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Table of Contents

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Original Research Article

Prevalence of protein energy malnutrition in children between one to five years of age in a tribal area Parol, Thane district

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Date of Submission: 15.10.2015 **Date of Acceptance: 01.11.2015**

Abstract

Title: Prevalence of protein energy malnutrition in children between one to five years of age in a tribal area Parol, Thane district.

Background: Nutrition in children is considered as one of the foundation not only for good health and freedom from disease, but also for normal growth and development. Nutrition has a profound and largely incalculable impact on human health. Preschool children are most vulnerable to the effect of undernutrition because of rapid growth and thus their nutritional status is considered to be sensitive indicator of community health.

Objectives:

1. To study the socioeconomic and demographic profile of children between one to five years of age
2. To study the prevalence of protein energy malnutrition in children between one to five years of age.

Materials and Methodology

The present study was carried out in a tribal area, Parol, Thane district. The study population comprised of children in the age group of 1-5 years. Study design: Cross sectional Descriptive epidemiological study.

Results: In our study maximum number of children 26.83% were in the age group of 2-3 years. 97.33% were Hindus , 45.33% of the mothers were illiterate, 10.67% of the fathers were illiterate, 51.11% of children belong to nuclear families. 30.22% were given exclusive breastfeeding for 6months.

Conclusion

In our study, the number of male children was slightly higher than the female children. Faulty feeding practices were commonly observed in this area and most of the children‘s diet were not adequate for calories and proteins as per ICMR guidelines.

Key words: protein energy malnutrition, tribal area, indices of nutritional status

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Introduction

Nutrition in children is considered as one of the foundation not only for good health and freedom from disease, but also for normal growth and development. In the global campaign of Health for All, promotion of proper nutrition was one of the eight elements of Primary Health Care.[1] Nutrition has a profound and largely incalculable impact on human health.[2]

In the millennium declaration of September 2000, member states of the United Nations made a passionate commitment to address the crippling and multiplying problems in many developing areas of the world. Among this, the first goal is to eradicate extreme poverty, which is measured by the prevalence of underweight among the children. The target is to halve the burden of undernutrition. The

next goal with regards to children is to achieve two third reduction in underfive mortality and infant mortality by 2015.[3] Malnutrition is called an ―Invisible Emergency because, much like an iceberg, its deadly menace lies mostly hidden from view**.** Preschool children are most vulnerable to the effect of undernutrition because of rapid growth and thus their nutritional status is considered to be sensitive indicator of community health.[4] In India, around 46 per cent of all children below the age of three are too small for their age, 47 per cent are underweight and at least 16 per cent are wasted. Many of these children are severely malnourished**.**[5] Malnutrition in children is not affected by food intake alone; it is also influenced by access to health services, quality of care for the child and pregnant mother as well as good hygiene practices. Children are at greater risk of dying before age five if they are born in rural areas, poor households, or to a mother denied of basic education. More than half of under-five child deaths are due to diseases that are preventable and treatable through simple, affordable interventions. Strengthening health systems to provide such interventions to all children will save many young lives. Malnourished children, particularly those with severe acute malnutrition, have a higher risk of death from common childhood illness such as diarrhoea, pneumonia, and malaria.[6] Malnutrition lowers the cell mediated immunity and thereby increases the susceptibility for the diseases.[7] In developing nations, there is a significant risk of malnutrition and infection among children who are between first and fifth birthday, particularly those in the process of being weaned from breast milk.[2]

Objectives:

1. To study the socioeconomic and demographic profile of children between one to five years of age
2. To study the prevalence of protein energy malnutrition in children between one to five years of age.

Materials and Methodology

The present study was carried out from June 2012 to May 2013 in a tribal area, Parol, Thane district which has population of 20795. The study population comprised of children in the age group of 1-5 years.

Study design: Cross sectional Descriptive epidemiological study.

Inclusion criteria: a) 1-5 year children ;b) Residing at least for 6 month in study area. c)Parents willing for study.

Exclusion criteria:a) Those children who are seriously ill; b)Whose parents are not present during the visit;c)Parents who are not willing for study.

Sample size is calculated considering the underweight status of children between 1-5 years of age. According to a study conducted by I.I.Meshram, N.Ariappa, N.Balakrishna[8], the prevalence of underweight was 64%. The sample size is calculated using the formula n=4pq/l2. The calculated sample size is 225, 10% of total population are underfive population[8]. So the underfive population is 10% of 20795 i.e 2079

n=y X 225/2079

Sampling Technique: According to population proportion sample size method, the sample was taken from individual subcenter by stratified random sampling method.

Methodology

Consent was taken from parents or family head. Data was collected using preformed questionnaire, which includes general information, anthropometry and socio-demographic factors. The age of child was confirmed either by parents or anganwadi worker.

Anthropometric measurement like weight, was recorded with minimum clothes, using weighing machine, the height was recorded by the non-stretchable measuring tape. Head circumference and chest circumference was measured using a narrow, flexible and non-stretchable tape. Mid upper arm circumference was measured to the nearest millimeter at exact midpoint of the left arm using flexible and non-stretchable tape.

The indices of nutritional status like weight for age, height for age and weight for height was compared with the WHO growth charts for particular age and sex. Three commonly used under nutrition indicators namely stunting, underweight and wasting were used to evaluate the growth status of children. The data was compiled and analyzed using statistical package for social sciences software for appropriate statistical tests.

Ethical clearance: The study was approved by ethical committee of T.N. medical college, Mumbai.

Results

Table 1: Distribution of children according to Age and Sex:

Age (In months)	Males		Females		Total	
	No.	%	No.	%	No.	%
13-24	31	25.20	27	26.47	58	25.84
25-36	25	20.33	34	33.33	59	26.83
37-48	33	26.83	19	18.63	52	22.73
49-60	34	27.64	22	21.57	56	24.61
Total	123	100.00	102	100.00	225	100.00

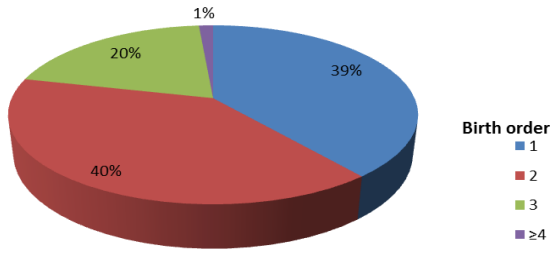
In the present study comprising of 225 children aged 1-5 years, maximum number of children (26.83%) were in the age group of 2-3 years.

Table 2: Distribution of children according to sociodemographic factors:

Sociodemographic factors	Children	
Religion	**No.**	**Percentage**
Hindu	219	97.33
Muslim	06	2.67
Total	225	100.00
Education of mothers		
Illiterate	102	45.33
Primary	113	50.22
Secondary	10	4.44
Higher secondary	0	0.00
College/Degree	0	0.00
Total	225	100.00
Education of father		
Illiterate	24	10.67
Primary	94	41.78
Secondary	85	37.78
Higher secondary	14	6.22
College/Degree	8	3.55
Total	225	100.00
Type of family		
Nuclear	115	51.11
Joint	84	37.33
Three generation	26	11.56
Total	225	100.00

Out 225 children, 97.33% were Hindus , 45.33% of the mothers were illiterate, 10.67% of the fathers were illiterate, 51.11% of children belong to nuclear families.

Fig 1: Distribution of children according to birth order



In context to birth order, 39.56% were of birth order two, 39.11% were of birth order one, 20% were of birth order three and 1.33% were of birth order 4 or more.

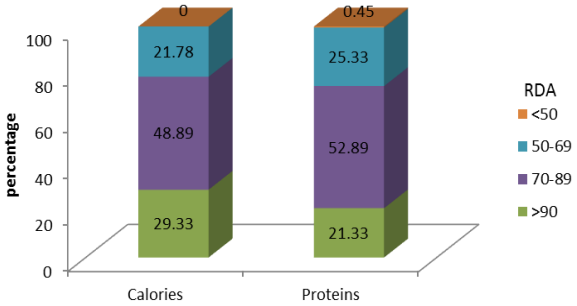
Out of 225 children, 44.89% were given prelacteal feeds, 55.11% did not receive any prelacteal feeds.

Table 3: Distribution according to exclusive breast feeding:

Exclusive breast feeding for 6months	Number	Percent
Given	68	30.22
Not given	157	69.78
Total	225	100.00

In the present study, out of 225 children, 68(30.22%) were given exclusive breastfeeding for 6months.

Fig 2: Distribution of children according to dietary adequacy



In the present study 29.33%, 48.89%, 21.78% had RDA for Calories >90%,70-89%,50-69% respectively; none of the child had <50% RDA for Calories and 21.33%, 52.89%, 25.33% had RDA for Proteins >90%,70-89%,50-69% respectively and only 1 child(0.45%) had protein deficit of <50 RDA.

Table 4: Distribution of children according to age and weight:

Age (In months)	Males		Females	
	Children Observed	Weight (In Kg±SD)	Children Observed	Weight (In Kg±SD)
13-24	31	8.54±1.07	27	8.46±0.94
25-36	25	9.71±1.49	34	8.66±2.08
37-48	33	11.37±1.93	19	10.84±1.78
49-60	34	12.87±1.63	22	13.44±1.87
13-60	123	10.74±2.29	102	10.04±2.61

The mean weight of male children in the 13-24 months,25-36 months,37-48 months and 49-60 months age group are 8.54±1.07 kg, 9.71±1.49kg, 11.37±1.93kg, 12.87±1.63kg respectively.
The mean weight of female children in the 13-24 months,25-36 months,37-48 months and 49-60 months age group are 8.46±0.94kg, 8.66±2.08kg, 10.84±1.78kg, 13.44±1.87kg respectively.

Table 5: Distribution of children according to height:

Age (In months)	Males		Females	
	Children Observed	Height (In Cm±SD)	Children Observed	Height (In Cm±SD)
13-24	31	75.81±1.62	27	76.04±2.80
25-36	25	83.32±3.21	34	79.62±5.51
37-48	33	89.42±4.23	19	88.47±3.85
49-60	34	96.06±3.84	22	99.27±3.18
13-60	123	86.59±8.38	102	84.56±9.71

The mean height of male children in the 13-24 months,25-36 months,37-48 months and 49-60 months age group are 75.81±1.62cm, 83.32±3.21cm, 89.42±4.23cm, 96.06±3.84cm respectively.
The mean height of female children in the 13-24 months,25-36 months,37-48 months and 49-60 months age group are 76.04±2.80cm, 79.62±5.51cm, 88.47±3.85cm, 99.27±3.18cm respectively.

Table 6: Distribution of children according to WHO classification of malnutrition:

Indices	Normal		Undernourished		Severely undernourished		Total	
	No.	%	No.	%	No.	%	No.	%
Weight for Age (underweight)	107	47.55	87	38.67	31	13.78	225	100
Height for Age (stunting)	133	59.11	78	34.67	14	6.22	225	100
Weight for Height (wasting)	114	50.67	81	36	30	13.33	225	100

Of the 225 children studied; 38.67%, 34.67%, 36% were underweight, stunted and wasted respectively and 13.78%, 6.22% and 13.33% were severely underweight, stunted and wasted respectively.

Table 7: Distribution of children according to Mid Upper Arm Circumference.

Mid Upper Arm circumference(in cm)	Number	Percentage
>13.5	146	64.89
12.5-13.5	58	25.78
<12.5	21	9.33
Total	225	100.00

Based on mid upper arm circumference, mild malnutrition was present in 25.78% children and severe malnutrition was present in 9.33% children.

Discussion

30.22% were given exclusive breast feeding for 6 months, which is less, when compared with the NFHS data (53% of children in Maharashtra are exclusively breastfed)[5]. This may be due to the variation in the social and cultural practices in that area.
The study undertaken in Ghaziabad revealed that the children's diet was adequate for proteins but

was deficient in energy[9]. In another study conducted in a rural area near Mysore, Karnataka revealed that the nutrient intake was grossly inadequate.[10] An ICMR study has observed that energy intakes are about 70% of RDA in children of 1-6 years age group, while the protein intake was found to be adequate.[11]

The mean weight of male and female children in our study was similar to a study conducted by V.G.Rao, Raju Yadav, C.K.Dolla, in tribal preschool children near Jabalpur.[12] The mean height of male and female children in our study was similar to a study conducted by V.G.Rao, Raju Yadav, C.K.Dolla, in tribal preschool children near Jabalpur.[12] In a study conducted by Kumar D, Goel NK, Mittal PC, Mishra P, 36.4% were underweight, 51.6% were stunted and 10.6% were wasted.[13] In a study conducted by Bisai S, Bose K, Ghosh A, the prevalence of underweight, stunting and wasting was 33.9%, 26.1% and 19.4 %, respectively. Of these, 9.1%, 9.7% and 3.6% children were found to be severely underweight, stunted and wasted.[14] The study conducted by Regional Medical Research Center for Tribals(ICMR), Jabalpur, India revealed that 61.6% preschool were underweight, 51.6% were stunted and 32.9% were wasted.[12] According to NFHS 3 the total prevalence of underweight, stunting and wasting in Maharashtra was 33%, 44%,17% respectively.[5] These were comparable with our study findings.

In a study conducted in a rural area in Faridabad district, malnutrition was detected in 27.2% of the children.[15]

Acute malnutrition was more common in 1-3years age group (60.36%), compared to 3-5 years age group (39.64%), compared to a study conducted by Chakraborty S where the prevalence of PEM was found to be significantly higher in the age group of 1-3 years(80.9%) as compared to other age groups.[16]

Critical age at which undernutrition starts is around 6 months and growth flatering is at peak in second year of life. Upto 6 months, the babies thrive well on breast milk which is adequate for normal growth and development, thereafter the baby needs supplementary feeds in addition to breastfeeding. Most mothers delay the weaning(giving complementary or supplementary foods) in young children and secondly the quantities of foods given are quite inadequate for normal growth and development. Cereals are deliberately not encouraged or are given in very small quantities. In a study conducted by, Patel KA et al, 51.4% were males, majority in the age group of 2-3 years, of which 63% children were malnourished, majority in Grade I malnutrition. Out of the total females, 72% were malnourished.[17]

Dey I, Chaudhuri RN found that 55.9%, 51.4% and 42.3% of the girls were underweight, stunted and wasted respectively compared to 46.6%, 40.5% and 35.3% of the boys.[18] Harishankar et al, prevalence of malnutrition was found to be more in female children (53.01%) as compared to males (45.85%). Severe grade of malnutrition was also prevalent in females (2.19%) as compared to their male counterparts.[19] Bhalani K D, more girls (68.2%) were malnourished than boys (58%)[20].

Usually prevalence of severe malnutrition is much more in young girls compared to young boys below 5 years of age. This is due to differential child rearing practices observed including feeding and health care seeking behavior.

In a study conducted by Kriti A Patel,[17] the findings related to Acute Malnutrition and the type of family was similar.

In studies conducted by Chakraborthy S, the overall PEM prevalence was seen to be higher among the children of illiterate mothers.[16] A Mittal, J Singh, SK Ahluwalia, mother's education seemed to play a protective role against child's malnutrition. Prevalence was the highest where mothers were illiterate (60.9%) v/s value of 21.2% where mother had education more than high school.[21]

In studies conducted by Harishankar, the prevalence of all grades of malnutrition increases with birth order, 43.5% in birth order three and above 26.9% in birth order two and 20.38% in birth order one.[19]

In studies conducted by Chakraborty S et al, the proportions of underweight among children who had exclusive breastfed for less than 6 months(64.6%) were significantly higher ($p<0.01$) than those who were breastfed more than 6 months(35.4%).[16]

Suvra Pathi et al, it was observed that malnutrition was higher in those infants who were partially breastfed and topfed(71.4%) when compared with the infants who were exclusively brestfed(21.21%).[22]

Continuing feeding during illness and more diet during convalescence period is essential for catch up growth. Adequate eating during illness reduces the severity of illness and gives energy to the body. In a study done by Harishankar et al, the prevalence of malnutrition was found to be 52.2%, 35.7% and 11.9% in children belonging to low, middle socioeconomic status group respectively[19].

In study conducted by, Swami, H. M.et al in Chandigarh, where, with increase in family size malnutrition also increased.[23]

conclusion

In our study, the number of male children was slightly higher than the female children. Majority of the children were Hindus. The literacy rate was higher in fathers of under-five children than mothers. The main occupation among fathers of under-five children was labourers and most mothers were homemaker. Maximum number of children belonged to nuclear families and socio-economic classes IV and V. Faulty feeding practices were commonly observed in this area and most of the children's diet were not adequate for calories and proteins as per ICMR guidelines. However, calorie consumption was better than protein consumption. The mean height and weight of the children was lesser than the WHO reference data . Nearly half of the children were underweight, nearly two fifth were stunted and two fifth of the children were wasted. Mother's literacy had an impact on the nutritional status of the children. Lower socio-economic condition, higher birth order, lower birth interval and faulty feeding habits were found to have an adverse effect on the nutritional status of the children. On the other hand higher socio-economic status, lower birth order, higher birth interval and proper feeding habits had a beneficial effect in protecting children from malnutrition.

Limitations

1. Dietary intake was assessed by 24-hour recall method and application of better and elaborate methods of dietary intake assessment was beyond the scope of the study.

Source of support:

Nil

Conflict of interest:

Nil

Acknowledgment:

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Original Research Article

Study on health seeking behaviour and compliance to treatment of women doctors

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Date of Submission: 19.09.2015 **Date of Acceptance: 01.11.2015**

Abstract

Objectives:

1. To study the health seeking behaviour and compliance to treatment of women doctors
2. To study factors influencing healthcare-seeking behaviour of women doctors.
2. To study the factors influencing the compliance of treatment of women doctors

Study Design: cross sectional study.

Setting and Participants: A cross-sectional survey was carried out among women doctors at the S.V. Medical College attached teaching hospitals, chittoor district (A.P), India. A structured questionnaire was used to get information from Women doctors on their self-reported health seeking habits. All women doctors between 25-50 years age were supplied with questionnaire but only 160 responded. Data were collected during March, to June 2015.

Main Outcome Measures: Doctors self-treatment attitudes and compliance to treatment.

Results: 160 doctors responded. 87.5% believed that acute conditions can be treated with self treatment. The major factors considered by the respondents in choosing their consultant were the specialty of the consultant,(32.2%); the doctor being in the same unit with them (48.5%), and friendship 26.6%. 60% of women doctors not completed treatment because of 1.improvement of the condition 2.due to side effects (13%)3.other causes (26.25%). Only 40%of women doctors completed treatment. 62% of participants graded themselves as bad patients, and 5% of graded themselves as very bad patients and only 32% of doctors graded them as good patients.

Conclusion: High rates of self-prescribing practices and low rates compliances of women doctors warrant in-depth studies in this area. Role of gender in this aspect needs further exploration.

Key words: women doctors, health seeking behaviour, self-prescription, treatment compliance.

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Introduction

Health or care seeking behaviour has been defined as any action undertaken by individuals who perceive them to have a health problem or to be ill for the purpose of finding an appropriate remedy. [1] There has been two broad frameworks for looking at health seeking behaviour. The first is the pathway model, which describes the steps of the process from recognition of symptoms to the use of particular health facilities. This method attempts to identify a logical sequence of steps, and looks at social and cultural factors which affect this sequence. The second is the determinants model, based on a more bio-medical and quantitative approach, where the focus is on outlining a set of determinants which are

associated with the choice of different kinds of health service. One of the most widely applied is the 'health belief model'. Sheer an and Abraham (1996) categorize the range of behaviours that have been examined using health belief models into three broad areas: preventive health behaviours, sick role behaviours and clinic use.[2] Thus health seeking behaviour may not be explained by a single theory.

Doctors who have the responsibility of caring for the sick also need to be cared for self when they suffer from illness. According to the many studies the medical community has developed a culture in which working through illness and self-treating is the norm. [3,4]. The present study intends to examine the sick role behaviour of the women doctors. Doctors are known to treat and investigate themselves, this behaviour is believed to start by the time individuals become junior doctors.[5] It is also believed that doctors have difficulty in adopting the patient role, doubt their GP's opinion and feel inhibited about consulting a colleague.[6]Students, like qualified doctors, have recognized levels of health and psychological problems. [7]

Although doctors have lower overall rates of mortality than the general population, they are at higher risk of certain physical and psychological problems .[8,9] the impact of these illnesses may be exacerbated by a culture that discourages admission of health vulnerabilities and seeking help. the physicians' proportionate mortality rate for suicide was more than 1 ½ times the rate for other male professionals .[10] Personal testimonies of doctors who have experienced major illness suggest that the "pull yourself together and just get on with it" mentality is a significant barrier to seeking appropriate treatment.[11] A study at New South Wales found that 26% of doctors experienced a condition warranting medical consultation, but felt inhibited about consulting a specialist When doctors do seek external care, evidence suggests they receive a lesser quality of care than lay patients[12, 13].

Self-treatment for doctors includes diagnosing and treating one's own illness and prescribing for oneself. Self-treatment is inappropriate because of its lack of objectivity. More than a third of the medical students felt that it was alright to self investigate and take self treatment. James H et al. [14] also reported similar attitudes favouring self medication in their study in Bahrain. It has been suggested that self-management of illness by doctors may be a behaviour that is learnt very early on in their careers by medical students and is increased with availability and increasing clinical accessibility.[15]

Health seeking habits of especially women doctors have been found to be poor in most developed countries. Utilization of health services by women doctors in developing countries is not known. It has also been shown that information needs, information seeking, and source preference are consistent between rural and non rural primary care practitioners, although rural women doctors have noted a lack of access to some sources.[16] Dorsch and others who have studied rural health professionals' information needs have described similar problems with access to information, noting such barriers as: lack of time, isolation, inadequate library access, lack of equipment, lack of skills, costs, and inadequate Internet infrastructure.[17,18,19] Misdiagnosis/late diagnosis is the sequelae of self treatment. Guidelines exist regarding doctor self prescribing and caring for their immediate family members.[20] Notwithstanding these, women doctors world-wide do not formally utilize health services and thus self medicate when they take ill. Between 52% and 99% of Women doctors in the western world had been taking self prescribed medications .[21,22,23] A sex difference in relation to consultation with a doctor was also evident. Female doctors consult other physicians more frequently than male doctors, although this may reflect a tendency to access more informal care, especially if they had a medical spouse. [24]Among women health seeking behaviour was delayed because of customary practice of taking home remedies or medication without prescription but there are underlying social norms push them to do so because of their 'restricted mobility' and 'lack of decision making power' . Another study using mixed method approach reported differential delay in seeking treatment, however, it reported more delay in women than in men but the reason for delay was reported to be only lack of awareness.

But a woman's decision to seek healthcare is not an isolated event; rather, it is a composite result of her personal needs, social forces, actions of healthcare providers, and the location of services. Wall man and Baker (1996) provide a detailed list of 'elements of livelihood' that are likely to affect women's capacity to obtain treatment, actual money income, potential money income, social status, social life, networks, autonomy and liability. Bedri (2001) in her study of women's health seeking behaviour around abnormal vaginal discharge , highlighted the role of the husband and the availability of

knowledgeable social contacts as key factors in securing an early diagnosis and use of health care services. The time of seeking health care after the perception of illness was also significantly differ between urban and rural mothers. Urban mothers' seek health care on the first day of perceived onset of illness than rural mothers'. The possible reason for delaying of rural mothers to seek health care might be their attempt to try home remedies, lack of money, or socio – cultural factors like consulting the elders and relatives.[25] How far the above factors affect the health seeking behaviour of women doctors remains to be determined.

Hence the present study is undertaken to find the health seeking habits of Women doctors and the factors influencing the above in detail in a developing country.

Subjects and Methodology

All women doctors between 25-50 years of age working at S.V. Medical College, Tirupathi, and its attached hospitals were distributed with a structured 14-item questionnaire with a request to participate in the study. Three items are about demographic data including age, marital status and parity. Nine items are about their own experience of formal health care, nature of the disease including acute infections like fever, infections, drug allergy and chronic illness like diabetes , hypertension . other questions addressed to find gap between symptom development and initiation of treatment, preference of self treatment, completing the course of treatment ,how many of them going for follow up treatment and self grading as a good or bad patients. Data was collected from March to June 2015.

Data analysis:

Data entry and analysis was done using MS excel 2007 and EPI Info7 soft ware. Data was described in percentages.

Results

Only 160 women doctors participated in this study. Of the total 160 women doctors who participated in the study, 28.12% were in the age group 25-30 years in that 44.4%were married , 55.5% unmarried and 37.5% in31-40 years and 83.3%were married and16.6% unmarried 34.37% in the age group 41-50 years married persons were90.9%and 9.09% un married.

Characterist ics	Total number		Chi-square test	p-value
Age in years	160			
25-30	45			
31-40	60			
41-50	55		1.56	0.459
Age in years	Marital life		Chi-square test	p-value
	Married	Un married		
25-30	20	25		
31-40	50	10	32.05	0.0000 0011
41-50	50	5		

Table – 1- . Demographic and Socio-Economic Profile.

In our study37.5% of the respondents suffered from sickness 7-10 days prior to the study and 25% in more than one month and 37.5% in 1-2 years period. Most of the respondents see ken medical advice 72 hours after suffering from illness (56.25%) and only 31.25% sought medical advice within 24-48 hours . As a patient, 12.5% opined they were not good patients because of busy schedule, lack of time and irregular treatment. 6.25% expressed they over look chronic diseases.

Table – 2 - Preference of Treatment

S.NO	Total no
1.self	140(87.5%)
2. consultation	20(12.5%)

Among160 doctors 87.5% were interested in self treatment and 12.5% had sought specialist advice.

Table - 3 - Showing percentage of completion of full course of treatment.

S.No	Total no
1.completed	65(40.62%)
2.Not completed	95(59.37%)
1.condition improved	96(60%)
2.others	64(40%)

Only 41% of the doctors completed the full course of treatment, remaining 59% had not completed because of improvement of the general condition, side effects and others.

Table - 4 - Showing percentage of participants gone for follow- up

1.yes	48(30%)
2 .No	112(70%)
Reasons for no follow up	
1. Lack of time	45(28.12%)
2.Busy work load	95(59.375%)
3.Not interested	20(12.5%)

Only 30% of the doctors have gone for follow up. Others were reluctant to go because of lack of time and work load, due to busy schedule and not being interested in follow up.

Predictors of appropriate treatment

Being a specialist was a highly significant predictor of choosing appropriate treatment .Having one's own management was a significant predictor of appropriate treatment choice in hypertension, bronchial asthma and diabetes only. Concern over confidentiality was a significant predictor of not choosing appropriate treatment in the anxiety condition alone. Workload, embarrassment and confidence in treating the condition were not predictors of treatment choice in any of the diseases.

Discussion

The present study reveals that women doctors often self treat them selves and delay consultations.

majority of the Women doctors in the study were more than 30 years of age, married and having two children. More in unmarried respondents (60%) than in married(40% taken treatment within 24-48 hrs).Delay in taking treatment in married respondents was due to lack of time and family responsibilities. Most of them suffered from illness 7-10 days prior to the study. only about half of the Women doctors consulted another doctor when ill. Most of the doctors believed self treatment for acute conditions and not completed full course of treatment because of improvement of the illness. The results of our study is in keeping with the findings among Women doctors in the western world where 62% to 99% Women doctors self prescribe .[26] Most considered self-treatment of acute minor illnesses acceptable, but there was more disagreement as to the acceptability of self-treating chronic conditions. Embarrassment is a common concern for all patients. For doctors, this may be complicated by concern about imposing upon a colleague and the potential exposure of error in self-diagnosis and treatment. Being worried that the problem might be trivial is also a concern for patients,although the magnitude of this barrier for doctors may be greater.[27] Confidentiality is another important issue for both the community and doctors, especially in relation to mental health issues.[28]

A 28 years old woman doctor elaborated "I got fever and pain abdomen for 10-15days ,I took self medication and investigations. As there was no relief, I went to specialist care and they diagnosed Appedicular abscess".delay in diagnosis resulted in complication. Another 42years woman doctor mentioned" I had excessive menstruation for 2-3 months ,so took styptics and haematinics' with no relief. specialist consultation diagnosed fibroid". 48 years old woman doctor said" I suffered from chest pain for one month ,I took medicines for gastritis without consulting anybody but there was no relief, then consulted specialist and diagnosis of angina pectoris was made. delay in consultation would have lead to further serious effects". In another case a 49 years old female doctor told ,"2 years ago I had small lump in the breast due to embarrassment not shown to another doctor .after 1 year with increased size of lump consulted specialist and underwent investigations they diagnosed it as early stage of carcinoma of the breast and given treatment"

One of the most disturbing findings was that, in spite of professional recommendations to the contrary, a quarter of respondents thought it was acceptable to self-treat chronic conditions and an even higher proportion thought it was acceptable to order blood tests on oneself to monitor a chronic condition.[26] Other studies have examined self-treatment in relation to specific medications or symptoms, and have not grouped self-treatment into acute conditions, chronic conditions, diagnostic procedures and monitoring categories as we did. Therefore, although it is not possible to directly compare across studies, our results are consistent with a previous finding that doctors would self-treat for seven out of 10 sets of acute and chronic symptoms for which they would recommend other doctors seek care.[27] The finding of little consensus regarding acceptability of self-treatment is also consistent with the earlier study.

Although most respondents were satisfied with the care they had received from other doctors, many thought it was difficult to find a doctor with whom they were comfortable. Reasons for this may include embarrassment or concern about confidentiality for sensitive health issues. This highlights the need for doctors to be appropriately trained for consultations in which the patient is also a doctor. [20]

The study population in the present study is rather small, so caution is needed in generalizing the results. However, it is comparable to other Australian surveys investigating doctors' own medical care . [26,27] Our study described doctors' opinions and attitudes, rather than their actual behaviour in managing their medical conditions. Given that recommendations against self-treatment are well known in the profession, responses may have been influenced by social desirability factors .Our results support previous assertions that the culture of medicine is a barrier to doctors seeking healthcare. The perception that doctors are more likely than other professionals to work through illness may be symptomatic of a culture in which an image of invincibility is encouraged and vulnerability is denied of this phenomenon is likely to be delayed presentations even for serious conditions. confidentiality breaches, combined with professional attitudes discouraging admission of vulnerabilities, have been reported to influence doctors' reluctance to seek mental healthcare.(29)

Conclusions: A greater proportion of women doctors believed in self treatment and doctors are reluctant to consult another doctor especially if the disease is acute. Professional factors like self confidence, confidentiality issues, rather than gender alone may explain this phenomenon. This behaviour may be quite harmful as illustrated by the case studies cited. Hence a definitive measure is required to alter the health seeking behaviour of women doctors in right direction.

Limitations: Our study had several limitations. Firstly this was a questionnaire based study and thus is prone to recall bias. To circumvent this, we asked more than one question in soliciting for a particular information. Secondly our study was a single institutional survey and the findings may not be generalizable to all Indian Women doctors,. Further more only allopathic medical doctors are included in this study and doctors from other medical systems are not studied. however it forms a bed stone for further research in this area

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Original Research Article

Assessment of Community contemplation about health insurance in rural area of south India

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Abstract

Background: India's health care and health financing provision is characterized by too little Government spending on health, meager health insurance coverage, declining public health care use contrasted by highest levels of private out-of-pocket health spending in the world. Although 64% of the population are aware of health insurance but only few are actually insured, so this study was done with an objective to assess what the community thinks about the health insurance.

Methods: A Cross sectional community based study was done with sample size of 290 households estimated by using 25% national coverage according to Public Health Foundation of India. The study was conducted between July 2014 to August 2014. 290 families were covered from two Primary Health Centres which come under field practice area of our medical college. A pretested semi structured questionnaire was used to collect data. Data was entered in excel sheet and analysed using SPSS version 17 software.

Results: Among 290 respondents 72.5% were in the age group of 26-45 yrs,69.4% were female,82.1% belonged to below poverty line,72.4% were from nuclear family and about 81% of respondents were aware of Health Insurance, 46.9% of them were actually insured.82.4% of the respondents felt that health insurance was necessary out of which 82% felt that it was necessary because it is useful at the time of emergency.50.9% of those who thought that health insurance was not necessary thought so because they felt that it has no added advantage over pledging property.

Conclusion: Although awareness about health insurance among rural population was good but still majority of them were not insured. This was mainly because they felt that there was no added advantage of health insurance over pledging the property, the amount that they get was not sufficient and few felt that it was of no use during emergency. In order to overcome these misconception among the rural population it's important to educate them so as to bring about behavior change among them.

Keywords: Rural, Health Insurance, Community, Contemplation

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Introduction

Health insurance is a method to finance healthcare. The ILO defines health insurance as "the reduction or elimination of the uncertain risk of loss for the individual or household by combining a larger number of similarly exposed individuals or

households who are included in a common fund that makes good the loss caused to any one member"[1].

'Community contemplation' means Knowledge, awareness, understanding, needs and necessities of people regarding health insurance[2]. For most people living in developing countries and especially in rural areas "health insurance" is still an unknown word [3].

The awareness of health insurance was found to be 64.0 percent in South Indian population[4]. Myriad constraints like ignorance, absence of information and it's accessibility are faced by people of rural area. The success of an insurance provider system lies in perfect planning in terms of ease of communicability of its scheme, accessibility, ease of utilization, opportunities for premium payment based on the convenience of people and thereby reducing the failure rate for renewal.

The health financing strategy is built around the principles of solidarity, where income and risk cross-subsidization will play a major role. By this ensuring that the health system puts people first and later health care provider. Thus promote efficiency, equity, access to a basic package of health services according to their needs and transparency which involves ensuring that purchasers, providers and users have access to information regarding the operations of the system [5,6].Ironically many studies have documented many serious problems with respect to the accessibility, efficiency and quality of the health delivery system. Many high yielding, well designed health insurance systems have failed due to poor understanding of people mindset.

Competent planning, necessary modification in the design of a Health insurance system is possible only by taking into consideration the necessity and needs of people. Prolific results can be obtained from existing health insurance systems itself by mere grasp of people apprehension. So this study was planned with an objective to assess the community contemplation about Health Insurance.

Materials and Methods

Study Design: Cross-sectional study.

Study setting: Villages coming under field practice area of two primary health centre.

Participants: Household heads or their spouses and in their absence, another senior household member.

Study period: 2 months.

Sample size: Calculated to be 288 by taking average National health care coverage as 25% according to Public Health Foundation of India [7].

$n=(1.96)^2PQ/L^2$ and taking allowable error as 20% of 25%.

P: Prevalence

Q: 1-P

L: Allowable error

Sampling method:

Total no. of villages: 80

Total population: 39,404

No. of PHC's:2

List of all the villages were prepared according to their population in ascending order and 15 villages were selected by Probability Proportionate to Size and for each village a list of all household was prepared. By Simple random sampling method using simple random table method, we selected 20 households.

Data collection:

Prior informed written consent in the local language was taken from all the households who were included in the study. For those who were illiterates, the consent was read out and explained to them in their own language and consent was obtained by taking their thumb impression in the presence of a witness.

Data was collected by visiting the selected households and carrying out face to face interview by using pretested semi structured proforma which included socio-demographic details and awareness regarding Health Insurance.

Statistical analysis: The data collected was entered in Microsoft excel worksheet and was analysed using SPSS software. Descriptive statistics like mean and percentage were calculated.

Inclusion criteria:

a) Household heads or their spouse and in their absence another senior household member aged between 15-45 yrs in rural area who were willing to participate in our study.

b) In case where both husband and wife were present at the time of survey, preference was given to the working household head.

Exclusion criteria: a) Seriously ill people at the time of survey.

Ethical consideration: Informed consent was taken from the persons before collecting information and an Ethical committee approval was obtained from Institutional ethical committee

Results

Table 1 suggest that most of the respondents were in the age group of 26 - 45 years that is 72.5%. Male constituted 30.6% of respondents where as female respondents were 69.4%. 82.1% of the respondents had Below Poverty Line (BPL) card. Majority of respondents were from nuclear family 72.4%.

In table 2 we can see that although 81% of the respondents were aware about the health insurance but only 46.9% were insured.

In table 3 we can see the respondent's contemplation about health insurance. 82.4% of the respondents felt that health insurance was the necessary. Majority that is 82% felt that health insurance was helpful at the time of emergency. 50.9% of the respondents said that health insurance was not necessary felt that health insurance had no added advantage over pledging property.

Discussion

In our study we found that although 81% of the respondents were aware about the health insurance but only 46.9% were actually insured. This gap of having awareness and being insured was huge. Our study tries to reason out this gap. 82.4% of the respondents felt that the health insurance was necessary and the reasons for it being necessary as coated by them were 82% felt its useful at the time of medical emergency, 11.3% felt that considerable amount is granted and 3% felt that it's useful as future security, Mahesh et al also found similar results in his study[3].

Table 1: Socio-demographic characteristic of respondents

Characteristics	No.	Percentage
Age (Years)		
15-25	80	27.5
26-35	100	34.5
36-45	110	38.0
Gender		
Male	89	30.6
Female	201	69.4
BPL Card		
Yes	238	82.1
No	52	17.9
Type of family		
Nuclear	210	72.4
Joint	80	27.6

Table 2: Distribution of respondents according to awareness and presence of health insurance

Characteristics	No.	Percentage
Awareness		
yes	235	81.0
No	55	19.0
Health insurance presence		
Yes	136	46.9
No	154	53.1

In our study we found that the respondents who were not in favor of health insurance felt that there was no added advantage over pledging the property (50.9%), 27.5% felt that they can't depend on it

during medical emergency and others (5.9%) felt that considerable amount is not granted, Ramesh et al also found similar results in his study[9].

Table 3: Distribution according to community contemplation about health insurance

Characteristics	No.	Percentage
Necessity of health insurance		
yes	239	82.4
no	51	17.6
Reasons for necessity of Health Insurance		
Helpful at the time of medical emergency	196	82.0
Considerable amount was granted	27	11.3
future security	7	3.0
others	9	3.7
Reasons for non requirement of Health Insurance		
Couldnt depend on it during medical emergency	14	27.5
Considerable amount was not granted	3	5.9
No added advantage to pledging property	26	50.9
Others	8	15.7

Socio-Economic development and health of community are related with each other in such a way that it is impossible to achieve one without other i.e. one cannot be achieved in isolation. No doubt, the economic development in India is gaining momentum over the last few decades because of the government initiatives in public health care facilities, yet its health system is at crossroad today. To a large extent the health indices of a country is determined with reference to the ways with which its health care gets financed. Although, in India the total health care expenditure is increasing steadily, but the mix of public and private spending is a major area of concern [8]. As the various studies reveal that in India more than 80 percent of health care's expenditure is borne by individuals i.e. health care financing is mainly in the form of out-of-pocket which gradually pushing them in to a vicious circle of poverty. In such a situation health insurance is a widely recognized and preferable mechanism to finance the health care expenditure of the individuals.

As far as the stage of development of health insurance in India is concerned, it is in the embryonic stage. As the people of India are not much aware about it and very few part of the population is taking the advantages of it. Moreover those who are aware about it are not actively participating for one reason or another and thereby making it difficult to bring it to the stage of expansion. Beside this, very few insurers are actively venturing in it and thereby making it difficult to construct inroads for health insurance in India.

But there is terrible need of health insurance in India as the World Bank Report reveals that 85% of the working populations in India do not have Rs. 5,00,000 as instant cash; 14% have Rs. 5,00,000 instantly but will subsequently will face a financial crunch; Only 1% can afford to spend Rs. 5,00,000 instantly and easily; and 99% of Indians will face financial crunch in case of any critical illness. With this scenario it becomes very important to know what the rural community thinks about the health insurance.

Limitation: The study was done in the rural setting only it would have been better to have done both in rural and urban setting.

Conclusion: In our study awareness about health insurance among rural population was good but still majority of them were not insured. This was mainly because they felt that there was no added advantage of health insurance over pledging the property, the amount that they get was not sufficient and few felt that it was of no use during emergency. In order to overcome these misconception among the rural population it's important to educate them so as to bring about change in their attitude.

Recommendations: The apprehensions of the community are not new and it becomes important to educate them about their apprehensions in order to bring about behavior change among the respondents. There should be implementation of health insurance policies which can benefit rural India.

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Original Research Article

Knowledge and Attitude About HIV/AIDS Among First Year Medical & Paramedical Students of A University in New Delhi

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Abstract

Background: The HIV/AIDS pandemic is in its fourth decade. A considerable amount of research has been executed world over. Currently a patient of HIV/AIDS can look forward to a life of reasonable quality and length. However, stigma and discrimination at health care setting, work places and at educational institutions are still a matter of concern and challenge.
Objectives: To determine the knowledge and attitude towards people living with HIV about HIV/AIDS, among the first year medical and paramedical students.
Methodology: The present cross sectional study explored knowledge and attitudes of first year medical and paramedical students of Jamia Hamdard University, New Delhi on HIV/AIDS using a self-administered questionnaire. Data thus collected was entered in MS excel spreadsheet and further analysis was done by using relevant statistical tests.
Results: The study revealed that students are more comfortable to discuss anything regarding HIV/AIDS with the friends of the same sex (95.53%), rather than with husband/wife (65.92%) or any family member (58.56%). Only 53.07% students knew that HIV can transmit through mother's milk. 49.72% of the students ever heard of Anti-Retroviral Therapy for HIV/AIDS. Most of the students (93.50%) have respect towards PLHIV, while almost half of the students think that HIV+ couple should not have children.
Conclusion: The study reveals that though HIV/AIDS is three decades old disease, and lots of work has been done, still the knowledge and attitude of the people in general has not increased to the desired level.

Key words: *Knowledge, Attitude, HIV/AIDS, Medical / Para-medical students*

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Introduction

HIV/AIDS is a major health concern all over the world. Globally, more than 35.3 million people are currently living with HIV infection, and 2.1 million (5.9%) of these are adolescents aged 10–19 years. [1,2]. In India, the adult HIV prevalence at national level has declined from estimated level of 0.41% in 2001 to 0.27% in 2011. The estimated number of PLHIV in India maintains a steady declining trend from 23.2 lakh in 2006 to 20.9 lakh in 2011 [3].

Since inception of the National AIDS Control Programme (NACP) in 1987 the `major focus was on awareness generation. To raise awareness about HIV, School AIDS Education Programme, University Talk AIDS Programme, Village Talk AIDS programme were initiated. However, the increasing incidence of HIV/AIDS epidemic necessitated the extension of NACP-I with larger objectives. The Phase II of the National AIDS Control Project (NACP-II) became effective from November 1999. One of the major objective of this

phase was to shift focus from raising awareness to changing behaviour through interventions, particularly for groups at high risk of contracting and spreading HIV; [4.]. During NACP-II, there has been a substantial increase in the efforts to inform and educate people in the issues related to HIV/AIDS. Efforts were made to develop and strengthen collaboration with different sectors and departments. For example, All India Radio and Doordarshan has incorporated HIV/AIDS awareness and information in a variety of innovative ways. Red-Ribbon Campain was reported to be an effective activity for creating mass awareness. Also World AIDS Day, Voluntary Blood Donation Day was being observed[4] The impact of the efforts were evident through the findings of Behavour Surveillance Surveys (BSS). The proportion of general population who has heard of HIV has increased from 76% in 2001 to 85% in 2006. The proportion of people having misconceptions about HIV transmission has also gone down from 78% in 2001 to 55% in 2006. [4.] But, the major challenge was addressing stigma and discrimination against people living with HIV/AIDS.

The third phase of the national programme (NACPIII) was launched in July 2007 with the goal of ***Halting and Reversing the Epidemic***. [5]. The IEC campaign focused on creating non stigmatizing environment and promote access to services [6]. However, India has demonstrated an overall reduction of 57% in estimated annual new HIV infections. [5]. Achievements in other areas are also remarkable. But, stigma and discrimination is still prevailing against the vulnerable population, persons and families infected and affected with HIV, especially at work place, healthcare settings and educational institutions. [5]. The stigmatization is even higher towards those people living in marginal lifestyles from the typical Indian society such as men who have sex with men (MSM), female sex workers (FSW) or IV drug users. [5] People infected with HIV who belong to these groups are doubly stigmatized. Recent studies show that fear of discrimination, rejection and stigmatization is a great barrier that influences timing of testing as well as the timing to disclose a positive test results to their family and spouse (Chakrapani et.al., 2009).[7]

Hence one of the key concern and challenge for NACP IV (2012-2017), will be reduction of stigma and discrimination at health care setting, work places and at educational institutions. [5]. Health care professional play a significant role in the society in raising awareness about HIV/AIDS. Therefore, knowledge gap among them would be detrimental to the society as a whole. Moreover, health care professionals are also among the potential high risks group. Various AIDS related KABP studies [8] carried out on health workers in different parts of the world revealed the presence of apparent unease or prejudice among the health workers lacking proper knowledge about various aspects of HIV infection and AIDS.

In context of the above realities, a Knowledge and Attitude study was carried out among the first year MBBS (Bachelor of Medicine & Surgery), BUMS (Bachelor of Unani Medicine & Surgery) and BSc (Bachelor of Science) Nursing students of the Jamia Hamdard University in New Delhi. The Aims &

Objectives of the study were:

To determine the extent of knowledge about HIV/AIDS among the first year MBBS, BUMS and BSc Nursing students

To ascertain their beliefs and perceptions about HIV/AIDS & attitudes towards people living with HIV

Materials and Methods

The present cross sectional study was carried out in Jamia Hamdard University Campus, New Delhi in the month of October, 2014. The institutions involved in the study were the Hamdard Institute of Medical Sciences & Research (HIMSR), Rufaida College of Nursing, & College of Faculty of Unani Medicine, Jamia Hamdard, Hamdard Nagar, New Delhi.

Study Participants:

The participants of the study were the 100 students of the first year undergraduate medical students of the Hamdard Institute of Medical Sciences and Research (HIMSR), 50 students each, of the first year BUMS & BSc nursing students. Both the genders were taken up for the purpose. The first year students were considered for the study as their knowledge and attitudes would reflect that of general population. Their admission process completed in the month of August, and the data were collected on the month of October, so that the technical knowledge does not interfere. The students were briefed about the general lay out of the proposed project in their respective lectures or postings to the Community Medicine department. Only after an informed consent was received from each student, were they included in the study. The protection of anonymity of the subjects was maintained in no uncertain terms.

Inclusion Criteria:

The students who willingly consented were included in the study. Only first year MBBS, first year BSc Nursing students and first year BUMS students were included in the study.

Exclusion Criteria:

Those students were absent on the day of data collection and those who did not give consent were excluded from the study.

Other than first year students, no other students were included in the study.

Ethical clearance: Informed and written consent was taken from participants before conducting the study. Clearance of university ethical committee was also sought.

Data collection & analysis:

A pre-designed, pre-tested, alpha numeric coded, self-administered, structured questionnaire was given to the students. The questionnaire consisted of questions related to socio demographic information, general knowledge about HIV/AIDS, knowledge regarding transmission of HIV/AIDS, their knowledge regarding treatment and prevention of HIV/AIDS, their attitude towards HIV/AIDS, and their source of information regarding HIV/AIDS.The purpose of the study was explained to the students and they were asked to answer question sincerely. The questionnaire was filled in the class in the presence of invigilators. Data thus collected was entered in MS excel spreadsheet and further analysis was done by using statistical tests. Data analysis was done with the help of Open Epi, version 3.03, updated 22/09/2014.

Results

During the time of data collection, out of 100 first year MBBS students 84 of them were present. Also 47 BUMS students & 48 nursing students out of 50 each were present at the time of data collection. Hence a total of 179 participants were available for the study purpose. The mean age of the study participants was 18.96 with a range from 17 years to 24 years. Out of the 179 study participants, 57 were male and 122 were females. Also 105 were Muslims, 63 were Hindus and 11 of the participants were from other religion. 145 of them were from urban background whereas 34 of them belong to rural background.

Television (89.39%), internet (87.15%), school teachers (89.39%), newspapers (83.80%) and books (93.30%) were found to be the major source of information regarding HIV/AIDS. However, family members, radio were the least reported source of information. The study also revealed that students are more comfortable to discuss anything regarding HIV/AIDS with the friends of the same sex (95.53%) and also with the health professionals (85.47%) or school teacher (75.98%) than with husband/wife (65.92%) or any family member (58.56%).

It has been found that the general knowledge of the students regarding HIV/AIDS is good. All the students have heard about the disease and 91.06% of them could correctly write the full form of AIDS. Most of the students (77.65%) knew that there is no permanent cure for HIV/AIDS, whereas only 49.72% of the students have ever heard of Anti-Retroviral Therapy for HIV/AIDS.

The study highlighted that the students' knowledge regarding transmission of HIV/AIDS is variable. Majority of the students were aware of the major routes of transmission. (Table:1). However, it needs to mention that only 53.07% students knew that HIV can transmit through mother's milk. Also only 56.98% of students mentioned that it can be transmitted through tattooing. The findings have statistical relevance also. One more important finding of the study is that a substantial proportion of students (31.28%) believed that HIV can spread through mosquito bite.

The study revealed that most of the students (93.85%) knew that HIV is a preventable disease. They were also aware that condom plays an important role in prevention. But regarding the treatment part, their knowledge is quite lacking. More than half of the students believed that HIV/AIDS is curable if diagnosed early. Their knowledge regarding anti-retroviral therapy (ART) was also lacking. Also most of the students falsely stated the vaccine is available for prevention of HIV/AIDS. (Fig:1)

The study pointed out that attitude of the students towards PLHIV is variable. Most of the students (93.50%) have respect towards PLHIV; many

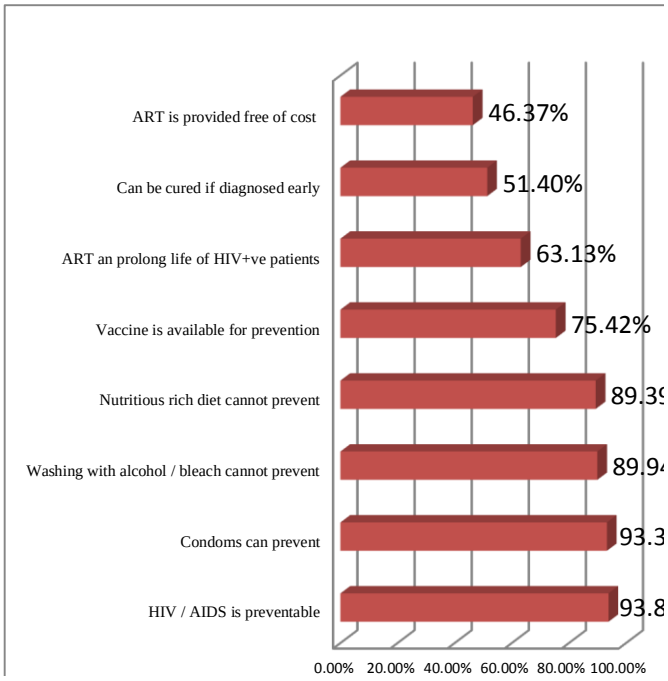
Table 1 : Knowledge on HIV Transmission

Sr.	Questionnaire	Correct Knowledge (%)				Chi square (X^2)	P value
		BUMS (N=47) (%)	MBBS (N=84) (%)	Nursing (N=48) (%)	All (n=179) (%)		
1	Vaginal Sexual Intercourse	95.74	98.81	93.75	96.65	2.57	0.28
2	Oral Sexual intercourse	42.55	53.57	66.67	54.19	5.59	0.05
3	Anal Sexual intercourse	65.96	69.05	43.75	61.45	8.80	0.01
4	From mother to child	38.30	96.43	89.58	79.33	66.31	0.001
5	Through breast milk	63.83	40.48	64.58	53.07	10.09	0.001
6	Through blood transfusion	100.00	100.00	100.00	100.00	0.00	0.00
7	Sharing a needle or syringe	97.87	100.00	100.00	99.44	2.82	0.10
8	Getting a Tattoo	42.55	76.19	37.50	56.98	24.07	0.001
9	Saliva, Tears, Sweat or Urine	61.70	78.57	58.33	68.72	7.28	0.02
10	Sharing food, clothes, toilet	89.36	91.67	89.58	90.50	0.25	0.50
11	Mosquito bite	68.09	72.62	62.50	68.72	1.47	0.10
12	Coughing & sneezing	87.23	95.24	81.25	89.39	6.61	0.01

Table 2: Attitudes of the Students towards PLHIV:

Sr.	Questionnaire	Correct Knowledge (%)				Chi square (X^2)	P value
		BUMS (N=47)	MBBS (N=84)	Nursing (N=48)	All (n=179)		
1	Need quality care and support	89.36	90.48	91.67	90.50	0.51	0.500
2	Should be treated respectfully	82.98	100.00	91.67	93.30	14.24	0.001
3	HIV+ Students should continue studying in school	85.11	92.86	89.58	89.94	2.01	0.100
4	HIV + teacher should continue teaching.	89.36	92.86	89.58	91.06	0.63	0.500
5	Maintain friendship with HIV+ friend	89.36	94.05	93.75	92.74	1.08	0.500
6	HIV+ patients can be put in rooms with other patients	25.53	90.48	85.42	72.07	68.95	0.001
7	Serving an AIDS patient does not put yourself and your family at risk of contracting the disease	68.09	72.62	77.08	72.63	0.97	0.500
8	Young children need not be removed from the home if one of the parents is HIV positive	91.49	98.81	95.83	96.09	4.31	0.100
9	I.V drug users don't deserve to get AIDS	68.09	66.67	81.25	70.95	3.41	0.050
10	A Homosexual patient's partner should be accorded the same respect and courtesy as the partner of a heterosexual patient	36.17	64.29	56.25	54.75	9.68	0.001
11	I would maintain friendship with a friend who is homosexual.	65.96	67.86	75.00	69.27	1.06	0.500
12	AIDS cannot be contracted from social contact with someone	74.47	79.76	79.17	78.21	0.53	0.500
13	HIV positive couple can have their children	51.06	39.29	77.08	52.51	17.55	0.001

Fig.1. Knowledge about HIV/AIDS prevention and tratment



(92.74%) would maintain friendship with HIV+ person. They also believe that PLHIV needs quality care and support.

However, the study also revealed few negative attitudes of students towards PLHIV. This highlights that stigmatization is still prevailing in our society towards PLHIV. Only 72.07% students said that HIV+ patients can be put in rooms with other patients. Almost half of the students think that HIV+ couple should not have children. Half of the students don't believe that there should be equal status for homosexual and heterosexual partners. More than 25% of the students think that serving an HIV+ patients might put oneself at risk of contracting disease.

Discussion

HIV/AIDS is undoubtedly a major public health malady. There is neither a permanent cure nor an effective vaccine available for it currently. The only way to combat the disease is by prevention, which can be achieved by Behaviour Change Communication (BCC), which is actually health education leading to desirable behaviour change. This kind of communication is expected to be made to the lay public by health professionals of all streams, both formally and informally. In order to dispense the correct knowledge and appropriate attitudes, the health professional should possess the requisite knowledge and outlook. Researches in the early 1990s', has identified that inadequate knowledge and fear of HIV infected people have been a serious problem among health care professionals considering themselves to be at risk of contracting the infection.[9,10]. At the very beginning of their respective professional training a level of knowledge and awareness more than the lay populaces would not be an unjustified expectation.Various studies have been carried out overtime to assess the knowledge gaps and attitude towards HIV/AIDS patients among the students of health care professions. This study is an attempt to update to the contemporary. Fortunately, Jamia Hamdard University has the distinction of imparting professional training in modern medicine, nursing and Unani medicine.

Transmission:

Our study highlighted some important gap in knowledge among students in relation to transmission of disease. While 100% of the students knew that HIV/AIDS can spread through blood transmission or by sharing a needle or syringe (99.44%), whereas 79.33% of the students did not know about mother to child transmission. Again, there is confusion regarding spread through sexual route. 96.65% of them were aware that the disease can spread through the vaginal sexual intercourse, while only 61.45% knew that the disease can also spread through anal sexual intercourse. However, the results of our findings are somewhat in congruence with the studies conducted in recent years [12, 17]. But the studies conducted in 1990's [18], showed that that the majority of Indian women did not know about explicit sexual behaviors which transmit the virus. Our study, also revealed that only, 53.07% of the students knew correctly about transmission of the virus, through breast milk, which is consistent with Mohammad Tajul Islam et al in 2002 [19] who conducted a KAP study among the staff of an International Organization in Bangladesh where only 43.6% were aware of transmission through breast milk. Most of the students in our study knew that HIV/AIDS cannot be transmitted through touching/shaking hands (97.77%), or by sharing clothes (93.85%), plates (90.50%), or by sharing toilet (83.83%). These findings are in congruence with Ravi Shankar *et al*, 2011 [17]. The study also revealed an important misconception among students regarding disease transmission. Few students (31.28%) mentioned that HIV can spread through mosquito bite, which is similar with that of Ravi Shankar et. al., 2011 [17] and Christina Ouzouni et al [15] in 2012.

Prevention & treatment:

Knowledge about prevention of HIV/AIDS is crucial for any health care provider. Most of the participants (93.30%) in our study correctly knew that use of condom prevents HIV/AIDS. Also, most of the students (93.85%) knew that HIV is a preventable disease. These findings are in congruence with the studies conducted in recent years. [15, 20, 21]. The situation was not similar in the past (even in 1990s). That the condom plays an important role in the prevention and the disease in incurable, was not known to many people. [9, 14, 16, 22]. Again, one of the findings of our study is that 75.42% of our study participants believed that vaccine for preventing HIV/AIDS is available, which is in contrast with some recent studies [12,21]. Our study also revealed one important aspect of prevention & treatment. The knowledge regarding the availability and usage of Anti-Retroviral Therapy (ART) is still a matter of concern. Only, 49.72% of the students in our study were aware of the availability of the Anti-Retroviral Therapy (ART) and the finding is similar with studies of the recent years. [21, 23].

Attitudes:

The attitudes of people, particularly the health professionals' as care givers, towards PLHIV, should always be positive and empathetic. Our study revealed that most of the students (93.30%) said that PLHIV should be treated and given same respect as any other patient. Again, 89.94% and 91.06% of them respectively, stated that HIV positive students or teacher should be allowed to continue studying or teaching. However, the study also revealed some negative attitudes of the students towards PLHIV. Around 68.95% of our study subjects mentioned that HIV positive people should be isolated and only 52.51% of our study participants believed that HIV positive couple can have their own child. This reflects that as of today, attitudes of the people towards PLHIV has not changed completely. This attitude is justified two decades back because awareness was lacking among people, and hence people had negative attitudes towards PLHIV [18, 24,]. The findings of our study are also in congruence to some recent studies [11, 18, 20, 23] which reported substantial intolerant attitude towards AIDS and HIV positive patients among general students.

Source of information:

The present study reflected television (89.39%) and internet (87.15%) are the major source of information regarding HIV/AIDS, which is similar with the observations of the studies conducted in recent years. [11,12] (Chauhan AS et al, [12] and N.A. Al-Rabeei et a [11]). However studies of early 90s' [13] showed that newspapers were the main source of information. Undoubtedly, in recent years, the electronic media, including the internet play a vital role in raising basic awareness on various health issues including HIV/AIDS.

Comfortable to discuss with:

The study also pointed out an important social concern. In our study, it has been found that students are more comfortable to discuss anything regarding HIV/AIDS with the friends of the same sex (95.53%) or with the health professionals (85.47%) or with school teacher (75.98%) rather than with husband/wife (65.92%) or any family member (58.56%). These findings are consistent with the findings of the studies conducted in 1990s's [14] and with that of recent years. [15]. This is a major concern which reflects that inspite of so many efforts and exposure, the young generation is still hesitant to talk anything regarding HIV/AIDS freely with their family members.

General Knowledge:

However, our study also tried to focus on other areas of concern regarding knowledge and attitudes of the newly admitted medical and paramedical undergraduates. All the students have heard about the disease and 91.06% of them could correctly write the full form of AIDS. Majority of the students (77.65%) knew that HIV is an incurable disease. This is in contrast to the studies in late 90s' and early part of 2000 [9, 16]. where they found that it is only 68% and 45% respectively.

Limitations of the study:

A KAP study usually focuses on knowledge, attitudes, and practices. The present study highlighted the knowledge and attitudes of the first year medical, nursing and BUMS students. Usually a KAP study also focuses on the practices. Therefore, the limitation of our study is that the practices of the students in terms of their sexual behaviour were not included. Also, the questionnaire did not cover some relevant variables like schooling background, family socio-economic status, recreational activities, etc. which might have had an influence on their knowledge and attitude regarding HIV/AIDS. Ideally, a repeat evaluation on the eve of graduation would give some idea of the effectiveness of the respective professional training in imparting desirable knowledge and attitude toward the issue of HIV/AIDS.

Summary & Conclusion

Knowledge about HIV/AIDS is crucial for health care professionals. The study reveals that though HIV/AIDS is three decades old disease, and lots of work has been done, still the knowledge and attitude of the people in general has not increased to the desired level. Our study reveals that till now students are hesitant to discuss the topic with family members. Students are lacking in knowledge about the vertical transmission or through breast milk, though they are aware of the other major routes of transmission. Many students from our study believe that vaccine is available against HIV/AIDS. They have little knowledge regarding Anti-Retroviral Therapy (ART). The attitudes of the students towards PLHIV are also mixed with both positive and negative attitudes. Therefore, there is a strong need for HIV/AIDS related education from the very beginning of professional education. This can be done by doing "Role Play" or "FGDs" for the students. This can help to improve the student's knowledge and demystify misconceptions. Also in addition to providing adequate knowledge, it will help to foster an environment that is conducive to the development of appropriate students' attitude towards people living with HIV.

Conflict of Interest: Nil

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Original Research Article

A Study on Infant Feeding Practices Among Mothers in the Rural Field Practice Area of a Teaching Hospital in South India

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Abstract

Background: Poor feeding practices are a major threat to social and economic development. Studies have demonstrated adverse consequences of inappropriate feeding practices on growth, development & survival of infants and children. Indian and global data have shown that exclusive breast feeding during first six months is associated with optimal infant growth and low morbidity. Breast feeding practices in rural communities are shaped by their beliefs, which are influenced by social, cultural and economic factors. **Objectives:** To study the infant feeding practices among mothers in the rural field practice area and to assess the nutritional status of the infants and children. **Methodology:** A community based descriptive study conducted in the rural field practice area among mothers of infants aged 12-23 months. Study period June 2013 to May 2014. The size of the sample is 347.**Results & Conclusions:** 13% of infants were given pre-lacteal feeds. 96.5% children were fed with colostrum. 99.2% of the children were breastfed, 82.2% were initiated breast feeding within one hour after delivery. Only 19.89% were breast fed exclusively for up to 6 months, 61.7% of the mothers practiced breast feeding on demand and 70.1% of mothers started complementary feeds before the age of 6 months.

Key words: infant feeding practices, exclusive breast feeding, complimentary feeding.

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Introduction

WHO defined an infant as a child younger than one year of age.[1] Infant feeding practices comprising of both breast feeding as well as complementary feeding have major role in determining the health status of the child. Over 2/3rd of under five deaths are often associated with inappropriate feeding practices and occurs during the first year of life. Poor feeding practices are a major threat to social and economic development.[2] Studies have demonstrated adverse consequences of inappropriate feeding practices on growth, development & survival of infants and children.[3]Breast milk is an excellent food and meets all nutritional requirements of the baby for the first six months.[4] The practice of breast feeding among Indian mothers is almost universal, but initiation of breast feeding is quite late. Breast feeding practices in rural communities are shaped by their beliefs, which are influenced by social, cultural and economic factors.[5] Indian and global data have shown that exclusive breast feeding during first six months is associated with optimal infant growth and low morbidity. Based on these data the 55th world health assembly has adopted a resolution recommending exclusive breast feeding

for first six months, introduction of complementary feeds after six months and continued breast feeding up to the age of two years or beyond .[6]

Child under-nutrition in our country mostly originates from inadequate and faulty feeding practices of newborn and children coupled with exposure to contaminated environment.[7] WHO recommends that infants start receiving complementary foods at six months (180 days) of age in addition to breast milk. There are many factors which may affect feeding practices in our country. Various studies have shown that infant feeding could be influenced by socio-economic status, maternal education, cultural practices, place of living and many other factors.[8,9]

Objectives:

To study the infant feeding practices among mothers in the rural field practice area.

To assess the nutritional status of the infants and children.

Methodology

The study was taken up with the approval of the Institutional ethics committee. It was a community based descriptive study conducted from June 2013 to May 2014. The size of the sample was calculated based on the rate of initiation of breast feeding within one hour after birth, which was 53.5% as per DLHS(2007-2008). With an allowable error of 10% of prevalence at 5% level of significance and 10% non response rate the sample size was rounded off to 395. The total number of children aged less than 24 months present in the study area were 691. About 50% of the mothers of these children were selected randomly and included in our study. The collected data was entered in Microsoft Office Excel sheet and analyzed using SPSS software version **2**1.0. Proportions were calculated for different study variables. Tools used for the study were a pre-tested semi structured questionnaire, Salter's weighing machine and an infantometer.

A house-to-house visit was made and mothers with children of age less than 24 months, who were selected, were interviewed. The nature, purpose and objective of the study were explained before hand to get maximum cooperation and informed consent was taken.

Results

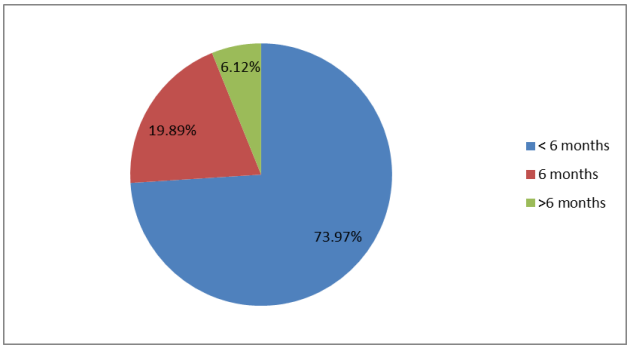
Socio-Demographic Profile

In the present study, among 395 children aged 0-23 months, it was observed that maximum number of children were in the age group of 12-23 months i.e. 230 (58.2%).199(50.4%) were males and 196 (51.4%) were females. 62% of mothers were aged between 20-24 years,15.2%were aged less than 20 years and 0.8% were aged 30 and above. 148 (37.5%)mothers were illiterate and 126(31.9%) were literate only up to primary level. Graduates constituted 0.8% of the study subjects. Majority of the mothers were homemakers i.e. 370 (93.7%) and only 25 (6.3%) were working. 307 (77%) study subjects belonged to poor economic status and 19.5% were from lower middle class. 267(67.6%) children were from nuclear families, 122 (30.9%) were from joint family. 81.5%of the children were Hindus and nearly 50% of the study subjects belong to BC community.

Infant Feeding Practices

In the present study 343 (86.8%) children were not given any pre-lacteal feeds and were directly started on breast-feeding. Among the 13% children who were fed with pre-lacteal feed, majority were given sterile water 22 (42.3%) children, followed by sweetened water (27%). In the present study it was observed that 96.5% of the children were fed with colostrum. The practice of breast feeding was almost universal and 99.2% of the children were breastfed. 82.2% of the children were breastfed within one hour after delivery and 17(4.4%) were initiated after 24 hours. Only about 20% of the children were exclusively breast fed up to six months of age.

Fig-1.Pie diagram showing the distribution of children who were exclusively breast fed.



In present study 61.7% of the mothers practiced breast feeding on demand. It was observed that 98.9% of the mothers practiced breast feeding even

while they were sick or when the child was sick. Among mothers feeding their children with artificial milk, 57% used spoon and glass to feed their children whereas bottle was used by 43%. Almost all mothers used to dilute milk and the reason given by them for dilution of milk was that child can't digest the undiluted milk. In the present study 70% of mothers started giving complementary feeding earlier than the scheduled time. Only 23% mothers started at the right time. Complementary feed given to most of the children (77.6%) was homemade food and 14.2% started with biscuits. Only 6.1% were given mashed fruits and vegetables. (Table -1)

Table 1: Distribution of children according to type of food introduced (n=344)

Type of introduced	Frequency	Percentage
Milk	7	2.03
Homemade food	267	77.6
Biscuits	49	14.2
Mashed fruits and vegetables	21	6.1
Total	**344**	**100**

2. Anthropometry of the Children

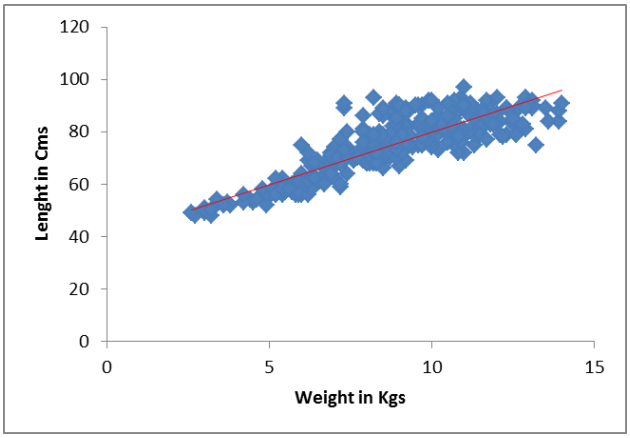
According to the WHO classification the prevalence of underweight is 24.8%, out of which 19.7% is moderate malnutrition and 5.1% is severe malnutrition. The prevalence of stunting is 31.9% and that of wasting is 20.2%.

Table 2: Nutritional status of children according to weight for height (WHO classification)

Malnutrition(weight for length)	Frequency of children	Percentage
Normal	315	79.7
Moderate wasting	53	13.4
Severe wasting	27	6.8
Total	**395**	**100**

There was strong positive correlation between weight and length which is significant at the 0.01 level (2-tailed). As age increases weight and length also increases.

Figure 2: Correlation between weight and length or height of children.



Discussion

Pre-lacteal feeds and types: In the present study it was observed that 343 (86.8%) children were not given any pre-lacteal feeds and were directly started on breast-feeding. Among the 52 children who were fed with pre-lacteal feed, sterile water was given to maximum i.e. 22 (42.3%) children, followed by sweetened water i.e.14 (26.9%) and honey was given to 13.5%. The practice of sterile water may be attributed to increased hospital deliveries.

This is similar to study done by I.I.Mesharam, et.al (2012) done in rural areas of Medak, Andhrapradesh where about 45% of infants received pre-lacteals such as honey (25%).[10] S Ashwini, et al (2014) in their study among urban and rural mothers in the Belgaum, Karnataka observed that practice of giving pre-lacteal feeds was 57.11% among rural mothers and most commonly in the form of sugar water i.e. 60.82%.[11] Asif Khan, Radha R (2013) in their study among mothers in the rural field practice area of Bellur[12], Bhavana R Hiremath, et al, (2013) in their study in rural area in Bijapur[13],Karnataka and Vyas Shaili, et al, (2012) in their study in rural area of Dehradun[14] observed that pre-lacteal feeds like sugar water, jaggery water and honey were given in 30.0%,66.1%and 61.8% respectively. A study by Satish K.Wadde (2011) in rural field practice area of Swami Ramanand Teert Rural government medical college, Maharastra observed 40.2% mothers offered various pre-lacteal feeds. This may be due to low literacy status, unawareness and deep rooted customs.[15] This difference may be attributed to majority of the mothers delivering in hospitals and

to some extent the role of health education and mother's literary status.

Breast feeding initiation:

The Government of India recommends starting breastfeeding immediately after childbirth; preferably within an hour. In the present study 99.2% of the children were breastfed and 82.2% mothers initiated breastfeeding within one hour after delivery and 4.4% initiated after 24 hours. A study by K Madhu, et al, (2009) in rural area of Kengeri PHC, Bangalore, observed that 97% of mothers initiated breast feeding within one hour after delivery and this was similar to present study. [16]

I.I.Mesharam, et al (2012) in their study done in rural areas of Medak, observed about 22% of mothers initiated breast feeding within 1-3 hours and 35.8% after 24 hours of delivery.[10] This delay may be the reason for high pre-lacteal use. A study by Asif Khan, Radha R (2013) among mothers in the rural field practice area of Bellur PHC, Karnataka, observed that 28.0% of the mothers initiated breast feeding within 1 hour after birth and the delay was due to the mothers did not know the importance of feeding early and 15% mothers could not express the milk.[12] Present study results are different from the above study probably because most of the deliveries were institutional.18.2% were caesarian deliveries and associated with delay in timely initiation of breastfeeding.

Practice of giving colostrum: In the present study it was observed that 96.5% of the children were fed with colostrum. I.I.Mesharam, et al (2012) [10], K Madhu et al, (2009)[16]and Vyas Shaili, et al, (2012) [14] in their studies observed 84.9%, 81% and81.6% of infants received colostrum respectively. Bhavana R Hiremath, et al, (2013) in their study in rural area in Bijapur, Karnataka observed the practice of feeding colostrum was higher among those delivered in institution compared to those delivered at home. [13]

Exclusive breast feeding: In present study it was observed that only 19.89% were breastfed exclusively for up to 6 months. Vyas Shaili, et al, (2012) in their study in rural area of Dehradun reported only 5.13% received EBF which is far behind the WHO recommendation.[14]S Ashwini, et al (2014) observed EBF rate upto 6 months of age was 15.26% in rural area and this is similar to the present study. [11] Asif Khan, Radha R (2013) in their study observed that only 35.0% mothers fed their infants exclusively for the optimal duration of 6 months. In a study done in rural areas of Medak, Andhrapradesh observed 41.4% infants received EBF. [10]

Breast feeding pattern: In present study 61.7% of the mothers practiced breast feeding on demand. This is similar to the study done by S Ashwini, et al (2 014) in Belgaum, who observed that 67.89% of rural mothers practiced demand feeding.[11] Nitin Joseph et.al,(2013)[17], Bhavana R Hiremath et.al,(2013)[13] ,K Madhu et.al,(2009) [16] and Vyas Shaili, et.al,(2012) [14] in their studies reported a high practice of feeding on demand(87.1%, 91.1%,84% and 89% respectively).Mostly breast feeding on demand is more common in rural areas compared to urban.

Weight for Height: In present study according to the WHO classification the prevalence of wasting was 20.2%, out of which 13.4% of children suffered moderate wasting and 6.8% of them from severe wasting. Dipta K Mukopadhyay, et al, (2013) in their study in under-two slum dwelling children in Bankura town, West Bengal showed the prevalence of wasting was 20% and 4.9% were severely wasted.[18]

Conclusions: 58.2% of the children were aged >12 months, gender wise they were distributed equally. Majority (67.6%) belong to nuclear families. Most of them (77.7%) belong to poor social class.13% of infants were given pre-lacteal feeds. Sterile water (42.3%) was the common pre-lacteal given. 96.5% children were fed with colostrum. 99.2% of the children were breastfed, 82.2% were initiated breast feeding within one hour after delivery. Only 19.89% were breast fed exclusively for up to 6 months, 61.7% of the mothers practiced breast feeding on demand. Majority 98.9% of mothers practiced breast feeding even when sick. Only 1.77% of the babies were fed with artificial/animal milk. In the present study 70.1% of mothers started giving complementary foods before the age of 6 months. Majority 77.6% were given homemade food as complementary feed. The prevalence of underweight was 24.8%, stunting 31.9% and wasting 20.2% according to the WHO classification.

Recommendations: IEC efforts through mass media and involving grass root workers and local leaders to educate mothers, families and community is required to create awareness regarding the importance of early initiation of breast feeding, advantages of colostrum feeding, benefits of exclusive breast feeding for 6 months, harmful effects of early introduction of top feeds, giving

diluted animal milk, and late introduction of complimentary feeding.

Peer counseling and peer support groups should be developed in rural areas.

Limitations: Recall bias could be a limitation to the study. This information cannot be generalized to the entire country due to the differences in local cultural practices on infant feeding and rearing.

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Original Research Article

A community based study regarding awareness of cancer among women of reproductive age group (15-49 years) in Kalaburagi district

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Abstract

Background Due to lack of awareness of cancer and danger signs among people, more than 70% of the cases present in advanced stage accounting to high morbidity and mortality.

Objective: To study the awareness of cancer among women in the reproductive age group of Kalaburagi district

Method: A community based cross sectional study, among 200 women of reproductive age group (18-49 years) covering 4 areas each from rural and urban area selected using simple random sampling technique.

Results: Out of 200 women, only 70.5% (141) of the women were aware of cancer, as a disease. Major source of knowledge was 60% from their relatives and friends among different media, television ranks the first. 68.5% of the respondents had knowledge that tobacco chewing is the main cause for cancer followed by smoking (66.5%) and Alcohol (51.5%) least number (3%) had knowledge that improper diet and physical activity can cause cancer, out of 141 only 91% of the women knew that there are screening test for detecting cancer and 9% did not know about screening test. 12.5% were aware about self examination of breast and only one woman knew about pap smear test.

Conclusion: Most of the respondents did not know about how to identify cancer, what are its symptoms and the tests available for the diagnosis of the cancer. Hence, it is recommended to increase awareness about cancer disease, its symptoms, identification and its detection and about the screening tests, to avoid the increasing number of deaths due to cancer by Legislation, public awareness programmes in different settings like educational institutions, work places and industries.

Key words: Cancer, awareness, reproductive age group women

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Introduction

February 4th is celebrated as World Cancer Day to heave awareness about cancer and to support its prevention, early diagnosis, and treatment. The primary goal is reduction of illness and death caused by cancer remarkably by 2020. Union for International Cancer Control (UICC) founded World Cancer Day in support of the goals of the World Cancer Declaration, 2008.[1] The current Indian population is 1.28 billion (October 2015) represents almost 17.31% of the world's population.[2] The incidence of cancer in India is 70-90 per 1, 00,000 populations and cancer prevalence is established to be around 2.5 million, with over 8, 00,000 new cases and 5, 50,000 deaths occurring each year. Majority

(greater than 70%) of the cases present in advanced stage adding to poor survival and high mortality. About 6% of all deaths in India are due to cancers accounting to 8% of global cancer mortality. Increase in life expectancy, demographic transitions and the effects of tobacco and other risk factors have elevated the burden of disease. Tobacco use itself attributes to 40 % of cancer cases. According to Recent estimates based on National Cancer Registry Program (ICMR) data on site specific cancer burden, in males, the most common are cancers of mouth/pharynx, esophagus, stomach, lung/bronchi while as in females, the common cancers are cervix, breast, mouth/oropharynx and esophagus.[3,4]

The Cancer impact in India is far beyond its morbidity and mortality rates its diagnosis is associated with enormous emotional trauma along with economic burden of its treatment. More than one-third of them suffering from anxiety and depression and many perceive its initial diagnosis. Cancer is equally distresses family as well by interfering family's daily functioning along with economic situation. The economic shock often embraces both loss of income and increase of expenses towards treatment and health care. This disease is associated with a lot of fear & despair in our country[4].

Cancer scenario in India as per Year wise total cancer prevalence in India by ICMR states that cancer cases have been progressively increasing from 2004 to 2010.According to a study by the World Health Organization, one in 12 women in urban India will develop cancer in their lifetime. Indian women afflict approximately 40 per cent of new cases of cancer; India has the highest rate of cervical cancer in the world. Breast cancer has overtaken cervical cancer as the most common cancer among women in Indian major cities in the past decade. Also One in every 10 cancer deaths worldwide is in urban India. Alarming, at the time of diagnosis 75-80 per cent of patients are in advanced stages of the disease. [5,6]

It is observed that cancer is diagnosed at a later stage due to lack of awareness of cancer and danger signal among people. Hence early detection and prompt treatment of cancer and precancerous condition will lead to decrease in number of death due to cancer. Need of awareness of cancer among people is necessary, hence we have undertaken the study of awareness among women of reproductive age group.

Materials and Methods

A cross-sectional community based study on awareness of cancer among women of reproductive age group (15- 49 years) was done during period of May 2014 to August 2014. Based on the study done by Mayur S S on cancer awareness where women's awareness about its prevention was 71.43%,[7] Sample size was calculated to be 160 by using the formula $N= 4pq/L^2$ where L was taken as 10%. To make it equal to nearest whole number a total of 200 women of reproductive age group were included in the study. Out of 200 subjects 100 from rural and 100 from urban areas of Kalaburagi were included in the study. The data was collected from four rural and four urban areas of Kalaburagi selected using simple random sampling. To meet the desired sample size a house to house visit of the area was done beginning from the centre of the selected area; moving along the right hand side till the required sample size 25 was achieved. If a house-hold had more the one woman in the reproductive age group youngest women was taken into consideration. Whenever houses with no women of reproductive age group were detected or unwilling to participate; that house was skipped and went to the next house. Thus a total of 200 women were included in the study.

A pre-tested, pre-designed and structured questionnaire was used for the data collection. Data was collected on age, occupation, type of family, regarding various aspects of the awareness of cancer like their perception by word cancer, source of their knowledge, types, risk factors, early identification signs or symptoms including screening tests. Questions were asked to the respondents in the local language by assuring the confidentiality of personal answers. They were first explained about the purpose of study and the data was collected in the proforma provided. The data collected was coded, tabulated and analyzed using SPSS package.

Results

Out of 200 women, 32% were in the age group of ≤ 30 years, followed by 33.5% in 31-40 years and 34.5% in the age group of >40 years. 80.5% were Hindus, followed by 18.5% Muslims and remaining belonging to other religions, 53.5% belonged to nuclear family, 37.5% of women were illiterate followed by 20% just literates or had primary education 16% secondary education 13%, 10% and 3% were graduates, pre-university and post

Table 1: Relation between knowledge and demographic factors

Variables	Awareness		Chi-square value	P-value
	Yes (n=141)	No (n=59)		
Place of residence				
Rural	61(43.3%)	39(66%)	8.679	0.003*
Urban	80(56.7%)	20(34%)		
Age (Years)				
<= 30 years	55(39%)	9(15%)	10.785	0.001*
>30 years	86(61%)	50(85%)		
Education				
Illiterate	29(20.6%)	46(78%)	58.47	0.0001*
Literate	112(79.4%)	13(22%)		
Occupation				
Not Working	101(71.6%)	36(61%)	2.172	0.096
Working	40(28.4%)	23(39%)		
Type of family				
Nuclear	79(56%)	28(47.5%)	1.228	0.170
Joint	62(44%)	31(52.5%)		

*Significant at 5% level of significance ($p < 0.05$)

Table 2: Distribution of study group as per source of cancer awareness

Source of information	No. of women	Percentage
Relatives	120	60
Friends	118	59
Television	88	44
Cinema	59	29.5
Health Workers	26	13
News	20	10
Radio	12	6
Others	3	1.5

Table 3: Distribution of respondents based on knowledge regarding causes for cancer

Causes for cancer	No. of women	Percentage
Tobacco chewing	137	68.5
Smoking	133	66.5
Alcohol	103	51.5
Genetic	69	34.5
Sun & UV exposure	51	25.5
Improper Diet & Physical activity	6	3

graduates respectively. 68.5% of the respondents were unemployed. 141 (70.5%) were aware of cancer out of which 19(14%) respondents had family history of cancer.

Table 1 indicated that among 141 women aware about cancer majority were (56.7%) from urban area, (61%) were >30 years of age and (79.4%) were educated women. A significantly associated with place of residence education and age of the respondent was found, were as 71.6% and 56% of aware women belong to non working and nuclear family respectively this was statistically insignificant.

Table 2 reveals that majority 60% of the respondents heard about cancer by their relatives and friends. Among different media, television ranks the first in bringing awareness of cancer among people.

Table 3 indicated that most (68.5%) of the respondents had knowledge that tobacco chewing is the main cause for cancer followed by smoking (66.5%) and Alcohol (51.5%) least number (3%) had knowledge that improper diet and physical activity can cause cancer.

As per table 4, the majority of the respondents said that, weight loss and or bleeding is the common sign or symptom of cancer followed by persistent fever unresponsive to treatment, change in skin pigments or moles and chronic cough or hoarseness of voice especially in a smoker. Among screening for early detection awareness regarding self examination of breast and Pap smear was poor 12.5% and 0.5% respectively.

Discussion

The present study was conducted to know the awareness of cancer among rural and urban women of reproductive age group. The study revealed that only 70.5% of the women were aware of cancer, as a disease. Urban women have more awareness of cancer when compared to rural women. Women who are educated have more awareness than women who are uneducated. Surprisingly it is observed that women who are not working had more awareness than working women. Hence, there is need for organizing awareness camps and programmes to bring awareness about cancer among women, particularly in the rural areas. Maximum 60% have seen and heard regarding the disease by their relatives and friends. Among different media, television ranks the first in bringing awareness of cancer among people were comparable to the findings of the study done by Mayur SS et al. [7]

According to the most recent statistical data from NCI's Surveillance, Epidemiology, and End Results program, the median age of a cancer diagnosis is 66 years. And Percent of New Cancers by Age Group All Cancer Sites indicated that majority 25.4% of cancer cases are diagnosed in the age group of 65-74 years followed by 24.1% in age group of 55-64 years, 19.5% in age group of 75-84 years and 14.1% in age group of 45-54 years[8] In the current study only 6% said, people who are more than 60 years are more prone to cancer. Majority 48.5% (97) women told median age group for cancer was 18-45 years; followed by 26.5% (43) in the age group of 45-60 years and 1% 2 said that, people whose age is less than 18 years are more prone to cancer.

According to Cancer patterns in eastern India: the first report of the Kolkata cancer registry In females, the most frequently reported malignancies were breast (22.7%) followed by uterine cervix (17.5%), gallbladder (6.4%) and ovary (5.8%).[9] In current study knowledge regarding common cancer in women was found to be poor as it was observed that 130 (65%) said, blood cancer is the common cancer found in women, followed by 101(50.5%) said, breast cancer and 76(38%) women said, skin cancer is the common cancer found in women. Contradictory findings were observed by Shahanaz Chowdhury[10] in study was conducted in OPD of Dhaka Medical College Hospital among the 175 respondents Where 64% of the respondent knew that it was common cancer in women and almost all (94.29%) mentioned that breast cancer did not occur in old age. In addition half of them said that it was not inherited. Majority of them (78.9%) did not know that early diagnosis improves treatment outcome and the risk factor of breast cancer (65.14%). Half of them (57.5%) had knowledge that clinical breast examination as screening method of breast cancer but vast majority did not practice clinical breast examination.

Smoking, alcohol consumption and chewing tobacco were held main culprits, leading to cancer. Out of 141 respondents who were aware of cancer, 71% knew about symptoms of cancer and 29% did not know about symptoms of cancer, 91% of the women knew that there are screening test for detecting cancer and 9% did not know about screening test. Few women (25) were aware about self examination of breast and only one woman knew about Pap smear test. Our findings are supported by the study conducted among 407 women aged 21-65 years in a randomly selected village of Udupi taluk in Karnataka where majority of the study population (98.5%, 401) had poor knowledge regarding cervical cancer screening. The study revealed that there was no apparent difference in the mean and standard deviation of knowledge scores in the different categories of cervical cancer (2.49±1.665), symptoms (0.43±0.496), Pap smear test (0.33±0.807) and screening guidelines (0.51±0.742). There is very poor knowledge of cervical cancer screening among women.[11]

Conclusion

To conclude the study revealed that place of residence, age of the respondents and educational levels of the respondents are associated with the awareness of cancer whereas type of family and occupation of the respondents are not associated with awareness of cancer.

Most of the respondents did not know about how to identify cancer, what are its symptoms and the tests available for the diagnosis of the cancer. Hence, it is recommended to increase awareness about cancer disease, its symptoms, identification and its detection and about the screening tests, by Legislation, Population based interventions, Behaviour Change Communication using mass media, mid-media and interpersonal counselling and public awareness programmes in different settings like educational institutions, work places and industries to avoid the increasing number of deaths due to cancer.

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Original Research Article

Road Traffic Accidents: A Challenge

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Abstract

Background: Accidents, tragically are not often due to nature, but are due to carelessness, thoughtlessness, ignorance and over confidence. In India the victims of road traffic accidents are increasing day by day in morbidity and mortality. Its socioeconomic repercussion is a great matter of concern both on government as well as on community and family.

Objectives: To find out epidemiological factors related to road traffic accident cases.

Materials and Methods: This cross sectional study was carried out, at emergency unit of tertiary care hospital, Udaipur, Rajasthan on 400 road traffic accident cases, reported during the period of July 2010 to December 2010.

Results: Among the 400 RTA study subjects, majority (81.0%) were male, most (80.25%) were in productive age group of (15-45) years. Out of 252 drivers of all types of vehicle, (33.33%) were observed consumed alcohol, among two-wheeler drivers, majority (64.86%) were without the use of helmet, and among drivers of four wheeler vehicle, most (59.62%) were observed without the use of seat belt. Among all study subjects, majority (32.50%) of the accidents occurred on Saturday/Sunday and the highest number (56.94%) of the accidents took place when the speed of the vehicle was more than 50 km/hour. There were 34 fatalities among all cases the majority (58.52%) had head injury.

Conclusion: RTAs is a major public health problem in India and in most of the cases the factors responsible for occurrence of accidents could be preventable. Hence to mitigate the RTAs, we have to accelerate the measures of prevention and control like enforcement of traffic rules, road safety education and to increase the awareness among masses for importance of self-safety.

Key words: Head injury, Helmet, Seat belt, Speed, Injury.

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Introduction

In many countries motor vehicle accidents rank first among all fatal accidents. During 2002 there were almost 1.19 million deaths from road accidents in the world. In 2002 the global rate of death from road traffic injuries was about 19.0 per 100,000 people. Adult aged 15-44 years accounted for more than 50 per cent of deaths and more than 1.8 lac children under 15 years of age died in road accidents[(1)].

Developing countries are very different from the industrialized countries with regard to the environment and the mix of vehicle in the traffic stream [(2)]. In South-East Asia Region countries, semi-urban and rural areas contribute 60-80 per cent of road accident injuries, with 1 to 2 per cent GDP loss to the nation [(3)]. In India the situation has taken a serious turn as vehicles are increased but without proportionate roads. From 1971-91, we have had a 227 per cent increase in traffic related fatalities [(4)].

In India, 11 per cent of deaths due to non-communicable diseases are due to injuries and 78 per cent of injury deaths are due to RTAs. The Indian council of Medical Research (ICMR) revealed that injury is the leading cause of mortality for young adults less than 45 years and a major burden of disease across all age group[5]. WHO day Theme 2004 was Road Safety: Safe Road is no Accident. The road traffic injury related disease burden is expected to rise over the next 20 years. For adult men aged 15-44 years RTAS are the biggest cause of ill health and premature death worldwide [6].

Accidents are definitely on increase in India. With increasing mechanization in agriculture and industry, there is a rapid increase in vehicular traffic, have resulted in an increase in morbidity and mortality in RTAs Overcrowding, lack of awareness and poor implementation of essential safety precautions resulted in an increasing number of accidents[7].

Accidents can be studied in terms of agent, host and environmental factors and epidemiologically classified into time, place, and person distribution. Epidemiologists have classified risk factors into three categories of road traffic accidents. These are human, vehicle and physical/social environment factors .Human risk factors have been identified as areas where clinically based intervention may have positives outcomes, these human risk factors are use of alcohol, use of drugs, morbidity, and speed of driving and advanced age [8].

Objectives: To find out epidemiological factors related to road traffic accident cases.

Materials and Methods

The present study was conducted on 400 cases of RTAs, in the period of July 2010 to December 2010 at emergency unit of MB hospital, a tertiary level government institute of medical care attached to R.N.T. Medical College and hospital, Udaipur, providing services to people of urban and rural areas of Udaipur city as well as to the neighboring districts and States. The first case was selected randomly and then every fifth case was included by systematic random selection method, till 400 cases were covered with oral or written consent.

The information of injuries related to road traffic accident cases was collected regularly in a pre-designed standard proforma, from the patient, attendant and case sheets, at casualty, OPD, IPD and forensic medicine department and cross checked with the police reports. Further the information pertaining to socio demographic profile including name, age, sex, religion, residence, date and time of registration and admission, day and time of accident, per capita income, type of vehicle, circumstances of injury and investigation undergone etc. were also recorded.

Ethics and data management:

Data was collected after getting the ethical clearance from RNT medical college, (Govt.) Udaipur. The collected data was analyzed in excel sheet of MS office and the Chi –square test was applied for the test of significance.

Results

Total 400 RTA cases were studied which caused 366(91.50%) injury and 34(8.5%) deaths (Fatal injury). Among all cases there were 252 drivers and among them 148 and 52 drivers belonged to motorized two wheeler and four wheeler vehicle respectively.

Table1: Distribution of RTA cases according to their age and sex.

Age group in years	Male	Female	Total
< 15	11 (2.75)	5 (1.25)	16 (4.00)
15-25	113 (28.25)	20 (5.00)	133 (33.25)
25-35	103 (25.75)	17 (4.25)	120 (30.00)
35-45	51 (12.75)	17 (4.25)	68 (17.0)
45-55	24 (6.00)	8 (2.00)	32 (8.00)
55-65	16 (4.00)	5 (1.25)	21 (5.25)
Above 65	6 (1.50)	4 (1.00)	10 (2.50)
Total	324 (81.0)	76 (19.0)	400 (100)

(Figures in parenthesis indicate percentage)

Among all study victims the majority 324(81.0%) were male and 76(19.0%) female indicating a large majority of male preponderance. Males are more prone to get involved in motor vehicle accidents than females. Males use motorized vehicle in excess of females due to more involvement in outdoor activity. More than two third 321(80.25%) of

victims were in productive age group 15-45 years, only 16(4.0%) were under 15 years of age.

Table2: Distribution of drivers according to intake of alcohol and type of injury (n=252).

Alcohol	Number of patient			
	Minor injury	Serious injury	Fatal injury	Total
Consumed	37 (44.44)	40 (47.61)	7 (8.33)	84 (33.33)
Not consumed	92 (54.76)	6(38.69)	11 (6.54)	168 (66.67)
Total	129 (51.19)	105 (41.67)	18 (7.14)	252 (100)

P > 0.05 not significant
(Figures in parenthesis indicate percentage)

Among 252 drivers, a good number 84(33.33%) were observed consumed alcohol. The impact of outcome of accident is aggravated in the form of severity with consumption of alcohol as more cases of serious injury (47.61%) and fatal injury (8.3%) were observed in drivers who consumed alcohol v/s (38.69%) and (6.54%) in drivers who did not consume alcohol.

Table3: Distribution of drivers of motorized two wheeler vehicle according to use of helmet and type of injury.

Protective device Helmet	Number of patient			
	Minor injury	Serious injury	Fatal injury	Total
Users	36 (69.23)	14 (26.92)	2(3.80)	52 (35.14)
Non-users	18(18.75)	70 (72.29)	8(8.33)	96 (64.86)
Total	54 (36.48)	84(56.75)	10(6.75)	148 (100)

P < 0.001 Significant
(Figures in parenthesis indicate percentage)

Among 148 drivers of two wheelers, majority 96(64.86%) were non users of helmet, and had maximum serious and fatal injuries (72.29% and 8.33%) against user group of helmet (26.92% and 3.8%). Significant association was observed with use of helmet and fatal outcome in cases of two wheeler accidents

Table4: Distribution of drivers of motorized four wheeler vehicle according to use of seat belt and type of injury.

Protective device Seat-belt	Number of patient			
	Minor injury	Serious injury	Fatal injury	Total
Users	13(61.90)	7(33.33)	1(4.76)	21 (40.38)
Non-users	9(29.03)	17(54.83)	5(16.12)	31 (59.62)
Total	22(42.30)	24(46.16)	6(11.54)	52(100)

P< 0.05, Significant
(Figure in parenthesis indicate percentages)

Among 52 drivers of four-wheeler vehicle, the fatal and serious injuries were observed more in non-users of seat belt (16.12% and 54.83.%) in comparison to seat belt users (4.76% and 33.33%). The association between seat belt user and outcome of accident was observed significant.

Table5: Day wise distribution of RTA cases.

Day	Number of cases
Monday	59 (14.75%)
Tuesday	53 (13.25%)
Wednesday	51 (12.75%)
Thursday	56(14.00%)
Friday	51 (12.75%)
Saturday	63 (15.75%)
Sunday	67 (16.75%)
Total	400 (100%)

In this study majority of cases 67(16.75%) had their accidents on Sunday, followed by Saturday 63(15.75%). RTAs are observed marginally increased on the weekend days. Saturday and Sunday are the last working days of relaxation in a week; this could be the possible reason for large number of accident on these days.

Table6: Distribution of injuries in fatal cases

(n=34 deaths)

Fatal injury	Number of cases
Head injury	20(58.52%)
Cervical spine injury	1 (2.94%)
Thoraco-abdominal injury	4 (11.76%)
Fracture of limbs and pelvic	5 (14.70%)
Multiple injury	4 (11.76%)
Total	34 (100%)

Out of 400 RTA cases, there were 34 deaths, majority had the head injury 20(58.52%) followed by fracture of limb/ pelvic 5(14.70%), and multiple injury 4(11.76%). Use of road safety precautions may be helpful in reducing the severity of injury.

Table7: Distribution of RTA cases according to speed of vehicle and type of injury.

Speed (km per hour)	Number of patient			
	Minor injury	Serious injury	Fatal injury	Total
Up to 30	27(54.00)	20(40.00)	3(6.00)	50 (13.89)
30-50	64(60.90)	37(35.23)	4(3.8)	105 (29.17)
50-80	62(42.75)	68(46.89)	15(10.34)	145 (40.27)
>80	19(31.66)	33(55.00)	8(13.33)	60 (16.67)
Total	172 (47.78%)	158 (43.89%)	30 (8.33%)	360 (100)

P <0.001, Significant
(Figure in parenthesis indicate percentage)

Among all 400 RTA cases, there were 40 cases where the history of speed of vehicle could not be ascertained due to unconscious, absconded or not aware of speed of their vehicle. In remaining 360 cases the majority 205(56.94%) were accounted when the speed was high, more than 50 km/hour, against the 155(43.06%) when the speed was below 50 km/hour. Out of 30 cases of fatal injury, majority 23(76.67%) were those in which speed was more than 50 km/hr against 7(33.33%) The association between speed and outcome of accident was found significant.

Discussion

In this study male and female ratio was found to be 4:1, (81.0% male and 19.0% female) indicating males were more prone to get involved in road traffic accidents than females. Similar results were observed by[9-15]. Maximum cases, both males and females were found in the age group 15- 45 years accounting (80.25%) of the total cases. Similar findings were also reported by[16], whereas[14] observed only (69.2%). In studies by [17,14,] among (31.0%) in age 21-30 years which matches to our study. In our study, Only 4% of the victims were affected under 15 years, and (2.5%) above 65 years of age, this may be due to extra care for children by parents and less mobility of the elderly in regards to road traffic accidents

In the present study (33.33%) of the drivers involved in RTAs had consumed alcohol, this was a higher percentage compared to [14,18,19] .

According to use of helmet by drivers, majority (64.86%) of the cases were not using helmet against (35.14%) users, similar results were observed by[20,21] whereas In the study of [9] (92%) non-users were very high and in study [22] observed low (27.98%).

In present study It was found that fatal and serious injury were more among non-user of seat belt. Studies by[14,23] observed none of the occupants of cars used seat belt, because there is no such law. Use of helmet and seat belt reduce the risk of fatal outcome.

In our study the majority of RTAs occurred on Sunday (16.75%) followed by Saturday and Monday, similar observations were made by others[14,21]. The reason may be because on holidays there is more congestion on the roads, our results differ from[9] (24.6%) of the incidents irrespective of the cause, occurred on Saturday.

In our study there were 34 deaths out of 400 RTA cases, the fatality rate was (8.4%), this is supported by study of [22] (13.11%) but not match with [24] reported (1.65%) less fatality rate. On considering injury, to one body region as the major cause of death, in present study the head injury was in majority (58.52%) similar results were reported b[23] (50.4%) but not similar to study[15] (30.22%) and study([25] (29.16%) less fatality. Our pattern multiple injury (11.76%) differs from studies[17] they observed (37.33%) injury to two and more than two body regions (head, chest and limbs) in majority of cases.

In present study more cases occurred when speed was more than 50 km/hr. This is supported by [20,26] (49.0% and 65.0%). The reason may be due to the high speed gives less time to react appropriately in a situation of sudden change of driving conditions on the roads, with improper use of breaks and the control of vehicle is lost resulting in occurrence of accident. Thus with high speed more are the chances of RTAs.

Limitation: The present study was a hospital based epidemiological study of RTAs with certain limitation of topography, climate and on the spot visit to all RTAs. The data was collected from a single hospital with a small sample size so could not be generalized to general population. The study period was five years back but the finding of this study will still be relevant for our country in increasing awareness among community for proper use of essential road safety precautions and also in prevention of RTAs.

Conclusion:

Commonest victims were young adults or middle aged males who were earners in their families. Majority of accident cases occurred with high speed, consumed alcohol, non-use of seat belts and helmets. The only prevention by way of improved use of safety devices such as seat belts and helmets, improved traffic monitoring with strict enforcement of traffic rules by police with regular campaigning for increase of awareness among users of motor vehicle. Every motor vehicle user should essentially undertake the safety precautions for prevention of road traffic accidents.

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Original Research Article

Association Between Male Condom Usage and Transmission of Sexually Transmitted Infections / Reproductive Tract Infections to Their Married Partners – A Hospital Based Cross Sectional Study

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Abstract

Background: The emergence of HIV and identification of sexually transmitted infections (STIs) as a co-factor have revived our interest in male condoms.

Aims & Objectives: To understand the pattern of condom usage among the partners of married women of reproductive age group and its association with STI/RTI.

Materials & methods: A cross sectional study was carried out in STI/RTI Clinic of Urban Health Centre, Shivaji Nagar, Govandi, Mumbai, involving total 266 married females who attended OPD from January to March 2012. Patients were interviewed on the basis of pretested and preformed questionnaire regarding usage of condom by male partner. Diagnosis of STI/RTIs in females was done by disease specific investigations.

Results Among the condom users only 24 (37.5%) females were having STI/ RTI as compared to 143(70.9%) females who were not using condom during the sexual act. Among the consistent condom users only 1 (14.3%) had acquired the infection as compared to the 23(40.4%) who were using condoms sometimes during sexual acts.

Conclusion: The pattern of condom usage among the partners of participants and its frequency is associated with STI/RTI.

Key words: STI/RTI, condom, sexual practices

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Introduction

Although many methods of prevention of sexually transmitted infection (STI)/HIV are available, Female Empowerment, behavioural change and vaccines are not yet on the horizon. Until that time, condoms remain important armamentaria for STI/HIV prevention.

The emergence of HIV and identification of STIs as a co-factor have revived our interest in condoms.[1]The condom usage in India has increased from 2.1% in 1992−93 National Family Health Survey- 1 (NFHS-1) to 5.2% in 2005−06 (NFHS-3) among males, aged between 15−54 years.[2] However, condoms are not 100% safe, but if used consistently

and correctly, will reduce the risk of pregnancy and/or STIs significantly.

The male condom offers more than 90% protection against Neisseria gonorrhoeae, 50–90% protection against Chlamydia trachomatis as well as Treponema pallidum, and 10–50% protection against Haemophilus ducreyi. When used correctly and consistently, offers more than 90% protectionagainst HIV and Hepatitis B virus, 50–90% protection against Cytomegalovirus (CMV), and 10–50%protection against HSV-2[3]. So, although many methods of prevention of STI/HIV are available, condoms remain of utmost importance. Another important role is that they also offer protection in scenarios when alternate sexual practices are adapted.Number of studies conducted over the past quarter century have found that people who reported consistent condom use reduced their risk of HIV transmission during anal sex by 70–87 percent. [4]Any attempt to undermine their use will have a negative and longlasting public health impact.

The most significant barriers are lack of privacy in stores and social stigma associated with condom use. The reported problems related to not using condom include not accepted by sexual partner, perceived ineffectiveness, less comfort, lack of sexual satisfaction with condoms, husband's alcohol use, depression, anxiety, and not available at that instant.[5] Further, female sterilization is the dominant family planning method in India. Couples in whom either the husband or wife has been sterilized may not be motivated to use condoms. They perceive that asking for use of the condom indicates the infidelity.Although, many people wrongly assume that all men know the correct way to use condoms, but the fact is, incorrect usage is common and it is a major cause of condom failure.

With the epidemiology of HIV epidemic into heterosexual, inner-city populations and increasing burden of other STI/RTI, understanding condom use patterns in the partners of married female of the reproductive age is crucial in developing the interventions.

Aim and objectives:

To understand the pattern of condom use among the partners of married women of reproductive age group and its association with STI/RTI in females.

Materials and Methodology

A Cross-sectional hospital based study was conducted at STI/RTI clinic of Urban Health Centre (UHC) Shivaji Nagar, Govandi, Mumbai which is affiliated to Department of Community Medicine, Topiwala National Medical College and B.Y.L.Nair Hospital, Mumbai.Study duration was from 1st January 2012 to 31st March 2012.Approval of the Institutional Ethics Committee was sought before the start of study. Total number of 411 females attended STI/RTI Clinics. Inclusion criteria was allowed us to include evermarried women belonging to age group of 15-45 years and willing participants. Out of 411 female patients 76 were excluded from the study as they did not fulfil the inclusion criteria and 62 were not willing for laboratory tests or internal examination done to confirm the diagnosis, 7 participants who either widow or divorced are excluded due to denial of active sexual history. So, total 266 patients were enrolled in the study. Informed and written consent of study population was taken. The nature & purpose of the study was explained to the participant. The data was collected using a predesigned, pretested, semistructured questionnaire and interview method about her name, age, symptoms of patients, duration of the illness. Information was collected regarding condom use by partner which includes the frequency of use to determine the consistent use of condoms. Consistent use means use of condom for each and every act. Detailed clinical examination was done in lithotomy position.Before collection of samples, antiseptic preparation of the vulva was done. Endocervical swab for gonococcal infection was obtained by inserting a sterile cotton swab into cervical canal and rotated for 30 seconds and withdrawn, smear was prepared. Two sterile cotton tipped swabs were inserted simultaneously in the posterior fornix of vagina and rubbed against the vaginal wall to obtain the vaginal swabs. The swabs were immediately transferred to the laboratory without delay for processing.

Collected Sample	**Laboratory Procedure**
Cervical swab	Gram Staining
Vaginal swab	KOH wet preparation and wet saline mount preparation
Blood sample	RPR and HIV testing

Table 1. Association between the Pattern of condom use and STI/RTI

Pattern of Condom use		N=266 No (%)	STI/RTI present No (%) 162 (62.80 %)	STI/RTI absent No (%) 99 (37.20 %)	X^2	P value
Condom use	Yes	64(24.06%)	24(37.5%)	40(62.5%)	23.05	0.000
	No	202(75.94%)	143(70.9%)	59(29.1%)		
Frequency of condom use	Every Act	7(2.63 %)	1(14.3 %)	6(85.7 %)	24.86	0.000
	Sometimes	57(21.43%)	23(40.4%)	34(59.6%)		
	No Use	202(75.94%)	143(70.8%)	59(29.2%)		

Table 2. Distribution of symptoms of RTI/STI among condom users and nonusers.

RTI/STI	condom users No(%)	non condom users No(%)	Total No(%)
Non specific cervicities	53(21.2%)	198(78.2%)	251(100%)
Candidiasis	8(11.6%)	61(88.4%)	69(100%)
Bacterial vaginosis	0(0.0%)	6(100%)	6(100%)
Fungal infection	4(16%)	21(84%)	25(100%)
Non specific vaginitis	4(16.7%)	20(83.3%)	24(100%)
HIV	0(0.0%)	4(100%)	4(100%)
HBV	0(0.0%)	5(100%)	5(100%)
Trichomoniasis	1(16.7%)	5(87.35)	6(100%)
Gonococcal cervicitis	0(0.0%)	3(100%)	3(100%)
YPHILIS	0(0.0%)	1(100%)	1(100%)
Herpetic ulcers	1(50%)	1(50%)	2(100%)

*****_The participants have been diagnosed with more than one STI/RTI_

Statistical analysis of collected data was done by using SPSS with frequency distribution and Chi Square test.

Results

The results areobtained by analysing the data of total 266 participants. Our study shows that out of total participants, only 168(63.15%) females were using one or other type of contraceptive practices.98 (36.85%) were not using any type of contraceptive practice. Fig 1 shows that among those who are using contraception, partners of 66(37.93%) females were using condom, 47(27.02%) were using intrauterine devices, 34(19.54%) were undergone permanent type of sterilisation. Only 25(14.37%) of females were using oral contraceptive pills as a method of contraception. Some of the study participants were using more than one method of contraception.

Fig 1. contraceptive practices among the participants

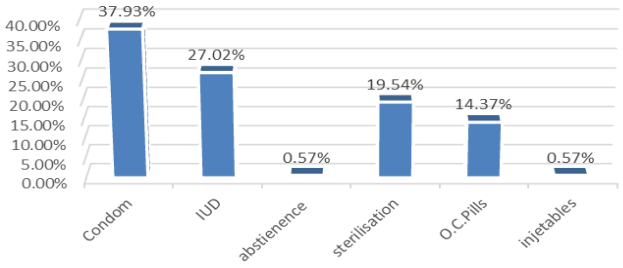

Fig. 3. Distribution Of STI/RTI among the condom users.

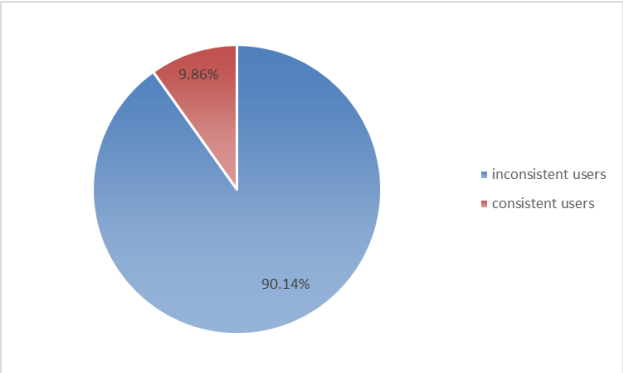

Table 1 shows that only 64(24.06%) partners of participant women were using condom during the sexual act and (202)75.94% were not using it. Among the condom users only 24 (37.5%) were having STI/ RTI as compared to 143(70.9%) who were not using condom during the sexual act. Among the consistent condom users only 1 (14.3%)

had acquired the infection as compared to the 23(40.4%) who were using condoms sometimes of the sexual acts. The association between condom use and STI/RTI is statistically significant. Consistency of condom use is also statistically significant with prevalence of STI/RTI.

Table 2 shows the distribution of symptoms among the condom users and noncondom users

Most common RTI was nonspecific cervicitis. Out of total 78.2% cervicitis was found to be among non-condom users as compared to 21.8% among the condom users, 88.4% candidiasis among non users of condom to 11.6% among users of condom, 100% bacterial vaginosis was among found to be among non-condom users. The prevalence of fungal infections 84%, vaginitis 83.3%, was relatively more among those who were not using condom at the time of sexual act. Other RTI like HIV, HBV, gonococcal cervicitis and syphilis were found exclusively among non-condom users. Proportion of Herpetic infection was 50% among non-condom users.

Fig 2 shows that out of total STI/RTI among the condom users, 90.14% prevalence was among the inconsistent users as compared to 9.86 % among those who are using condoms consistently.

Discussion

Methods most effective in preventing transmission of STI/RTI are barrier methods. In the present study, among the condom users only 24(37.5%) were having STI/ RTI. The use of contraception, particularly oral contraceptives and condoms, was associated with a reduced risk for Bacterial Vaginosis and these associations have been seen in previous studies.[6,7] Regarding the pattern of use of condom during the sexual act it is statistically proved that among consistent condom users only1(14.3%) had acquired the infection. out of total STI/RTI among the condom users, 90.14% prevalence was among the inconsistent users.In a study done by Tang Yongjun,[8] the Logistic regression assessment identified an association between the presence of nongonococcal cervicitis or Chlamydia Trachomatis and occasional condom use in the previous three months. Similar findings had been reported earlier by Thomas *et al*. and Weller and Davis‐Beaty.[9,10] In a study done by Choudhary S., multivariate analysis shows that condom use has statistically significant association with STI/RTI[11].

The reason to include the analysis of consistent condom use and STI/RTI is,many researchers conclude that comparing the STI prevalence rates of condom users and nonusers may not be a useful comparison, given that greater proportions of condom users than of nonusers reported recent risky sexual behavior. They suggest that "the more relevant comparison is within the condom use group, between those who used them consistently and those who did not," in which consistent use offered men and women significant protection against bacterial infections, and protected men against genital herpes.[12] In a study done in Denver STD clinic showed that men who used condoms consistently were less likely than those who used them inconsistently to have gonorrhea, chlamydia or genital herpes (0.7-0.9).[13]

Distribution of symptoms among the condom users were more as compared to noncondom users.

Most common RTI was nonspecific cervicitis. Out of total 78.2% cervicitis was found to be among non-condom users as compared to 21.8% among the condom users, 88.4% candidiasis among non users of condom to 11.6% among users of condom. Proportion of Herpetic infection was 50% among non-condom users. Reason for this finding may be that effectiveness of condoms may depend on how the STI is transmitted. Condoms do not completely cover all parts of the body that can become infected, or are infected, by STIs that are primarily transmitted through skin–skin contact (such as herpes, syphilis and genital warts). Therefore, condoms may be less protective against these STIs compared to those that are transmitted through contact with infected fluids.

Conclsion and Recommendations

Both correct and consistent use of condoms is necessary for STI andHIV prevention and is, in the true sense, the need of the hour.Thus, it is not enough to encourage people to use the condoms, but they should be guided on the correct usage too.Our study emphasize the fact that barrier usage should be promoted in the population of reproductive age group in urban slum which is especially migrating from one place to another so at risk of developing STIs and HIV. Safe sex practices and awareness regarding HIV and STIs should be promoted not only in the high risk group but also in the general population. Special attention should be given on married women as STI/RTI seriously affect the reproductive health and lead to many avoidable complications. Sexual education and routine

counselling should be made compulsory in all parts of the country to control the current burden of STIs behaviour among high risk population.

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Original Research Article

Awareness of Family Planning among the Students of Women's Degree Colleges of Kalaburgi City, Karnataka

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Abstract

Background: College girls are in reproductive age and are future mothers. So it is necessary to have health concern information about dimensions and magnitude of awareness towards family planning among these girls.

Objectives: To study the awareness pertaining to various aspects of family planning among degree college girls.

Methods: A cross-sectional study was conducted among the total of 118 final year girls belonging to women's degree colleges of Kalaburgi city. Data was collected from three women's degree colleges from 15.09.2012 to 30.09.2012 in a pre-designed and pre-tested structured proforma.

Results: In the present study, out of 118 students, 92.3% had relative opinion regarding family planning i.e. 30% opinion as promotion of health and family welfare, 13.6% as spacing between two children, 11% as prevention of child birth, and 29.6% had correct opinion regarding all the above components of family planning. 73.3% of students accepted ideal age at marriages for girls was 20-25 years, 70.34% of students accepted two children norms. 75.42% mentioned that interval between pregnancies should be 2-3 years. 86.4% of girls were aware of different family planning methods and among them 34.6% were aware of only terminal methods as methods of family planning and 60.4% were aware of spacing methods.

Conclusion: Present study revealed that participants have good knowledge regarding family planning but timely knowledge gap restricts the female's choice for the use of various contraceptive methods in the initial years of marriage.

Key words: Awareness, Family planning, Women Students

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Introduction

India is one of the populated developing countries with people belonging to different religions, cultures and traditions. The social, economic and cultural characteristics of communities vary. The age and sex composition of a population plays an important role in demographic analysis. Human fertility is determined by all customs, morals and habits of social groups with regard to marital obligations and life. The fertility pattern is inversely proportional to socio economic development.[1] Family planning is defined by WHO as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the

health and welfare of the family groups and thus contribute effectively to the social development of a country."[2,3]

A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being as well as on the outcome of each pregnancy. Family planning can influence health by permitting a women to bear children at an age when the risk of health problems to her and her offspring is lowest and allowing a couple to choose the number of children they wish to have as well as decide the spacing of their children and providing a safe and effective measures of family planning that are part of a service program that includes information, education and comprehensive preventive health services.[4]

Over the decades, there has been a substantial increase in contraceptive use in India. The direction, emphasis and strategies of the Family Welfare Programme have changed over time. However, meeting the contraceptive needs of considerable proportions of women and men and improving the quality of family planning services continue to be a challenge. NFHS-II 1998-99 shows that only 10% of the married adolescents of age 15-19 years use any method of contraception. As per NFHS-III, 56.3% of currently married women of aged 15-49 years are using any method of contraception. Acceptance should be further scaled up to have desired demographic impact by creating awareness. Family Planning 2020 is a global partnership that supports the rights of women and girls to decide, freely, and for themselves, whether, when, and how many children they want to have. Family planning services have a great potential not only to improve the quality of lives of people but also to bring up the economic welfare. A lack of knowledge of contraceptive methods or a source of supply, cost and poor accessibility are the barriers that exist in developing countries.[5] Hence it is necessary to have health concern information about dimensions and magnitude of awareness towards family planning program among the students of women's degree college. Thus, the present study is designed to assess the awareness of family planning. It is very important aspect as these girls are not only in reproductive age but are future mothers.

Materials and Methods

A cross-sectional study was conducted among the 118 final year girls students belonging to women's degree colleges of Gulbarga city now named as Kalaburgi which is in north of Karnataka state. Sample size of 80 was calculated using the formula $n= 4pq/l^2$ with an acceptable error of 5% level of significance, from a previous study,[6] where the awareness regarding family planning was 95.2%**.** Three colleges were randomly selected to get calculated sample size from the list of women's degree college. Data was collected from one randomly selected class of three selected women's degree college. It was pre decided to include only one class from one college from the list of three different women's degree colleges. Students from three women's college present in the randomly selected class on the day of data collection were included in the study. First data was collected from Bibi Raza women's college where 45 students were present on the day of data collection in randomly selected class followed by V.G. women's college where only 28 students were present in the randomly selected class on the day of data collection and lastly from Godutai women's college where 45 students were present in the randomly selected class on the day of data collection, thus a total of 118 students were included in the study. Exclusion criteria included students who were not willing to participate in this study. Data was collected during the period from 15.09.2012 to 30.09.2012 in a pre-designed and pre-tested structured proforma containing questions related to meaning of family welfare, ideal age at marriage, spacing, small family norm, knowledge regarding different contraceptive methods etc. Students were informed that maximum care is taken to maintain the privacy and confidentiality. Ethical clearance was obtained from the institutional ethical committee well before the collection of data. Consent was obtained from all the participants of the study. Data was coded and analyzed by Microsoft Excel 2007.

Results

In the current study, out of 118 students, 53.5% were Hindus, 44% were Muslims and 2.5% were others. **Table 1** showed that 92.3% had relative knowledge regarding family planning i.e. 30% were in opine as promotion of health and family welfare, 13.6% as spacing between two children, 11% as prevention of child birth, only 29.6% of subjects had correct knowledge regarding family planning.

Figure 1 shows the perception of students about major components like 73.3% of students accepted that the ideal age at marriages for girls was 20-25 years and 70.34% of students accepted two children norms. 75.42% mentioned that interval between two pregnancies should be 2-3years.

Figure 2 revealed that only 51% of girls showed awareness regarding spacing method of contraceptives of which the most commonly known methods are condom 23% followed by copper-T

Table 1: Opinion pertaining to family planning amongst study population

Family planning means	BBRW	VGW	GTW	Total	Percentage
Proper spacing between two children	4	4	8	16	13.6
Prevention of child birth	7	3	3	13	11
Promotion of health and family welfare	8	12	13	33	28
All of the above	10	7	18	35	29.6
Don't know	16	2	3	21	17.8
Total	**45**	**28**	**45**	**118**	**100**

BBRW= BiBi Raza Women's College; VGW= V.G. Women's College GTW= Godutai Women's College

Table 2: Source of information about family planning among study population

Source of information about family planning	Number	Percentage
Television	63	60.6
Radio	02	1.9
News paper	22	21.2
Friends	16	15.4
Don't know	01	0.9
Total	**104**	**100**

14% and OCPs 13%. The percentage of subjects who were aware of terminal methods of contraceptive commonly known as tubectomy was 28.8%. Subjects who had no idea about contraception are 14% and 9% subjects were aware of both spacing and terminal methods.

Table 2 shows that out of 104 students who were aware of family planning methods the most common source of information was TV 60.6% followed by news paper 21.2% and friends 15.4%. About 84.7% subjects are of opinion that both husband and wife should adopt the family planning method. Only 24.6% of girls were of opinion that condom is the ideal method of family planning among newly married couples were as 57% were totally unaware.

Figure 1: Knowledge regarding the ideal age at marriage, two children norm and child spacing amongst study population

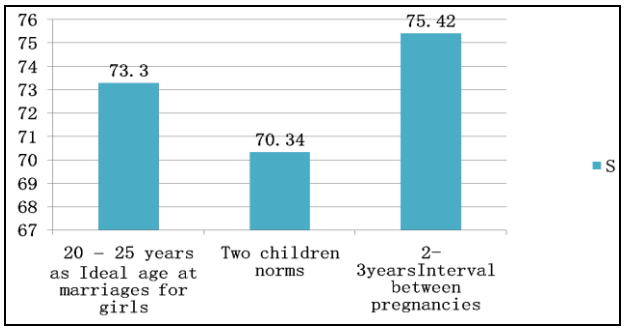
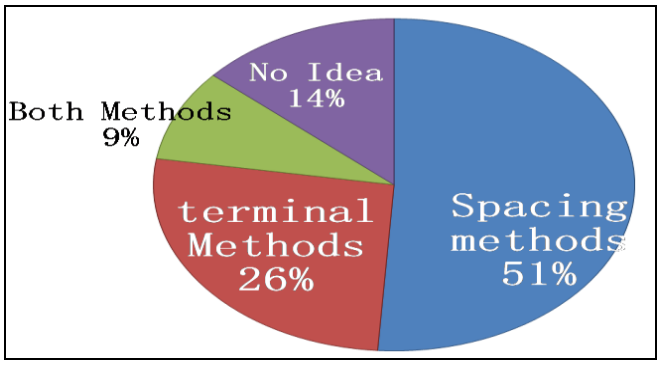


Figure 2: Knowledge regarding different family planning methods amongst study population



Discussion:

In the present study, among 118 subjects, we found that 29.6% of subjects had correct opinion regarding all the components of family planning. A study done by Takkar N et al.[7] revealed that 11.2% of the study population was very much aware of contraceptive methods, this can be taken as a positive move as the study done by them was 5 years ago. Another study done by Prateek SS and Saurabh RS[8] also revealed that due to lack of awareness regarding family planning 70.5% did not use any contraceptives and about 21.3% were afraid to use contraception because of the side effects of various methods.

Family planning can decrease the rate of maternal mortality by reducing the number of pregnancies, abortions and proportions of births at risk.[9] The key element to lower the fertility rates in developing countries is proper use of contraceptive methods.[10] The Family Welfare Programme in India was launched with the objective of reducing birth rates to the extent necessary to stabilize population at a level consistent with the requirements of the national economy. The programme has since evolved

through a number of stages, and has changed direction, emphasis and strategies. This programme promotes the responsible parenthood with two child norms through voluntary choice of family planning.[11,12] Every year September 26 is designated as World Contraception Day. It was launched in 2007 and it is devoted to raising awareness of contraception and improving education about sexual and reproductive health, with a vision of "a world where every pregnancy is wanted".

Majority 73.3% of students accepted that 20-25 years is the ideal age of marriages for girls and 70.34% of students accepted the two children norms. 75.42% subjects believed that interval between two pregnancies should be at least 2-3years and 84% were aware of family planning methods. Our findings were comparable with the studies done by Nirmala Jaget Lakkawar et al.[12] and Lakshmi MM et al.[6], majority 81.6% and 95.2% of the subjects were aware of one or more methods of contraception respectively. Another study done by Sajid A and Malik S[13] in their study observed that 100% awareness regarding family planning services. A study done by Rasania SK et al.[14] in the Delhi have also shown that knowledge regarding various spacing methods vary from 10-60% among masses.

Conclusion:

To conclude, our study indicates that participants has good knowledge regarding family welfare but timely knowledge gap restricts the female's choice for the use of various contraceptive methods especially about ideal contraceptive methods in the initial years of marriage. Effective counseling, motivation and education are required for people in reproductive age. Health care providers and media should play their role efficiently to create awareness of family planning methods and its availability in the local health centers. Extended efforts are needed to create awareness and to implement its usage for the contraception. Family planning awareness should also include knowledge about prevention and treatment of sexually transmitted diseases.

Limitations:

One of the limitations of this cross-sectional study is a representative sample of women's college students only; therefore that findings cannot be generalize to the all students of degree college (co education colleges) or whole women population of the Kalaburgi city.

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Short Article

Infant and Child Feeding Practices among Tribal Population in Bangalore district, Karnataka

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Date of Submission: 04.10.2015 **Date of Acceptance: 01.11.2015**

Abstract

Introduction: Tribes constitute 8.2% of the Indian population. Social barriers may prevent the utilization of available nutrition supplementation programmes and services for women and children. Each tribe has its own unique practices of child-bearing and child rearing. These practices continue to be neglected in spite of their important role in the growth of infants.

Objectives: To assess the infant and child feeding practices in a tribal community in Bangalore district, Karnataka and to assess nutritional status of the children by anthropometry.

Methodology: It was a cross sectional study conducted in a tribal community in Bangalore district during the period of October 2013 to April 2014. After obtaining institutional ethical clearance, door to door survey was conducted using interview schedule and nutritional status of children was assessed by anthropometry.

Results: We interviewed mothers of 73 children aged 0-5 years. The mean age of the mothers was 23 years. Among the study population 26.0% had fed their children with prelacteal feeds. Exclusive breast feeding up to 6 months was by only 75.0% of the mothers. Of all of them 98.6% initiated breastfeeding within the first hour of birth. Only 2.9% of them started complementary feeds at 6 months of age. It was observed that 49.3% of the children were under weight according to WHO (World Health Organization) weight for age growth charts. **Conclusions:** The study shows poor infant and young child feeding practices with poor nutritional status. There is need for promotion and protection of optimal feeding practices for improving nutritional status of infants.

Key words: Infant and young child feeding practices; breast feeding; mothers; nutritional status; tribal population.

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Introduction

Tribes constitute 8.2% of the Indian population.[1] Tribal communities are geographically distinct; with each tribe having its own unique customs, traditions, beliefs and practices. Tribal populations are isolated from the general population by their own socio-economic and physical environment. Poverty, illiteracy, lack of environmental sanitation and hygiene, lack of safe water supply and lack of access to health services are some of the factors which contribute to the poor health status of tribal communities. The tribal women and children bear the brunt of these inadequacies.[2] They form a special risk group- the risk being associated with child-bearing in women and growth, development and survival in children.

Most tribal women do not utilize the maternal and child health services provided at government facilities because of reduced access to the health facility and as they will be working during the day

time hours.[3] Social barriers may prevent the utilization of available nutrition supplementation programmes and services for women and children. The health seeking behavior is guided by superstitions and prevailing cultural practices. Each tribe has its own unique practices of child-bearing and child rearing.[4]

Breast-feeding practices of women are critical determinants of child survival, maternal and reproductive health, and population growth rates. Breastfeeding for the first two years of life and beyond protects the young child from infection, provides an ideal source of nutrients, is a cost-effective and safe form of feeding, fosters mother-child bonding, and lowers the risks of early childhood deaths.[5] This research throws light on the prevailing infant and child feeding practices and the nutritional status of children in Hakki pikki tribal community in Bangalore district, Karnataka.

Methodology:

A cross sectional study was carried out among Hakki Pikki tribal community in Bangalore district, Karnataka, India. The study was conducted during the period of October 2013 to April 2014. The study population comprised of mothers of children 0 – 5 years of age. The estimated population of this tribal colony was 1000 (according to HMIS data 2013). List of all children of 0-5 years of age was obtained from the anganwadi teacher. Data was collected by house to house survey and ensured participation of all the children in this area by visiting anganwadi and other common gathering places. Children who were not available after three visits were excluded from the study. Data was collected using a structured interview schedule with a modified Breast feeding Promotion Network of India (BPNI) questionnaire. Anthropometric measurements were taken by post graduate students of public health with standard WHO (World Health Organization) methodology using standard measurement scales (weighing scale and measuring tape). Degrees of malnutrition were assessed using WHO growth charts. This study was approved by the institutional ethical committee. After establishing rapport with the mothers, the purpose and procedure of the study were explained. Informed written consent was obtained from the participants and the interview schedule was administered to the participants. All questions were asked in their local language by the investigators. The data was entered and coded in Microsoft Excel and analyzed using SPSS version 16. Frequencies, measures of central tendency, dispersion and chi square tests were used to analyze data.

Results:

We interviewed 50 mothers of children aged 0-5 years. The mean age of the mothers was 23 ± 6.01. The youngest mother was 18 years of age and the eldest mother was 40 years of age. About 30 (60.0%) of the mothers were illiterate and 23 (46.0%) of the fathers were illiterate. All of them were Hindu by religion and 31(62.0%) were holders of Below Poverty Line (BPL) card. According to modified B G Prasad classification most 39 (78.0%) of them belong to class V (per capita income less than Rs. 846).[6] The total number of children in a family ranged from one to six with a mean number of three children.

A total of 73 children were included in the study. Of the pregnancies 69 (94.5%) had undergone ante natal check-ups, of which 45 (61.6%) had undergone two antenatal visits which was mostly conducted by nurse. During pregnancies, 70 (95.9%) received advice on breast feeding and 43 (58.9%) received information on breastfeeding through nurses. About 37 (50.7%) of the deliveries took place in government hospital followed by home delivery 25 (34.2%). Of all 33 (45.2%) of the deliveries were conducted by doctors whereas 21 (28.7%) of deliveries were conducted by untrained traditional birth attendants. Four deliveries were conducted by government midwives at home. Of all 65 (89.0%) mothers had normal vaginal delivery.

Of the 73 children examined, 5 (6.9%) were below six months of age and 33 (45.2%) belonged to the age group of 24-48 months. In the study population 35 (47.9%) were males and 38 (52.1%) were females. 72 (98.6%) were given colostrums and 19 (26.0%) of children were given prelacteal feeds (mostly sugar water), as per the advice of mother or traditional belief. Regarding bottle feeding 3 (4.1%) of children were given bottle feeds after one month of life.

The feeding practices of the study population is depicted in table 1

Of the 73 children 5 (6.8%) had diarrhoea in the last two weeks and breast milk was continued during the period of illness. But the children ate and drank less than usual during this period.

Table 1 Feeding practices of the study population

Feeding practices	Yes	No	Number (%)
Prelacteal feeding	19 (26.0%)	54 (74.0%)	73 (100)
Colostrums feeding	72 (98.6%)	1 (1.4%)	73 (100)
Early initiation of breast feeding	72 (98.6%)	1 (1.4%)	73 (100)
Exclusive breast feeding for six months	51 (75.0%)	17 (25.0%)	68 (100)
Complimentary feeding at six months	2 (2.9%)	66 (97.1%)	68 (100)
Continued breastfeeding till two years	22 (51.2%)	21 (48.8%)	43 (100)

Of the children who had diarrhoea 60% took treatment from government facilities and 40% from private hospitals. Among the 73 children, 10 (13.7%) had fever and 5 (6.8%) had cough and fast breathing in the last two weeks. They all took treatment from government hospital. The prevalence of underweight was 49.3%. Overall 28.8% of the children had severe underweight.There was statistically significant association between exclusive breast feeding for six months and under nutrition.

Table 2: Association between feeding Practices and Under Nutrition (n=68)

Feeding Practices		Under Nutrition Present	Under Nutrition Absent	Total	P Value
Exclusive Breast Feeding for six months	present	21 (61.8)	30 (88.2)	51 (75.0)	0.01
	Absent	13 (38.2)	4 (11.8)	17 (25.0)	
Complementary Feeding at six months	present	1 (2.7)	1 (3.2)	2 (2.9)	0.58
	Absent	36 (97.3)	30 (96.8)	66 (97.1)	

(Figures in the parenthesis shows column percentages except the total column which shows row percentages)

Discussion

In our study population 8% of mothers were at 18 years of age which contribute to adolescent pregnancies. The youngest mother was 18 years and the eldest was 40 years of age, which shows skewing of data in the study population. Of all 60% of mothers were illiterate which is higher than the national average. 62% of the family members possessed BPL card. The mean number of children was three which shows high fertility rate. Home deliveries constituted 34.2% of all the deliveries which is higher than NFHS-3 data.[7] 28.7% of the deliveries were conducted by untrained traditional birth attendants.

In our study prelacteal feeding was given to 26.0% of the infants which is less than National Family Health Survey – 3 (NFHS-3) data (57.3%).[7] The reasons could possibly be due to the health education programmes conducted by health care professionals. Colostrum was refused only to 1.4% of the infants which is lower when compared to a study done in Allahabad where 54.8% of the mothers discarded colostrum. In the same study lack of colostrum feeding was associated with increased risk of under nutrition.[8] Early initiation of breast feeding within one hour was followed by 98.6% of the respondents, which could be explained by the health education sessions on breast feeding given to mothers and studies have showed that early initiation of breastfeeding could reduce neonatal mortality by 22%.[9] Exclusive breast feeding rate for the first six months among the infants within 6-24 months was 75.0% which throws light on the feeding practices prevailing in the area. This could be attributed to the poor knowledge about optimal breast feeding practices. Another reason could be due to inadequate milk secretion by the mother was found by a study in rural Tamilnadu by Parmar et al.[10] Promotion of exclusive breast feeding would go a long way in improving infant survival.[11,12] The timely initiation of complementary feeding at six months was 2.9% in the 6-24 months age group which was much lower than 16.6% observed in Delhi slums[13] because of cultural practices prevailing in the community and lack of awareness regarding the need of extra calories for the children. Late initiation of complementary feeds may also attributed to the poverty prevailing in the community. Breastfed children at 12-23 months receive 35-40% of their total energy needs from breast milk thus emphasizing the need for continued

breast feeding till two years of age.[14] Continued breast feeding till two years was 51.2% in the 24 month age group. The prevalence of diarrhea among the study group was 6.8% in the preceding two weeks of the survey which could be attributed to poor hygienic practices in the preparation of complementary feeds. Of all 40.0% mothers fed less than the usual number of breastfeeds during the period of illness which could predispose the child to under nutrition. There was statistically significant association between exclusive breast feeding for six months and under nutrition. The prevalence of under nutrition was less among the children who were exclusively breast fed till six months.

Conclusion:

The findings of our study indicate that breastfeeding practices and timely implementation of complementary feeding practices were suboptimal. The nutritional status of children was also less than national average. Efforts should also be made to increase the awareness of maternal and child health including infant and child feeding practices for improved health status of the children of the tribal population. Health programmes should be initiated to improve the demographic and socioeconomic conditions of tribal families for improved maternal and child health.

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