ORIGINAL ARTICLE

OBSERVANCE OF WHO TEN STEPS TOWARDS SUCCESSFUL BREASTFEEDING; A SURVEY FROM POSTPARTUM MOTHERS

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Background: Breastfeeding is a physiological phenomenon; nonetheless, this act is a learned behaviour that requires continuous active support to make it successful. This study determines the frequency of mothers practicing successful breastfeeding according to the WHO ten steps at tertiary care hospital. **Methods**: A descriptive cross sectional study was conducted in the Obstetrics department of Military Hospital, Rawalpindi over six month duration from July to December 2014. Booked mothers aged 15–49 years, having given birth to healthy, singleton baby were included in the study. Questions were asked after taking written informed consent from the mothers after delivery. Data was entered and analysed on SPSS version 20. **Results:** Out of 148 mothers, 35 (23.7%) mothers were following successful breastfeeding, i.e., knew 7 or more steps. A total of 100 (67.6%) mothers received support for breastfeeding by healthcare staff during their stay in hospital while 19 (12.8%) mothers started breastfeeding within one hour. About 71% had started formula milk along with breastfeeding. About 127 (85.8%) reported that they fed their children on demand and 144 (97.3%) did not use dummies. Statistically significant difference was observed as housewife mothers gave no top feed (p=0.005) and multiparous mothers started breastfeeding within one hour of delivery (p=0.04). **Conclusion**: The steps to achieve successful breastfeeding are followed to a small extent among mothers. Delayed initiation of breastfeeding and increasing trend towards use of formula feed was observed. Employed, primiparous mothers are the most sensitive group to be focused during antenatal period.

Keywords: breast feeding, successful breastfeeding, rooming in care, breastmilk

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INTRODUCTION

There is extensive evidence on the benefits of breastfeeding for the mother's health and for the healthy growth and development of the child.[1] Breastfeeding has been recognized globally as one of the most important intervention towards attainment of Millennium Development Goals (MDG-4).[2] The World Health Organization (2011) reports that nearly 40% of all deaths of children under five years of age occur during the neonatal period3. Major cause of these deaths was due to infections. An internationally accepted preventive strategy to combat this preventable mortality in the new-born is breastfeeding.[3]

Breastfeeding is a unique and distinct natural way of providing food to the new born for proper growth and development.[4] Breastfeeding is a physiological phenomenon, nonetheless, this act is a learned behaviour that requires continuous active support to make it successful.[4] Hospitals and maternity centres form a vital component of the total continuum of health care of the mother and infant(s). The Baby Friendly Hospital Initiative (BFHI), launched in 1991, by UNICEF and WHO addresses this need and developed plan that all maternities must serve for supporting and promoting breastfeeding practices.[4] The rates of breastfeeding could be increased by adherence to the Ten Steps of BFHI that positively affect breastfeeding initiation but also to a lesser extent duration and exclusivity.[5]

Poor breast feeding practices start immediately after delivery, even in health care settings, as evident by rates of early initiation, and exclusive breast feeding as low as 60% and 51.5% respectively. With all the advocacy on successful practices, rooming-in and breast feeding on demand rates are only 57% and 66% respectively while 56% mothers use pacifiers even during the hospital stay and only 72% mothers get referral to breast feeding support group on discharge.[6]

Pakistan has high neonatal mortality rate. Breastfeeding is initiated within one hour by only 18 percent mothers.[7] The percentage of exclusively breastfeed children for the first six months is only 38, which has hardly improved since the last survey (37%).[8] Insufficient information, ineffective motivation of mothers, inappropriate healthcare practices, are identified inadequate practices.[9]

The rationale of this study is to explore the hospital practices for successful breastfeeding as experienced by mothers visiting the tertiary care hospital. As breastfeeding is a time sensitive intervention, optimum practices and positive beliefs established well in time will determine future intentions for breastfeeding and ultimately child's health. The objective was to determine the frequency of mothers

practicing successful breastfeeding according to the WHO ten steps at a tertiary care hospital.

MATERIAL AND METHODS

A descriptive cross sectional study was conducted in the Obstetrics department of Military hospital, Rawalpindi over a period of six months from July to December 2014. A sample size of 148 was calculated using the WHO sample size calculator with anticipated population proportion of 44%.[6] Other assumptions were: 95% confidence interval and absolute precision of 8%. Booked mothers aged 15–49 years; having given birth to healthy, singleton baby and stayed in hospital for minimum 24 hours after delivery were selected using non-probability consecutive sampling. Mothers who underwent any immediate postpartum complication, landed in emergency or didn't consent were excluded from study. Also the mothers who gave birth to babies with any congenital abnormality or babies that required admission in paediatric ward for any medical reason were not included in the study.

Successful breast feeding entails written policy on breastfeeding in hospital, education of mothers during pregnancy, training of healthcare workers about breastfeeding, encouraging breastfeeding initiation within an hour, supporting demand-based feeding, explaining to mothers how to breast feed, practicing rooming-in, restricting supplements and pacifiers for breastfed infants, and post-discharge follow up support.5

The first part of questionnaire consisted of questions on demographic profile of mothers (age, parity, education, occupation, family type, mode of delivery) and baby (gender, weight); and second part comprised close ended questions (Yes/No) about breastfeeding practices based on "WHO ten steps of successful breastfeeding". Mothers observing 7 steps or more were considered as having successful breastfeeding.

The interviewer administered questions after taking informed written consent from the mothers at the time of discharge. Ethical approval was obtained from the hospital ethics review committee prior to the commencement of data collection.

Data was entered and analysed on SPSS version 20. Descriptive statistics in terms of frequencies and percentages was used to describe categorical variables. Data on ten steps of successful breastfeeding was presented as a frequency and percentage of each practice experienced by all women. Effect modifiers like age, education, occupation, parity, and family type, mode of delivery and weight of baby were controlled by stratification at the time of data analysis. Post stratification chi-square test was applied keeping p-value <0.05 as significant.

RESULTS

A total of 148 mothers were included. The mean age of mothers was 27.37±4.1 years. Table-1 shows the demographic profile of mothers.

Among babies, 54 (36.5%) were male and 94 (63.5%) were females. The mean weight of babies was 3.05±0.43 kg.

Mothers were asked to report their observance of the WHO ten steps during hospital stay. Mothers who saw and understood written breastfeeding policies displayed on the walls of department were 94 (63.5%) while 54 (36.5%) reported otherwise (Step-1). Hundred (67.6%) mothers received support for breastfeeding by healthcare staff during their stay in hospital and 48 (32.4%) didn't have any (Step-2). Fifty-two (35.1%) were informed about importance of breastfeeding and 96 (64.9%) told that healthcare staff never discussed about it during pregnancy (Step-3). Nineteen (12.8 %) mothers started breastfeeding within one hour and rest 129 (87.2%) started late (Step-4). Mothers who were taught to express breastmilk if there aroused a need were 66 (44.6%) and 81 (54.7%) were never told about such method (Step-5). During hospital stay, 43 (29.1%) mothers fed their children with their milk only, rest 105 (70.9%) had started formula milk also (Step-6). Mothers numbering 140 (94.6%) reported that their babies stayed with them (Step-7). One hundred and twenty-seven (85.8%) reported that they fed their children on demand while 21 (14.2%) mothers practiced feeding their child on specific schedule (Step-8). One hundred and forty four mothers (97.3%) did not use dummies or pacifiers during hospital stay while 4 (2.7%) used it (Step-9). Mothers numbering 137 (92.6 %) didn't know about breastfeeding support groups while 11 mothers knew and contacted breastfeeding support groups when required (Step-10). Table-2 shows the practice of steps in descending order.

Overall, thirty five (23.7%) mothers followed successful breastfeeding, i.e., observed 7 or more steps. Mothers who knew 4–6 steps were 91 (61.5%).

Effect modifiers were controlled by stratification at the time of analysis. Post-stratification Chi-square test was applied. Mothers who were housewives, breastfed their children with their own milk as compared to employed mothers who also started formula milk. This difference was statistically significant (p=0.005). Multiparous mothers initiated first breastfeed within an hour as compared to first time mothers and this difference was also statistically significant (p=0.04). There was little difference between educated mothers (13.2%) and uneducated (11.4%) as for the initiation of breastfeeding within one hour is concerned (p=0.05). The mothers who

delivered by spontaneous vaginal delivery (SVD) breastfed their children with no top feed during hospital stay as compared to mothers who had caesarean section, fed children with milk other than human milk (p=0.05).

Overall, post stratification chi square showed no statistical association of mothers' age, educational status (p=0.121) occupation (p=0.231), family type (p=0.118), parity (p=0.132) with the number of steps observed. Similarly, sex (p=0.535), weight of child and mode of delivery (p=0.308) did not show any relationship with successful breastfeeding.

Table-1: Demographic profile of Mothers (n=148)

Variable	Categories	Frequency (%)
Occupation		
	House wife	133(89.9)
	Employed	15 (10.1)
Educational Status		
	Nil	12 (8.1)
	Primary	23 (15.5)
	Inter	19 (12.8)
	Matric	59 (39.9)
	Graduate	18 (12.2)
	Higher	17 (11.5)
Parity		
	Primigravida	62 (41.9)
	Multigravida	86 (58.1)
Family Type		
	Joint	114 (77.0)
	Nuclear	34 (23.0)
Mode of delivery		
	Spontaneous vaginal delivery	39 (26.4)
	Caesarean section	109 (73.6)

Table-2: Percentage of observance of WHO ten steps towards successful breastfeeding (Descending order)

Step No.	Steps of successful breastfeeding	Observance n (%)
9	No use of dummies/pacifiers	144 (97.3%)
7	Rooming in	140 (94.6%)
8	On demand breastfeeding	127 (85.8%)
2	Support of trained staff	100 (67.6 %)
1	Written policy	94 (63.5%)
5	Teaching of how to express breast milk	66 (44.6%)
3	Prenatal education	52 (35.1%)
6	Child fed with only human milk (no supplement use)	43 (29.1%)
4	Initiation of breastfeeding within one hour	19 (12.8 %)
10	Breastfeeding support groups	11 (7.4%)

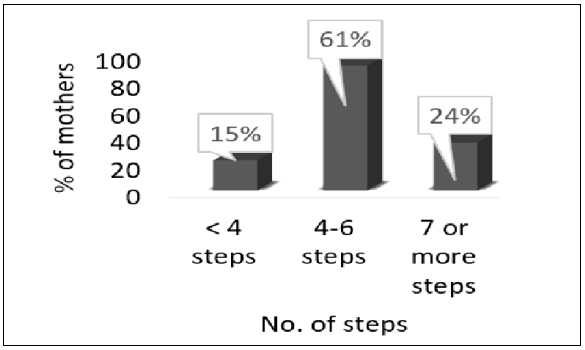

Figure-1: Observance of successful breastfeeding by mothers

DISCUSSION

Breastfeeding support right from the beginning is vital for not only establishing the breastfeeding but also for the continuation of the practice. Though WHO recommends delivery in health care facility[4], however, hospital policy does not necessarily promote the practice. Hospitals should certify that employed staff members are skilfully trained in breastfeeding promotion and advocacy.

Even the motivated mothers require continuous backing in hospital to successfully breastfeed. In our study, only 63.5% mothers ever read and understood breastfeeding policy displayed on hospital walls. In evaluating hospital support in a study, only 22% of mothers showed their satisfaction from hospital staff and stated it as "very good".[10] According to a study in the United States, most hospitals (92.8%) self-reported their practice of educating mothers regarding breastfeeding during their antenatal visits.[11] The low percentage may be because it is reported by mothers themselves and most females are illiterate.

The role of health care provider cannot be overlooked in creating awareness and educating mothers about the importance of breastfeeding. In our study, only 67.6% mothers were supported by healthcare staff during stay in hospital. A local study in rural Gujrat reported that 81.03% mothers were advised by doctors for breastfeed.[12] According to a qualitative study in India, mother described her bad experience during hospital stay that nurse did not advise her anything about breastfeed, rather she was taught to give ghutti.[13] Ghutti is something other than mothers' milk like honey etc.

In our study, only 35.1% were informed about importance of breastfeeding during antenatal period. In a tertiary hospital in Karachi, 63.77% mothers were not counselled for benefits and management of breastfeeding during their antenatal visits.[14] However, 71.3% mothers received antenatal counselling in India.[15] In Brazil hospitals, 80% of expecting females were not aware of the importance and the management of lactation respectively.[16]

In our study, only 19 (12.8 %) mothers started BF within one hour and majority 129 (87.2%) started late. This figure is quite low when compared to study in urban slums of Lahore, where 81% mothers reported their practice that they initiated breast milk during first an half hour of birth.[17] Pakistan demographic health survey showed results comparable to our study (18 percent)[7] and also among Saudi women only 11.4% started breastfeeding immediately[18]. However, international data showed high figures contrary to ours, i.e., 73.1% of the Iraqi women[19] started timely BF. Also in

Turkey, 43.7% of women commenced breast feeding within the first 30 minutes of giving birth.[20] This delay in practice is common in Indian subcontinent where breast feeding is usually started 2–3 days after delivery.[21] According to a qualitative study, Indian mother initiated breastfeeding on the second day. The healthcare staff asked her to put the child to breast, "but milk doesn't come in the breast so (it's) no use putting child to the breast".[13] In our study, only 29.1% mothers fed their child with their milk only, rest 70.9% had given some form of pre-lacteal feed or formula milk. The practice of pre-lacteal feed was observed in 35% in local study in Karachi[22], 46.1 % in Gujrat[12] and 32% among Saudi mothers[18].

In our study, 52 (35.1%) were informed about importance of breastfeeding by healthcare staff and only 44.6% were taught technique to express milk if need arose. In a study in Karachi, 96% of nurses claimed that they teach mothers the expressing procedures.[23] However, in hospitals of United States, it is observed that 89.1% mothers were taught breastfeeding techniques.

Rooming-in was practiced by 94.6% mothers in our study group. The few missing were only those whose children were sent to paediatrics wards at the time of interview for check-up if there were some complaint like vomiting. The practice is higher as compared to that in Saudi Arabia (72%).[18]

In our study, breastfeeding on demand was 85.8% less than that in Bangladesh (96%)[24] but more than that in Iran (64.6)[19]. There are adequate breastfeeding support groups in the hospitals of the United States to help and guide breastfeeding mothers at hospital discharge (26.8%).[11] In Brazil, 66.6% of the recently delivered mothers were fully aware about whom to contact to receive support to breastfeed their babies at the time of leaving hospital[16]. While in our study only 7.4% mothers knew and contacted breastfeeding support groups when required. In our hospital, there was no special support group, therefore, mothers used to contact their obstetrician or any attending healthcare staff for the complaint, however, every child is examined by consultant paediatrician in OT if born by caesarean section and in OPD if born by SVD.

There was no significant relationship between demographic factors and breast feeding initiation as found in our study.[25] However, mothers with less education had twice the odds of not commencing breastfeeding in comparison to mothers who had education above matriculation (OR=1.98, 95% CI (1.19, 3.31). Also, caesarean birth did not affect success or timing of initiation of breastfeeding.[26] In a local study in Karachi, educated mothers initiated breastfeeding earlier (57%) than uneducated females (49%), however, there was little difference in our study group.

The limitations of the study are that it is a cross sectional study done at one centre and mainly consisted of less educated population who did understand written policies even if displayed on walls.

The strength of this study is that it has identified that there is dire need to focus on primiparous uneducated mothers for successful early initiation of breastfeeding as it will depict their future behaviour of continuing breastfeeding in future pregnancies. This would ultimately be translated into better child health. The study is first of its kind in the region to study all WHO ten steps of successful breastfeeding.

CONCLUSION

The steps to achieve successful breastfeeding are followed to a small extent among mothers. Delayed initiation of breastfeeding and increasing trend towards use of formula feed are points of concern. Mothers did follow on demand breastfeeding and majority discouraged use of dummies. Employed, primiparous mothers are the most sensitive group to be focused during antenatal period.

RECOMMENDATIONS

WHO ten steps should be incorporated as routine practice among doctors and nurses. Breastfeeding teaching should be made part of antenatal visits.

AUTHOR'S CONTRIBUTION

This study is the outcome of the intellectual environment of the whole team; and that all members have contributed in various degrees to the concept and design of study, literature search, data collection, analysis and final drafting for approval.

REFERENCES

1. Rito RV, Oliveira MI, Brito Ados S. Degree of compliance with the ten steps of the Breastfeeding Friendly Primary Care Initiative and its association with the prevalence of exclusive breastfeeding. J Pediatr (Rio J) 2013;89(5):477–84.
2. Bartick M, Stuebe A, Shealy KR, Walker M, Grummer-Strawn LM. Closing the quality gap: promoting evidence-based breastfeeding care in the hospital. Pediatrics 2009;124(4):e793-e802.
3. Strong G. Barriers to breastfeeding during the neonatal period. J Neonatal Nurs 2013;19(4):134–8.
4. WHO. Nutrition-Exclusive breastfeeding. [internet]. Geneva: World health Organization; 2013[cited 2013 Dec 20]. Available from: www.who.int/nutrition/topics/exclusive_breastfeeding/en/ WHO
5. Schmied V, Gribble K, Sheehan A, Taylor C, Dykes FC. Ten steps or climbing a mountain: A study of Australian health professionals' perceptions of implementing the baby friendly health initiative to protect, promote and support breastfeeding. BMC Health Serv Res 2011;11(1):1.

6. DiGirolamo AM, Grummer-Strawn LM, Fein SB. Effect of maternity-care practices on breastfeeding. Pediatrics 2008;122(Suppl 2):S43–9.
7. National Institute of Population Studies(NIPS).Pakistan Demographic Health Survey Preliminary report 2012-13. Islamabad:Pakistan:ICF; 2013.
8. National Institute of Population Studies (NIPS) [Pakistan], and Macro International Inc. Pakistan Demographic and Health Survey 2006-07. Islamabad, Pakistan: NIPS and Macro International Inc 2008.
9. Sabir SA RM. Breast Feeding Patterns In Some Lactating Mothers Of Rawalpindi. Pak Armed Forces Med J 2008;58(1):26–31.
10. Forster DA, McLachlan HL. Breastfeeding initiation and birth setting practices: a review of the literature. J Midwifery Womens Health 2007;52(3):273–80.
11. Centers for Disease Control and Prevention (CDC). Vital signs: hospital practices to support breastfeeding--United States, 2007 and 2009. MMWR Morb Mortal Wkly Rep 2011;60(30):1020–5.
12. Chaudhry AG, Ahmed A, Hussain S, Ali N, Batool A. An anthropological study of breastfeeding practices and prevalence of supported liquids among child-bearing women in rural Gujrat. Sci Int 2014;26(1).
13. Lingam R, Gupta P, Zafar S, Hill Z, Yousafzai A, Iyengar S, *et al*. Understanding care and feeding practices: building blocks for a sustainable intervention in India and Pakistan. Ann N Y Acad Sci 2014;1308(1):204–17.
14. Hanif R, Khalil E, Sheikh A, Harji A, Haris S, Rasheed MW, *et al*. Knowledge about breastfeeding in accordance with the national policy among doctors, paramedics and mothers in baby-friendly hospitals. J Pak Med Assoc 2010;60(10):881–6.
15. Ananthakrishnan S, Kasinathan B. Antenatal counseling for breast feeding-Are we doing it the right way? Curr Pediatr Res 2012;16(2).
16. Lopes Sda S, Laignier MR, Primo CC, Leite FMC. Baby-friendly hospital initiative: evaluation of the ten steps to successful breastfeeding. Rev Paul Pediatr 2013;31(4):488–93.
17. Azeem Z, Qadir U, Afzal MF, Sultan MA. Knowledge, Attitude and Practice of Breastfeeding in Urban Community of Lahore: A Cross– â€“Sectional Study. Ann King Edw Med Univ 2010;16(4):299–302.
18. El Gilany A, Sarraf B, Al Wehady A. Factors associated with timely initiation of breastfeeding in AI-Hassa province, Saudi Arabia. 2012.
19. Abdul Ameer A, Al Hadi AH, Abdulla MM. Knowledge, attitudes and practices of Iraqi mothers and family child-caring women regarding breastfeeding. East Mediterr Health J 2008;14(5):1003–14.
20. Yanikkerem E, Tuncer R, Yilmaz K, Aslan M, Karadeniz G. Breast-feeding knowledge and practices among mothers in Manisa, Turkey. Midwifery 2009;25(6):e19–32.
21. Ahmed A, Chaudhry AG, Riaz A, Batool A, Farooq H. Breastfeeding knowledge and practices: an anthropological study of lactating mothers of noor pur shahan, islamabad. Sci Int 2014;26(1):453–7.
22. Ali S, Ali SF, Imam AM, Ayub S, Billoo AG. Perception and practices of breastfeeding of infants 0-6 months in an urban and a semi-urban community in Pakistan: a cross-sectional study. J Pak Med Assoc 2011;61(1):99–104.
23. Hasnain S, Majrooh A. Knowledge and practices of resident doctors and nurses in breast feeding in obstetric and paediatrics departments of Jinnah Hospital, Lahore. Biomedica 2012;28:156–62.
24. Haider R, Rasheed S, Sanghvi TG, Hassan N, Pachon H, Islam S, *et al*. Breastfeeding in infancy: identifying the program-relevant issues in Bangladesh. Int Breastfeed J 2010;5:21.
25. Roostaee F, Tabatabaei SM, Zaboli M, Keykhaie R, Sharifi-Rad J, Shahrak P, *et al.* Breast-feeding Continuation in South-Eastern of Iran: the Associated Factors. Med Arch 2015;69(2):98–102.
26. Sutherland T, Pierce CB, Blomquist JL, Handa VL. Breastfeeding practices among first-time mothers and across multiple pregnancies. Matern Child Health J 2012;16(8):1665–71.

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