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RESEARCH ARTICLE

ORIGINAL RESEARCH ARTICLE: STUDY OF IMMUNIZATION AND BREASTFEEDING AWARENESS IN PRIMIGRAVIDA ATTENDING TERTIARY CARE HOSPITAL OF ANAND DISTRICT, GUJARAT

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ABSTRACT

Introduction: Maternal complications and poor perinatal outcome are highly associated with nonutilisation of antenatal and delivery care services and poor socioeconomic conditions of the patient. It is essential that all pregnant women have access to high quality obstetric care throughout their pregnancies. This study tries to find out the awareness and attitude among the primigravida females regarding breastfeeding and immunization.
Materials and Methods: The study includes 150 primigravida females that attending our hospital for delivery and antenatal check-up during april 2013-may 2014 .A pre tested, semi structured questionnaire was used as the data collecting tool.
Results: Majority (n=140, 93.33%) were Hindus followed by Muslims (n=05, 3.33%). Nearly half of the participants (n=80, 53.33%) were in the 21-25 y age group, and 10.8% (n=20) believed that immunization should be stopped if it showed side effects.
Conclusion: Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first 6 months after birth. Breastfeeding and Immunization is an effective way of reducing child and maternal mortality. From my study conclusion is that although a major population had adequate knowledge of breast feeding and immunization but they do not follow it properly.This gap should be filed up for reducing infant and maternal mortality rate.

Key Words:

INTRODUCTION

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease. Immunization is a proven tool for controlling and eliminating life-threatening infectious diseases and is estimated to avert between 2 and 3 million deaths each year. It is one of the most cost-effective health investments, with proven strategies that make it accessible to even the most hard-to-reach and vulnerable populations. It has clearly defined target groups; it can be delivered effectively through outreach activities; and vaccination does not require any major lifestyle change (http://www.unicef.org/health/index_43509.html.) 75% of the children are not breastfed from birth and over 50% are not exclusively breastfed.

According to Lancet series of 2008, breastfeeding promotion alone contributes to an 11.6% reduction (http://www.imagine.in/Sem6-ExeSum.pdf) in IMR and it reduces the risk of dying from diarrhea and pneumonia. Immunization program is one of the key interventions for protection of children from life threatening conditions, which are preventable.

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India has one of the largest immunization program in the world but diseases like Maternal and neonatal tetanus (MNT) has alone led to 58,000 newborns deaths (Bhas, 2009) in 2010 and a significant number of women also die to due to maternal tetanus every year. Breast milk has nutritional, immunological, behavioral and economic benefits and helps to build mother infant bonding (Shaili *et al*., 2012). Breastfed children have lower rates of childhood cancers, infections, asthma, allergies, childhood diabetes, gastrointestinal illnesses and infections that can damage their hearing (Beral *et al*., 2000).

The major causes of death among under five children in India is neonatal sepsis, diarrhea and pneumonia and breast milk is protective (http://www.unicef.org/health/index_43509.html) against all the three diseases. Breastfeeding benefits is not just restricted to child, it protects the mother who has breastfed from developing ovarian and premenopausal breast cancers (Kwan *et al*., 2004; Benefits of breastfeeding, 2002), and it also reduces the risk of postpartum bleeding and osteoporosis.

More than 15% of 24 lacs child deaths could be avoided in India by optimal breastfeeding practices but very few women in India have access to counseling services on infant and young child feeding (Ekambaram *et al*., 2010). Despite the knowledge of benefits of breastfeeding, its prevalence and duration among general population in many countries are still lower than the international recommendations of six month of exclusive breastfeeding (Mbada, 2013).

The prevalence of exclusive breastfeeding of six months duration is 46.4% and the early initiation of breastfeeding in India is less than 41% which are far from the desired level and interestingly breastfeeding practices vary among different regions and communities (www.unicef.org/infobycountry /india_statistics.html ; Kavitha, 2009). In India it is common practice amongst mothers to extract the initial breast milk which they think is watery and is harmful to the baby (Singh *et al*., 2012).

Immunization is a timely step for prevention of diseases in the 0-5 years of age group (Hamid *et al*., 2012). Despite India being a leading producer of vaccines, it harbors one-third of the world's unimmunized children (Vashistha *et al*., 2013). However in the past few decades' immunization coverage rates have improved sufficiently in developed countries whereas most of the developing countries are still struggling with low rates (Hamid *et al*., 2012). A study was warranted to assess the awareness and attitude of the primigravida with respect to breastfeeding and immunization practices in this part of the state.

MATERIALS AND METHODS

This cross-sectional study was conducted during April 2013-may 2014 at pramukhswami medical college and shree Krishna hospital, Karamsad, Anand, Gujarat in department of community medicine. The study was done among 150 primigravidae attending the hospitals for delivery and those who attended the outpatient department for antenatal care during the study period. The participants were selected by convenient non-random sampling. The nature and objectives of the study was explained to the participants in a language which they could clearly understand. A written informed consent was taken from the subjects before their recruitment in the study and those not willing to participate were excluded from the study. The data was collected using a pretested, semistructured questionnaire to assess the knowledge and attitude regarding breast feeding and immunization among the primigravida. The questionnaire consisted of four parts. Section-A dealt with the socio demographic profile of the participants. Modified Kuppuswamy scale was used to assess the socio-economic status. The second part B dealt with pregnancy details. The questions pertaining to knowledge and attitude regarding breast feeding constituted Section C and the last Section D assessed the knowledge and attitude of the respondents towards immunization in accordance with National Immunization Schedule.

Data analysis

Obtained data was analyzed stastatically by using graph pad prizm software by calculating p-value. P-value less than 0.05 was considered as a difference of significant.

RESULTS

This was a cross-sectional study done among 150 primigravida who came to the hospital for delivery and antenatal check-up. Demographic distribution of all participants is shown in Table 1.

Table 1. Showing Demographic detail of the study population

Characteristic of study population	Number(n)
Age of the subject (in years)	
<20	
21-25	04 (2.6)
26-30	80 (53.33)
31-35	62 (41.33)
	04 (2.6)
Religion	
Hindu	140 (93.33)
Muslim	05 (3.33)
Christian	03 (02)
Buddhist	02 (1.3)
Socio-economic status	
Upper class	
Upper middle class	07 (4.6)
Middle/ Lower middle class	22 (14.66)
Lower/ Upper lower class	42 (28)
Lower class	78 (52)
	01 (0.6)
Place	
Urban	
Rural	80 (53.33)
	70 (46.46)

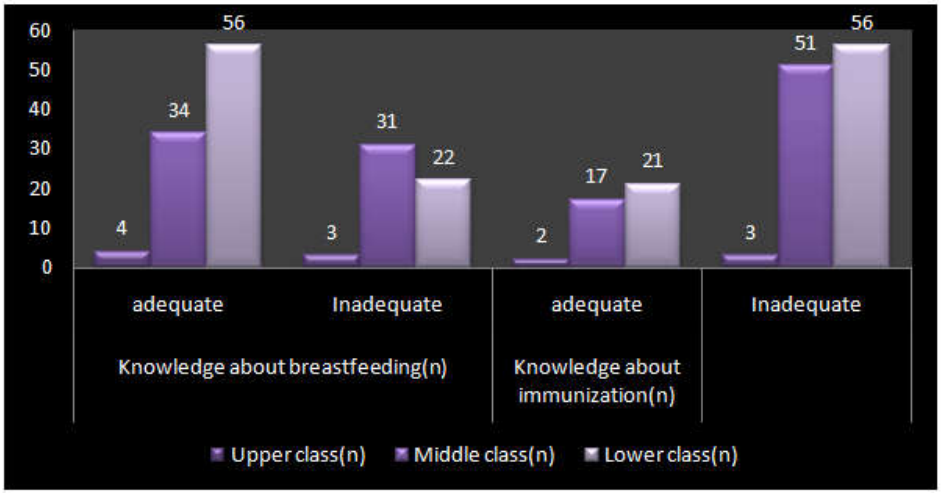
Table 2 shows the distribution of knowledge of breastfeeding and immunization among the different socio-economic groups.. Table 5 shows that out of total respondents, 80% (n=120) were aware of the fact that the colostrum should be fed to the newborn. Approximately half of the participants (n=138, 92%) knew that breast feeding decreases the risk of diarrhea in baby and almost equal number of participants. (n=124, 67%) were unaware of the fact that exclusive breast feeding is a natural method of contraception.

Table 2. Showing knowledge regarding breastfeeding and immunization in study population

		Upper class(n)	Middle class(n)	Lower class(n)
Knowledge about breastfeeding(n)	adequate	04	34	56
	Inadequate	03	31	22
Knowledge about immunization(n)	adequate	02	17	21
	Inadequate	03	51	56

Table 6 shows that 90% (n= 135) participants were aware that immunization prevents risk of disease. When asked about the tetanus immunization approximately (n=122, 81.33%) knew that it is given during pregnancy and almost similar number (n=134, 89.33 %) were aware of two doses during pregnancy. All the participants (n=150,100%) showed positive attitude towards getting their child completely immunized and almost the same number of participants (n=145, 96.66%) believed that immunization is important for their children and decided to follow the immunization schedule regularly.

As shown in Table 5, the level of adequate knowledge regarding breastfeeding was higher among the subjects in the age group of 21-25 Years compared to others. However, this difference was not found to be statistically significant (p= 0.824). The urban dwellers and lower middle class were found to have higher level of knowledge than the subjects living in rural area but the results was not statistically significant. Table 5 depicts that the level of knowledge regarding immunization was adequate among the age group of 21-25 y, among the urban dwellers and in the participants belonging to upper lower socio-economic status but the findings were found to be statistically insignificant.



Graph 1. Showing Graphical presentation of knowledge regarding breastfeeding and immunization in study population

Table 3. Showing Associations of variables with different variables (n = 150) knowledge regarding Immunization

Variables	Level of knowledge regarding Immunization		p-value
	Adequate	Inadequate	
Age of the subject	n (%)	n (%)	
<20	7 (4.83)	13 (8.66)	
21-25	43 (28.66)	26(17.33)	
26-30	18 (12)	29(19.33)	0.231
31-35	6 (4)	8(5.33)	
Place			
Urban	42 (28)	36(24)	
Rural	44 (29.33)	28(18.66)	0.523
Socio-economic status			
Upper class	05 (3.33)	03 (2)	
Middle class	52 (34.66)	27 (18)	
Lower class	39 (26)	24(16)	0.725

Table 4. Associations of variables with different variables (n = 150) Knowledge regarding breastfeeding

Variables	Level of knowledge regarding Breast feeding		p-value
	Adequate	Inadequate	
Age of the subject	n (%)	n (%)	0.824
<20			
21-25	9 (6)	6 (3.22)	
26-30	63 (42)	29(15.59)	
31-35	38 (25.33)	30(20)	
	6 (4)	5(3.33)	
Place			
Rural	54 (36)	28(18.66)	
Urban	62 (41.33)	42(28)	0.532
Socio-economic status			
Upper class	05 (3.33)	02 (1.33)	
Middle class	62 (41.33)	35 (23.33)	
Lower class	49 (32.66)	33(22)	0.235

DISCUSSION

Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease. Our study depicted that 94% respondents knew that colostrum should be fed to the child and 80% participants were aware that colostrum boosted immunity.

This was an encouraging finding and is in contrast to a similar study done in a rural area of East Delhi (Grover *et al.*, 1997) which revealed that 52% of mothers considered colostrum harmful, although all of them breast fed their babies but only 9.5% initiated within 1 hour of delivery, prelacteal feeds were given by 82% of the women, jaggery being the most common form.

Table 5. Showing Knowledge perception and attitude towards breastfeeding among the participants (n = 150)

Knowledge & perception among the participants	n (%)	Socio-economic status		
		High(n=12)	(Middle=83)	Low(n=55)
Colostrum boost child immunity	120 (80)	4(3.33)	70(5.83)	46(38.33)
Child should be fed colostrum	141 (94)	11(7.8)	80(56.73)	50(35.46)
Duration of exclusive breast feeding is 6 months	114 (76)	5(4.38)	55(39)	54(38.29)
Baby should be breast fed on demand	64 (42.66)	1(1.5)	36(56.25)	27(42.18)
Complementary feed should be started after 6 months	114 (76)	6(4.1)	62(54.38)	46(40.35)
Breastfeeding decreases the risk of diarrhea in the baby	138 (92)	6 (4)	68 (49.27)	64 (46.37)
Breastfeeding should be continued if the child falls sick	64 (42.66)	4(6.25)	34(53.12)	26(40.62)
Breastfeeding is stopped temporarily if the mother falls ill	146 (97.33)	6(4.1)	81(55.5)	59(40.4)
Breastfeeding is stopped if there is a breast infection	60 (40)	3(5)	30(50)	27(45)
Colostrum is healthy for my baby	79 (52.66)	3(3.8)	31(39.24)	45(56.96)
Breastfeeding will help me bond better with my child	146 (97.33)	9(6.16)	76(52.0)	61(41.78)
Doctors and nurses should encourage breastfeeding	136(90.66)	7(5.1)	69(50.73)	60(44.1)
Breastfeeding is old fashioned	143 (94)	7(4.89)	70(48.95)	66(46.15)
Breastfeeding has negative effect on marital relationship	3 (2)	0(0)	1(33.3)	2(66.7)
After breastfeeding baby should be made to burp	13 (8.66)	1(7.6)	3(23.07)	9(69.23)
Attitude among the participants				
Will exclusively breastfeed my baby	136 (98.4)	7 (5.14)	86 (63.23)	43 (31.61)
I will give pre lacteal food to my baby	28 (18.66)	1 (3.6)	13 (46.4)	14 (50)

Table 6. Knowledge awareness and attitude towards Immunization among primigravida (n = 150)

Knowledge & awareness among participants	n (%)	Socio-economic status		
		High(n=11)	(Middle=90)	Low(n=49)
Immunization prevents and reduces the risk of disease	135 (90)	6 (4.4)	73 (54.07)	56 (41.48)
Immunization is started at birth	122 (81.33)	5 (4.1)	64 (52.45)	53 (43.44)
TT vaccine is given during pregnancy	122 (81.33)	7 (5.7)	42 (34.42)	73 (59.83)
2 doses of TT are given during pregnancy	134 (89.33)	7 (5.2)	71 (52.98)	56 (41.79)
TT given during pregnancy protects mother and neonate	122 (81.33)	4 (3.27)	65 (53.27)	53 (43.44)
Child should be taken to nearest health centre if it shows AEFI	139 (92.66)	4 (2.87)	76 (54.67)	59 (42.44)
Feel that immunization is important for my child				
Vaccines may cause side effects , so will discontinue my child's vaccination	113 (75.33)	7 (6.2)	55 (48.67)	51 (45.13)
Attitude towards Immunization among primigravida	132 (88)	5 (3.78)	66 (50)	61 (46.21)
Will get my child completely immunized	150(100)	7(4.66)	86(57.33)	57(38)
Will follow vaccination schedule	145(96.66)	7(4.82)	106(73.10)	37(25.51)

This difference in finding between the two study settings could be attributed to high literacy rate of this place which is 94.03% of which female literacy is 91.63% (http://www.census 2011.co.in/ census/city/451-mangalore.html.) and is well above the national average. Although only 40% (n=74) knew that the baby should be fed on demand and it warrants the need of health education and baby-care by the health providers to the expecting mother. Media can play a pivotal role in enhancing the knowledge of breastfeeding in the target population. A study done in Dhaka (Afrose *et al.*, 2012) showed that majority had knowledge on duration of exclusive breastfeeding (74%) and breastfeeding (66%) and this finding was in coherence with our study which showed that more than 70% (n=134) agreed to the fact that exclusive breast feeding should be given for six month and 79.6% (n=148) knew that complementary feed should be started after six months. A cross sectional study done in Puducherry (Ekambaram *et al.*, 2010) concluded that the knowledge of mothers was inadequate in areas of initiation of breast feeding (95%), colostrum feeding (56%), exclusive breast feeding (38%) which was discordant with the findings of our study.

There is a tradition in India that pregnant female stays in her mother's residence and prefers to stay for some time after delivery and elder women and relatives are the main source of information regarding breastfeeding practices and newborn care. Although it is better to have an experienced lady to advise the new mother but sometime there are practices which are unhealthy. Prelacteal feed is one of such practice and its prevalence and practice is different in different parts of the country. Prelacteal feed is a health hazard both for the mother and the newborn baby, but it is a common practice in our country. It can lead to infection to the newborn and hampers with the bonding (http://www.who.int/nutrition/publications/ evidence_ten_step_ eng.pdf) of mother and child. According to the report of nationwide study by Breast Feeding Promotion Network of India (BPNI), the prevalence of prelacteal feed (Gupta and Gupte, 2003) was found to be 49%. Our study depicted that close to 16% (n=28) primigravida females had positive attitude for giving prelacteal feed which showed a contrasting finding from the study done in Maharashtra (20) where knowledge and attitude about prelacteal feed was 75.5% and 54% respectively.

A similar study done in Mysore (Shete and Tata, 2014) and Uttarakhand (http://www.imagine.in/Sem6-ExeSum.pdf) showed that pre-lacteal feeds were done in more than 50% and 66.03% respectively. Time of initiation and adequate duration of breastfeeding is a very important landmark in the development of the baby. Exclusive breastfeeding of the newborn is stopped many times by the mother due to various reasons. One of the reason mentioned by the mothers are breast infection. A self-reported study by the mothers done in America (Li *et al*., 2008) found that on an average 4.6 women stopped breastfeeding because of pain due to breast infection. A study in Davangere (Mallikarjuna *et al*., 2002), Karnataka showed that (23.1%) mothers had stopped breastfeeding because of problems like sore nipples, mastitis, breast engorgement and breast abscess. Mothers usually develop feeding problems like mastitis and breast engorgement due to poor positioning of the baby. Initiatives like health education by the health care provider during pre and post-delivery regarding correct positioning of the baby will help in reducing the number of mothers who discontinue breastfeeding due to breast infection.

Immunization is the main weapon by which infectious diseases can be controlled in developing country like India. India has National immunization program for prevention of infectious diseases and vaccines are provided free of cost at the government health centre. It is sad that despite these efforts diseases like Maternal and neonatal tetanus (MNT) are still rampant in our country. MNT transmits mainly during the delivery and can be prevented by two doses of tetanus toxoid (Koenig *et al*., 1998) given to the pregnant women. A questionnaire based study (Hamid *et al*., 2012) done in Kashmir showed that 100% mothers knew that immunization is beneficial and protects their children from diseases, the results shown was better with respect to our study which showed that only 74.7% (n=139) participants were aware of the advantages of immunization.

The above mentioned study (Hamid *et al*., 2012) also showed that all mothers were aware of immunization during pregnancy (TT) but 86% were unaware of its benefits. These findings were in contrast to our study which depicted that 90% primigravida were aware of the benefits of immunization and 89.33% were aware of two doses of TT given during pregnancy. Study (http://www.isical.ac.in/~wemp/Papers/ PaperNilanjanPatra.pdf) has shown that a pregnant mother staying in joint family has a positive influence on the immunization status of the mother and child.

Our study showed that all the participants wanted to get their children immunized. 99.5% felt that immunization is important for their child. Although the attitude was good among the participants, the levels can be further improved by providing awareness and health education. The current study showed that the knowledge deficit was found in all the socio-economic class of the participants, particularly in middle class.

Health education should be more focused on these groups so that their knowledge could be improved thereby helping them in proper care of their newborn. The study was done in a developed area where the female literacy is higher compared to the national average and so the results obtained cannot be generalized. This is a limitation of the study and further research in rural and suburban parts of the country is recommended.

Conclusion

Exclusive breastfeeding is ideal nutrition and sufficient to support optimal growth and development for approximately the first 6 months after birth. Breastfeeding and Immunization is an effective way of reducing child and maternal mortality. From my study conclusion is that although a major population had adequate knowledge of breast feeding and immunization but they do not follow it properly.This gap should be filed up for reducing infant and maternal mortality rate.

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