International Journal of Research in Medical Sciences
Seema N et al. Int J Res Med Sci. 2019 Nov;7(11):4171-4176
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012
DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20194987

Original Research Article

Perception of medical students regarding breast feeding at Al Tibri Medical College and Hospital: a comparative study

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Received: 27 August 2019
Revised: 03 September 2019
Accepted: 04 October 2019

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ABSTRACT

Background: Breast milk is an ideal feed for infants, and it is effective in ensuring child health and survival. The study was done to assess the perception regarding breastfeeding among medical students of basic and clinical sciences and to compare knowledge regarding feeding among basic sciences with clinical sciences students.
Methods: This cross-sectional survey was done at Al-Tibri Medical College and Hospital over a period of 6 months from February 2019 till July 2109. A self-generated Questionnaire was used to assess the perception of 367 medical students regarding breast feeding from basic and clinical sciences of medical students. Result was statistically analyzed using SPSS version 22. Chi-square test was used to compare qualitative data, p-value <0.05 was considered significant.
Results: A total of 367 students participated in the study with 159(43.3%) from basic medical sciences and 208(56.7%) from clinical sciences. Out of respondents, 54.5% were females. Internet was the main source of knowledge (47.3%) as shown in the graph, 74.1% were native. Generally, the majority of students from clinical group had a better perception regarding breastfeeding initiation and continuation along with infant and maternal benefit. Clinical science group had an edge on the basic science group with reference to their perception of breastfeeding in special circumstances.
Conclusions: Medical universities are the main platform for future physicians, so knowledge regarding breast feeding promotion and practices should be given from this stage.

Keywords: Breast feeding, Basic science, Child health, Clinical science, Perception

INTRODUCTION

Breast feed is an ideal food for the newborn and is effective in ensuring child health and survival.[1] WHO recommends that breast feeding should be started within 1st hour of birth and should be continued exclusively for 1st 6 months of life and then complementary feed should be added and breast feeding should be continued along with it for 1st two years of life.[2] Exclusive breast feed means that the infant does not receive any fluid or food other than breast feed.[3]

In developing countries, infants who were not breast fed are 6-10 times more at risk of death in 1st months of life than infants who are breast fed.[4-6]

Breastfeed has beneficial impact on child health. It's an ideal and easily available food for all newborn babies. Colostrum is the first food produced by mother's breast after the birth of baby. It is sticky yellow fluid that contains antibodies especially IgA, IgM, IgG. Other components include lactoferrin, lysozymes, complement and proline rich polypeptides. Colostrum is high in carbohydrates and proteins and low in fat .Colostrum not only protects the baby from infection but also regulates the functions of gastrointestinal system of body.[7]

Furthermore, breast feeding has many maternal health impacts like decrease in risk of breast cancer, child spacing and strong bonding with the baby.[8] In addition ,breast feed has long term beneficial effects on infants too. The most significant impact is on cognitive development and reduce the incidence of immune related diseases.[9]

Despite these benefits the rate of exclusively breastfeed is still low around 36%.[10] In 2012, world health assembly declared that rate of exclusive breast feeding in first 6 months of life should be increased up to 50% by 2025.[11]

There are a number of factors that convince mothers to initiate and continue breast feed including benefits of breast feeding to mother and her baby provided by health professionals.[12]

With all these benefits still breastfeeding perception and practices are limited .Health care professionals can play a vital role in promoting breastfeeding.[13,14] It is therefore necessary that medical students acquire knowledge regarding breastfeeding during their period of study.[15] Although they have positive attitude towards breastfeeding, but their knowledge is lacking and perception varied.

This study was conducted to assess perception regarding breastfeeding in students of basic sciences and clinical sciences and to compare the knowledge regarding breast feeding among basic sciences and clinical sciences students.

METHODS

This cross sectional study was conducted on medical students of Al-Tibri Medical College and Hospital from February 2019 to July 2019. Medical students from 1st year MBBS to final year MBBS were included in the study. Medical officers, nursing student's and consultants were excluded from the study. The required sample size was calculated to be 367. Sampling technique was random sampling. A self-generated questionnaire especially designed for the study was filled by the medical students during clinical postings and in classrooms. The questionnaire included demographic details of participants (age, gender, year of study of MBBS, local or boarder and source of information. It comprised 27 questions to assess the perception of students regarding breast feeding. Comparison of perception of basic and clinical sciences student was also undertaken.

The study Proposal was approved by Al-Tibri Medical College and Hospital ethical and review committee.

Results were statistically analyzed using SPSS version-22. Chi-square test was used to compare knowledge between basic sciences and clinical sciences students. p-value <0.05 was considered significant.

RESULTS

A total of 367 students participated in the stud y with 159(43.3%) from basic medical sciences and 208(56.7%) from clinical sciences. Out of respondents, 54.5% were females. Source of knowledge through internet was 173(47.1%), social media was 101(27.5%), group discussion 77(21.0%), seminars 14(3.8%) and other sources were 2(0.5%). Regarding residence the boarder were 95(25.9%) and native were 272(74.1%) as shown in (Table 1 and Figure 1).

Table 1: Categorical variables frequency and percentage.

Variables	n (%)
Age	
<25 Years	364 (99.2%)
>25 Years	3(0.8%)
Gender	
Male	167(45.5%)
Female	200 (54.5%)
Groups	
Basic Medical Sciences	159(43.3%)
Clinical Sciences	208(56.7%)
Residence	
Boarder	95(25.9%)
Native	272(74.1%)

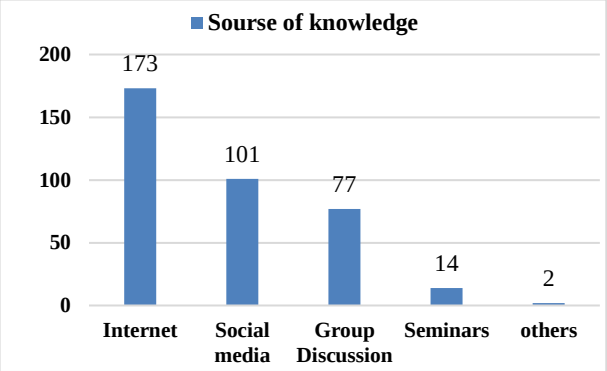

Figure 1: The different source of knowledge among the medical students of basic and clinical sciences.

Variables related to beginning, continuation of breastfeeding and introduction of complementary feed. Around

197(94.7%) from the clinical science group and 107(67.3%) from the basic medical science group were of the opinion that breast feeding should begin within half an hour after delivery (p <0.001). Regarding colostrum, 168(80.8%) from the clinical science group and 103(64.8%) from basic medical science group think that colostrum should be discarded (p <0.001), 182(87.5%) from clinical science group and 123(77.4%) from the basic science group were of the opinion that breast feeding should be continued for 2 years, (p<0.01) 168(80.8%) from clinical science group and 111(69.8%) from the basic science group thought that weaning should be started at 6 months of age (p=0.015) as shown in (Table 2).

The knowledge regarding benefits of breastfeeding to mother, advantages of breast feeding and the hazard of bottle feeding.

Regarding maternal benefits of breast feeding, 166(79.8%) from clinical science group and 98 (61.6 %) from basic science group knew that breast feed reduces maternal gestational weight gain (p<0.001), 175 (84.1%) from clinical group and 91(57.2%) from basic sciences knew that breast feeding help in birth spacing (p<0.001), 171(82.2%) of clinical group and 111(69.8%) from basic science group knew that breast feeding protects from ovarian cancer as shown in (Table 3). Regarding hazards of bottle feeding, 191(91.8%) from the clinical group and 128(80.5%) from the basic science group had the knowledge about hazards of bottle feeding.

Regarding benefits of breastfeeding to the baby,194(93.3%) from the clinical group and 121(76.1%) from the basic group knew that breast fed infants are more intelligent (p<0.001), 194(93.3%) from the clinical group and 109(68.6%) from the basic science group had the knowledge that breast milk is always sterile (p<0.001), 176(84.6%) from the clinical group and 146 (91.8%) from basic medical group knew that breast milk is easier to digest (p=0.037) as shown in (Table 3).

Table 2: Questionnaire response among the different groups.

Duration and supplementation		Group A	Group B	p-value
BF should be started within half an hour after delivery	Yes	107(67.3%)	197(94.7%)	<0.001*
	No	52(32.7%)	11(5.3%)	
BF should be continued exclusively for a period of 6 months	Yes	124(78.0%)	171(82.2%)	0.313
	No	35(22.0%)	37(17.8%)	
Colostrum shouldn't be discarded	Yes	103(64.8%)	168(80.8%)	0.001*
	No	56(35.2%)	40(19.2%)	
Colostrum is beneficial for babies	Yes	128(80.5%)	177(85.1%)	0.245
	No	31(19.5%)	31(14.9%)	
BF should be continued for 2 years	Yes	123(77.4%)	182(87.5%)	0.01*
	No	36(22.6%)	26(12.5%)	
Nothing should be given to exclusively breastfed babies	Yes	117(73.6%)	166(79.8%)	0.161
	No	42(26.4%)	42(20.2%)	
Weaning should be started at 6 months of age	Yes	111(69.8%)	168(80.8%)	0.015*
	No	48(30.2%)	40(19.2%)	

Categorical variables were presented as frequencies and percentages and Chi-square / Fisher Exact test was applied.
*p-value ≤0.05 was considered as significant. BF: Breast feeding.

The perception of students regarding continuation of breast feeding in special situations is shown in (Table 4).

Only 86(41.3%) from clinical group and 45(28.3%) from the basic science group knew that breast feeding should be continued with hepatitis B infection, 74(35.6%) from clinical science group and 38(23.9%) from the basic science group were of the opinion that breast feeding should be continued with maternal HIV infection.

Regarding continuation of breastfeeding in maternal TB, 108(51.8%) from the clinical science group and 47(29.6%) from the basic science group were of the opinion that it should be continued (p<0.001) as shown in (Table 4), 163(78.4%) from clinical group and 61(36.4%) from basic science knew that breastfeeding should be continued even if the baby develops diarrhea, 154(74%) from clinical group and 82(51.6%) from basic science knew that breastfeeding should be continued even if the baby develops respiratory infection (p<0.001), 165(19.3%) from the clinical group and 99(62.3%) from the basic science group had the knowledge that breastmilk should be given to preterm babies even if they had weak sucking.

Table 3: Response regarding benefits of breastfeeding and Hazards of bottle feeding among different groups.

Maternal benefits		Group A	Group B	p-value
BF helps mother in reducing gestational weight gain	Yes	98(61.6%)	166(79.8%)	<0.001*
	No	61(38.4%)	42(20.2%)	
BF protects mother from ovarian cancer	Yes	111(69.8%)	171(82.2%)	0.005*
	No	48(30.2%)	37(17.8%)	
BF helps in birth spacing	Yes	91(57.2%)	175(84.1%)	<0.001*
	No	68(42.8%)	33(15.9%)	
Hazards of bottle feeding				
Bottle feeding should be discouraged	Yes	121(76.1%)	172(82.7%)	0.119
	No	38(23.9%)	36(17.3%)	
Bottle feeding has many adverse effects	Yes	128(80.5%)	191(91.8%)	0.001*
	No	31(19.5%)	17(8.2%)	
Advantages of Breast feeding				
BF infants are more intelligent	Yes	121(76.1%)	194(93.3%)	<0.001*
	No	38(23.9%)	14(6.7%)	
BF protect babies from infection	Yes	152(95.6%)	204(98.1%)	0.167
	No	7(4.4%)	4(1.9%)	
BF is ideal nutrition for babies	Yes	152(95.6%)	200(96.2%)	0.791
	No	7(4.4%)	8(3.8%)	
Breast milk is always sterile	Yes	109(68.6%)	194(93.3%)	<0.001*
	No	50(31.4%)	14(6.7%)	
Breast milk is easier to digest	Yes	146(91.8%)	176(84.6%)	0.037*
	No	13(8.2%)	32(15.4%)	

Categorical variables were presented as frequencies and percentages and Chi-square / Fisher Exact test was applied. *p-value ≤0.05 was considered as significant. BF: Breast feeding.

Table 4: Response of knowledge regarding breastfeeding in special circumstances.

BF in special circumstances		Group A	Group B	p-value
BF should be started immediately after cesarean section	Yes	91(57.2%)	119(57.2%)	0.997
	No	68(42.8%)	89(42.8%)	
Commencement with maternal Hepatitis C infection	Yes	48(30.2%)	82(39.4%)	0.067
	No	111(69.8%)	126(60.6%)	
Continuation with maternal Hepatitis B infection	Yes	45(28.3%)	86(41.3%)	0.011*
	No	114(71.7%)	122(58.7%)	
Continuation with maternal HIV infection	Yes	38(23.9%)	74(35.6%)	0.016*
	No	121(76.1%)	134(64.4%)	
Continuation with active maternal TB	Yes	47(29.6%)	108(51.9%)	<0.001*
	No	112(70.4%)	100(48.1%)	
Breastfeeding in twin babies	Yes	147(92.5%)	189(90.9%)	0.588
	No	12(7.5%)	19(9.1%)	
Continuation if baby develop diarrhea	Yes	61(38.4%)	163(78.4%)	<0.001*
	No	98(61.6%)	45(21.6%)	
Continuation if baby develops respiratory infection	Yes	82(51.6%)	154(74.0%)	<0.001*
	No	77(48.4%)	54(26.0%)	
Continuation if baby develop oral ulcer	Yes	62(39.0%)	155(74.5%)	<0.001*
	No	97(61.0%)	53(25.5%)	
Expressed breastmilk can be given to preterm babies with weak sucking	Yes	99(62.3%)	165(79.3%)	<0.001*
	No	60(37.7%)	43(20.7%)	

Categorical variables were presented as frequencies and percentages and Chi-square / Fisher Exact test was applied. *p-value ≤0.05 was considered as significant. BF: Breast feeding.

DISCUSSION

Breast milk is the main source and ideal feed for infants. But unfortunately, still it is not adequately provided to the babies. The mother's decision is not the only reason for lack of breast feeding but also lack of knowledge of health care professional in this regard is also a significant contributing factor because they are the one whom mother will approach, so their knowledge regarding breast feeding initiation, continuation, its benefits and continuation in special situations should be improved.[16,17] This study aimed to assess the knowledge of breast feeding in medical students and to compare between basic medical sciences and clinical sciences. Overall perception was low but clinical science group had better perception than basic medical science group. Perception of students regarding benefits of breastfeeding was good because most students knew that breastmilk is easily digested, sterile and babies who are breastfed would be more intelligent. These results were consistent with the study done on students of private medical college and on mothers in Egypt.[18,19]

Knowledge of students regarding breastfeeding in special situations like maternal Hepatitis C, HIV and tuberculosis was fair and was consistent with study done on female medical students.[20] Authors assessed the perception of medical students regarding maternal benefits of breast feeding i.e. it reduces gestational weight gain ,ovarian cancer ,act as a contraceptive ;the results were similar to other studies.[21] Regarding continuation of breastfeeding in diseases in babies like diarrhea and respiratory infection ,students had a better knowledge and the result were consistent with other studies.[22]

Perception of students that breastfeed protect the baby from infections is lacking in students and is contradictory to results in other studies.[23] Breastfeeding is beneficial and life saving for the babies in countries with poor socioeconomic environment, so medical students knowledge has to be improved.

CONCLUSION

Overall perception of breast feeding was low ,although clinical science group has better perception than basic science group. The difference of knowledge on breast feeding in clinical science and basic science medical students can be improved by introducing these topics as part of curriculum in junior classes. As they are the future physicians, they play a vital role in promoting and supporting optimum breast feeding practices. So breast feeding knowledge should be given at all levels of medical education.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Seema N, Saboohi E, Kazi U, Hadi A, Khan H, Channa Y, Tariq A. Perception of medical students regarding breast feeding at Al Tibri Medical College and Hospital: a comparative study. Int J Res Med Sci 2019;7:4171-6.