

## Current Breastfeeding Practices among Mothers Attending Immunization Clinic at MGM's Medical College, Aurangabad

### Anwaya Magare

Assistant Professor, Department of Community Medicine, JIU's IIMSR Warudi, Tq.-Badnapur, Dist- Jalna , Maharashtra 431202, India.

### Sangita Adchitre

Associate Professor, Department of Community Medicine, MGM Medical College, Aurangabad, Maharashtra 431003, India.

### Vijaykumar Jadhav

Associate Professor, Department of Community Medicine, JIU's IIMSR Warudi, Tq.-Badnapur, Dist- Jalna , Maharashtra 431202, India.

### Swati Mahajan

Associate Professor, Department of Community Medicine, MGM Medical College, Aurangabad, Maharashtra 431003, India.

---

---

### Abstract

*Introduction:* Colostrum is considered as the first vaccine which needs a "warm chain" made by mother-infant contact. There are certain barriers preventing early initiation and colostrum feeding to the newborn babies. One of the main causes of neonatal mortality and morbidity is inadequate breastfeeding, following faulty breastfeeding techniques. *Aim:* The present was conducted to study the current breast feeding practices and various sociodemographic determinants affecting it. *Material and Methods:* The present descriptive, cross-sectional study was conducted at Immunization clinic of MGM's Medical College, Aurangabad district (M.S) amongst the mother-child pair attending the immunization clinic during 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2014. A total of 325 Mothers-child pairs were included in the study. A structured questionnaire having open and closed-ended questions were used. *Results:* Prolactal was given to 85 (26.15%) newborns consisting of honey to 54 (63.52%), sugar water to 17(20%). It was given as a custom 38 (44.7%), helps digestion 34 (40%) and 22 (25.88%) for the early development of speech. 134 (41.2%) newborn received first feed within half an hour of delivery while 102 (31.4%) within one hour. Only 286(88%) mothers feed their newborns with colostrum. 100 (30.8%) mothers said that colostrum increases immunity, 66 (20.3%) said its best for baby. *Conclusion:* It was concluded that though a significant difference was found between practices and various sociodemographic factors, as a whole the practices and understanding were found to be of mediocre quality.

**Keywords:** Breastfeeding; Prolactal; Colostrum; Exclusive Breastfeeding.

---

---

### Introduction

Breastfeeding, as described by Godfrey and Lawrence (2010), is concerned with creating a new person, establishing an effective immune system,

building brain function, developing socialization, and promoting long-term health. Breastfeeding promotion is essential not only because of the nutritive benefits for mothers and infants but mainly because of the impact of the serious health risks and costs that are associated with not breastfeeding [1]. Breastfeeding has been reported as an age-old practice that has been very critical not only to the physiology, growth, and overall well-being of neonates but the physiology and health of women as well. Even when mothers were not in a position to breastfeed owing to sickness, death, e.tc other women (wet nurse) were made to breastfeed the newborn [2]. The *Lancet* Series on Child Survival

---

---

**Corresponding Author:** Sangita Adchitre, Associate Professor, Department of Community Medicine, MGM Medical College, Aurangabad, Maharashtra 431003, India.

E-mail: [anumagare@rediffmail.com](mailto:anumagare@rediffmail.com)

**Received on:** December 28, 2017

**Accepted on:** February 09, 2018

2003 underscored that exclusive breastfeeding (EBF) and continued breastfeeding with complementary feeding are major factors in child survival, growth and development [3]. Colostrum is the pale yellowish first milk produced through the early 3 days of delivery. It can be considered as the first vaccine which needs a "warm chain" made by mother-infant contact. Though in small amount Colostrum is adequate and must not be denied to the baby [4].

There are certain barriers preventing early initiation and colostrum feeding to the newborn babies like lack of knowledge about the importance of early initiation of breastfeeding and the benefits of colostrum feeding, prolonged labour and surgical deliveries, neonatal illness, bathing baby and mother after birth, lack of family support, discouragement for early initiation of breastfeeding by traditional birth attendants, decision made by family members to give other fluids are some important barriers to colostrums feeding [5]. Customs, Superstition, traditions and ignorance sometimes deprive the child of getting this benefit. One of the main causes of neonatal mortality and morbidity is inadequate breastfeeding, following faulty breastfeeding techniques, lack of health education given by the nursing personals. The practice of giving the prelacteal lead to suppression of lactation as prolactin gradually ceases and the breast stops secreting milk. Due to inadequate breastfeeding, maternal problems like breast engorgement, mastitis, breast abscess, cracked and sore nipple and subinvolution of uterus results with higher risk of postpartum haemorrhage [6].

In India, a large majority of the population has a low income and poor education, the need for breastfeeding becomes even more marked and in fact it represents the only way of giving a child a fair chance of survival and good health [3]. Low adherence to established breastfeeding guidelines is a major health concern because it becomes a catalyst for various childhood diseases and increases chances of childhood morbidity and mortality [7]. In India, 96% of children younger than 5 years of age are breastfed; the mean duration of breastfeeding is 24.7 months. An alarming 43% of children less than 3 years of age are stunted, 48% are underweight and 17% is wasted, according to the latest National Family Health Survey (NFHS; 2005–2006) [8]. Although breastfeeding is nearly universal in Maharashtra, only 53% of children under six months of age are exclusively breastfed. In addition, only 78% is put to the breast within the first day of life, including 52% who started

breastfeeding in the first hour of life, which means that many infants are deprived of the highly nutritious first milk (colostrum) and the antibodies it contains.

Breastfeeding is having so many advantages for mother and infant, but still, the standard recommended practices are not followed due to many sociodemographic factors. Hence, the researcher felt the need to assess the current breastfeeding practices and various sociodemographic determinants.

#### *AIM*

To study the current breastfeeding practices and various sociodemographic determinants affecting it.

#### *Objectives*

- To study the awareness regarding optimum breastfeeding practices as recommended by WHO.
  - To study various current breastfeeding practices.
- To study the various socio-demographic factors influencing current breastfeeding practices.

#### **Material and Methods**

##### *Research Question*

Are the recommendations given by WHO, UNICEF and Govt. of India regarding breastfeeding followed by mothers and what are the various factors affecting breastfeeding?

##### *The Hypothesis of the Study*

It was hypothesized that all the mothers are following the recommendations given by WHO, UNICEF and Govt. of India regarding breastfeeding.

##### *Research Approach*

In view of the problem selected for the study and the objectives to be accomplished, personal interview approach was considered to be appropriate.

##### *Research Design*

The research design selected for this study is descriptive, cross-sectional.

##### *Settings of the Study*

This study was conducted at Immunization clinic

of MGM's Medical College, Aurangabad district (M.S). The population for this study included the mother-child pair attending the immunization clinic of MGM's Medical College, Aurangabad coming for Immunization of child. The data collection period was from 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2014. A total of 325 Mothers-child pairs were included in the study.

*Inclusion Criteria*

Mother-Child pair with child age of more than 6 months and less than 2 years, Mothers giving consent.

*Exclusion Criteria*

Mothers having contraindication for breastfeeding, Children with breastfeeding difficulty (e.g - cleft lip/palate), Child never breastfeed.

*Ethical Consideration*

Ethical approval for the study was obtained from the Institutional Ethical Committee at MGM's MCH, Aurangabad. Informed and Written consent was obtained from all the mothers participated in the study.

*Tool Used:* A structured questionnaire having open and closed-ended questions were used.

**Results**

*The results are presented as follows:*

Table 1 shows the practice of pre-lacteal feeding along with the type of prelacteal feed. Prelacteal was given to 85 (26.15%) newborns consisting of honey to 54 (63.52%), sugar water to 17 (20%) while gold dipped water was given to 6 (7.05%) and religious water to 8 (9.41%).

Table 2 shows the various reasons for giving prelacteals, which includes as a custom 38 (44.7%), helps digestion 34(40%), 22 (25.88%) early development of speech and 6 (7.05%) cleansing of the digestive system. Prelacteal was suggested majority times by mother- in- law 53 (62.53%) mothers followed by relatives 14 (16.47%) and by mother 8 (9.41%).

Table 3 revealed that 134 (41.2%) newborn received first feed within half an hour of delivery while 102 (31.4%) within one hour. Further 24 (7.4%) received within 3 hrs and 26 (8%) within 3 days. Also, it was studied that 286 (88%) mothers feed their newborns with colostrum and 39 (12%) didn't give colostrum.

Table 4 shows that the delayed initiation of breastfeeding among 73 mothers was due to Pain

**Table 1:** Various Pre-lacteal feeds received by Newborns: (N= 85)

Pre-lacteal feed	Number of Mothers	%
Honey	54	63.52
Sugar water	17	20.00
Religious water	8	9.41
Gold dipped water	6	7.05

**Table 2:** Reasons by Mothers for giving Pre-lacteal feed: (N= 85)

Reasons for giving Pre-lacteal feed	Number of Mothers	%
Custom	38	44.70
Helps digestion	34	40.00
Early development of speech	22	25.88
Insisted by relatives	16	18.82
Cleanses digestive system	6	7.05

**Table 3:** Distribution of mothers according to the time of initiation of breastfeeding after delivery

Time of initiation of breastfeeding	Number of mothers	%
Within ½ hour	134	41.2
Within 1 hour	102	31.4
Within 3 hrs	24	7.4
3 - 24 hrs	10	3.1
>24 hrs - 3 days	16	4.9
>3 days	39	12.0
Total	325	100.0

**Table 4:** Reasons for delay in initiation of breastfeeding: (multiple responses) - (n = 89)

Reasons for delayed initiation of breastfeeding	Number of mothers	%
Pain and sedation due to LSCS	48	65.75
Inadequate milk	33	45.20
Colostrum discarded as perceived harmful	24	32.87
Baby in NICU	14	19.17
Thick milk is not good for baby	10	13.69

**Table 5:** Importance of Colostrum (n=286)

Importance of colostrum	Number of mothers	%
Increases immunity	100	30.80
Don't know	85	26.15
Best for baby	66	20.30
Good for health	40	12.30
Nutritious	30	9.20
Increases Bonding	4	1.20

**Tables 6:** Multiple Logistic Regression showing independent association of various socio demographic factors associated with Initiation of Breast Feeding by multivariate analysis

**Tables 6a:** Model summary

Model	R	R square	Adjusted R square	Standard error Estimate
1	0.448 <sup>a</sup>	0.201	0.188	0.729

**Table 6b:** Coefficients

Model	Unstandardised Coefficients		Significance
	B	Standard error	
(Constant)	2.614	0.354	0.000
Mother Education	0.113	0.163	0.020
Mothers Occupation	-0.026	0.043	0.547
Socio-Economic Status	0.105	0.151	0.038
ANC-IEC	-0.066	0.093	0.480
Mode of Delivery	-0.783	0.090	0.000

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Where Y= dependent Variable i.e Initiation of Breast Feeding

X<sub>1</sub>= Mother Education

X<sub>2</sub>= Mothers Occupation

X<sub>3</sub>= Socioeconomic class,

X<sub>4</sub>= ANC-IEC,

X<sub>5</sub>= Mode of Delivery

$$\beta_0 = 2.614, \beta_1 = 0.113, \beta_2 = -0.026, \beta_3 = 0.105, \beta_4 = -0.066, \beta_5 = -0.783$$

$$\text{So } Y = 2.614 + 0.113 X_1 - 0.026 X_2 + 0.105 X_3 - 0.066 X_4 - 0.783 X_5$$

**Tables 7:** Multiple Logistic Regression showing independent association of various socio demographic factors associated with Colostrums by multivariate analysis

**Tables 7a:** Model summary

Model	R	R square	Adjusted R square	Standard error Estimate
1	0.298	0.089	0.074	0.373

Predictors: (constant) Mother Education, occupation and socioeconomic status & ANC-IEC.

**Table 7b:** Coefficients

Model	Unstandardised Coefficients		Significance
	B	Standard error	
(Constant)	1.539	0.181	0.000
Mother Education	0.121	0.132	0.011
Socio-Economic Status	-0.095	0.126	0.017
ANC-IEC	-0.030	0.047	0.524
Mode of Delivery	-0.221	0.046	0.000

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$   
 Where Y= dependent Variable i.e Colostrums  
 $X_1$  = Mother Education  
 $X_2$  = Socioeconomic class,  
 $X_3$  = ANC-IEC,  
 $X_4$  = Mode of Delivery  
 $\beta_0 = 1.539, \beta_1 = 0.121, \beta_2 = -0.095, \beta_3 = -0.030, \beta_4 = -0.221$   
 So  $Y = 1.539 + 0.121 X_1 - 0.095 X_2 - 0.030 X_3 - 0.221 X_4$

The study showed that the majority of mothers 220 (67.7%) were housewives while 105 (32.20 %) were working mothers these findings are similar to the study by Maheswari Ekambaram et al where Majority of the mothers (67%) were housewives [3].

In the present study majority of mothers 104(32%) belonged to the socioeconomic class- III and 100 (30.7%) to class- II similar to the study by Maheswari Ekambaram et al where (61%) mothers belonged class III[4] and Mamta Parashar et al. [9].

In the present study, 100% mothers delivered in hospital nearly similar to study by K Madhu et al where 90% had hospital deliveries and 10% had home deliveries [10].

The present study showed that only 86 (26.5%) mothers received health education for breastfeeding during ANC period which is low. These finding can be compared with the study by Maheswari Ekambaram et al where the majority of the mothers (52%) did not receive any advice on breastfeeding during the antenatal period [3].

In the present study, prelacteal was given to 85 (26.15%) newborn babies consisting of honey to 54 (63.52%), sugar water to 17 (20%) while gold dipped water was given to 6 (7.05%) and religious water to 8 (9.41%). Various mis-beliefs for giving prelacteals were as a custom 38 (44.7%), helps digestion 34 (40%), 22 (25.88%) mothers gave for early development of speech and 6 (7.05%) gave for the cleansing of the digestive system. Prelacteal was suggested majority times by mother- in- law to 53 (62.53%) followed by relatives 14 (16.47%) these results are comparable with the study of Sunita Reddy where 34.67% mothers have given pre-lacteal feeds and tea and jaggery was most common [11] and Syed E. Mahmood, et al. *found that Ghutti* (water mixed with honey and herbs), boiled water, tea, and animal milk were commonly used pre-lacteal feeds [12]. Association between prelacteal feeding and mothers education ( $\chi^2- 11.622, p-0.04$ ), socioeconomic status ( $\chi^2- 34.41, p- 1.6e-7$ ) and type of family ( $\chi^2- 13.34, p-0.001$ ) was found to be statistically significant while not significant with mothers religion ( $\chi^2- 3.59, p- 0.30$ ) while in the study by Vijay L. Grover et al. as many as 80 percents of

and sedation after LSCS 48 (65.75%), due to inadequate milk secretion 33 (45.20%), colostrum was discarded 24 (32.87%), baby was in NICU 14 (19.17%) and thick milk (colostrum) is not good for baby 10 (13.69%)

Table 5 shows that various important benefits of colostrum were not known by mothers. 100 (30.8%) mothers said it Increases immunity, 66 (20.3%) said its best for baby, good for health 40 (12.3%), Nutritious 30 (9.2%), increases Bonding between mother and child 4 (1.2%) and 85 (26.15%) didn't know the importance of colostrum. This shows though colostrum is given by majority of mothers but very few benefits of colostrum are known.

### Discussion

The objectives of the study were to evaluate current breastfeeding practices, to assess the knowledge regarding breastfeeding and various socio-demographic factors determining breastfeeding.

In the present study 255 (78.5%) mother's belonged to an urban area and 70 (21.5%) mothers were from the rural area, with an average age of 27 years ( $\pm 4.21$ ). A study by Maheswari Ekambaram et al. found that out of the 100 postnatal mothers their age ranges from 18 to 35 with an average of 25.18 years ( $\pm 3.81$  years) [3].

The present study showed that majority of the mothers 317 (97.5%) were literate with 60 (18.5%) completed middle, 62 (19.1%) higher education and 24(7.4%) mothers were postgraduate these findings were similar with a study by Maheswari Ekambaram et al where the participant mothers 29% completed primary school or less while 22% were graduates [3].

mothers gave pre-lacteal feeds which was usually in the form of a preparation of jaggery or honey.

Pre-lacteal feeds in relation to the educational status of a mother was found significant ( $\chi^2=8.07$ ,  $df=3$ ,  $p < 0.05$ ) [13].

The present study revealed that only 134 (41.2%) newborns received first feed within half hour of delivery as per recommendation while 102 (31.4%) within one hour. Also, it was studied that 286(88%) mothers feed their newborns with colostrum and 39 (12%) didn't give colostrum. The delayed initiation of breastfeeding among 73 mothers was due to pain and sedation after LSCS 48 (65.75%) was also found due to inadequate milk secretion 33(45.20%), colostrum was discarded 24 (32.87%), baby in NICU 14 (19.17%) and for the belief that thick milk (colostrum) is not good for baby 10 (13.69%) .

These findings are consistent with Maren Kvalvaag [14] study where mothers who were unemployed or working in agriculture were less likely to introduce breastfeeding within one hour after birth ( $p=0.048$ ) and study of Maheswari Ekambaram et al. [3] where 92% of the mothers were aware to initiated within one hour, only 36% of the mothers had actually done so. After normal delivery 92% and after caesarean section 70% initiated within half hour. NFHS-3 survey found that only 78 percent mothers initiated within the first day of life, including 52 percent who started breastfeeding in the first hour of life [15].

The present study showed that 286 (88%) mothers gave colostrum and 100 (30.8%) mothers said it increases immunity, 66 (20.3%) said its best for baby, good for health 40 (12.3%), nutritious 30 (9.2%) while 85 (26.15%) didn't know the importance of colostrum. In the present study, it was concluded that association of colostrum feeding with mothers education ( $\chi^2 - 21.21$ ,  $p- 0.00$ ) and socioeconomic status ( $\chi^2 -8.05$ ,  $p- 0.04$ ) was found statistically significant, while the association was not significant with mothers religion ( $\chi^2 - 5.30$ ,  $p- 0.15$ ). These finding can be compared with following studies by Sunita Reddy, et al where 90.67% mothers were aware that colostrum is good for the baby [11]. Malireddy Radhika et al. found that out 214 mothers interviewed 189 mothers gave colostrum, whereas 25 mothers (11.81%) discarded colostrums [16]. In a study by Monal R. Shroff, it was revealed that several mothers squeezed their breast to express colostrum to discard with a cultural belief that the colostrum milk is stale and bad for the child, eight mothers gave glucose water during the first few days of the birth of the infant, in addition to feeding colostrum [17].

The present study showed the pattern of feeding,

where 217 (67%) mothers feed their babies during night time adequately. 52 (16%) mothers followed scheduled feeding while 273 (84%) mothers feed their children on demand. In the present study association between mother's occupation ( $\chi^2- 13.93$ ,  $p-0.00$ ) and feeding pattern was found statistically significant. Following studies were conducted on the same topic by RN Chaudhary et al. found that 15% mothers had knowledge on the importance of night feeding and 90% mothers were practising night feeds [18].

The present study found that 286 (88%) mothers had practised burping of the child after each feed. Mothers gave the following reasons that it helps digestion 187 (57.53%) and decrease colic in baby 122 (37.53%) and prevent vomiting 116(35.69%). 42 (12.69%) mothers were not aware of its importance but practised burping. These results were better than Mamta Parashar et al study in which the practice of burping after breastfeeding was not adopted by most of the mothers (74.5%) [69].

In the present study, 50 (15.4%) mothers took medicine to increase the milk production and secretion (herbal or allopathic). In a study by Desale MK et al. and according to ABM Clinical Protocol Galactogogues (Domperidone and Metoclopramide) are commonly used to increase a faltering rate of milk production, often due to the effects of maternal or infant illness and hospitalization or because of regular separation such as work [19].

Multivariate analysis was also done to see the combined effect of socio-demographic factors on breastfeeding practices. In this model, the practice of prelacteal feeding depends on mother's education, occupation, socioeconomic class & ANC-IEC which were statistically significant. (std error=0.025 & p-value= 0.407). In this model initiation of breastfeeding depends on mother's education, occupation, socioeconomic class, ANC-IEC & mode of delivery which was statistically significant. (std error=0.043 & p-value= 0.547). In this model, the practice of colostrum feeding depends on mothers education, socioeconomic class & ANC-IEC which was statistically significant.(std error=0.047 & p-value= 0.524 ).

From the above discussion, it is apparent that mother's education, occupation, socioeconomic status, type of family and mode of delivery has a significant influence on their work and breastfeeding practices. Even though health education system is present in health facilities to facilitate breastfeeding but it is not satisfactory. Therefore antenatal and postnatal (during immunization sessions) health education, support for early initiation, avoidance of prelacteal and promotion of colostrum with

exclusive breastfeeding through health professionals and community participation is the need of the hour.

### Conclusion

It can thus be concluded that though a significant difference was found between practices and various sociodemographic factors, as a whole the practices and understanding were found to be of mediocre quality. The practices deviated far from the recommendations as given by WHO, UNICEF guidelines of ANC care, initiation of breastfeeding, not to use prelacteals, colostrum feeding, exclusive breastfeeding duration, total period of breastfeeding, addition of complementary foods

### References

1. Damstra Kelli Marie. Improving breastfeeding knowledge, self-efficacy and intent through a prenatal education program (2012). Doctoral Dissertation, Paper 4. Grand Valley State University, USA.
2. Iddrisu Seidu. Exclusive breastfeeding and family influences in rural Ghana: A Qualitative Study. Thesis in Master of Public Health Malmö University Health and Society, May 2013. Sweden.
3. Maheswari Ekambaram, Vishnu Bhat B. Knowledge, attitude and practice of breastfeeding among postnatal mothers. *Curr Pediatr Res.* 2010;14(2):119-24.
4. Sharanya B. Shetty, Sudarshan Shetty K. KAP study of factors promoting breastfeeding in nursing mothers and pregnant women. *NUJHS* 2013 September;3(3):34-37.
5. Joshi S, Barakoti B, Lamsal S. Colostrum Feeding: Knowledge, Attitude and Practice in Pregnant Women in a Teaching Hospital in Nepal. *WebmedCentral MEDICAL EDUCATION* 2012;3(8):WMC003601. doi: 10.9754/journal.wmc.2012.003601
6. H.P.S. Sachdev, Shipra Mehrotra. Predictors of exclusive breastfeeding in early infancy: Operational implications. *Indian Pediatrics.* 1995 Dec;32:1287-96.
7. Henry, Beth A. Socio-cultural factors influencing breastfeeding practices among low-income women in Fortaleza- Ceará-Brazil: A Leininger's Sunrise Model Perspective. *Enfermeria Global.* June 2010.pp. 1-13.
8. Nisha Malhotra. Inadequate feeding of infant and young children in India: lack of nutritional information or food affordability?. *Public Health Nutrition.* 2012.pp.1-9.
9. Mamta Parashar, Satyavir Singh, Jugal Kishore. Breastfeeding attachment and positioning techniques, practices, and knowledge of related issues among mothers in a resettlement colony of Delhi. *ICAN: Infant, Child, & Adolescent Nutrition.* 2015 Sep;20(10):1-6.
10. K Madhu, Sriram Chowdary, and Ramesh Masthi. Breastfeeding practices and newborn care in rural areas: A descriptive cross-sectional study. *Indian J Community Med.* 2009 July;34(3):243-46.
11. Sunita Reddy. Socio-economic dimensions of breastfeeding - A study in Hyderabad. *Health and population - Perspectives and Issues* 2000;23(3):144-59.
12. Syed E. Mahmood, Anurag Srivastava, Payal Mishra. Infant feeding practices in the rural population of North India. *J Family Community Med.* 2012 May-Aug;19(2):130-35.
13. Vijay L. Grover, Pragti Chhabra, O.P. Aggarwal. Knowledge, attitude and practices of breastfeeding in a rural area of East Delhi. *Health And Population Perspectives and Issues.* 1997;20(2):49-56.
14. Maren Kvalvaag. Breastfeeding practices among infants in Bhaktapur, Nepal. Master Thesis Public Health Nutrition, 2013. Faculty of Health.
15. Sara B.Fein, Brian Roe. The effect of work status on initiation and duration of breastfeeding, *American Journal Of Public Health.* July 1998;88(7):1042-46.
16. Malireddy Radhika, Sekhar K Chandra, Deotale P.G. Knowledge, attitude, practice regarding breastfeeding practice among mothers attending Alluri Sita Rama Raju Academy of Medical Sciences, Eluru, Andhra Pradesh. *Indian Journal of Public Health Research and Development.* 2012;3(2):76-79.
17. Monal R. Shroff. Child nutritional status, feeding practices and women's autonomy in Rural Andhra Pradesh, India. A dissertation submitted to the faculty of the University of North Carolina: At Chapel Hill in partial fulfilment of the requirements for the degree of doctor of philosophy. In the Department of Nutrition of School of Public Health, Chapel Hill, 2007.
18. RN Chaudhary, T Shah, S Raja. Knowledge and practice of mothers regarding breastfeeding: A hospital-based study. *Health Renaissance Journal.* September-December 2011;9(3):194-200.
19. Singh J, Vishakantamurthy D G, Charan P M. Breastfeeding practices among lactating mothers: Problems and prospects in a Cross-Sectional study. *Int J Health Allied Sci [serial online]* 2012 [cited 2015 Dec 16];1:54-8.

## Prevalence of Cardio-vascular Disease Risk Factors among Adolescents of Urban Field Practicing Area of MIMS Medical College, Vizianagaram

### Aurobindo Samantaray

Assistant Professor, Department of Community Medicine, MIMS Medical College, Vizianagaram, Andhra Pradesh 535217, India

### Bikash Chandra Nayak

Assistant Professor, Department of Community Medicine, MIMS Medical College, Vizianagaram, Andhra Pradesh 535217, India

### N. Maitreyi

MBBS Student, MIMS Medical College, Vizianagaram, Andhra Pradesh 535217, India

### Padmaja Priyadardhini Kar

Tutor, Department of Pharmacology, MIMS Medical College, Vizianagaram, Andhra Pradesh 535217, India

---

---

### Abstract

*Background:* Cardiovascular diseases are the number one cause of death globally. Over three quarters of CVD deaths take place in low and middle income countries. The mortality varies from <10% in rural locations in less developed states to >35% in more developed urban locations. Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet and obesity, physical inactivity and harmful use of alcohol using population-wide strategies.

- Objectives:*
1. To study the demographic profile of study population.
  2. To determine the prevalence of cardio-vascular disease risk factors among study population.
  3. To suggest measures for prevention of cardio-vascular diseases.

*Methods:* This study is a community based cross-sectional study conducted from June 2017 to July 2017 involving adolescents of the age group 10 to 19 years from the Urban Field Practice area of MIMS Medical College. Data was collected in a predesigned and pretested schedule and analyzed using SPSS version 17. *Results:* Out of 328 participants, 185 (56.4%) were male and rest 143 (43.6%) were female. Among them 3.6% were hypertensive, 6.7% were Obese, tobacco intake and history of alcohol intake in last 30 days was present in 11.9% and 4.3% of male participants respectively. *Conclusion:* Many CVD risk factors are prevalent in the adolescents of the study area which can be prevented by healthy lifestyles such as healthy diet, regular exercise and personal awareness.

**Keywords:** Adolescent; Cardio-vascular Disease; Risk Factor; Urban Population.

---

---

### Introduction

Cardiovascular diseases (CVDs) are a group of disorders of the heart and blood vessels and they include: coronary heart disease, cerebrovascular

disease, peripheral arterial disease, rheumatic heart disease, congenital heart disease, deep vein thrombosis and pulmonary embolism [1].

CVDs are the number one cause of death globally. Over three quarters of CVD deaths take place in low and middle income countries [1].

According to 2010-2013 RGI data, proportionate mortality from CVD was 23% of total deaths and 32% of adult deaths in years 2010-2013 in India [2].

The mortality varies from <10% in rural locations in less developed states to >35% in more developed urban locations [3].

---

---

**Corresponding Author:** Bikash Chandra Nayak, Assistant Professor, Department of Community Medicine, MIMS Medical College, Vizianagaram, Andhra Pradesh 535217, India.  
E-mail: [bikashnayak78@gmail.com](mailto:bikashnayak78@gmail.com)

**Received on:** March 14, 2018

**Accepted on:** April 02, 2018