

## ORIGINAL ARTICLE

# KNOWLEDGE, ATTITUDE AND PRACTICE OF MEDICAL PRACTITIONERS REGARDING BREASTFEEDING : A STUDY AT A TERTIARY CARE HOSPITAL OF KARACHI

Shaista Ehsan<sup>1\*</sup>, Uzma Ghoriz<sup>2</sup>, Farah Agha<sup>1</sup>

<sup>1</sup>Department of Pediatrics, Ziauddin University and Hospital, Karachi

<sup>2</sup>Department of Medicine, Ziauddin University and Hospital, Karachi

## ABSTRACT

**Background:** Physicians play a crucial role in the promotion and support of breastfeeding. Although many studies have been conducted to evaluate the knowledge about breastfeeding in mothers, few studies are found in literature discussing the knowledge and practice of physicians regarding breastfeeding. To assess the knowledge, attitude and practice of medical practitioners about breastfeeding at a tertiary care hospital.

**Methods:** A cross-sectional study was conducted on 200 physicians of Ziauddin University belonging to the specialties of Pediatrics, Gynecology/Obstetrics, General Medicine and Family Medicine. The participants filled a structured questionnaire after informed consent. Data was analyzed on SPSS 20.0. Categorical variables were expressed as frequencies and percentages while continuous variables were presented as mean. P value of <0.05 was considered significant.

**Results:** A total of 200 medical practitioners participated in the study. 97% of the respondents recommended exclusive breastfeeding for the first six months of life. Formula feeding was also considered equally acceptable by 66.5%. Pre-lacteal feeds were forbidden by 74% and 82% of the participants had not attended any Continuing Medical Education (CME) program on breastfeeding in the last 03 years.

**Conclusion:** The shortcomings in the breastfeeding counseling skills of physicians and in their ability to manage lactational problems need to be addressed. A written hospital policy on breastfeeding is mandatory.

**KEY WORDS:** Breastfeeding, Lactation, Attitude, Practice, Pre-lacteal.

## INTRODUCTION

The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life and thereafter continued breastfeeding until two years of age along with complimentary foods. Exclusive breastfeeding is defined as feeding the infant only breast milk (including expressed breast milk) with no supplemental liquids/water and solids except for liquid medicine and vitamin/mineral supplements<sup>1</sup>. It is a well known fact that breastfeeding practices can have a substantial effect on infant health and mortality in developing countries but unfortunately the trend of breastfeeding has declined<sup>2</sup>. The importance of breastfeeding has been emphasized in the Holy Quran which states "And mothers shall breastfeed their children for two whole years for those who desire to complete the appropriate duration of breastfeeding"<sup>3</sup>. It has also been found that early initiation of breastfeeding is associated with a decreased risk of neonatal mortality and infection-related deaths in the first month of life<sup>4</sup>. Pakistan being the seventh populous country in the world is having a high infant mortality rate. According to the UNICEF report (2006) the infant mortality of Pakistan stands at 78/1000 while the rate of exclusive breastfeeding is only 16%<sup>5</sup>. Moreover, suboptimal breastfeeding practices have also been reported from rural areas of India<sup>6</sup>. Medical practitioners can however, play a pivotal role in promoting breastfeeding through antenatal counseling and postna-

tal lactational support<sup>7</sup>. Physicians also need to be aware of the protocol developed by the Academy of Breastfeeding Medicine for optimum storage of expressed breast milk so that they can guide the mothers to optimize the integrity of expressed and stored breast milk<sup>8</sup>. It is also important that essential breastfeeding education must start early in the antenatal checks as early as the first or second trimester<sup>9</sup>. Antenatal visits provide an opportunity for counseling regarding breastfeeding but studies have revealed that antenatal counseling given to first time mothers is not sufficient<sup>10</sup>. Furthermore, physicians lack the skills to offer proper guidance, provide optimum management of lactational issues and breastfeeding support to breastfeeding mothers<sup>11</sup>. It has been observed that training courses on counseling skills regarding breastfeeding and CME (Continuing medical education) programmes have improved the outcome of counseling sessions<sup>12,13</sup>. Since the breastfeeding practices in Pakistan are far from ideal therefore, there is an urgent need to implement the ten steps of baby friendly hospital initiative. The strict implementation of such a policy improved the breastfeeding practices in some centers of Sindh to 98.97%<sup>14</sup>.

This study was, therefore, conducted to assess the knowledge and clinical practice of medical practitioners regarding breastfeeding. Search of relevant literature reveals that there are a few local studies in this regard. The

**Corresponding Author: Shaista Ehsan\***

importance of Antenatal counseling regarding the role of breastfeeding and its positive impact on the health of the infant needs to be emphasized. This study was also done with the aim of identifying the need for continuing medical educational programs on breastfeeding and lactation management in order to improve and update the knowledge and counseling skills of physicians regarding breastfeeding issues. Also, a strict hospital policy regarding exclusive breastfeeding needs to be implemented on the lines of Baby Friendly Hospitals like the Aga Khan Hospital and Civil Hospital Karachi.

## METHOD

This descriptive cross-sectional study was conducted at Ziauddin University Hospital, Karachi from November 2014 till January 2015. The study population included 200 physicians belonging to the specialties of Pediatrics, General Medicine, Gynecology /Obstetrics and Family Medicine. All doctors including resident physicians, medical officers and consultants belonging to the above mentioned specialties were included. However, medical undergraduate students, surgeons, nurses and paramedical staff were excluded from the study. Physicians who were absent on the day that the questionnaire was distributed and those who were unwilling to participate in the study were also excluded. The reason for exclusion of doctors belonging to the surgical specialty was their not having to deal with infant feeding and lactational issues on a day-to-day basis.

Sampling was done by simple random technique. Data was collected using a three page self-administered structured questionnaire prepared after thorough review of relevant literature and it was pretested for clarity by piloting on four doctors belonging to the specified specialties. A resident physician distributed the questionnaire after obtaining informed written and verbal consent. It was collected after 15 to 20 minutes by the same. Demographic profile of the respondents, questions related to knowledge of breastfeeding and management of various breastfeeding problems were asked in the questionnaire. The confidentiality of all respondents was maintained by a coding system. Zero score was assigned for incorrect and

one for correct responses.

Statistical analysis was carried out using SPSS version 20 and the results were expressed as frequencies and percentages for qualitative data and mean and standard deviation for quantitative analysis. Chi-square test was applied for categorical variables. To adjust for the last number of outcome variables, responses between groups were considered statistically significant at p-value <0.05.

## RESULTS

Based on the inclusion criteria, a total of 200 physicians were included in the study. Majority of the participants i.e. 64% (n=128) were female. 55% (n=129) of the respondents were between 25-29 years of age. When asked about the professional activities and clinical experience, 74.5% (n=149) of the medical practitioners were involved in hospital-based direct patient care and 20.5% (n=41) in private practice. Pediatricians constituted 31% (n=62) of the total physicians participating in the study while 25.5% (n=51) were practicing general medicine. Doctors with a postgraduate experience constituted 48.5% (n=97) of our study population while the rest 51.5% (n=103) were medical graduates. Majority of the study participants i.e. 49% (n=98) had a clinical experience of less than three years.

Majority of the Physicians 97% (n=195) recommended exclusive breastfeeding for the first six months to all mothers. When asked about the duration for which they recommended breastfeeding, 2 years was the recommendation of 95% (n=190) of the respondents. In response to a question about the personal practices of married female physicians regarding breastfeeding, only 10% (n=20) continued it for 1-2 years. Infant formula feeding was considered equally acceptable by 66.5% (n=133) of the respondents. However, emotional value of breastfeeding was acknowledged by 99% (n=198) of the study participants while 74% (n=148) reported that they strictly forbid pre-lacteal feeds (anything given to the neonate before initiating breastfeeding for example ghutti, arq, honey) as this is an important barrier to starting exclusive breastfeeding. A majority of the participants (95.5%) were aware of

**Table 1: Practice of the study participants regarding breastfeeding. And Practices to Promote Breastfeeding**

Practices	Response			
	Yes		No	
	%	No.	%	No.
Written Breast Feeding Policies For Staff	82.5	165	17.5	35
Demonstration of Breast Feeding Techniques and Antenatal Counseling	87.5	175	12.5	25
Encourage Breastfeeding within half an hour of birth	91.5	183	8	16
Encourage Exclusive Breastfeeding for 06 Months	96	192	4	8
Encourage Exclusive Breastfeeding for 02 Years	95	190	5	10
Ban Pacifier and Feeding Bottles in the Hospital	50	100	50	100
Provide Literature on Breastfeeding to Mothers	88.5	177	11.5	25
Establish Support Groups within the Community	77.5	155	22.5	45
Provide Family Counseling for Support	91	182	9	18

the immunological benefits of breast milk. It was reported by 94% (n=188) of the participants that they recommend rooming in of the newborns during hospital stay as keeping the neonate in the mother's room facilitates breastfeeding. However, 97% (n=194) of the study participants were of the view that a follow-up visit for the mother and neonate regarding breastfeeding issues should be recommended. Answering a question regard-

ing the reason as to why medical practitioners failed to give routine advice on breastfeeding 32% (n=64) of the respondents considered lack of a written hospital policy on breastfeeding to be responsible while 26.5% (n=53) considered limited breastfeeding counseling skills of the physicians to be the reason. According to another 23.5% (n=47) of the participants time constraint due to increased work load and patient turnover was mainly responsible.

**Table 2: The advice given by participating physicians regarding breastfeeding in a number of different circumstances**

Circumstances	Breastfeeding Advised (n=200)			
	Yes		No	
	%	No.	%	No.
Lower Segment Caesarean Section	97.5	195	2.5	5
Multiple Births (Twins)	98	196	2	4
Nipple Problems (Cracked, Inverted)	45.5	91	54.5	109
History of Breast Surgery (last 2-3 months)	51.5	103	48.5	97
Mastitis/Breast Abscess	31.5	63	68.5	137
An unsatisfied infant	88	176	24	12
Mother less than 20 years of age	96	192	4	8
Chronic illness of the mother	81	162	19	28
Use of regular medication by the mother	49.5	99	50.5	101
Infant not gaining adequate weight (<5 grams/day)	85	170	15	30
Neonatal Jaundice	90.5	181	9.5	19
HIV positive mother	36.5	73	63.5	127
Working Mother	96	192	4	8

Majority of the participants, 92% (n=164) had not attended any CME (Continuing Medical Education) program that focused on breastfeeding during the past three years.

57.5% (n=115) of the participants claimed that they never received free milk samples, gifts and information material from formula milk companies.

**Table 3: Recommended duration of breastfeeding by physician of various specialities included in the study. Significant association between specialty of the position and recommended duration of breastfeeding was found on application of chi-square ( $p < 0.01$ ).**

Specialty	Frequency 02 Years	Frequency <02 Years	Frequency Not At All	Chi Square Value	p-value
Pediatrics	54	8	0	19	0.015
Gynecology/Obstetrics	18	1	3		
General Medicine	40	10	1		
Family Medicine	25	8	0		
Non-Specialists	28	3	1		

## DISCUSSION

The result of this study indicates that although physicians are aware of the health benefits associated with breastfeeding, they however, have gaps in knowledge, counseling skills and practice regarding breastfeeding although their attitude towards breastfeeding was generally found to be positive as majority of the participants (97%) reported recommending exclusive breastfeeding for the first six months of life. The duration of breastfeeding was recommended by 82.5% of the participants as two years. Furthermore, 91.5% of the doctors supported breastfeeding to be started within half an hour of birth. When the findings of this survey were compared with those from other hospitals of Pakistan and around the world it was observed that only 79% doctors from other hospitals in the country recommended breastfeeding to be started within an hour of birth<sup>15</sup>. Similarly a survey conducted by the American Academy of Pediatrics in 2004 compared the results with a survey conducted in 1995 and found that a higher percentage of paediatricians in 2004 versus 1995 recommended that mothers discontinue breastfeeding for conditions compatible with breastfeeding<sup>16</sup>.

The practice of giving pre-lacteal feeds was forbidden by 74% of the participants with similar results observed in a study from Nepal<sup>17</sup>. This study also examined the personal practices of married female physicians about breastfeeding and found that only 10% had continued it for 1-2 years. Similarly, a study from Nigeria also revealed that only 11.1% of the female physicians practiced exclusive breastfeeding for the first six months<sup>18</sup>. These findings can be explained by a lack of breastfeeding support at the workplace. This study revealed that only 45.5% of the participants encouraged breastfeeding in case of nipple problems and only 31.5% advised it to be continued in case of mastitis. In comparison however, a study from Scotland revealed that 90% of the doctors advised to continue lactation in mothers suffering from mastitis<sup>19</sup>.

Artificial feeding is associated with increase in morbidity and mortality in exposed uninfected and HIV-infected children<sup>20</sup>. However, only 36.5% of our participants recommended breastfeeding in case of an HIV- positive mother. Also in a similar study from Egypt 18% of the respondents advised breastfeeding in case of maternal HIV infection<sup>21</sup>.

It was also observed that only 49.5% of the participants of this study recommended breastfeeding in case the mother was on regular medication. Jones W et al observed similar findings in another study where health professionals unnecessarily advised to cease lactations during pharmacotherapy<sup>22</sup>. Physicians should not be overcautious in recommending cessation of breastfeeding without reliable and evidence-based information<sup>23</sup>.

Another noteworthy observation of this study was that 42.5% of the participating physicians reported to having received gifts or information material from formula milk companies. Infant formula promotion adversely affects the initiation of exclusive breastfeeding by mothers. The findings of this study are comparable to other studies from urban Sindh where more than one third of the health workers reported to having received gifts and sponsorship for attending conferences<sup>24</sup>. Hanif R. et al have also reported 83.75% of the doctors from other areas of Karachi of being supportive of donations and promotional material on formula feeding<sup>25</sup>.

This survey revealed that majority of the respondents (82%) reported to having not attended any Continuing Medical Education Program (CME) on breastfeeding during the past three years. Similar findings were reported from Egypt where in a study 52% of the respondents had not attended any educational program on breastfeeding<sup>26</sup>. In a similar study it was observed that healthcare providers showed increase level of knowledge and comfort in dealing with breastfeeding issues after an educational programme<sup>27</sup>.

There are however, a few limitations of this study. Firstly, the information provided by the physicians is self-reported so the results may not truly reflect their actual practice. The authors however, attempted to minimize this by ensuring anonymity of the respondents and requesting complete honesty. Secondly, as this is a cross-sectional study carried out at a single center therefore, the results cannot be generalized to represent all the physicians working elsewhere.

In the light of the findings of this survey, it is recommended that educational programs and interactive training sessions on lactation management for physicians be arranged periodically. Furthermore, implementation of a strict hospital policy on breastfeeding is required.

## CONCLUSION

Medical practitioners are in a unique position to promote, encourage and support both the initiation and duration of breastfeeding. However, this survey identified inadequacies in the knowledge and clinical practice of physicians dealing with breastfeeding issues. Therefore, workshops and CME (Continuing Medical Education) lectures to promote breastfeeding knowledge and improve lactational skills of the physicians be arranged and comprehensive breastfeeding training and education be incorporated in the residency curriculum. In addition, there is a need to stop the promotion and advertisement of formula milk in the hospitals and a strict hospital policy on breastfeeding needs to be implemented. Antenatal education and counseling significantly improves the practice of breastfeeding especially in the first three months after delivery. Physicians should emphasize the importance of exclusive breastfeeding and educate the mothers in this regard during each antenatal counseling session. Therefore, antenatal counseling skills regarding lactation need to be imparted to doctors to improve the outcome of these sessions.

## ACKNOWLEDGEMENT

This is to acknowledge the support offered by Dr. Bina Fawad for statistical analysis.

## REFERENCES

- 1.WHO. The optimal duration of exclusive breastfeeding: report of an expert consultation. Geneva: World Health Organization 2001.
- 2.Black RE, Victoria CG, Walker SP, Bhutta ZA, Christian P, de Onis M, et al. Maternal and child undernutrition and overweight in low income and middle income countries. Lancet 2013; 382: 427-451.

- 3.Zahed PY, Zahed PE, Baleghi M Islam and Breastfeeding. JBUMS. 2013; 15(1): 15-20.
- 4.Khan J, Vesel L, Bahl R, Martinez JC. Timing of Breastfeeding initiation and exclusivity of breastfeeding during the first month of life: effects on neonatal mortality and morbidity – a systematic review and meta-analysis. *Matern Child Health J* 2015; 19:468-479.
- 5.UNICEF (Online) Available from URL: [http://www.unicef.org/infobycountry/pakistan\\_pakistan\\_background.html](http://www.unicef.org/infobycountry/pakistan_pakistan_background.html), 2009
- 6.Radhakrishnan S, Balamuruga SS. Prevalence of exclusive breastfeeding practices among rural women in Tamil Nadu. *Int J Health Allied Sci* 2012; 1(2): 64-67.
- 7.James PJ, Berkovitz AR. General Practitioners knowledge of Breastfeeding Management: a Review of the Literature. *J Public Health Res* 2012; 2(1): 12-19.
- 8.Rasmussen KM, Genaghty SR. The quiet revolution: breastfeeding transformed with the use of breast pumps. *Am J Public Health* 2011; 101(8): 1356-1359.
- 9.Meedyas S, Fahy K, Kable A. Factors that positively influence breastfeeding duration to 6 months: A literature review. *Women Birth* 2010; 23(4): 135-145.
- 10.Ahmad MO, Sughra U, Kalsoom U, Imran M, Hadi U. Effect of antenatal counseling on exclusive breastfeeding. *J Ayub Med Coll* 2012; 24:116-119.
- 11.Imtiaz R, Izhar R, Hussain S, Hussain S. Antenatal counseling on Breastfeeding- Is adequate Counselling Being Provided? *Ann Abbasi Shaheed Hosp Karachi Med Dent Coll* 2015; 20(1): 45-51.
- 12.El- Sayed H, Martinez J, Rakha M, Zekry O, Abdel-Hak M, Abbas H. The effectiveness of the WHO training course on complementary feeding counseling in a primary care setting, Ismailia, Egypt. *J Egypt Public Health Assoc* 2014; 89:1-8.
- 13.Srinivasan A, Graves L, D'Souza V. Effectiveness of a 3-hour breastfeeding course for family physicians. *Can Fam Physician* 2014; 60(12): 601-606.
- 14.Khan M, Akram DS. Effects of baby- friendly hospital initiative on breastfeeding practices in Sindh. *J Pak Med Assoc* 2013; 63(6): 756-759.
- 15.Hassnain S, Majrooh A. Knowledge and Practices of Resident doctors and Nurses in Breastfeeding in Obstetrics and Pediatrics Departments of Jinnah Hospital, Lahore. *Biomedica* 2012; 28(2): 156-162
- 16.Lori B, Winter-F, Schanler RJ, O'Connor KG, Lawrence RA. *Arch Pediatr Adolesc Med* 2008; 162(12): 1142-1149.
- 17.Chandarshekar TS, Joshi HS, Bina V, Shankar PR, Rana MS, Ramachandran V. Breastfeeding initiation and determinants of exclusive Breastfeeding: A questionnaire survey in an urban population of western Nepal. *Public Health Nutr* 2007; 10: 192-197.
- 18.Sadon AE, Sadon WE, Oniyolu P. Breastfeeding Practice among Medical women in Nigeria. *Niger Med J* 2011; 52 (1): 7-12
- 19.Scott JA, Robertson M, Fitzpatrick J, Knight C and Mulholland S. Occurrence of lactational mastitis and medical management: A prospective cohort study in Glasgow. *Int Breastfeed J* 2008; 3:21
- 20.Kuhn L, Aldrovandi G. Survival and health benefits of breastfeeding versus artificial feeding in infants of HIV-infected women: developing versus developed world. *Clin Perinatol* 2010; 37:843-862.
- 21.Abdel Hady D, Eladair N, El-Gilany HA. Knowledge of female medical students about breastfeeding. *Univ J Public Health* 2013; 1 (3): 72-78.
- 22.Jones W, Brown D. The Medication vs Breastfeeding dilemma. *Br J Midwifery* 2003; 11(90): 550-555.
- 23.Hussain SY, Dermele N. Knowledge Attitudes and Practices of health professionals and women towards medication use in breastfeeding: A Review. *International Breastfeeding Journal* 2011; 6:11
- 24.Salasibew M, Kiani A, Faragher B, Garner P. Awareness and reported violations of the WHO International code and Pakistans' National breastfeeding legislation; a description cross sectional survey. *Int Breastfeed J* 2008; 3:24.
- 25.Hanif R, Khalil E, Sheikh A, Harji A, Haris S, Rashid MW et al. Knowledge about breastfeeding in accordance with national policy among doctors, paramedics and mothers in a baby friendly hospital. *JPMA*. 2010; 60(10): 881-886.
- 26.Al-Binali AM. Knowledge, attitude and practice of Breastfeeding among female health care workers in tertiary care hospitals. *Med J Cairo Univ*. 2012; 80(1); 159-164.
- 27.Mellin PS, Poplawski DT, Gole A, Mass SB. Impact of a formal breastfeeding programme. *The Am J Matern Child health Nurs* 2011; 36(2): 82-88.

