CARE GIVERS' KNOWLEDGE, BELIEFS, ATTITUDES AND PRACTICES ON CASE MANAGEMENT OF ACUTE RESPIRATORY ILLNESSES IN A RURAL DISTRICT IN ETIHIOPIA

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ABSTRACT: A survey was conducted in three randomly selected farmers' associations in Sululta District, around Chancho town out of which, 540 households were selected randomly. Mothers and other care givers of children under-five were interviewed regarding their knowledge, beliefs, attitudes and practices in case management of acute respiratory illnesses. The study showed that 406(75%) of the care givers have favorable practice, whereas
483(89.4%),497(92.0%) and 334(61.9%) of the care givers have unfavorable attitudes, knowledge and beliefs, respectively. Care givers' age is significantly associated with practice, attitudes and beliefs. Care givers' economic status is also significantly associated with their practice, attitudes and knowledge whereas care givers' education and presence of grand parents in the neighborhood affected significantly their attitude, knowledge and belief. [Ethiop. i. Health Dev. 1994;8(2): 103108]

INTRODUCTION

Diarrhoea, acute respiratory infections (ARI) and protein-energy malnutrition are considered to be the three leading killing diseases of early childhood (1).

Although there are no accurate figures of incidence and prevalence globally, the existing data show that acute respiratory infections (ARI) are one of the major causes of deaths among children under five years of age. Out of the total 15 million deaths among under-five children per year , one third of these deaths are caused by ARI; and of these, approximately 90% are caused by pneumonia alone. This means that there are about four million deaths due to ARI in the world each year. The morta1ity rate of ARI in developing countries is more than 30 times higher when compared to the USA and Canada (2).

The occurrence of ARI in under five children is usually about four to eight episodes per child per year , suggesting there are about two billion episodes of ARI infections in developing countries each year .On average a child in an urban area has from 5-8 episodes of respiratory illnesses annually during the first five years of life (3-7). In rural areas, the annual incidence per child is reported to be lower, ranging from one to three episodes per year (8-13).

Because of the high mortality and morbidity due to ARI, WHO has developed standard guidelines for the control of ARI. The suggested control programs are standardized case management, immunization and health
education. To implement an effective control program in Ethiopia, it is essential to know maternal knowledge, attitudes and practices regarding the important signs and symptoms and case management of ARI. Therefore, this study was designed to serve as a baseline in the implementation of ARI-specific health education intervention study.

METHODS

This study on care givers' knowledge, beliefs, attitudes and practices regarding case management of ARI was conducted in Sululta District from April 1990 to August 1990.

Of the five farmers' associations found within a five kilometre radius around Chancho Health Centre, three farmers' associations were randomly selected. The study included 540 randomly selected care givers of children under five years of age living within the selected farmers' association. To ensure an adequate _____

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response rate and to obtain the informed consent of the study subjects, the study was discussed in general terms with the farmers' association leaders, the District Health Committee and by the women's associations. Mothers or other care givers were informed about the study through the farmers' associations and the women's associations.

Before the interviews were conducted, a questionnaire was prepared to assess knowledge, beliefs, attitudes and practices regarding the case management of ARI. The questionnaire was backtranslated to assess reliability. Then the questionnaire was pretested in a community similar in social, economic and educational background to the study areas. The interviews were conducted by ten trained female interviewers.

Analysis was made using SPSS/PC statistical package. Variables were combined to determine the economic status, practice, attitudes, beliefs and knowledge. Measurements for economic status were created by calculating a composite score of numbers of cows and oxen and the type of roof. The highest and lowest scores for economic status were 8 and 1 respectively. A score of < 4.5 was considered as low and a score of > 4.5 was considered as high.

Knowledge, attitudes, beliefs and practice were dichotomized into favorable and unfavorable. The dichotomization of knowledge scores was made on the ability of the care givers to identify danger signs and symptoms and cause of pneumonia. Care givers' practice was assessed on their previous health-seeking practices and on their knowledge of where to seek treatment. Accordingly, care givers attitudes and beliefs were measured by the ability of the care givers to perceive of the, danger signs of pneumonia and on the preference or choice of health care providers. Responses referring to un-scientific concepts of disease causation and spiritual ways of treating ARI, such as considering evil spirits as cause and holy water as treatment of ARI were attributed to the belief of the individual.

RESULTS

As shown in table 1, 285(52.8%) of the care givers were young (15-34 years), 486(90%) were illiterate, 532(98.5%) were housewives and 492(91.1%) were married. Three hundred and thirty nine(62.8%) of the care givers were classified as haying low economic status. Of the 540 care givers, 487(90.2%) were mothers and 345(63. 9%) had their grandparents around their house. Four hundred and six(75.2%) of the care givers reported that they would treat their children with home treatment initially and take them to a health institution if the illness worsens.

Four hundred and eighty three(89.4%) of the care givers perceive pneumonia as not dangerous and 330(16.1%) prefer to take their children to the local healer .

Four hundred and ninety seven(92.0%) of the care givers do not have adequate knowledge as to what causes ARI and 312(57.8%) of the mothers do not know the signs and symptoms of pneumonia (table 4).

Three hundred and thirty four(61.9%) of the care givers believe that pneumonia is caused by evil spirits and 312(57.8%) said that it can be cured by holy water (table 5).

When practice is dichotomized in terms of favourable and unfavourable practices and these are compared by demographic factors, old and middle aged care givers are found to have less favorable practices (RR = 0.18 ; 95% confidence interval (CI)=0;ll, 0.30 and RR= 0.07;95% CI=O.04, 0.11 respectively) as compared to young care givers. Care givers with high economic status also had better practice in case management as compared to those with low economic status (RR= 1.99;95% CI= 1.49-2.67) (table 2).

Old and middle-aged care givers were more likely to have negative attitudes as compared to young care givers (RR=0.36,95% CI=0.23- 0.56 and RR=0.17,95% CI=0.13-0.24 respectively). As compared to illiterate care givers, mothers who have attended literacy campaigns and completed grades 1-3 have unfavorable attitudes (RR=0.24,95% CI=0.19- 0.31 and RR=0.73, ' 95% CI=0.200.46 respectively). Care givers with high economic status have less favorable attitudes as compared to those with low economic status (RR=0.2,95% CI=0.12-0.33). Care givers whose parents are living in the neighborhood also have more unfavorable attitudes (RR=0.23,95% CI= 0.16- 0.33).

Care givers who have attended literacy campaign and who have completed grades 1-3 have better knowledge (RR=1.20,95% CI=1.03-1.38 and RR=1.79,95% CI=0.19- 2.67 respectively) as compared to those who are
illiterate. Care givers' knowledge has a statistically significant negative association with economic status (RR=0.96,95% CI=~.93=0.99) and a positive association with the presence of grandparents in the neighborhood (RR=1.04,95% CI=1.00-1.07).

No statically significant association was found between care givers' beliefs and care givers , age, education and economic status. However, there was a statistically significant positive association with age and education. Presence of grandparents has proved to have an association with unfavorable beliefs (RR=0.80, 95% CI=0.69-0.94).

Table 1. Selected Demographic Characteristics of Care Givers, Sululta District, 1990

Characteristics	No.(%)
Age in years	
15-34	285(52.8)
35-49	196(36.3)
50& above	59(10.9)
Total	540(100.0)
Education	
Illiterate	486(90.0)
Lit. Camp.	36(6.7)
Grade 1-3	18(3.3)
Total	540(100.0)

Economic Status	
High	201(37.2)
Low	339(62.8)
Total	540(100.0)
Marital Status	
Married	492(91.1)
Divorced	35(6.5)
Others	13(2.4)
Total	540(100.0)
Relation to the Children	
Mother	487(90.2)
Others	53(9.8)
Total	540(100.0)
Grandparents Around	
Yes	345(63.9)
No	195(36.1)
Total	540(100.0)

DISCUSSION

More than 50% of the care givers were young (15-34), which is typical of developing countries where women have children in their early ages. About 90% of the care givers were illiterate, thus affecting their general outlook of disease causality and case management. About two- thirds of the care givers had low economic status, which in turn affects their access to health care.

Table 2. Care Givers' practice by Selected Demographic Characteristics, Sululta District, 1990

Practice Age in years	Unfavourable	Favourable	Total	RR (95% CI)
15-034	17	268(94.0)	285	1.00*
35-49	65	131(66.8)	196	0.18(0.11,0.30)
50-&above	51	8(13.6)	59	0.07(0.04,0.11)
Care Giver's Education				
Illiterate	125	361(74.3)	486	1.00*
Lit.Camp.	7	29(80.5)	36	1.32(0.67,2.62)
Grade 1-3	1	17(94.4)	18	4.63(1.69,31.29)
Care Giver's Occupation				
Housewife	131	401(75.4)	532	1.00*
Others	2	6(75.0)	8	0.98(0.29,3.30)
Economic Status				
High	72	129(64.2)	201	1.00*
Low	61	278(82.0)	339	1.99(1.49,2.67)
Grandparents				
Yes	88	257(74.5)	345	1.00*
No	45	150(76.9)	195	1.11(0.81,1.51)
Total	133	407(75.4)	540	

*Reference Group

Table 3. Care Givers' Attitudes by Selected Demographic Characteristics, Sululta Dirstrics, 1990.

Attitude age in years	Positive	Negative	Total	RR ((95% CI)
15-34	49	236(82.8)	285	1.00*
35-49	57	139(70.9)	196	0.36(0.23,0.56)
50&above	43	16(27.1)	59	0.17(0.13,0.24)
Care Giver's Education				
Illiterate	110	376(77.4)	486	1.00*
Lit.Camp.	28	8(22.2)	36	0.24(0.19,0.31)
Grade 1-3	11	7(38.9)	18	0.31(0.20,0.46)
Care Giver's Occupation				
Housewife	146	386(72.8)	532	1.00*
Others	3	5(62.5)	8	0.73(0.30,1.81)
Economic Status				
High	16	185(84.3)	201	1.00*
Low	133	206(60.8)	339	0.20(0.04,0.33)
Grandparents				
Yes	32	313(63.7)	345	1.00*
No	117	178(36.3)	195	0.23(0.16,0.33)
Total	149(27.6)	391(72.4)	540	

* Reference group

Table 4. Cavers' knowledge by Selected Demographic Characteristics, Sululta District, 1990

Knowledge Age in years	Unfavourable	Adequate	Total	RR (95% CI)
15-34	278	7(2.5)	285	1.00*
35-49	190	6(3.1)	196	1.01(0.98,1.04)
50 & above	56	3(5.1)	59	1.03(0.97,1.09)
Care Giver's Education				
Illiterate	484	2(0.4)	486	1.00*
Lit. Camp	30	6(16.7)	36	1.20(1.03,1.38)
Grade 1-3	10	8(44.4)	8	1.79(1.19,2.71)
Care Giver's Occupation				
Housewife	519	13(2.4)	532	1.00*
Others	5	3(37.5)	8	1.56(0.91,2.67)
Economic status				
High	190	11(5.5)	201	1.00*
Low	334	5(1.5)	339	0.96(0.93,0.99)
Grandparents				
Yes	339	6(1.7)	345	1.00*
No	185	10(5.1)	195	1.04(1.00,1.07)
Total	524(97.0)	16(3.0)	540	

*Reference group

Table 4. Cavers' knowledge by Selected Demographic Characteristics, Sululta District, 1990

Belief Age inYears	Unfavourable	Adequate	Total	RR (95% CI)
15-34	133	152(53.3)	285	1.00*
35-49	106	90(45.9)	196	0.86(0.73,1.03)
50 & above	47	12(20.3)	59	0.59(0.49,0.70)
Care Giver's Education				
Illiterate	268	218(85.8)	486	1.00*
Lit. Camp	12	24(9.5)	36	1.65(1.04,2.64)
Grade 1-3	6	12(4.7)	18	1.65(0.86,3.20)
Care Giver's Occupation				
Housewife	282	250(47.0)	532	1.00*
Others	4	4(50.0)	8	1.06(0.53,2.13)
Economic status				
High	96	105(52.2)	201	1.00*
Low	190	149(44.0)	339	0.85(0.72,1.01)
Grandparents				
Yes	168	177(51.3)	345	1.00*
No	118	77(39.5)	195	0.80(0.69,0.94)
Total	286(53.0)	254(47.0)	540	

* Reference group

In general, the prevalence of unfavourable practices was quite low. This may be due to the geographical proximity' of Sululta to the capital city which might have enabled the members of these study communities to make frequent visits and gather new ideas and better ways of practice. It is also possible that the majority of the study population gave the correct answer telling the interviewers what they thought was desired. To find out the true practices, other methods of data collection should be used.

The prevalence of negative attitudes was lower than expected during the baseline survey. This may be due to some of the same reasons as for the low prevalence of unfavourable practice. One of the factors which can lead to change in people's behaviour is thought to be the level at which they consider a disease risky .

This study shows that care givers think that pneumonia and some of the danger signs of ARI are not life threatening. Therefore health workers should educate mothers on the signs and symptoms of ARI. There was a high prevalence of unfavourable knowledge regarding causes and case management of ARI. This was probably due to the low literacy rate.

The prevalence of negative beliefs was also relatively high. This may be due to traditional concepts of disease causation which have been held for generations. To address this, the study differentiated beliefs from knowledge, classifying spiritual concepts of causation of ARI as beliefs.

Care givers' knowledge, attitudes, beliefs and practices are strongly associated with age, education and economic status. Stronger health education interventions or more effort should be put in on educating the care givers with relatively high risk groups.

We can conclude from this study that care givers' practice were relatively good and care givers' attitudes, knowledge and beliefs were unfavorable. The study also showed that care givers' knowledge, attitudes, beliefs and practices were affected by age, education and economic status.

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