
Awareness Regarding Maternal And Infant Feeding Practices Among Mothers Of Medical Undergraduates

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Citation

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Abstract

Background: Health of the family especially the infants rotate around the mother so it is essential to assess the knowledge and awareness of women regarding dietary practices pregnancy, lactation and infancy.

Aim: To study knowledge and awareness regarding various aspects of feeding practices in infancy and pregnancy.

Setting: Specialised population of Chandigarh (UT)

Design: A cross-sectional community based epidemiological study.

Methods And Material: 253 mothers of medical under-graduate students.

Statistical Analysis: Number and percentage

Results: The majority of the subjects (87.8%) knew that medication should be avoided during pregnancy. Only 26.48% believed that drinking alcohol and smoking is harmful for pregnant females. Knowledge about need of extra food (78.7%) and extra iron (78.26%) during pregnancy was found to be quite high. Only 19.76% reported that extra sleep/rest is essential during pregnancy. Only 18.97% respondents had information about the importance of colostrum.

Conclusion: Knowledge regarding various aspects of feeding practices during pregnancy and in infants like avoidance of smoking and alcohol, importance of rest in pregnancy and importance of colostrum in infants was lacking in the studied subjects despite high literacy status. Hence the provision of health education for all females is a prerequisite for reduction of morbidity and mortality amongst vulnerable groups of mothers and infants.

INTRODUCTION

Health and nutritional status of the population of a nation is an important indicator of development of the country. Under nutrition is an important factor responsible for high infant, maternal mortality rate and for low birth weight. Appropriate nutritional practices on the other hand play a pivotal role in determining optimal health and development of infants.¹

The health and nutritional status of millions of infants which influence their subsequent growth and development throughout childhood is determined by the pattern of feeding practices during infancy.² In the light of current scientific knowledge, there is a consensus about human milk as being the only food product that is capable of adequately attending

to all physiological requirements of infants metabolism during the first six months of their life.³

India has one of the highest incidences of malnutrition in the developing world today, caused by a combination of lack of information and awareness, poverty as well as absence of adequate and balanced diet. Abandonment of breast-feeding is a significant factor in the death of around 3000-4000 infants everyday from diarrhoea and respiratory infection.⁴

Since the inter-relationship between baby and the mother is well known, there is no better time to begin the care of the baby than while it is still a foetus. Various maternal factors such as maternal age, parity, spacing between children, her health and nutritional status and care during pregnancy all

have effect on growth and well being of foetus. Various studies shows that half to 2/3 pregnant women in poor community in India are anaemic and 1/3rd weigh <40 kg in last trimester of pregnancy leading to 1/3rd babies weighing <2.5 kg.₅ In India Maternal & Mortality Rate (MMR) is 304 according to Sample registration System (SRS). This may be due to under nutrition, lack of access to health care facilities as well as lack of awareness regarding healthy nutritional practices and immunisation.

Adequate knowledge regarding various aspects of feeding practices in pregnancy and among infants is very essential especially among females as they are going to influence the feeding practices of these vulnerable groups as grandmothers and mother in law. This study was conceptualized and conducted among the mother of undergraduate students by their own trained wards so as to assess the their knowledge, attitude and practices regarding dietary practices during pregnancy, lactation, and infancy

MATERIAL AND METHODS

Study setting- The study was carried out in urban population of Chandigarh city. The city has population of 9,00,914 with male to female ration of 1.8:1. The majority of the population belongs to middle and upper class. There is one Govt. Medical College, with 90% of undergraduates from the city itself.

Study Design- A cross sectional community based epidemiological study was done.

Subjects & Sample- Mothers of 253 medical undergraduates participated in the study.

Methodology- Data was collected from 6 batches of medical undergraduates with the strength of 50 every year i.e from 1999-2004. With these numbers of students from each batch total sample size stood 300 but 40 students could not be included as 28 forms were incomplete, 11 students left MBBS course in between due to various reasons and mothers of 8 students were not alive.

As a part of their training, they were posted in Department of Community Medicine, Government. Medical College, Chandigarh for a month during clinical posting. Besides various other teaching and training activities during their posting, they have to study families allotted to them. One family was allotted to each student from the rural community and another family unit was their own family. The data was collected on the pre-designed, pre-tested and

structured proforma under supervision of faculty members from the Department of Community Medicine. The data collected was verified and checked randomly. The questionnaire included multiple choice questions regarding awareness on feeding practices during pregnancy, feeding restrictions imposed during pregnancy and feeding practices in children. The socio-economic status of the family was assessed by revised Kuppuswami scale. (It includes occupation and education of the head of the family and total monthly income of the family from all sources)

RESULTS

Out of 260 respondents, 193 (74.3%) were in the age group of 45-54 years and 50 (19.2%) were less than 45 years old. Majority of the respondents' i.e 72.3% belongs to middle class. While 72 (27.7%) were in the upper class, 142 (54.6%) respondents were postgraduates whereas only 9 (35%) were educated below higher secondary.

Figure 1

Table 1: Sociodemographic Characteristics Of Subjects (n=253)

Demographic Characteristics	No. (%)
Age	
<35	00 (00)
35-44	50 (19.2)
45-54	193 (74.2)
>55	17 (6.5)
Socioeconomic status	
Upper	72 (27.7)
Middle	188 (72.3)
Educational status	
Illiterate	00 (00)
Below high school	09 (3.5)
Senior secondary	13 (5.0)
Graduate	96 (36.9)
Post-graduate	142(54.6)

Out of all the respondents, majority 222 (87.8%) were of the opinion that drugs during pregnancy without medical advice should be avoided. Only one third of the respondents' i.e. 26.48% thought that smoking and Alcohol intake should be restricted during pregnancy. 31 (12.25%) were of the opinion that restriction on non-vegetarian food should be there in pregnancy while only 5.9% thought that extra food

than daily average intake is not required.

Figure 2

Table 2: Feeding Restrictions Imposed During Pregnancy (n=253)

Restrictions	No.(%)
Avoid drugs without medical advice	222 (87.75)
Avoid smoking or taking alcohol	67 (26.48)
Avoid Non Vegetarian food	31 (12.25)
Avoid eating extra food than daily average intake	15 (5.93)

Two thirds of the respondents i.e. 199 (78.7%) were of the opinion that pregnant females need extra food and 188 (78.26%) thought that extra iron is required during pregnancy. According to 50 (19.76%) participants, pregnant females required more sleep/rest while few respondents i.e. 14(5.53%) considered that spicy food should be taken during pregnancy

Figure 3

Table 3: Feeding Practices In Pregnancy (n=253)

Practices	No. (%)
Extra food	199 (78.66)
Extra iron	198 (78.26)
More sleep/rest	50 (19.76)
Consume spicy food	14 (5.53)

About feeding practices in children, most of the participants i.e. 172(67.98%) believed that breast feeding is essential for infants while only 48 (18.97%) knew that colostrums is essential for infants. Top (any feed other than breast milk) feeding was considered to be suitable for infants by 84 (33.2%). 45 (17.79%) were of the opinion that milk dilution should e practised.

Figure 4

Table 4: Feeding Practices In Children(n=253)

Practices	No.(%)
Breast feeding	172 (67.98)
Top feeding	84 (33.20)
Colostrum	48 (18.98)
Milk dilution	45 (17.79)

DISCUSSION

This study was conducted amongst the mothers of undergraduate MEDICAL students with the objective to judge their knowledge regarding the feeding practices during pregnancy and during infancy.

12.26% of the study subjects believed that non-vegetarian food should be avoided during pregnancy as compared to 37% in the study by Puri S₆. Mehtab S Bamji₁ reported that energy intake from animal source among Indian females is very low i.e. 7.4%, only. Most of the drugs are teratogenic. Majority (87.75%) of the participants of the present study had the knowledge about the same. Almost all the participants believed that extra food than daily average intake is required during pregnancy. Micro Studies have indicated that women do not get adequate nutrition during pregnancy and lactation The dietary intake of women in the lower economic group is deficient by 500 to 600 calories.⁷ Mean calorie intake was found to be 40% of the Recommended Daily Allowance (RDA) in other studies.⁸ The use of substances like tobacco, alcohol etc. during pregnancy has bad implication on the health of both mother and the foetus. Only one fourth of study subjects thought that a restriction on smoking and drinking alcohol during pregnancy is essential. It is seen that 25% of white females and 23% of black females smoked in pregnancy (Kleinman and Kopstelin, 1987), .Smoking was found in 33% and 46% of pregnant females in Sweden and Norway respectively.¹⁰ Alcohol was consumed by 10.1% of American women in the year 2000 during pregnancy.⁹

About the feeding practices, four quarters (78.66%) of the participants thought that extra food is required during pregnancy. The special foods preferred by mothers during pregnancy and lactation were mainly ghee and milk products irrespective of their socio – economic conditions.¹¹ But other studies^{8,12} shows inadequate intake of food during pregnancy and the intake does not increase with advancement of

pregnancy. Even National Nutrition Board (NNB) has reported that food consumption by pregnant females is below the recommended amount.⁽¹³⁾ In a study conducted in Indore, mothers narrated inadequate food and lack of rest during antenatal period as the cause of low birth weight babies.¹⁴ Despite a highly educated group, only 1/5th of the respondents in the present study thought that extra sleep/rest is required during pregnancy.

78.26% of the study subjects opined that extra iron intake during pregnancy is required which is much higher than the findings that only 30% of the pregnant females received iron supplements in Rajasthan.¹⁵ In Indore, it was seen that 86% received Iron and Folic Acid (IFA) but only 11.5% actually consumed it for 3 months.¹⁴ Consumption of spicy food during pregnancy was not considered important by almost all study subjects.

In the present study only 18.98% knew the importance of colostrums which is quite less as compared to the findings of other studies.^{2,4,16} 67.98% of the mothers in present study thought that exclusive breast feeding is beneficial for infants which is much higher than seen in other studies^{16,17}. Top feeding was favoured by 33.2% of the study subjects which is comparable to the findings of Gupta Arun¹⁸ where 23% gave bottle feeding. In the study by Bhan¹⁷ 3% gave only top feeding while 88% combined breast feeding with top feeding. 17.79% of the mothers thought that milk dilution can be practised for feeding infants.

CONCLUSION

Nutrition education to women is a good starting point for the introduction of better dietary habits. A need exists for establishing a nutrition education activity in maternal AND child health centers in order to teach women better methods of feeding themselves during pregnancy and lactation and their infants before and throughout the weaning period. Knowledge about nutrition should be largely diffused to the public through the mass media.

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References

1. Bamji MS: Early nutrition and health- Indian perspective. *Current science*; 2003. 85(8),1137-42
2. Choudhury RK: Breast feeding practices among Santals and Non-Santals of Orissa. *Anthropologist* 2005;7(4), 283-87.
3. World Health Organization. Global strategy on infant and young child feeding. Geneva: World Health Organization; 2001
4. Rao SB, Ajmera SK et al: Impact of baby friendly hospital on the knowledge, attitude and practices of breast feeding. *Bombay hospital journal* 2006;48(2)
5. Ghosh S: Reaching the Under- Threes in ICDS. *Nutrition foundation of India Jan.* 1989
6. Puri S, Kapoor S: Taboos and myths associated with women's health among rural and urban adolescent girls in Punjab. *IJCM* 2006, 31(4). 10-12
7. <http://population.commissio.nic.in/unmet-women.htm>. accessed on 28.02.08 at 11.00 am
8. Garg A, Kashyap: Effect of Counseling on Nutritional Status During Pregnancy. *Ind J of Paed* 2006;73(3),687-91
9. <http://books.nap.edu/catalog/1451.html>. Accessed on 28.02.08 at 11.15 am.
10. Hauj K: Smoking among peggant women. *Norsk Epidemiology* 1995;5(2),155-160
11. Yadav RJ, Singh RP: Knowledge, attitude and practices of mothers about breastfeeding in Bihar. *Indian Journal of Community Medicine*; 29(3),130-31.
12. Kashyap S. Maternal work and nutrition profile of the pregnant and nursing mothers and their offspring among the quarry workers in Delhi-a prospective study. Unpublished Doctorate Dissertation. Department of Foods and Nutrition, 13. National Nutrition Monitoring Bureau (NNMB): Report of second repeat surveys (1996-97). Hyderabad National Institute of Nutrition ICMR: 1999
14. Maternal and newborn care practices in urban poor of Indore, India- Gaps, reasons and potential programme options. USAID, Aug 2007
15. Goyal, R.S and Khanna, Anoop: Reproductive health of adolescents in Rajasthan : a situational analysis. *Indian Institute of Health Management Research, Jaipur.* : IIHMR. 2005. 35.
16. Singh PMP, Bhalwar R: Breast feeding practices among families of armed forces personnel in a large cantonment. *MJAFI* ;2007 63(2).134-36
17. Bhan NB, Mahajan P, Bhadwal B: A comparative study of breast feeding practices among Kashmiri Pundits and Dogras. *Anthropologist*,2004,6(4),261-63
18. Gupta A, Gupta YP: Status of infant and young child feeding in 49 districts (98 blocks) of India 2003: a national report of the qualitative study . Breast feeding promotion network of India (BPNI). New Delhi: BPNI,42

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