Original Article

Child Health: Understanding the home care practices in some illnesses among Underfive children in IMNCI implemented rural area.

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ABSTRACT

Background: Child mortality rates in rural areas are still higher than in urban areas. Success in reducing childhood mortality requires a partnership between health workers and families, with support from their communities. The integrated management of neonatal and childhood illnesses (IMNCI) strategy has improved the care of sick child at health facilities thereby reducing mortality. But the community component of IMNCI to improve household and community practices related to child health, nutrition and development is not addressed adequately. Objectives: To study the home care practices received by under five children in some childhood illnesses in IMNCI implemented rural area. Material and methods: Type of study: Cross sectional descriptive. Study participants: Mother's of underfive child who had fever, diarrhea and ARI in last two weeks. Study area: 3 PHC's adopted by Department of Community Medicine. The detailed history regarding the home care practices adopted in case management was asked. Results: 830 children of age below five years and their mothers were surveyed. The attack rate of ARI was 18.3%, for diarrhea was 11.3 % and for fever 6.1 % in the study. 25.3 % 0f the children did not receive any care. In case of fever, 71.4 % of children received antipyretic tablet, 1.7 % received antimalarials and 16.7 % received antibiotics at home. The use of ORS at home in diarrhea was low. In ARI, 29.4 % children received antibiotic. The most common danger signs of illness were fever (33.1%) and change in appetite (18.4%) as reported by mothers. Conclusions: There were lacunae in the knowledge of mothers in home based care or management of these illnesses. Hence there is a need to address the community component of IMNCI.

1. Introduction

Child survival programmes and interventions have been implemented for several decades in the country. The challenge before India is the task of reducing its child mortality by 2015 to meet the Millennium Development Goal's target in less than a decade. Annually 10 million children in low and middle income countries die before their fifth birthday. Seven in ten underfive deaths in these countries are from illnesses diarrhoea, acute respiratory infections, measles, malaria and malnutrition [1].

Diarrhea was found to be responsible for 20% of underfive deaths while pneumonia and malaria caused 19% and 1% of the deaths respectively [2]. Various studies from developing countries have reported that delay in seeking appropriate care and not seeking any care contributes to the large number of child deaths [3, 4, 5]. Improving families' care seeking behaviour could contribute significantly to reducing child mortality in developing countries. In developing countries, the majority of the approximately 12 million fatal illnesses that occur each year among children younger than 5 years can be prevented or treated effectively by means of simple interventions [6].

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In India, there are nearly 17 lakh child deaths each year, and child mortality rates are one of the highest in the world. The government of India adopted IMNCI (Integrated Management of Neonatal and childhood illnesses) in 2005 in the National Programme. Effective management of childhood illness involves a partnership between families and health workers.

The integrated management of childhood illness (IMCI) strategy, besides improving providers' skills in managing childhood illness also aims to improve families' care seeking behaviour. The health workers are trained to teach the mothers about danger signs and counsel them about the need to seek care promptly if these signs occur [7, 8].

Most studies focus on people presenting at health centres who represent a highly selected population with illnesses and limited data is available from community based studies.
The present study was thus undertaken with the broad objective of conducting a situational analysis of household practices adopted by mothers in some childhood illnesses as per the IMNCI framework in rural area.

2. Material and Methods

A cross sectional descriptive study was conducted in the rural practice area of Primary Health centres (PHC's) attached to MIMSR Medical College, Latur which were Kharola, Bhatangali and Renapur. IMNCI was implemented in all the 3 PHC's with training of all health workers. Bhatangali PHC was selected randomly for the study. The total population of underfive children was 4462 as per the PHC records. The sample size was calculated based on incidence of ARI/ diarrhea episodes in two weeks which was 3 episodes/child/year and a recall period of two weeks. Hence assuming an incidence of 12 % with an allowable error of 10 % the sample size calculated was 826 for 95 % confidence limits. Sampling was done by purposive quota sampling method from 6 Subcentres under the selected Bhatangali PHC. A house-to-house survey was conducted. Mothers of underfive children in the house were enquired about the symptoms like fever, diarrhea and acute respiratory infection (ARI) in the past 2 weeks. Standard case definitions were followed to identify the children correctly with symptoms [9, 10]. The detailed history regarding the home care practices adopted in case management was asked and recorded on a semi-structured pretested questionnaire developed for the purpose of this study .The questionnaire contained information about sociodemographic characteristics of the family, symptoms and duration of the illness. The mothers were also asked about the type of care sought during the child's illness, awareness of danger signs and feeding habits during illness.

2.1. Inclusion criteria

All children less than 5 years of age and residents for more than 6 months in the study area.

2.2. Exclusion criteria

Children whose families were residents for less than 6 months and children of relatives or visitors were excluded.

2.3. Data analysis

The data was coded and entered on excel spreadsheet and analyzed using the SPSS package version 17.The results were expressed as means and proportions. The test of significance was chi-square test.

3.Results

A total of 830 children of age below five years and their mothers were surveyed. The sample consisted of 432 boys (52.1%) and 398 girls (47.9%) The children's mean age ± standard deviation (SD) was 31.6 ± 2.8 months. Mean age of mother's ± SD was 22.6 years. The socio-demographic characteristics of the sample are shown in table 1. 38 percent of the children were infants, and 47.9 % were female. 152 (18.3%) of these children had an attack of ARI in the two weeks preceding the survey. The attack rate of diarrhea was found to be 94 (11.3 %) and for fever was 51 (6.1 %) in the study. No significant gender differences were observed. During their illness, 25.3 % 0f the children did not receive any care while remaining received care during the illness. The median duration of illnesses was 6 days (range: 4 hours to 80 days). Caregivers usually consulted multiple health providers (mean: 3.6; range: 1–12). The median delay in consulting a health provider after onset of symptoms was 2 days. Seeking care outside home was not influenced by the socio-economic status or the educational status of mother (P> 0.05)

Table 1: Socio-demographic characteristics of the sample

Variables	Mean (SD)/ No. (%)
Mean age of mother in years (SD	22.64 (3.6)
Mean age of Child in months (SD)	31.64 (2.8)
Child's Gender	
Male	432 (52.1)
Female	398 (47.9)
Religion	
Hindu	638 (76.8)
Non-Hindu	192 (23.2)
Socioeconomic status	
Class II	15 (1.8)
Class III	58 (6.9)
Class IV	123 (14.8)
Class V	634 (76.5)
Mothers Education	
Illiterate	256 (30.8)
Primary	368 (44.4)
High school and above	206 (24.8)

3.1.Home care practices for Fever

In case of fever, 71.4 % of children received antipyretic tablet, 1.7 % received anti-malarials and 16.7 % received antibiotics at home. It was observed that traditional methods like tepid bath (8.3%), sponging with water (10 %) and other methods (6.7%) were still

practised at home before the child was taken to health care provider. A small proportion of mothers (5 %) gave traditional/herbal medicines for fever. (Table 2)

Table 2: - Home Care practices adopted for childhood illness - fever

Type of care provided	% of cases
Tepid bath	8.3
Sponged with cold water	10.0
Removed clothing	10.0
Gave fever tablets	41.7
Gave malaria tablets	1.7
Gave antibiotic	16.7
Gave herbal/traditional medicine	5.0
Other methods	6.7

3.2.Home care practices for diarrhea

The use of ORS at home in diarrhea was low (10.5%) in the study area while the most popular method was use of salt sugar solution in case of 71.1% cases. The methods less adopted were giving traditional/herbal medicines (5.3%), antibiotics (10.5%) and others (2.6%). (Table 3)

Table 3: - Home Care practices adopted for childhood illness - diarrhoea

Type of care provided	% of cases
Gave ORS	10.5
Gave Sugar Salt Solution (SSS)	71.1
Gave antibiotic	10.5
Gave herbal/traditional medicine	5.3
Other	2.6

3.3.Home care practices for ARI

50 % of the mothers gave cough medicine to the children in ARI and 29.4% gave antibiotic / other medicine. The use of herbal/ traditional was high (14.7%) in ARI than in case of fever or diarrhea. (Table 4)

Table 4: - Home Care practices adopted for childhood illness – ARI

Type of care provided	% of cases
Cough medicine	50.0
Antibiotics	29.4
Herbal/traditional medicine	14.7
Other treatment	5.9

3.4.Recognition of danger signs/symptoms

Mothers were asked about how they would recognise the danger symptoms/ signs of illnesses in their children. The most common danger signs of illness felt by mothers were fever (33.1%) and change in appetite (18.4%). The other signs were weakness (14.7%), change in activeness of child (12.9%), unconsciousness (11.7 %) and vomiting (5.5%) are shown in table 5.

The dietary or feeding practices followed by mothers in case of illness was assessed as depicted in table 6. Most of them preferred to give usual diet in illness while 8.9 % changed the diet. 14.8% said they increased the frequency of food, 17.6 % decreased it and the remaining 67.6 % followed the usual frequency in illness. The breastfeeding was continued in illness by majority (80.4%) of mothers while only 12.6% decreased it. A small number of mothers (7%) stopped breastfeeding the child in illness depriving the beneficial effects of breastmilk.

Table 5: Mothers' awareness about danger signs/ symptoms of childhood illness

Danger signs	mothers aware (%)
Change in appetite	18.4
Change in activeness of child	12.9
Weakness of child/lethargy	14.7
Fever	33.1
Unconsciousness/fits/convulsion	3.7
Persistence of signs/ symptoms	11.7
Vomiting	5.5

Table 6: Dietary / feeding practices followed by mothers during illness of child

Danger signs	mothers aware (%)
Type of diet	
Usual	756 (91.1)
Change	74 (8.9)
Diet frequency	
Usual	561 (67.6)
Increased	123 (14.8)
Decreased	146 (17.6)
Breastfeeding	
Continue	667 (80.4)
Decrease	105 (12.6)
Stopped	58 (7.0)

4.Discussion

One of the strategies of IMNCI to reduce the under-5 child mortality is education of the mother and/or caregiver on home care of the child during illness and after recovery and on the signs of severe illness for which the child should be taken immediately to a health worker. In this context we assessed the mothers' awareness about the danger signs of childhood illness. Overall the knowledge of mothers was poor.

NFHS-3 [10] reported 15.1 % prevalence of fever in the two weeks preceding the survey which was higher than present study. In case of fever, approaches to therapy vary from country to country [11, 12] as in rural Gambia [13] only 2.3 % of mothers gave chloroquine consistent with the findings of present study. As per NFHS-3, 7.6% children took antimalarials and 12.2% took

antibiotic in fever. The preferred home treatments were antipyretic and analgesic drugs and herbal preparations in our study and similar findings are found in other studies also [14, 15].

Overall, 9 % of all children under age five had diarrhoea as per NFHS-3 in rural area which was higher in present study. The use of ORS was low (10.5%) in our study as compared to that reported by NFHS-3 [10] which was 24% indicating poor knowledge of proper treatment of diarrhoea among mothers. Use of antibiotics is not generally recommended for the treatment of childhood diarrhoea, but 10.5 % children received it. As per a study in Chennai, 79.9% of children with common illnesses were prescribed antibiotics in diarrhea and ARI [16].

ARI attack rate was higher in present study than other studies [17, 9, 10]. The percentage of children who received antibiotic in ARI was slightly higher (29.4%) in present study than NFHS-3 (23.5%). The use of traditional/ herbal medicine in ARI was higher in present study than the studies by Sreeramareddy CT and et al [18] and Adegboyega and et al [19] while lower than a study by Ogunlesi and et al [20].

Presence of fever was reported by most of mothers as a danger sign followed by other signs like change in appetite, weakness / lethargic, change in activeness of child and unconsciousness or convulsions. Awareness of two or more danger signs was 35 % which is similar to the figures reported by NFHS-3.

The present study showed inappropriate home care practices in IMNCI implemented area which is in contrast to better treatment practices at home by a study in Nigeria [21].

This population based study shows that there are severe deficiencies with the care received at home. Hence unless measures are taken to address them the morbidity and mortality in underfive children will not be greatly reduced.

5. Conclusions

Mothers adopted various home care practices in illnesses of their children. There were lacunae in the knowledge of mothers in home based care or management of these illnesses. Inappropriate care was given to 36 % of children putting them at risk of complications and premature death. Awareness of danger signs was present in only one third of mothers. Community-based intensive behavioural communication strategies complementing clinic-based IMNCI programmes can reinforce mothers' perception of illness severity and enhance their cues to appropriate action. Hence there is a need to address the community component of IMNCI.

Acknowledgement

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