



Research Article

Knowledge and Attitude Evaluation of Mothers Regarding Exclusive Breastfeeding Referring to Health Care Centers

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Abstract

Background: Exclusive breastfeeding is the single most effective intervention for child survival. The purpose of the study was to assess knowledge, attitude of mothers about exclusive breastfeeding.

Materials and methods: Data has been collected by structured questionnaire and interview from Iranian mothers referring to Health Care Centers in Zabol. In a cross sectional study 268 women who had children less than two years selected via cluster random sampling technique.

Results: Mean age of mothers was 27.33 ± 6.13 , 64.6% of children used breastfeeding and 39.5% of them had exclusive breastfeeding till 4 months after birth and 28% had exclusive breastfeeding till end of 6 months. 9.7% of the subjects had poor knowledge, 59.7% of them had a moderate awareness and 30.6% had a good knowledge about breastfeeding. Moreover 41.8% had a moderate attitude and 58.2% had a good attitude towards breastfeeding. According to Pearson correlation, no significant relationship was found between knowledge with attitude and age of mothers in the 1st pregnancy, ($P > 0.05$), but there was a significant positive relationship with between knowledge and age ($r = 0.28$, $P < 0.05$) and the time of initiating of supplementary food ($r = 0.166$, $P < 0.05$). No significant relationship observed between attitude with knowledge and age, age of mothers in the 1st pregnancy and the time of initiating of supplementary food ($P > 0.05$).

Conclusion: There is an urgent necessity to provide accurate prenatal education that focuses on methods and long-term benefits of infant feeding to mothers, family and health professionals.

Keywords: Breastfeeding; Knowledge; Attitude; Health care centers; Iran

Introduction

Breastfeeding is a basic human activity, vital to infant and maternal health and of immense economic value to households and societies. Exclusive breastfeeding is the single most effective intervention for child survival [1,2]. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that every infant should be exclusively breastfed for the first six months of life, with breastfeeding continuing for up to two years of age or longer [3]. Hence, breastfeeding is an important public health strategy for improving infant, child and maternal morbidity and mortality, and helping to control health care costs. Breastfeeding is associated with a reduced risk of otitis media, gastroenteritis, respiratory illness, sudden infant death syndrome, necrotizing enter colitis, obesity, and hypertension [4]. Many factors that may influence breastfeeding include race, maternal age, maternal employment, level of education of parents, socio-economic status, insufficient milk supply, infant health problems, maternal obesity, smoking, parity, method of delivery, maternal interest and other related factors [5]. Only 35% of worldwide infants were exclusively breastfed for even the first six months of life and the recommendations in developing countries were still low [6].

Exclusive breastfeeding is uncommon and breastfeeding practices in Iran are varying considerably and suboptimal. The exclusively breastfed infants in 1998 were 28% and increased to 55.6% in 2000 and a decrease in 2005 (27.1%) [7] And it was 31.17% in 2011 [8] and 53% in 2013 [9]. Exclusive breastfeeding during the first year of a child's life ensures the provision of certain biological and psychological needs and therefore increases the probability of survival during this critical stage of development [10,11]. Consequently, mothers are encouraged to breastfeed exclusively in the first six months of a child's life. Breastfeeding has declined worldwide in recent years as results of urbanization, maternal employment; mothers felt that breast milk was inadequate. Inadequate knowledge, attitude along with inappropriate practice, of breastfeeding may lead to undesirable consequences. Many researches are done about mother's knowledge and attitude concerning exclusive breastfeeding in many areas in Iran, but no research is done around this topic, in southeastern Iran. Hence, we decided to assess breastfeeding knowledge, attitude among mothers referring to Health Care Centers in Zabol. Findings from this study could be used in developing appropriate intervention strategies to promote optimal infant feed.

Materials and Methods

A descriptive cross-sectional study of 268 mothers with baby less than 2 years' age was conducted in Zabol, in Sistan & Baluchestan Province, Iran. The sample selected among pregnant women that whom referred at the Health Care Centers for routine babies' checkup. Sample size was determined by help of a statistician based on the previous data derived on knowledge score [12], by using formula,

$$n = \frac{Z^2 \frac{p(1-p)}{d^2}}{1 - \frac{Z^2 p(1-p)}{d^2}}$$

with 5% marginal error and 95% CI. Finally, 270 pregnant women selected through randomized cluster stratified sampling method. Inclusion criteria involved all mothers with baby less than 2 years' age visiting the Health Care Centers, Zabol. Exclusion criteria included, conditions where breastfeeding is contraindicated like galactosemia, mother suffering from cancer, active tuberculosis, psychoses. The study approved by Ethics Committee of Zabol University of Medical Sciences, Iran, in 2016. A written informed consent was taken from eligible participants.

Data collected by structured questionnaire and interview. Data were including demographic characteristics of mothers, their knowledge and attitude toward exclusive breastfeeding.

A structured questionnaire used to assess demographic data, knowledge and attitudes towards exclusive breastfeeding among Participants. The questionnaire was containing three sections as follow:

Section A: The demographic form elicited information on participants' background: age, type of delivery, occupation, education level, Type of baby milk feed, the source of information regarding breastfeeding.

Section B: This part of questionnaire was developed by the researchers based on the review of literature and past experiences. This section included 33 multiple-choice questions about knowledge. Each item in the knowledge section of the questionnaire had 3 possible responses, namely True, False, and not sure. One mark was awarded for every correct response, zero otherwise. Hence, the total number of marks in the knowledge section ranged from 0 to 33. Total score of awareness varied from zero to 33. Scoring of knowledge were as follow; the total score of 11 and less considered as weak awareness, between 11 and 22 as moderate and more than 22 as good awareness.

Section C: Third part contained 16 questions related to attitude items to determine level of agreement to each question. A 5-option Likert scale from strongly disagrees to strongly agree was applied to all

questions. It is mentionable that some of the questions were negatively worded. Total scores were grouped into three groups (1) score of 30 and less considered as weak attitude, (2) between 30 to 60 as moderate and (3) greater than 60 as good attitudes.

Questionnaire was validated by nutrition experts in Department of Nutrition in Zabol University of Medical Sciences. Reliability of used questionnaire was evaluated by a pilot study on 10% of study population. Analysis of data that gathering by pilot study showed, the questionnaire was reliable with Cronbach's alpha coefficient of 91% and 87 for knowledge and attitude respectively. Finally data analyzed by SPSS ver.18. Continuous variables were expressed as mean ± SD, qualitative data were presented as frequency (percent). One-way ANOVA and post hoc-Tukey test, Student independent sample t test and Pearson correlation were used to determine relationship between variables. A P-value of <0.05 was considered to be statistically significant.

Results

The results of current study demonstrated that, the mean age of mothers was 27.33 ± 6.13 with ranged from 16 to 46 years, 64. 6% of children used breastfeeding and 39.5% of them had exclusive breastfeeding till 4 months after birth and 28% had exclusive breastfeeding till end of 6 months.

The educational levels of 50.4% were secondary and high school, 32.5% had university education and 1.9% of them were illiterate. The most of families had two children (37.7%) and a low percent (0.7%) had five children. The mode of delivery of 75.4% of mothers was vaginal, while 24.6% were delivered through a Caesarian Section (CS) and 37.7% of them had twice pregnancy experience. Most of the participants (74.3%) were housewives. As depicted in the Table, 64.6% of infants used breastmilk and a low percent of them merely used formula (1.9%). The results demonstrated that the highest lactation period (29.5%) was for children between 6-12 months and the lowest (2.2%) was for children who consumed milk for more than 24 months. Majority of participants mentioned, the breastmilk is inadequate for their child (28.4). The main sources of mothers' knowledge reading breastfeeding were Health Care Centers personnel's (Table 1).

Variables			N (%)	Mean (SD)	P-value
Knowledge	Type of delivery	Vaginal	202 (70.4)	19.05 (5.72)	0.714
		Caesarian	66 (24.6)	19.34 (5.39)	
Attitude	Type of delivery	Vaginal	202 (70.4)	50.28 (7.42)	0.261
		Caesarian	66 (24.6)	51.48 (7.73)	
Knowledge	Mother's job	Housewife	199 (74.3)	66 (24.6)	0.599
		Employed	19.06 (5.49)	19.48 (5.97)	
Attitude	Mother's job	Housewife	199 (74.3)	50.66 (7.69)	0.853
		Employed	19.06 (5.49)	50.46 (7.0)	
Knowledge	Mother's educational levels	illiterate	5 (1.9)	17.6 (7.02)	0.014
		Elementary	41 (15.3)	18.31 (5.62)	

		Middle & high school	135 (50.4)	18.4 (5.47)	
		Academic	87 (32.5)	20.72 (5.57)	
Attitude		illiterate	5 (1.9)	51.8 (2.2)	0.553
		Elementary	41 (15.3)	50.09 (2.0)	
		Middle & high school	135 (50.4)	50.1 (0.67)	
		Academic	87 (32.5)	51.47 (0.81)	
Knowledge	Type of baby milk	Breast milk	173 (64.4)	18.88 (5.95)	0.351
		Breast milk & Formula	86 (32.1)	19.9 (4.73)	
		Formula or others	5 (1.9)	18.2 (4.76)	
Attitude		Breast milk	173 (64.4)	50.46 (7.79)	0.757
		Breast milk & Formula	86 (32.1)	50.82 (7.18)	
		Formula or others	5 (1.9)	52.8 (2.16)	
Knowledge	Duration of lactation	No breastfed	4 (1.5)	14.75 (7.94)	0.001
		< 6 months	65 (24.3)	17.81 (5.47)	
		6-12 months	79 (29.5)	18.02 (4.8)	
		12-18 months	41 (15.3)	19.9 (6.49)	
		18-24 months	66 (24.6)	21.3 (4.36)	
		>20 months	6 (2.2)	20.5 (3.94)	
Attitude		No breastfed	4 (1.5)	49 (9.46)	0.000
		< 6 months	65 (24.3)	50.98 (9.93)	
		6-12 months	79 (29.5)	45.09 (8.47)	
		12-18 months	41 (15.3)	52.29 (4.7)	
		18-24 months	66 (24.6)	51.96 (3.66)	
		>20 months	6 (2.2)	49.5 (6.65)	
Knowledge	Causes of using formula	Recommended by relatives	9 (3.4)	16.11 (6.25)	0.654
		No getting breast	8 (3)	16.87 (4.15)	
		Breast milk is inadequate	76 (28.4)	19.26 (6.29)	
		Child Disease	5 (1.9)	19 (4.89)	
		Mother's disease	6 (2.2)	19.33 (4.76)	
		Mother's employment	30 (11.2)	19.36 (6)	
Attitude		Recommended by relatives	9 (3.4)	51.22 (6.11)	0.35
		No getting breast	8 (3)	50.62 (6.13)	
		Breast milk is inadequate	76 (28.4)	51.61 (7.48)	
		Child Disease	5 (1.9)	53.6 (9.62)	
		Mother's disease	6 (2.2)	47.66 (9.24)	

		Mother's employment	30 (11.2)	48.7 (6.46)	
Knowledge	Source of information regarding Breastfeeding	Clinics and health centers experts	196 (73.1)	19.26 (5.78)	0.436
		Baby's doctor	39 (14.6)	19.46 (5.21)	
		Relatives and friends	28 (10.4)	17.85 (5.21)	
Attitude		Health centers personals	196 (73.1)	51.3 (7.45)	0.018
		Baby's doctor	39 (14.6)	50.97 (5.14)	
		Relatives and friends	28 (10.4)	47.1 (8.32)	

Table 1: The mothers' demographic characteristics and relationship with their knowledge and attitude regarding exclusive breastfeeding.

The results showed that 9.7% of the subjects had poor knowledge, 59.7% of them had a moderate awareness and 30.6% had a good knowledge about breastfeeding. Moreover 41.8% had a moderate attitude and 58.2% had a good attitude towards breastfeeding (Table 2).

Variables		N (%)
Knowledge	Weak	26 (9.7)
	Moderate	160 (59.7)
	Good	82 (30.6)
Attitude	Weak	0 (0)
	Moderate	112 (41.8)
	Good	156 (58.2)

Table 2: Distribution of different levels of knowledge and attitude in participant toward exclusive breastfeeding.

Analysis of data showed there was no statistical significant between mothers' knowledge and attitude regarding breastfeeding with their type of delivery, occupation, type of feeding, the cause of using formula (P>0.05). A significant association found between mothers' knowledge and attitude concerning breastfeeding with duration of lactation

(P<0.05). A significant association found between mothers' knowledge and their education levels (p=0.014), based on post hoc -Tukey test, the knowledge of mothers' with university education level was higher than others (P<0.05), while there wasn't significant association between mothers' attitude with their education levels (P>0.05). Analysis of data by post hoc-Tukey test demonstrated that the knowledge of that mothers' hadn't breastfeed to their baby's was significantly lower than others, while the attitude of mothers' that had 18 to 24 months' duration of lactation was higher than others. There was not significant association between mothers' knowledge and the sources of information regarding breastfeeding (P>0.05). Association between attitude with the source of information regarding breastfeeding was statistically significant (P = 0.018), based on post hoc-Tukey test mothers believed that, the health care center personnel were the main source of information about breastfeeding (Table 1).

According to Pearson correlation, no significant relationship was found between knowledge with attitude and age of mothers' in the 1st pregnancy, (P>0.05), but there was a significant positive relationship with between knowledge and age (r = 0.28, P<0.05) and the time of initiating of supplementary food (r = 0.166, P-value<0.05) (Table 3). No significant relationship observed between attitude with knowledge and age, age of mothers' in the 1st pregnancy and the time of initiating of supplementary food (P>0.05) (Table 3).

Attitude				Knowledge			
P-value	Pearson correlation coefficient	N	Variables	P-value	Pearson correlation coefficient	N	Variables
0.104	0.99	268	Knowledge	0.104	0.99	268	Attitude
0.559	0.035		Age	0	0.28		Age
0.459	0.051		Age in the 1st pregnancy	0.352	0.064		Age in the 1st pregnancy
0.868	0.01		time of initiating of supplementary food	0.008	0.166		time of initiating of supplementary food

Table 3: Correlation between knowledge and attitude with age, age of mothers' in the 1st pregnancy, the time of initiating of supplementary food.

The results showed that 9.7% of the subjects had poor knowledge, 59.7% of them had a moderate awareness and 30.6% had a good knowledge about exclusive breastfeeding.

Mothers' knowledge concerning breastfeeding demonstrated that, the highest correct response (92.2%) were regarding "After delivery is the best time to initial the breastfeed", 91.4% for "neonate need

breastfeeding throughout the night”, 88.1% for “there is a relationship between the mental and psychological status of mother and secretion of her milk”, 84% for “the best time to initiate the supplementary food, is the end of the 6th month”, 81.7% for “breastfeeding enhance immune system of baby against the illness” and 80.2% for “lactation has not complication for health of mother”, 79.1 for “It is possible to keep the mother’s milk in the refrigerator”, 78.7% for “First milk is low, but it will be increased by lactate”, 70.9 for “Colostrum’s consumption has effect on health of neonates”, also for “Breastfeeding couldn’t fully meet the child’s need, if supplementary food not be started at suitable time,

thus, it would lead baby to the malnutrition ”and for “the nutritional status of mother has not effect on nutrients contents of her milk” and 70.5 % for “Long separation of mother and her neonate’s is a main reason for deteriorating (failing) of breastfeeding” and 69% for “Night lactation is effectiveness to increase the mother’s milk” and 64.2% for “Glass containers are the first choice and hard plastic transparent containers are the second choice to save mother’s milk” and 63.1% for both answers “Mother’s milk is compulsory for feeding of immature neonate” and “it’s necessary to wash the breast before breastfeeding” (Table 4).

Item	True N (%)	False & not sure N (%)
1 After delivery is the best time to initial breastfeed	247 (92.2)	21 (7.8)
2 Colostrum’s consumption has effect on health of neonates	190 (70.9)	78 (29.1)
3 First milk is low, but it will be increased by lactate	211 (78.7)	57 (21.3)
4 If neonates cry and dysphoria, it’s better feed him/her a little of formula	99 (36.9)	169 (63.1)
5 Does neonate need breastfeeding throughout the night	245 (91.4)	23 (8.6)
6 According to the nutritional-healthy recommendations , lactation till 6 months is not enough for growing of baby	144 (53.7)	124 (46.3)
7 Based on nutrition expert recommendation , the best time to initiation the supplementary food, is the end of 6th month	225 (84)	43 (16)
8 Breastfeeding couldn’t fully meet the child’s need, if supplementary food not be started at suitable time, thus, it would lead baby to the malnutrition	190 (70.9)	78 (29.1)
9 Immunoglobulins are maternal immunity products that, there are in the mothers milk	147 (54.9)	121 (45.1)
10 Breastfeeding Enhance immune system of baby against the illness	219 (81.7)	49 (18.3)
11 If mother shouldn’t take a healthy food to improve the quality of her milk, the quality of milk will not enough for her child’s growth	17 (6.3)	251 (93.7)
12 The nutritional status of mother has not effect on nutrients contents of her milk	190 (70.9)	78 (29.1)
13 There is a relationship between the mental and psychological status of mother and secretion of her milk	236 (88.1)	32 (11.9)
14 Eating fennel seed by mother helps to increase her breastmilk	123 (45.9)	145 (54.1)
15 Mother’s milk has low level of iron, but, it has high level of absorption in the intestine of baby	136 (50.7)	132 (49.3)
16 Breastfeeding helps to prevent the further conception	118 (44)	150 (56)
17 Mother’s milk is compulsory for feeding of immature neonate	169 (63.1)	99 (36.9)
18 If mother illness and used antibiotic medicine, breastfeeding would be stopped	91 (34)	177 (66)
19 Mother should not feed the child when her baby has diarrhea or fever	136 (50.7)	132 (49.3)
20 Lactation has not complications for health of mother	251 (80.2)	53 (19.8)
21 The mother with HIV can breastfeed to her neonate	82 (30.6)	186 (69.4)
22 The addict’s mother cannot breastfeed to her neonate	71 (26.5)	197 (73.5)
23 Night lactation is effectiveness to increase the mother’s milk	185 (69)	83 (31)
24 The best indicator of inadequacy of mother’s milk is the weight of her neonate	158 (59)	110 (41)
25 Long separation of mother and her neonate’s is a main reason for deteriorating(failing) of breastfeeding	189 (70.5)	79 (29.5)
26 The mothers, whom have smaller breasts will be least success in breastfeeding	127 (47.4)	141 (52.6)

27	Lactation ability in mother has inheritable basis	87 (32.5)	181 (67.5)
28	Lactation is instinctive and doesn't require training	114 (42.5)	154 (57.5)
29	Nipple cracking will be cure by sucking	59 (22)	209 (87)
30	It's necessary to wash the breast before breastfeeding	169 (63.1)	99 (36.9)
31	Glass containers are the first choice and hard plastic transparent containers are the second choice to save mother's milk	172 (64.2)	96 (35.8)
32	It is not possible to keep the mother's milk in the room temperature	66 (24.6)	202 (75.4)
33	It is possible to keep the mother's milk in the refrigerator	212 (79.1)	56 (20.9)
34	It is possible to keep the mother's milk in the freezer for a long time	87 (32.5)	181 (67.5)

Table 4: Knowledge of participants towards exclusive breastfeeding.

Mothers' attitude towards breastfeeding showed in Table 5. As clear, about 91% of the mothers were strongly agree that "breastfeeding is a cause of deformity of the mothers' breast", followed by 68.7% the item "breastfeeding increase mother infant bonding", then a slightly lower with percentage of 63.1 for item of "breastfed babies are healthier than formula fed babies". Followed by 59%, the item of "mothers whom,

formula fed their baby miss one of the great joys of motherhood". After that the item of "breastfeeding is more convenient than formula feeding" with percentage of 57.1% and it's followed by 54.1% for the item of "breast milk is cheaper and save money than formula" and finally item of "breastmilk is more easily digested than formula" (52.2%) (Table 5).

	Item	Strongly Agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	Strongly disagree N (%)
1	Mothers whom, formula fed their baby, miss one of the great joys of motherhood	158 (59)	57 (21.3)	20 (7.5)	12 (4.5)	21 (7.8)
2	I feel embarrassing, when I saw a women breastfeed her child in public places	17 (6.3)	47 (17.5)	67 (25)	60 (22.4)	77 (28.7)
3	people are believed that, formula feed is more acceptable than breastfeed	22 (8.2)	48 (17.9)	75 (28)	62 (23.1)	61 (22.8)
4	Formula feed is acceptable than breast feed because the father can be cooperated to feed of his baby	24 (9)	70 (26.1)	58 (21.6)	82 (30.6)	34 (12.7)
5	mothers milk's Benefits has continues till baby feeds by its.	86 (32.1)	74 (27.6)	52 (19.4)	31 (11.6)	25 (9.3)
6	Breast milk is lacking in iron	28 (10.4)	55 (20.5)	107 (39.9)	49 (18.3)	29 (10.8)
7	Formula feeding is the best choice if the mother plans to go back to work	6 (2.2)	46 (17.2)	60 (22.4)	98 (36.6)	58 (21.6)
8	Breast milk is cheaper and save money than formula	145 (54.1)	58 (21.6)	23 (8.6)	15 (5.6)	27 (10.1)
9	Breast milk is more easily digested than formula	140 (52.2)	53 (19.8)	41 (15.3)	7 (2.6)	27 (10.1)
10	Formula feeding is more convenient than Breastfeeding	53 (19.8)	45 (16.8)	58 (21.6)	73 (27.2)	39 (14.6)
11	Breastfeeding increases mother infant bonding	184 (68.7)	25 (9.3)	22 (8.2)	6 (2.2)	31 (11.6)
12	Breastfed babies are healthier than formula fed babies	169 (63.1)	42 (15.7)	20 (7.5)	8 (3)	29 (10.8)
13	breastfeeding is more convenient than Formula feeding	153 (57.1)	46 (17.2)	28 (10.4)	18 (6.7)	23 (8.6)
14	Formula is as healthy for an infant as breast milk	31 (11.6)	33 (12.3)	84 (31.3)	97 (36.2)	23 (8.6)

15	Breastfeeding is a cause of deformity of the mother's breast	24 (91)	68 (25.4)	82 (30.6)	63 (23.5)	31 (11.6)
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Table 5: Attitude of participants to wards exclusive breastfeeding.

Discussion

Exclusive breastfeeding is the single most effective intervention for child survival. According to the Millennium Development Goals, exclusive breastfeeding for six months is considered as one of the most effective interventions [13]. The results of current study demonstrated that, 64.6% of children used breastfeeding that was lower than Poormand et al. [9] results that was 78%. Also 39.5% of participants demonstrated had exclusive breastfeeding till 4 months after birth, and 28% had exclusive breastfeeding till end of 6 months while in Poormand et al. [9] findings, it was higher than current results (53%). Findings showed 9.7% of the subjects had low level of knowledge, 59.7% of them had a moderate level and 30.6% had high level of knowledge about breastfeeding, while Dallak et al. [14] showed the highest percent of mother's knowledge regarding breastfeeding was in moderate level, that was slightly lower than current results (59.7% vs. 47.3%) and they demonstrated that, 30.2% of participants had low level of knowledge that was higher than current results (30.2 vs. 9.7) , while 22.5% of the mothers had high level of knowledge that was lower than current findings (22.5 vs. 30.6). As mention above, the study shows that 30.6% of mothers had good knowledge towards exclusive breastfeeding which is lower than studies conducted in Gondar, Ethiopia (69.8%); Abha city, Saudi Arabia (55.3%) [15]; Calabar, Nigeria (80%) [16]; Bedele town in Ethiopia (87.3%) [17]; Hyderabad, Telangana, India (72.8%) [18]. Knowledge towards exclusive breastfeeding in current research is higher than studies conducted in Hamadan, Iran, that was 3% [19]. These differences may be related to variations in sampling technique, sociocultural and economic status participants, and healthcare delivery systems.

In the current study, the knowledge of initiation of breast feeding after birth is 92.2% which is higher than that from a study conducted in Gondar, Ethiopia that was 70%; study conducted in Mizan, Aman town of Ethiopia that was 73.3% [20]; a study conducted in Odisha which was 52.78% [21] and Tanzania which was 58.8% [22]. The above dissimilarities may be due to the differences of sample sizes. Knowledge of respondents on colostrum in this study is 70.9% (having good knowledge). This is higher than the previous study which was 54.7%.

In this study based on the attitudinal score 58.2% had a good attitude towards exclusive breastfeeding. The finding is lower than reports done in Gondar Ethiopia (76%); Rwanda, Kigali, which was 71.1% and in Jima town in Ethiopia that was 73.9% [23]; Mizan Aman town, which is 89.5% in Ethiopia [20]. The disagreement among these study results might be attributed to the dissimilarities due to the differences of study settings and may be due to methodological difference.

The mother's attitude level toward breastfeeding indicated that, 41.8% had a moderate level of attitude and 58.2% had a high attitude towards breastfeeding. While in Dallak et al. [14] study, the majority (86.1%) of the participated mothers had neutral attitude toward breastfeeding and 12.8% of mothers had positive attitude to breastfeeding and only 1.1% of the mothers had positive attitude toward formula feeding. Aghababai et al. [19] study showed, just 3% of

participants had good level of knowledge about breastfeeding and an increase observed in their knowledge of them after education (55.5%). Naseem et al. [18] in their study demonstrated that, Majority of mothers received antenatal counselling regarding benefits and management of breast feeding. Their results showed that, the mothers had good knowledge; attitude and practices were still prevalent in the community which needs to be addressed.

Conclusion

According the current results, there is a need for programmers, which support and encourage breastfeeding at a primary level, focusing more on younger women, less well educated and those from lower socioeconomic class. So, it is suggestible that, serious practical steps have to be put in place in order to rectify resolve such a public health concern. Intensive education about breast feeding starting early in high school, during antenatal visits and through social media channels are important to provide sufficient awareness knowledge to young and expecting mothers. Other important aspects include serious support to new mothers at the postnatal wards with education and psychological support. Longer maternity leave might give working mothers more time to spend with her young infant and might encourage continuation of the already started breast feeding

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Ethical Approval

This study was approved by the Ethics Committee of Zabol University of Medical Sciences

References

1. AlFahmi M (2014) Knowledge, attitude and practice of breastfeeding among health care working mothers in primary health care centers of prince ahmad sector, makkah al mukarramah, saudi arabia. *International J Nutri Food Res* 1: 1-11.
2. Faruque AS, Ahmed AM, Ahmed T, Islam MM, Hossain MI, et al.(2008) Nutrition: basis for healthy children and mothers in bangladesh. *J Health Population Nutri* 26: 325-339.
3. WHO and UNICEF (2003) "Global strategy for infant and young child feeding". World Health Organization, Geneva.

4. James DC, Lessen R (2009) Position of the american dietetic association: promoting and supporting breastfeeding. *J Am Dietetic Associat* 109: 1926-1942.
5. Nabulsi M (2011) Why are breastfeeding rates low in Lebanon? A qualitative study. *Nabulsi BMC Pediatr* 11: 1-6.
6. Lauer JA, Betrán AP, Victora CG, de Onís M, Barros AJ (2004) Breastfeeding patterns and exposure to suboptimal breastfeeding among children in developing countries: review and analysis of nationally representative surveys. *BMC Med* 1: 2-26.
7. Khabazkhoob M, Fotouhi A, Majdi M, Moradi A, Javaherforoshzadeh A, et al. (2008) Prevalence of Exclusive Breastfeeding in Health Center Mashhad, 2007. *Iranian J Epidem* 3: 45-53.
8. Dalili H, Farsar A, Barakati H, Raji F, Shariat M, et al. (2014) Frequency of exclusive breastfeeding and its effecting factors in tehran 2011. *Acta Medica Iranica* 52: 552-556.
9. Poorahmad-Garbandi F, Salaezade M, Etehad R (2014) Reason for termination of breastfeeding among women referred to bandar abbas health centers. *J Prevent Med* 1: 16-22.
10. Natural Resources Defense Council (2005) *Healthy Milk, Healthy Baby: Chemical Pollution and Mother's Milk*. New York, NY: National Resources Defense Council.
11. Tyndall JA, Kamai R, Changchangi D (2016) Knowledge, Attitudes and Practices on Exclusive Breastfeeding in Adamawa, Nigeria. *Am J Public Health Res* 4: 112-119.
12. Nakhshab M, Ghaffari J, Nasehi MM, Yazdani-Charati j, Shakeri A, et al. (2014) Knowledge of general practitioner (gp) about characteristics of breastfeeding. *J Babol Uni Med Sci* 16: 71-76.
13. Bryce J, Terreri N, Victoria CG, Mason E, Daelmans B, et al. (2006) Count down to 2015: tracking intervention coverage for child survival. *The Lancet* 368: 1067-1076.
14. Dallak AM, Nabil Ahmed Al-Rabeei NA, Aljahmi YA (2016) Breastfeeding knowledge, attitude, and practices among mothers attending health centers in sana'a city. *ARC J Public Health Comm Med* 1: 9-17.
15. Ayed AAN (2014) Knowledge, attitude and practice regarding exclusive breastfeeding among mothers attending primary health care centers in abha city. *Int J Med Sci Public Health* 3: 1355-1363.
16. Essien NC, Samson-Akpan PE, Ndebbio TJ, John ME (2009). Mothers' knowledge, attitudes, beliefs and practices concerning exclusive breastfeeding in calabar, Nigeria. *Africa J Nurs Midwifery* 11: 65-75.
17. Wolde T, Diriba G , Wakjira A , Misganu G , Negesse G, et al. (2014) Knowledge, attitude and practice amongst lactating mothers in Bedele town, southwestern Ethiopia: descriptive cross sectional study. *Rese* 6: 91-97.
18. Naseem A, Mazher NA (2016) Study to evaluate the knowledge, attitude and practices of exclusive breastfeeding among primi mothers of healthy term neonates in tertiary care hospital and predictors of failure of establishment of exclusive breastfeeding in first six months. *Int J Contemp Pediatr* 3: 810-814.
19. Aghababaei S, Rafat B, Bahmanzadeh M, Agha-mohammadi L (2009) Effects of breastfeeding education among primiparous women referring to fathemieh hospital in hamadan, iran. *Scientific JHNMF* 17: 41-51.
20. Tadele N, Habta F, Akmel D, Deges E (2016) Knowledge, attitude and practice towards exclusive breastfeeding among lactating mothers, Mizan Aman town, southwestern Ethiopia: descriptive cross sectional study. *Int Breasfeed J* 11: 1-7.
21. Maiti A, Sarangi L, Sahu SK, Mohanty S (2015) An assessment on breastfeeding and weaning practices in odisha. *Am J Public Health Res* 3: 49-52.
22. Mbwana, Hadijah A (2012) Exclusive breast feeding: mothers' awareness and heath care providers practice during antenatal visits in Mvomero, Tanzania. A thesis presented for partial fulfillment of the requirements for the Degree of Master of Sciences IN Human Nutrition at Massey University, Auckland, New Zealand
23. Seifu W, Assefa G, Egata G (2014) Prevalence of exclusive breast feeding and its predictors among infants aged six months in jimma town, southwest ethiopia, 2013. *J Pediatr Neonatal Care* 1: 1-6.