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Perception of Breastfeeding among Female Medical Students, Taibah University, Medina, Saudi Arabia 2012

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Abstract

Background: Breast feeding (BF) is known to have many advantages but our Arab region has a pattern similar to western countries; where exclusive breastfeeding less than 35%. Knowledge given to women during her antenatal visits plays an important influential role in her attitude and practice of BF later on. **Objective:** To explore knowledge and attitude of female medical students at Taibah University about breastfeeding. **Methods:** A Cross sectional study was carried out from October to November 2012. It included female medical students. Stratified sampling allocation technique was used; with a total sample of 149 students. A specialty designed self-administrated questionnaire in Arabic form was used. It included socio-demographic data, obstetric history, data about the knowledge and attitude of female medical students towards breastfeeding value and guidelines. Mean percent knowledge score for value of BF, mean percent score for BF guidelines and mean percent score for attitude were calculated. Appropriate statistical tests for qualitative and quantitative data were used accordingly. **Results:** Majority (91.9%) **(of the studied sample)** was never married and 37.6% got their knowledge about BF via books. Regarding ever married women, 58.3% only were gravid (mean =2.2±1.94). Only 25.0% were family planning users; 66.7% of them used hormonal contraceptives. Only 20% breast fed their infants with a mean duration for exclusive BF of 3.8 ± 2.87 months and mean age of weaning of 2.3 ±0.63 months. The mean knowledge percent score for guidelines of BF was 64.7±8.45. The mean attitude percent score for concepts related to BF was 76.9±7.91. **Conclusion:** Media and internet have minor roles in getting knowledge about BF. The mean knowledge score about advantages of BF, guidelines of BF and attitude towards BF of all female medical students; especially academic years were unsatisfactory.

Key words: Breastfeeding, medical students, females, exclusive breastfeeding, weaning.

1. Introduction

Breastfeeding is the healthiest form of feeding for babies. In addition to its strengthening maternal infant bond, breastfeeding (BF) significantly decreases a lot of infant' morbidities accompanying consumption of artificial feeding.[1] Breastfeeding results in protection of infants; with a variable proportion against many diseases as acute respiratory infections[2], type I diabetes[3], otitis media.[4,5] Exclusively breast-fed infants for 6 months were able to crawl earlier and start to walk at about age of one year.[6]

Breastfeeding has many benefits for nursing mothers as well as their newborn. It is easy; needs no preparation, economic, enhancing involution of uterus and has contraceptive effect by suppressing the ovulation process, which is known as "lactation amenorrhea".[7,8] Two Honduran studies suggested that exclusive breastfeeding for 6 months was associated with delayed recommencement of menses and rapid regaining of pre-pregnancy weight.[9] BF is also associated with other health benefits to women such as decreased risk of breast and ovarian cancers.[10]

Breast feeding (BF) is known to have many advantages but our Arab region has a pattern similar to western countries; where exclusive breastfeeding less than 35% (12% in Qatar, Kuwait; 31% in Oman; 31% in Saudi Arabia and 34% in Bahrain and the UAE).[11] Knowledge given to women during her antenatal visits plays an important influential role in her attitude and practice of BF later on. Perception of physicians as well is a crucial factor in increasing the breastfeeding practice. Assessment of physicians' perception of BF, therefore; is important starting point to improve BF practice as they are the key persons and first line who instruct, motivate and follow mother to correct BF practice. Hence this study was carried out.

Aim: To explore knowledge and attitude of female medical students (who will be the future physicians) at Taibah University about breastfeeding.

2. Subjects and Methods

A Cross sectional study was carried out from October through November 2012. The study was carried out at female section, Medical college, Taibah University, Al-Madinah. It included female medical students in both academic (first and second years) and clinical years (third to fifth years). Stratified sampling technique with proportional allocation was used; where the students were divided into strata according to their level. Then according to the number of students at strata 50% of them were included; with a total sample of 149 students. A specially designed self-administrated questionnaire in Arabic form was used. It included socio-demographic data (age, level, marital status), obstetric history for ever married students (gravidity, parity, abortion, family

planning, breastfeeding practice), data about the knowledge and attitude about breastfeeding -values, guidelines and concepts. Readability of the questions was assessed using Cronbachs alpha (0.862). Pilot study on 20 students was carried out to refine the questionnaire.

Approval of the Medical College Research Committee was considered. Both verbal and written consents of all participants were obtained; before inclusion and after explanation of the objectives of the study. Confidentiality and privacy of the participants were assured. Percent knowledge score for the following: value of BF, percent score for BF guidelines and percent score for attitude were calculated using the following formula: Percent score = ∑Selected variables scores x 100 / Maximum possible score

Statistical analysis

SPSS software version 17 was used. Frequencies, percentages, proportions, mean and standard deviation were calculated. *Chi square test, Fisher's Exact test* and student's *t*-test were used accordingly. *P-value* was considered significant at level less than 0.05 level.

3. Results

The mean age of the studied students was 21.0 ± 1.41 years; with significant difference between academic and clinical years (*P*=0.000). The majority (91.9%) was never married and 37.6% got their knowledge about BF via books (Table 1).

Table 1: General description of the studied students by grade

	Academic years N=68 (%)	Clinical years N=81 (%)	Total N=149 (%)	P-value
Age in years				
Mean ± SD	19.8±0.78	22.0±0.92	21.0±1.41	0.000^
Marital status				
Never married	64 (46.7/94.1)	73(53.3/90.1)	137 (91.9)	0.372¥
Ever married	4 (27.3/5.9)	8(72.7/9.9)	12 (8.1)	
Source of knowledge about BF				
Media	4 (50.0/5.9)	4 (50.0/4.9)	8 (100.0/5.4)	
Internet	1 (50.0/1.5)	1 (50.0/1.2)	2 (100.0/1.3)	0.325¥
Books	30 (53.6/44.1)	26 (46.4/32.1)	56 (100.0/37.6)	
Friends	1 (14.3/1.5)	6 (85.7/7.4)	7 (100.0/4.7)	
All	32 (42.1/47.1)	44 (57.9/54.3)	76(100.0/51.0)	

*Pearson's Chi-square test, *¥Fishers' Exact test,* ^ students' t test, *p*- value is significant at < 0.05

Regarding ever married women, 58.3% only were gravid (mean =2.2±1.94); with insignificant difference between academic and clinical years. Only 20% of ever married, ever gravid students breast-fed their infants (Figure 1) with a mean duration for exclusive BF of 3.8 ± 2.87 months and mean age of weaning of 2.3 ±0.63 months; with insignificant difference between academic and clinical years. Only 25.0% of them were family planning users; 66.7% of them used hormonal contraceptives; with insignificant difference between academic and clinical years (Figure1 and 2).

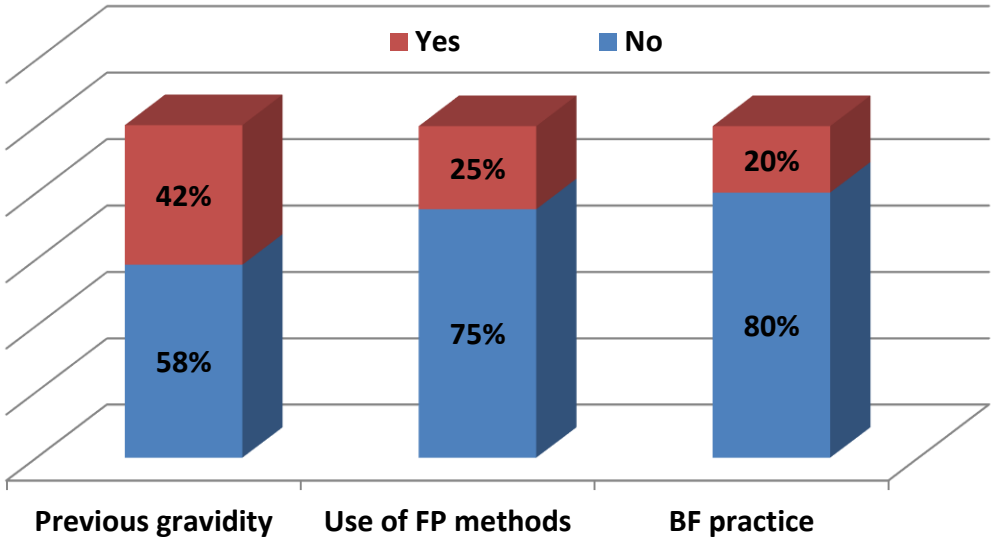

Figure 1: Some elements of obstetric history of ever married students

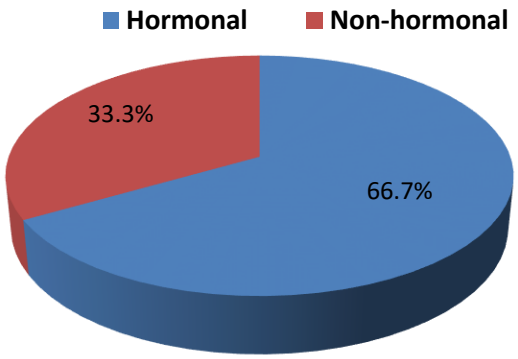

Figure 2: Type of Family planning method used

The mean knowledge percent score for advantages of BF was 67.2 ±9.58; with insignificant difference between academic and clinical years. The highest percent was for value of BF (99.3%) followed by value of colostrum (97.3%) (Table 2).

Table 2: Students' knowledge about advantages of BF by grade

	Academic years N=68 (%)	Clinical years N=81 (%)	Total N=149 (%)	P-value
BF of value				
No	1 (100.0/1.5)	0 (0.0/0.0)	1 (100.0/0.7)	
Yes	67 (45.3/98.5)	81 (54.7/100.0)	148 (100.0/99.3)	
				0.273¥
Advantages for mother				
Contraceptive action	1 (16.7/1.5)	5 (83.3/6.2)	6 (100.0/4.0)	
Strengthens mother-infant bond	15 (57.7/22.1)	11 (42.3/13.6)	26 (100.0/17.4)	
Decreases mother weight	2 (100.0/2.9)	0 (0.0/0.0)	2 (100.0/1.3)	
All of the above	50 (43.5/73.5)	65 (56.5/80.2)	115 (100.0/77.2)	0.104¥
Advantages for infant				
Increases immunity	4 (30.8/5.9)	9 (69.2/11.1)	13 (100.0/8.7)	
Of great nutrient value	5 (62.5/7.4)	3 (37.5/3.7)	8 (100.0/5.4)	
Both of the above	59 (46.1/86.8)	69 (53.9/85.2)	128 (100.0/85.9)	0.352¥
BF has disadvantages				
Absent	43 (47.3/63.2)	48 (52.7/59.3)	91 (100.0/61.1)	
Present	25 (43.1/36.8)	33 (56.1/40.7)	58 (100.0/38.9)	0.620*
Disadvantages to mother				
Pain	7 (63.6/28.0)	4 (36.4/12.1)	11 (100.0/19.0)	
Inflammation	5 (27.8/20.0)	13 (72.2/39.4)	18 (100.0/31.0)	
Make mother antisocial	1 (33.3/4.0)	2 (66.7/6.1)	3 (100.0/5.2)	
All of the above	12 (46.2/48.0)	14 (53.8/42.4)	26 (100.0/44.8)	0.280¥
Disadvantages to infant				
Transmission of infection	16 (45.7/64.0)	19 (54.3/57.6)	35 (100.0/60.4)	
Allergen	2 (40.0/8.0)	3 960.0/9.1)	5 (100.0/8.6)	
Both	7 (38.9/28.0)	11 (61.1/33.3)	18 (100.0/31.0)	0.884¥
Colostrum is of great benefit				
No	4 (100.0/5.9)	0 (0.0/0.0)	4 (100.0/2.7)	
Yes	64 (44.1/94.1)	81 (55.9/100.0)	145 (100.0/97.3)	0.027¥
Mean knowledge percent score				
Mean ± SD	66.5 ± 9.54	67.8 ±9.73	67.2 ±9.58	0.635^

*Pearson's Chi-square test, ¥*Fishers' Exact test,* ^ students' t test, *P*- value is significant at < 0.05

The mean knowledge percent score for guidelines of BF was 64.7±8.45; with insignificant difference between academic and clinical years (Table 3).

Table 3: Students' knowledge about some BF practice guidelines by grade

	Academic years N=68 (%)	Clinical years N=81 (%)	Total N=149 (%)	P-value
Concept of BF				
BF for 24 months	23 (42.6/33.8)	31 (57.4/38.3)	54 (100.0/36.2)	
Exclusive BF for 6 months	11 (30.6/16.2)	25 (69.4/30.9)	36 (100.0/24.2)	
BF with complementary foods	34 (57.6/50.0)	25 (42.4/30.9)	59 (100.0/39.6)	0.031*
Planning for BF should start at				
After marriage	19 (33.9/27.9)	37 (66.1/45.7)	56 (100.0/37.6)	
During pregnancy	48 (53.3/70.6)	42 (46.7/51.9)	90 (100.0/60.4)	
After delivery	1 (33.3/1.5)	2 (66.7/2.4)	3 (100.0/2.0)	0.066¥
Time of initiation of BF				
Immediately after delivery	36 (42.9/52.9)	48 (57.1/59.3)	84 (100.0/56.4)	
Any time after delivery	3 (42.9/4.4)	4 (57.1/4.9)	7 (100.0/4.7)	
When mother gets rest after delivery	29 (50.0/42.6)	29 (50.0/35.8)	58 (100.0/39.9)	0.695¥
Agreement with rooming in policy				
No	5 (50.0/7.4)	5 (50.0/6.2)	10 (100.0/6.7)	
Yes	63 (45.3/92.6)	76 (54.7/93.8)	139 (100.0/93.3)	0.774¥
Intervals between feedings				
On demand	20 (39.2/29.4)	31(60.8/38.3)	51(100.0/34.2)	
Must be timed	48(49.0/70.6)	50 (51.0/61.7)	98(100.0/65.8)	0.514¥
Size of mother breasts affects BF				
No	45 (42.9/66.2)	60 957.1/74.1)	105 (100.0/70.5)	
Yes	23 (52.3/33.8)	21 (47.7/25.9)	44 (100.0/29.5)	0.293¥
Herbs could be given to infant				
No	39 (42.9/57.4)	52 (57.1/94.2)	91 (100.0/61.1)	
Yes	29 (50.0/42.60	29 950.0/35.8)	58 (100.0/38.9)	0.393¥
Mean knowledge percent score				
Mean ± SD	66.1±9.46	63.4±7.34	64.7±8.45	0.056^

*Pearson's Chi-square test, ¥*Fishers' Exact test,* ^ students' t test, *P*- value is significant at < 0.05

The mean knowledge percent score for guidelines of BF was 64.7±8.45; with insignificant difference between academic and clinical years (Table 3). Nevertheless, the mean attitude percent score for concepts related to BF was 76.9±7.91; with insignificant difference between academic and clinical years (Table 4).

Table 4: Students' attitude about some concepts related to BF by grade

	Academic years N=68 (%)	Clinical years N =81(%)	Total N =149(%)	P-value
BF alone is sufficient for growth				
No	30 (41.7/44.1)	42 (58.3/51.9)	72 (100.0/48.3)	
Yes	38 (49.4/55.9)	39 (50.6/48.1)	77 (100.0/51.7)	0.347*
Supplements could be given during first 6 months				
No	44 (41.9/64.7)	61 (58.1/75.3)	104 (100.0/70.5)	
Yes	24 (54.5/35.3)	20 (45.5/24.7)	44 (100.0/29.5)	0.158*
Artificial feeding is better than BF				
No				
Yes	66 (45.8/97.1)	78 (54.2/96.3)	144 (100.0/96.6)	
	2 (40.0/2.9)	3 (60.0/3.7)	5 (100.0/3.4)	0.797¥
BF saves mother's time				
No	39 (52.7/57.4)	35 (47.3/43.2)	74 (100.0/49.7)	
Yes	29 (38.7/42.6)	46 (61.3/56.8)	75 (100.0/50.3)	0.085*
There are many contraindications for BF				
No	7 (63.6/10.3)	4 (36.4/4.9)	11 (100.0/7.4)	
Yes	61 (44.2/89.7)	77 (55.8/95.1)	138 (100.0/92.6)	0.213¥
Most important contraindication for BF				
Mother's depression	10 (83.3/14.7)	2 (16.7/2.5)	12 (100.0/8.1)	
Lack of social support	4 (40.0/5.9)	6 (60.0/7.4)	10 (100.0/6.7)	
Lack of knowledge about BF	19 (70.4/27.9)	8 (29.6/9.9)	27 (100.0/18.1)	
All of the above	35 (35.0/51.5)	65 (65.0/80.2)	100 (100.0/67.1)	0.000¥
Medications prevent BF				
No	12 (52.2/17.6)	11 (47.8/13.6)	23 (100.0/15.4)	
Yes	56 (44.4/82.4)	70 (55.6/86.4)	126 (100.0/84.6)	0.494¥
Mode of delivery affect BF				
No	42 (44.7/61.8)	52 (55.3/64.2)	94 (100.0/63.1)	
Yes	26 (47.3/38.2)	29 (52.7/35.8)	55 (100.0/36.9)	0.759¥
Mother' s travelling affect BF practice				
No	30 (46.9/44.1)	34 (53.1/42.0)	64 (100.0/43.0)	
Yes	38 (44.7/55.9)	47 (55.3/58.0)	85 (100.0/57.0)	0.792¥
Mean attitude percent score				
Mean ± SD	75.7 ±8.24	78.0 ±7.32	76.9 ±7.91	0.073^

*Pearson's Chi-square test, *¥Fishers' Exact test,* ^ students' t test,

p- value is significant at < 0.05

4. Discussion

The most excellent first foodstuff for newborn is breast milk.[11] The present work revealed that the mean knowledge score (unfortunately for female medical students) for advantages of BF was (67.2±9.58), and its guidelines was (64.7±8.45), which were unsatisfactory. The Medical Education System in the medical College of should pay attention for this; as these students will be the crucial persons who will disseminate the knowledge about BF in the future. The present work revealed that only 20% of studied highly educated medical students practicing BF; for a very short duration (3.8±2.87 months) and early weaning (2.3±0.63 months). Although many benefits have been stated for breastfeeding, its practice is still lower than that recommended by WHO.[12,13]

The last 20-30 years, Saudi Arabia had many socioeconomic changes which introduced many foreign unpopular norms, many of which have influenced its population and changed their habits. There is a trend toward bottle feeding both in urban and rural areas.[14] Before that it is believed that BF was very common and in some cases it may exceed two years, as all the populations in the kingdom are Muslims nursing mothers are expected to follow the Holy Koran, which instructs them to breastfeed their children for up to two years.[12]

A considerable number of both community and hospital-based studies have carried out in Saudi Arabia looking at infant feeding practices. A national health survey reported that initial prevalence of BF was 90%, becoming 50% at 3 months and dropped down to 10% at one year.[14] Another survey; which included eleven primary health care centers found that only 21.5% were exclusively BF, 20.6% artificially fed and 57.9% had a combination of both breastfeeding and artificial one.[15] Most studies have shown that BF in the country is less than optimal.[16, 17] In 1994 the first six months exclusive breastfeeding rate in KSA was only 31 % despite of its known advantages.[16] One study in King Khalid University hospital 1985 showed that 51% of the mothers began weaning at 6-12 months.[18] In the kingdom, baby-friendly hospital initiative (BFHI) activities were started in 1992 and BFHI training was started in 1995 with technical and material assistance from WHO. Then the activities of BFHI have been extended from hospitals to health centers and communities, with the health friends committees functioning as community support teams for promoting breastfeeding BF.[19,20] The present work showed that the attitude score of the surveyed students towards some basic concepts of BF was fair (76.9±7.91). They obtain their knowledge from books, internet, media and friends. Care must be paid to the information given by these sources as they are influential. Causes for discontinuation of breastfeeding as stated by Saudi women include insufficient breast milk, new pregnancy, use of inappropriate hormonal contraceptive method, maternal age, educational level, parity, family income, place and mode of delivery.[14,21-24]

Staff training has special importance, particularly for health care workers who are directly responsible for mothers 'caring giving them consistent information on appropriate infant feeding. They should be aware with method of BF, psychosocial factors and probable difficulties and how to deal with them. Knowledge alone is inadequate; staff necessitate positive attitude gained by experience. They are in a big need to understand the great benefits that gained for both nursing mothers and infants if follow this feeding pattern.[25]

5. Conclusion

Media and internet have minor roles in getting knowledge about BF. The mean knowledge score about advantages of BF, guidelines of BF and attitude towards BF of all female medical students; especially academic years were unsatisfactory.

6. Recommendations

There is urgent need to strengthen the role of media and interne in disseminating knowledge about BF targeting medical students. Emphasis must be done for advantages of BF, guidelines and enhancing attitude towards BF practice. Further intervention researches are needed to study pre and post-study effects of health education knowledge, attitude and practices (KAP) effects.

7. Study limitations

The cross sectional design of the study did not allow measurement of the actual future practice of BF. Inclusion of all students will be needed in further studies. The number of the included married students; who actually constituted a low percent of the students (and we try to include all of them), was a weak point in this research.

Abbreviations:

Breastfeeding (BF)
Family planning (FP)
World Health organization (WHO)

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