CROSS SECTIONAL ANALYTIC STUDY OF AWARENESS REGARDING FACTORS RELATED TO CHILD SURVIVAL AMONG MARRIED WOMEN IN A SEMI-URBAN COMMUNITY

Lt Col IB SAREEN^{*}, Lt Col RAJVIR BHALWAR⁺,
Brig VW TILAK[#],_{VSM}

ABSTRACT

A cross sectional analytic study was undertaken on 480 married women living in a semi-urban locality in Pune, with the objective of assessing their awareness regarding factors related to child survival. It was observed that 62.1 per cent of the ladies had adequate knowledge about immunisation. A highly significant trend was evident as regards knowledge about immunisation and formal education and socio-economic status ($p < 0.01$). 93 per cent ladies initiated breast feeding within 24 hours of birth of the new born. Significantly larger proportion of ladies from lower education favoured prolonged breast feeding ($p < 0.001$) and favoured late introduction of top milk ($p < 0.001$). In general, the awareness about growth chart was very poor with only 3.5 per cent ladies having adequate knowledge. Larger family size was significantly associated with declining probability of use of oral rehydration solution (ORS). Certain recommendations for improving the awareness regarding child survival have been submitted accordingly.

MJAFI 1998; 54 : 101-104

KEYWORDS : Child survival; Health awareness

Introduction

In India, women of child bearing age (15-44 years) constitute 22 per cent and children under 15 years of age about 40 per cent of the total population [1]. By virtue of their sheer numbers, and being "vulnerable group", they deserve special attention. The national health policy approved by our parliament in 1983 laid considerable stress on mother and child health activities, through the primary health care approach. One of the major goals of national health policy is the reduction of mortality rate in children under 5 years of age. Despite a significant decline from death rate of 41.2 per 1000 children in 1984 to 26.5 in 1991, the rate is still far above the aimed level of 10 per 1000 children to be achieved by the end of this decade [2]. In this regard, the WHO and UNICEF have been spearheading the child survival campaign and have stressed the strategy under "GOBI - FFF" (Growth monitoring, Oral rehydration, Breast feeding, Immunisation, Female education, Family spacing, and Food supplementation). In India, we have the "Child survival and safe motherhood" (CSSM) programme, launched since 20 August 1992 [3]. In primary health care approach, community participation is of vital importance and that is necessarily related to health awareness of the community to undertake actions con-

sidered essential for child survival.

The present study has been undertaken to find out the extent of awareness among married women regarding the basic knowledge linked with better child survival so that suitable recommendations may be arrived at, to augment the same.

Material and Methods

The present study is a community based cross sectional analytic study and has been undertaken from Oct to Dec 1995, through a single home visit, in respect of 480 married women residing in 250 randomly selected houses in Wanworie area of Pune Cantonment. Wanworie area is a semi-urban area located approximately 2 km from AFMC, Pune. The study was confined to assessment of the basic knowledge related to essential elements, covered under "GOBI-FFF" advocated by UNICEF for better child survival and further stressed under our National CSSM programme. The selection (inclusion) criteria for the subject required that she should be a permanent resident of the study area, should be a married lady and should have delivered at least one living child since her marriage.

A pre-structured questionnaire comprising of 5 simple questions pertaining to each component of these essential elements was administered to every subject selected for the study. The data collected has been analysed statistically and some salient features that have emerged are presented here.

Results

A total of 497 women fulfilled the selection criteria. At the time of the home-visit, only 480 women were available and re-

^{*}OC,SHO Lucknow, UP 226002; ⁺Reader and Epidemiologist, Dept of PSM, Armed Forces Medical College, Pune 411040; [#]DDMS, HQ 2 Corps, C/o 56 APO

sponded to the interview, the response rate, thus worked out to be 96.57 per cent. Age of the interviewees ranged from 16 to 73 years.

Socio-economic status :

Socio-economic status of the family was assessed by using Kuppuswamy's socio-economic scale (urban) [5]. Families were classified into 5 social classes depending upon the education, occupation of the head of the household and per capita income. There was no woman in S.E. class-I, majority, 368 (76.67%) belonged to S.E. class-IV, followed by 106 (22.08%) of S.E. class-III, 4 (0.84%) of S.E. class-II, and only 2 (0.41%) of S.E. class-V.

Immunisation and S.E. class :

Highly significant declining trend of knowledge about immunisation was observed among women belonging to various socio-economic status, being higher among upper socio-economic classes and progressively declining in women of lower socio-economic status. The odds of having adequate knowledge being the highest among ladies from upper socio-economic classes, and it significantly declined to less than 50 per cent among ladies of lower socio-economic status (Table 1)

TABLE 1
Association between socio-economic status and knowledge about immunisation

Socio-economic status	Level of knowledge			Stratum OR
	Adequate	Inadequate	Total	
Upper class (S.E.S I & II)	3 (75%)	1 (25%)	4 (100%)	1.00
Middle class (S.E.S III)	77 (72.6%)	29 (27.3%)	106 (100%)	0.89
Lower class (S.E.S IV & V)	218 (58.9%)	152 (41.1%)	370 (100%)	0.48
Total	298 (62.1%)	182 (37.9%)	480 (100%)	

X^2 for linear trend = 6.67, $P < 0.01$ (HS)

Educational status :

In this semi-urban community, out of the total 480 women in the study group, majority, 301 (62.71%) had studied upto middle level, and 57 (11.87%) upto Higher Secondary or above.

Immunisation and Education :

Data at Table 2, shows that the level of knowledge about Immunisation was very high among ladies with higher education, as 80.7 per cent of those who had studied upto higher secondary and above had adequate knowledge and this declined to 71.8 per cent among ladies educated upto middle. This was considerably low among those who were either illiterate or were educated upto primary level as only 29.5 per cent of them had adequate knowledge about immunisation. Chi square for linear trend brought out this declining trend among women of different educational status to be statistically very highly significant (Table 2).

Breast feeding and weaning :

As regards the duration for which breast feeding should continue, a much larger proportion (29.8%) of higher educated ladies as compared to only 1.7 per cent among the lesser educated group felt that, the breast feeding is required for only the first 3 months. On the other hand, a much larger proportion, that is 49.4 per cent, of low educated women as compared to 26.3 per cent of higher

TABLE 2
Association between education and knowledge about immunisation

Educational status	Level of knowledge			Stratum OR
	Adequate	Inadequate	Total	
Higher secondary and above	46 (80.7%)	11 (19.3%)	57 (100%)	1.00
Upto middle	216 (71.8%)	85 (28.2%)	301 (100%)	0.61
Primary and illiterate	36 (29.5%)	86 (70.5%)	122 (100%)	0.10
Total	298 (62.1%)	182 (37.9%)	480 (100%)	

X^2 for linear trend = 63.15, $P < 0.001$ (very HS)

TABLE 3
Association between educational status and knowledge about duration of breast feeding

Age upto which breast feeding required	Educational status			Total
	Hr Secy and above	Less than Hr Secy		
Up to 3 months	17 (29.8%)	7 (1.7%)	24 (5%)	
3 to 9 months	25 (43.9%)	207 (48.9%)	232 (48.4%)	
> 9 months	15 (26.3%)	209 (49.4%)	224 (46.6%)	
Total	57 (100%)	423 (100%)	480 (100%)	

$X^2 = 85.73$, $df = 2$, $p < 0.001$ (very HS)

TABLE 4
Association between educational status and knowledge about optimum time of introduction of top milk

Age of introduction of top milk	Educational status			Total
	Hr Secy and above	Less than Hr Secy		
Within 3 months	21 (36.8%)	78 (18.4%)	99 (20.6%)	
3 to 6 months	23 (40.4%)	62 (14.7%)	85 (17.7%)	
6 months to 1 year	7 (12.2%)	142 (33.6%)	149 (31.1%)	
Not required	6 (10.5%)	141 (33.3%)	147 (30.6%)	
Total	57 (100%)	423 (100%)	480 (100%)	

$X^2 = 42.84$, $df = 3$, $p < 0.001$ (very HS)

educated women favoured continuation of breast feeding beyond 9 months. The difference was statistically very highly significant (Table 3).

It was observed that a much larger proportion of women from higher educational group favoured introduction of top milk within 3 months of age or within 3 to 6 months. On the other hand, a larger proportion of lower educated women favoured introduction of top milk between 6 months to 1 year or even felt that it was not required at all (Table 4). The difference was statistically very highly significant.

Iron and Folate supplementation

Awareness about iron and folate supplementation was higher among women who had studied upto higher secondary and above (75.4%) as compared to those who had studied upto lower levels or else were illiterates (Table 5). The odds were more than 9 times high (odds ratio - 9.19, 95% confidence limits = 4.65 to 18.4). The difference was statistically very highly significant.

TABLE 5

Association between educational status and awareness about iron and folate supplementation

Educational status	Level of awareness		Total
	Adequate	Inadequate	
Hr Secy and above	43 (75.4%)	14 (24.6%)	57 (100%)
Less than Hr Secy	106 (25.1%)	317 (74.9%)	423 (100%)
Total	149 (31.1%)	331 (68.9%)	480 (100%)

$\chi^2 = 59.56$, $df = 1$, $p < 0.001$ (very HS), Odds ratio = 9.19, 95% confidence limits of odds ratio = 4.65 to 18.40

Size of the family

Four hundred and fifty six (95%) women had 3 or less children and only 24 (5%) had 4 or more children.

Use of ORS and size of family

The proportion of women who used ORS declined progressively from 68.8 per cent and 71.2 per cent among women having one or 2 children, to as low as 37.5 per cent among women with 4 or more children (Table 6). Thus, awareness about use of ORS was more among smaller families than the larger ones. The Odds ratio showed a very highly significant declining trend ($p < 0.001$).

TABLE 6

Association between family size and use of ORS

Number of children in the family	Use of ORS when child had diarrhoea			Stratum Odds ratio
	Used ORS	Did not use ORS	Total	
One	89 (68.8%)	40 (31.2%)	129 (100%)	1.00
Two	158 (71.2%)	64 (28.8%)	222 (100%)	1.11
Three	58 (55.2%)	47 (44.8%)	105 (100%)	0.55
Four or more	9 (37.5%)	15 (62.5%)	24 (100%)	0.27
Total	314 (65.4%)	166 (34.6%)	480 (100%)	

χ^2 for linear trend = 11.05, $p < 0.001$ (very HS)

The possibility of co-variables like socio-economic status and educational status of mother having played a confounding role in this relationship was considered as a possibility, and adjustment for confounding was made through Mantel-Haenszel stratified analysis. It was observed that even after adjusting for the effect of socio-economic status and mother's education as confounders, family size still had a significant association with use of ORS (Mantel-Haenszel adjusted chi square was 33.06 after controlling for socio-economic status and 28.89 after controlling for mother's education ($p < 0.01$)).

Other variables

The association of level of awareness about immunisation did not have statistically significant relationship with religion, neither educational status was significantly associated with the correct time of starting breast feeding. In addition, awareness about growth chart was observed to be uniformly poor among the study subjects, irrespective of their educational status as only 3.5 per cent had adequate knowledge about growth charting.

Discussion

The present study has categorically brought out the influence of factors, such as, female literacy, fertility (family-size), and socio-economic status on the extent of awareness among the married women, regarding the basic issues considered so very important for child survival, such as, immunisation, breast feeding and use of ORS when the child develops diarrhoea.

Knowledge about immunisation and iron and folate supplementation has been found to be significantly higher among women with higher educational status as compared to those in lower educational status (Tables 2 and 5). Ashok Kumar from his study in Lucknow has also reported similar findings [7].

Socio-economic status has also been observed to exercise an influence on the level of awareness about immunisation, as the same showed significantly declining trend among women of different socio-economic strata, being higher among upper socio-economic class and progressively declining in women belonging to lower socio-economic classes (Table 1). Earlier, Nabarita Bhattacharya in the study conducted at Calcutta in 1987 [8] has also reported very poor immunisation coverage for infants in the low income families.

Use of ORS was observed to be higher among women with smaller family (68.8% among women having one child and 71.2% among those having 2 children) as compared to those with larger families (37.5% among women having 4 or more children) (Table 6). Chandra, Ganguli and Baraskar [9] had made similar observations from their study, and had stated lack of both time and inclination to use ORS by mothers with large families as the underlying reason.

However, knowledge about growth chart was uniformly low among all women irrespective of their educational status as only 3.5 per cent were aware about this. In their study among medical students and interns Kudesia, Madhura and Narayanappa [10] had reported that only 25.2 per cent were aware of the necessity of growth monitoring. Growth-measurement has an important place in nutrition and health programmes for children and therefore, awareness about growth-charts among the medical functionaries as well

as the community especially the women can not be ignored.

As regards duration of breast feeding, in the present study, a larger proportion (49.4%) of women with lesser education favoured breast feeding beyond 9 months compared to lower proportion (26.3%) of those with higher educational status (Table 3). Underlying reason for this, could be, out-door working conditions of women with higher educational status because almost all of them were employed on jobs in this semi-urban community. Thus their views about duration of breast feeding seemed to be related to compulsions of work-conditions. This highlights the necessity of the facilities such as creches for the children of working women more specifically, women in the lower socio-economic strata.

Larger proportion (43.3%) of women in the present study had received information about health activities from medical/paramedical staff, a strong indication that the health message received from medical/paramedical staff has longer and effective role.

To conclude, the present study has highlighted the need to augment resources for health education of the community with special emphasis on education of women. Scientific technology for child survival is available, but most of the problems require a continuing level of control, a change in behaviour, habits, perceptions and actions of a population. More specifically, women in the lower socio-economic strata and those educated less than higher secondary need to be identified as target groups for focusing the health edu-

cational efforts as regards growth chart, immunisation, oral rehydration, breast feeding and iron/folate supplementation.

REFERENCES

1. Govt of India, Health Information of India (1992), DGHS, New Delhi.
2. MCH Division, Ministry of Health and FW Govt of India, New Delhi, 1994 National Child Survival and Safe Motherhood Programme Manual on Programme interventions for Child Survival.
3. UNICEF. The State of World's Children, 1994, Indian Country Office New Delhi; UNICEF, 1994; 5.
4. UNICEF (1975). UNICEF - A Guide Current Policies and Working Methods, E/ICEF/Misc 258.
5. Park JE, Park K. Text Book of Preventive and Social Medicine. 10th ed. Jabalpur: M/S Banarsi Das Bhanot 1975; 446-50.
6. UNICEF. Assignment children - A child survival and development revolution 1983; 61-2.
7. Ashok Kumar. Knowledge and use of child health services in a city of Uttar Pradesh. Indian J of Pub Health 1986; 30 (2): 66-75 34 7.
8. Nabarita Bhattacharya. Immunization : Parental knowledge and attitude in relation to low income and literacy. Indian J of Pub Health 1990; 34 (4): 22.
9. SS Chandra, SK Ganguli, HR Baraskar. A knowledge - attitude - practice study of oral rehydration solution in mothers. Medical Journal Armed Forces India 1992; 48 (3): 207-10.
10. P Kudesia, BP Madhura, M Narayanappa. Assessment of Degree of knowledge of future health care delivery personnel with reference to child survival. Indian J of Community Medicine 1992; 17 (1): 30-40.