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## **Association of workplace support on breastfeeding self-efficacy among working mothers of Attock City**

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**Abstract--Objective:** To find out the association of workplace support on breastfeeding self-efficacy among working mothers of Attock city and the association of breastfeeding self-efficacy with their socio-demographics. **Methodology:** The study employed a cross-sectional study design. Data were gathered from public & private organizations including secondary care hospitals, banks, schools, colleges/universities, and parlors of Attock city. It was a six months' study from July to September 2021. The study was conducted with 369 working mothers. A consecutive non-probability sampling technique was used. Data was collected by a validated tool, which consisted of two questionnaires: WBBSS (workplace breastfeeding support scale) and BSEF-SF (breastfeeding self-efficacy scale short form) questionnaire. Data analysis was done through SPSS version 20. Pearson Correlation was employed to determine the association between support at the workplace and the self-efficacy of breastfeeding. **Results:** Statistically significant relationship between workplace support for breastfeeding and maternal self-efficacy ( $r=0.375$  and  $p\text{-value}=0.0001$ ). **Conclusion:** Support at the workplace

was significantly related to the self-efficacy of breastfeeding. Further research is required to understand breastfeeding policies at a workstation that increase the self-efficacy of working mothers in attaining their goals of breastfeeding.

**Keywords**---breastfeeding, self-efficacy, working mothers, workplace, support.

## **Introduction**

Breastfeeding self-efficacy is maternal confidence to breastfeed her new baby(1). UNICEF and WHO suggested that breastfeeding should be carried on at a minimum of twenty- four months of age(2). Studies have shown that cessation of breastfeeding is most likely right away after coming back to work(3).

Breastfeeding self-efficacy is determined through prior exposure to breastfeeding behavior, noting other moms breastfeeding successfully, breastfeeding motivation from influential others, and physiologic responses, such as anxiety(4). Support for breastfeeding at the workplace is given by providing isolation during milk expression, work options, flexible breaks, education resources, and support from the organization and other moms(5). According to the study, 90% of the women had high rates of breastfeeding self-efficacy, while the remaining 10% had average rate (6).

Globally breastfeeding among employed moms differ according to a region(7)(8)(9)(10). When mothers return to work after having a baby, they confront significant time demands of homogenizing work and family life, which can create barriers to breastfeeding(11).

The breastfeeding-friendly environment in the workplace can significantly affect breastfeeding self-efficacy. Support at the workplace is vital because breastfeeding has known benefits associated with the nourishment of infants & crucial for a mother's health.

## **Methodology**

A cross-sectional study was conducted in Attock city from the public and private organizations including secondary care hospitals, banks, schools, parlors, and offices from July 2021 to September 2021. The sample size was 369 (12). The study received ethical approval from the institutional review board (Ref # ERC-10/AST-2 Dated 1-6-21). Informed consent was obtained from the respondents. Working lactating mothers having children up to twenty-four months of age were included in the study while mothers who had children with medical illnesses that interfere with successful breastfeeding were excluded. Convenience Non-probability sampling was used in which every participant who meets the criteria of inclusion was selected. Data collection was done through a validated tool. The questionnaire was quantitative and consisted of 3 sections. 1<sup>st</sup> was socio-demographic variables, which included 7 variables that were maternal age, education level, type of breastfeeding, parity, occupation, age of baby, and sex of

the baby. Maternal age and baby's age were quantitative continuous while all other socio-demographic variables were categorical.

The 2<sup>nd</sup> section consisted of the workplace breastfeeding support scale questionnaire that had 12 questions. Likert scale was used on a scale of 1 to 7 ranging from strongly disagree (SD) to strongly agree (SA). The score range was 12-84. 3<sup>rd</sup> section was short form of breastfeeding self-efficacy scale. It comprised of 14 questions. A 5-point Likert scale ranging from 1 to 5 was utilized with no confidence at all to very confident. The score range was 14-70. A pilot study was conducted to assess the validity and reliability of the tool. It was carried out on first 40 respondents and the value of Cronbach alpha came out to be 0.79.

### Statistical Analysis

Data collected was analyzed by using version 20 of SPSS. Data of qualitative demographic variables such as maternal occupation and education level were entered in the SPSS by using codes that were assigned to each category. Whereas, data for quantitative variables like age was entered as such in numbers.

### Results

The Descriptive result of the Socio-demographic variables was presented in a compiled table with percentages and frequencies. However, both the tools used to assess workplace breastfeeding support and to determine breastfeeding self-efficacy were quantitative and hence provided a score. The descriptive result of both the tools was presented with mean and standard deviation. The statistical test utilized to examine the relationship between workplace breastfeeding support (independent variable) and breastfeeding self-efficacy (outcome variable) among lactating working mothers was *Pearson's Correlation*.

Table-1: Socio-demographic variables

S.no	Variables	N (%)
1.	Occupation <ul style="list-style-type: none"> <li>• Public</li> <li>• Private</li> <li>• Self-employed</li> </ul>	197 (53.4) 137 (37.1) 35 (9.5)
2.	Education level <ul style="list-style-type: none"> <li>• Primary</li> <li>• Secondary</li> <li>• Tertiary</li> </ul>	6 (1.6) 131 (35.5) 232 (62.9)
3.	Type of breastfeeding <ul style="list-style-type: none"> <li>• Exclusive</li> <li>• Mixed</li> <li>• others</li> </ul>	94 (25.5) 219 (59.3) 56 (15.2)
4.	Parity <ul style="list-style-type: none"> <li>• Primiparous</li> <li>• Multiparous</li> </ul>	163 (44.2) 206 (55.8)
5.	Sex of child <ul style="list-style-type: none"> <li>• Male</li> <li>• Female</li> </ul>	196 (53.1) 173 (46.9)

The sample had mean maternal age 29.24±4.67 years and the mean baby's age 10.03±5.08 months.

Table 2: Independent variable: workplace support

Sr no	Variables	Strongly Disagree N (%)	Disagree N (%)	Somewhat Disagree N (%)	Neutral N (%)	Somewhat Agree N (%)	Agree N (%)	Strongly agree N (%)
1	My fellow-workers agree that breastfeeding is more favorable for the baby's health than formula feeding	5 (1.4)	2 (.5)	9 (2.4)	20 (5.4)	62 (16.8)	88 (23.8)	183 (49.6)
2.	I have helpful co-workers who support me when I need to pump my milk.	19 (5.1)	12 (3.3)	39 (10.6)	40 (10.8)	64 (17.3)	117 (31.7)	78 (21.1)
3.	My colleagues do not mock me when I sometimes leak milk through my clothes.	14 (3.8)	20 (5.4)	28 (7.6)	38 (10.3)	63 (17.1)	70 (19.0)	136 (36.9)
4	Breastfeeding is usual in my worksite.	64 (17.3)	52 (14.1)	71 (19.2)	47 (12.7)	47 (12.7)	44 (11.9)	44 (11.9)
5	I have a breastfeeding supportive supervisor	72 (19.5)	49 (13.3)	57 (15.4)	48 (13.0)	32 (8.7)	47 (12.7)	64 (17.3)
6.	My colleagues listen to me discuss my breastfeeding experience.	15 (4.1)	30 (8.1)	54 (14.6)	54 (14.6)	63 (17.1)	102 (27.6)	51 (13.8)
7.	I feel comfy taking several breaks during duty hours to extract breast milk.	67 (18.2)	48 (13.0)	60 (16.3)	54 (14.6)	54 (14.6)	52 (14.1)	34 (9.2)
8.	In my worksite, there is an assigned area (nursing room) to feed my baby or extract breast milk.	122 (33.1)	82 (22.2)	57 (15.4)	27 (7.3)	28 (7.6)	24 (6.5)	29 (7.9)
9.	I can simply find a calm place other than the bathroom at my worksite to extract breast milk.	117 (31.7)	75 (20.3)	55 (14.9)	29 (7.9)	39 (10.6)	21 (5.7)	33 (8.9)
10	My worksite has a refrigerator that I can use to store my milk.	126 (34.1)	62 (16.8)	47 (12.7)	34 (9.2)	29 (7.9)	26 (7.0)	45 (12.2)
11	My worksite has a breast pump for lactating mothers to use.	166 (4)	71 (19.2)	49 (13.3)	34 (9.2)	24 (6.5)	11 (3.0)	14 (3.8)
12	My worksite has job-site nursery	146 (39.6)	66 (17.9)	51 (13.8)	33 (8.9)	23 (6.2)	27 (7.3)	23 (6.2)

The total workplace support scores had a range of 17 to 78 and a mean of 46.57±12.23.

Table 3: Outcome variable: breastfeeding self-efficacy

Sr. no	variables	Not at all confident N (%)	Not really confident N (%)	Sometimes confident N (%)	Confident N(%)	Very confident N (%)
1.	I am sure that my baby is getting ample milk.	19 (5.1)	32 (8.7)	104 (28.2)	129 (35.0)	85 (23)
2.	I am sure I can always breastfeed my baby, equally challenging as other tasks	20 (5.4)	45 (12.2)	134 (36.3)	104 (28.2)	66 (17.9)
3.	I am sure I can always breastfeed my baby without the addition of formula	39 (10.6)	68 (18.4)	109 (29.5)	112 (30.4)	41 (11.1)
4.	I am sure that my baby is suckling in the right way throughout breastfeeding.	46 (12.5)	55 (14.9)	85 (23.0)	98 (26.6)	85 (23.0)
5.	I am sure I can always handle to breastfeed up to my expectation.	27 (7.3)	54 (14.6)	133 (36.0)	97 (26.3)	58 (15.7)
6.	I am sure I can always nurse even when my baby was crying.	19 (5.1)	56 (15.2)	146 (39.6)	95 (25.7)	53 (14.4)
7.	I have always desired to nurse my baby.	15 (4.1)	38 (10.3)	75 (20.3)	102 (27.6)	139 (37.7)
8.	I am always ease at breastfeeding my baby even with family members around.	91 (24.7)	76 (20.6)	73 (19.8)	55 (14.9)	74 (20.1)
9.	I am always content with my breastfeeding journey.	55 (14.9)	54 (14.6)	86 (23.3)	104 (28.2)	70 (19.0)
10.	I acknowledge that the nursing process will take a long time.	17 (4.6)	59 (16.0)	103 (27.9)	116 (31.4)	74 (20.1)
11.	I can consistently nurse my baby exclusively from one breast before switching to the other breast	19 (5.1)	57 (15.4)	123 (33.3)	111 (30.1)	59 (16.0)
12.	I can consistently breastfeed my baby at every feeding session without encountering any issues	24 (6.5)	83 (22.5)	128 (34.7)	82 (22.2)	52 (14.1)
13.	I am capable of breastfeeding my baby whenever they request to be feed.	30 (8.1)	78 (21.1)	130 (35.2)	83 (22.5)	48 (13.0)
14.	I am consistently able to discern when my baby has completed breastfeeding and appears content with the feeding session.	20 (5.4)	47 (12.7)	127 (34.4)	104 (28.2)	71 (19.2)

The total breastfeeding self-efficacy scores had a range of 21-70 and a mean of 46.53±8.495. An *Independent sample t-test* was run to check the association of total breastfeeding self-efficacy with maternal age, parity, sex of a child, and baby's age. The test was run after checking assumptions of normality and homogeneity of variance (Levene's test). Results showed that mothers having the

age of less than or equal to 30 years ( $46.32 \pm 8.473$ ) and mothers having the age of greater than 30 years ( $46.92 \pm 8.553$ ) had no statistically significant association with total breastfeeding self-efficacy  $t(367) = 0.650$   $p\text{-value} = 0.516$

Primiparous ( $46.40 \pm 9.069$ ) and multiparous ( $46.63 \pm 8.032$ ) had no statistically significantly different means for total breastfeeding self-efficacy  $t(367) = 0.284$ ;  $p\text{-value} = 0.804$ . Male ( $46.24 \pm 8.967$ ) and female baby ( $46.86 \pm 7.939$ ) had no statistically significantly different means for total breastfeeding self-efficacy  $t(367) = 0.694$ ;  $p\text{-value} = 0.488$ . Baby's age less than or equal to twelve months ( $46.60 \pm 8.736$ ) and baby's age greater than twelve months ( $46.31 \pm 7.718$ ) had no statistically significant means for total breastfeeding self-efficacy  $t(367) = 0.280$   $p\text{-value} = 0.780$

*One-way analysis of variance* was conducted after checking assumptions of normality and homogeneity of variances (Leven's test). Results showed that occupation of public ( $46.62 \pm 8.323$ ), private ( $46.25 \pm 9.078$ ), and self-employed ( $47.11 \pm 7.169$ ) had no statistically significant means for total breastfeeding self-efficacy  $F(368) = 0.168$ ;  $p\text{-value} = 0.845$ . Education level primary ( $47 \pm 11.61$ ), secondary ( $45.47 \pm 6.208$ ), and tertiary ( $47.11 \pm 9.454$ ) had no statistically significant means for total breastfeeding self-efficacy  $F(15.337) = 1.896$ ;  $p\text{-value} = 0.188$ . Similarly, types of breastfeeding, exclusive ( $48.19 \pm 8.386$ ), mixed ( $45.94 \pm 8.018$ ), and others ( $46.05 \pm 10.136$ ) had no statistically significant means for total breastfeeding self-efficacy  $F(368) = 2.44$ ;  $p\text{-value} = 0.089$

Table 4: Pearson's Correlation to check the relationship between the Independent variable (workplace support) and the Outcome variable (breastfeeding self-efficacy)

Variable	N	Mean $\pm$ SD	r	r <sup>2</sup>	P value
Workplace support	369	46.57 $\pm$ 12.228	0.375	0.141	0.0001
Breastfeeding self-efficacy	369	46.53 $\pm$ 8.495			

## Discussion

In our study, there was no significant association between socio-demographic variables with breastfeeding self-efficacy which are consistent with previous research conducted in Iran and Saudi(13) (14). A study conducted in Brazil showed no significant association except with maternal age (15)(Dodt et al., 2012). The mean score for breastfeeding self-efficacy among the mothers in our study was  $46.53 \pm 8.495$  out of total score of 70 while a study conducted in Iran showed a mean score of breastfeeding self-efficacy among mothers was  $58.19 \pm 10.48$  out of 70(16).

In our study 67(18.2%) strongly disagree with taking several breaks, 117(31.7%) strongly disagree with finding a quiet place and 122(33.1%) strongly disagree with having a nursing room compared to a study conducted in the United States that showed 19(36.5%) disagree to take breaks while 15(28.8%) did not have access to any quiet place, 14(26.9%) reported that they did not have access to a designated

space(17).Nevertheless, our results do not align with studies conducted in western populations this could be due to variations in the availability of workplace breastfeeding policies, lactation programs and other forms of support for mothers, as well as differences in educational resources.

Our study showed that mothers who were always confident that their baby was getting enough milk was 85(23%), mothers who were very confident that they can successfully cope with breastfeeding were 66(17.9%), 41(11.1%) were highly confident that they can breastfeed their babies without adding formula milk, 85(23.0%) were highly confident that their baby properly latched on, 58(15.7%) were highly confident on managing breastfeeding up to their satisfaction, 53(14.4%) were highly confident on managing to breastfeed even their baby was crying, 139(37.7%) were highly confident to always breastfeed their babies, 74(20.1%) were highly confident to breastfeed comfortably presence of other family members, 70(19.0%) were highly confident on satisfaction with breastfeeding experience, 74(20.1%) were highly confident in addressing the issue that breastfeeding can be time consuming, 59(16.0%) were highly confident that they can complete feeding on one breast before switching to the next, 52(14.1%) were highly confident that they can breastfeed for every feeding, 48(13.0%) were highly confident to meet demands of breastfeeding , 71(19.2 %) were highly confident that they were able to recognize that their baby is finished with breastfeeding session. Mean score of BSEF-SF was (46.53±8.495) compared to Turkey that showed mothers who were always confident that their baby was getting enough milk was 59(38.8%), mothers who were very confident that they can successfully cope with breastfeeding were 70(46.1%), 64(42.1%) were highly confident that they can breastfeed their babies without adding formula milk, 74(48.7%) were highly confident that their baby properly latched, 70(46.1 %) were highly confident on managing breastfeeding up to their satisfaction, 63(41.4%) were highly confident on managing to breastfeed even their baby was crying, 114(75.0%) were highly confident to always breastfeed their babies, 74(48.7%) were highly confident to breastfeed comfortably presence of other family members, 114(75.0%) were highly confident on satisfaction with breastfeeding experience, 110(72.4%) were highly confident in dealing with the fact that breastfeeding could be time consuming, 56(36.85%) were highly confident that they can finish feeding on one breast before switching to the next, 97(63.8%) were highly confident that they can breastfeed for every feeding, 92(60.5%) were highly confident to keep up with their baby's breastfeeding demands, 87(57.2 %) were highly confident that they were able to recognize that their baby is finished with breastfeeding. The mean score of BSEF-SF was (58.61±8.93)(18).

Our study found a moderate, positive correlation between workplace support for breastfeeding and self-efficacy similar to the study conducted in Malaysia that reported comparable results (4). We observed a highly significant correlation between breastfeeding workplace support and breastfeeding self-efficacy ( $r=0.4$ ,  $p = 0.0001$ ) which is similar to the study in Selangor ( $r= 0.40$ ,  $p <0.01$ ) (4).

## **Conclusion**

Our study indicates that there is significant relationship between workplace support and breastfeeding self-efficacy. Specifically, mothers who received greater

levels of workplace support demonstrated higher levels of breastfeeding self-efficacy. Furthermore, the lack of association between socio-demographic factors and breastfeeding self-efficacy highlights the unique value of self-efficacy as a tool for identifying high risk mothers based on modifiable variables. No such research has been carried out in Attock city before and the primary researcher was involved with the respondents throughout the research process.

### **Limitation of study**

Working mothers from rural areas of Attock city were not included in the study and the sampling technique used in the study was Convenience non-probability sampling which was a limitation in the study.

### **Ethical approval**

IRB letter was obtained from Institutional Review Board of Al-Shifa School of Public Health, Rawalpindi.

### **Conflict of interest**

None

### **Authors contribution**

AJ: study design, data collection, analysis, interpretation of results, and manuscript preparation. SW: review, supervise and finally approved the manuscript.

SH: data collection analysis interpretation and advice

RS: data collection proof reading and revision

MK: data collection review and editing

TK: data collection review and editing

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## Al-Shifa Trust



### Ethical Review Committee

#### To Whom It May Concern

This is to certify that **Dr. Amber Jamil Siddiqi** presented her proposal to conduct a research study on **"Effect of workplace support on breastfeeding self efficacy among working mothers of Attock city"** (Reference No: ERC-10/AST-21). She has devised the plan by following the guidelines for Ethical Approval of Research involving human participants and has accepted the responsibility for the conduct of the procedures set out in the participation. The Ethical Review Committee (ERC) has received this project and considers the methodological aspects of the presented proposal to be appropriate. The study project dose not raise any ethical issues.

Sincerely,

Date: 1<sup>st</sup> June 2021

Prof. Dr. Wajid Ali Khan  
Chairman Ethical Review Committee  
Al-Shifa Trust Eye Hospital Rawalpindi