation of infant formulas was most common at age one to three months. Early formula initiation was noted in mothers working in private setup as compared to government employees. Retuning to job was strongly associated with termination of breastfeeding for majority of mothers irrespective of their type of employment. It was found that on returning to work most of most mothers either stopped breast feeding or supplement it with formula feed or fresh milk. Similar findings were published in many other studies (Ryan et al., 2006; Gatrell, 2007;)

Data analysis showed that the workplaces were overall deprived of facilities for breastfeeding practice at workplaces. Majority of workplaces are lacking in provision of flexible time for breastfeeding, task adjustment during lactation period, nursery for child, separate room for breastfeeding, breast pump to express breast milk and refrigerator to store expressed milk. These findings are in line with the study conducted in Pakistan by Hirani & Karmalian in 2013.

No significant difference was noted between public and private settings regarding the provision of major breastfeeding facilities. Except for the provision of separate rooms, both public and private workplaces are lacking equally in other areas i.e. flexible time for breastfeeding, task adjustment during lactation period, nursery for child, breast pump to express breast milk and refrigerator to store expressed milk. This is contradictory to the findings of a study conducted by Soomro in 2015.

To gather information regarding mother perception of workplace breastfeeding barriers an open-ended question was asked. Lack of nursery, organizational support and separate rooms were the most prevalent factors reported as a barrier to breastfeeding at work by study participants (Rafique et al., 2024). Other common factors effecting workplace breastfeeding reported by mothers were inadequate maternity leave, long working hours, hectic work schedule, no relaxation in working hours, night duties, no lactation breaks and unsuitable environment for baby. Similar factors are widely reported by many previous studies (Arlotti et al., 1998; Guttman & Zimmerman, 2000; Khoury et al., 2005).

Limitations

This study only concentrates on urban areas of Muzaffarabad AJK however, results of this study cannot be generalized to AJK's rural areas.

In this study, unregistered jobs such as shops, small health clinics and home-based businesses were not considered even though they were very small but could affect the internal and external competence of the research.

CONCLUSION

The study findings concluded that workplaces in both public and private settings in the city Muzaffarabad AJK are not breastfeeding friendly. There is a strong need for dissemination of information regarding workplace breast feeding benefits to mothers, the public and most importantly employers. Policies should be formulated regarding workplace breastfeeding support to lactating mothers at state level.

RECOMMENDATIONS

Results of the study showed a negative impact of employment on breastfeeding. For the successful combination of breastfeeding and employment a woman needs a workplace lactation support, a positive attitude, and a strategic plan to achieve their breastfeeding goals. To make it happen:

Interventions should be made at government level to sensitize the policy makers/political leaders about the issue.

Legislation about establishment of childcare nursery & breastfeeding room at working place of all public & private organizations, this should include all accessories related to breastfeeding.

Through electronic, print and social media breastfeeding education & importance of exclusive breastfeeding should be disseminated for mothers to eliminate myths regarding disadvantages of breastfeeding and the incompatibility of work and breastfeeding and to increase their knowledge and confidence in breastfeeding. Other methods like panel discussion, lectures and focused group discussion should also be used.

Workplace lactation programs should be designed for mothers returning to work after maternity leave to help them continue breastfeeding.

Lactating mothers should be guided to develop appropriate strategic plans in the form of a set routine, a schedule to express breast milk to maintain their milk supply, a balanced diet and having a back-up plan if work and breastfeeding are to be successful.

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