ORIGINAL ARTICLE

MOTHERS' HEALTH CARE SEEKING BEHAVIOR FOR CHILDHOOD ILLNESSES IN DERRA DISTRICT, NORTHSHOA ZONE, OROMIA REGIONAL STATE, ETHIOPIA

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ABSTRACT

BACK GROUND: ***Despite the substantial reductions in the number of deaths observed in recent decades, globally around 10 million children still die every year before reaching their fifth birthday. In Ethiopia, almost half a million children are dying each year from easily preventable diseases which could be partly due to low level of health care seeking for both preventive and curative services. The objective of this study was to assess and compare mothers' health care seeking behavior and its determinants among urban and rural communities for common childhood illnesses in Derra District.***

METHOD: ***A community based comparative cross-sectional study was conducted from January 20 to February 30, 2007. A total of 612 mothers of index under five children were selected randomly from urban and rural communities. Data were collected by interview and analyzed using SPSS for windows version 12.0.1. Descriptive, bivariate and multivariate logistic regression analyses were used to show frequency distributions and associations.***

RESULTS*: A total of 563 mothers were involved in the study giving an overall response rate of 92%. Care was sought from health facilities only for less than half of sick rural children 48 (43.2%) as compared to urban 41(87.2%). Mothers' responses and actions were frequently influenced by their perception of severity or worsening of illness. Lack of money 30 (36%), distances 23 (27.7%) and perception of the illness not being serious 21 (25.3%) were the major reasons for not seeking care. Residence (OR= 5.58 95%CI, 2.05, 15.2) and knowledge (OR=2.27 95% CI, 1.01, 5.17) were identified as the major predictors of health care seeking practices from health facilities.*

CONCLUSION*: There was low health care seeking practices particularly among rural mothers which might have a significant contribution to malnutrition and child mortality. Residence and knowledge appeared to be important variables predicting health care seeking behavior. Therefore, health care services should be strengthened at community level through Community Integrated Management of Childhood Illness, Information Education Communication/Behavioral Change Communication strategies to improve mothers' health care seeking behaviors*.

KEY WORDS: ***Health Care Seeking Behavior, Derra District, Ethiopia***

INTRODUCTION

Despite the substantial reductions in the number of deaths observed in recent decades, around 10.6 million children still die every year before reaching their fifth birthday. Almost all of these deaths occur in low and middle-income countries. Most deaths among children of under five years are still attributable to just a handful of conditions and are avoidable through existing interventions (1, 2). The under-five mortality rate is now seven times higher in the African Region than in the European Region (2, 3).

In Ethiopia, seventy five percent of children who seek medical care suffer from preventable illnesses such as; malaria, diarrhea, pneumonia, measles and micronutrient deficiency. Almost half a million children are dying each year from easily preventable diseases despite the existing interventions (4). Yet, our Knowledge about how and when families seek treatment for these prevalent illnesses are not well known.

Even though care seeking interventions have the potential to substantially reduce child mortality, in developing countries large number of children die without ever reaching a health facility and due to delays in seeking care (4). The World Health Organization estimated seeking prompt and appropriate care could reduce child deaths due to acute respiratory infections by 20% (5). However, millions of mothers and their children live in a social environment that is against seeking and enjoying good health (6).

Appropriate care seeking is of particular importance in areas where access to health services is limited (3, 7). In addition, effective management of childhood illness involves a partnership between families and health workers. Families need to be able to respond appropriately when their children are sick, seek

a timely assistance when children need additional care and give the recommended treatments (8).

The IMNCI strategy has now been extended into communities and households to promote improved preventive and curative health behaviors to address the major causes of childhood illness and death (9). This strategy is adapted by Ministry of Health of Ethiopia to reduce child mortality (10).

Although progress has been made in Ethiopia, access and utilization of health care facilities remains low. Only 63% of the households reside in less than 2-hours walk (10 km) from a health facility. Child immunization represents the greatest use (54%) of health service, with a lesser proportion receiving treatment for illnesses (43%) (11) and less than 20% in 2005 Ethiopian Demographic and Health Survey (12).

The objective of this study was to assess mothers' care seeking behavior for common childhood illnesses (acute respiratory infections, malaria and diarrhea) and influencing factors.

Methods and Materials

The study was conducted in Derra District, North Shoa Zone, Oromia Regional State, Ethiopia. Gundomeskel Town is the capital of Derra; located 214 kilometers (k.ms) north of Addis Ababa. The district has 33 rural kebele and one urban kebele (Gundomeskel). Except Gundomeskel Town, which has a temperate climate, most of the geographic condition of the district is Lowland. According to information obtained from the woreda office, the total population of the woreda in 2006 was 182,660 when projected from the 1994 national census. Out of these 17.2% were under five children. The district has one health center, 2 public clinics which have been promoting to health centers and 18 health posts, which were functional during the study period giving child health services.

A community based Comparative Cross-Sectional study was conducted in January and February months of 2007. The sample size was determined by using Epi Info version 6.04d statistical software, estimating two population proportions: p1- percentage of mothers who seek care from health institution 47% of urban mothers for pneumonia (EDHS 2005), p2- 30% for rural mothers to detect a minimum 17% difference in care seeking practices between urban and rural communities and the other assumptions were α=0.05, β=0.2, n1=n2, 10% non-response rate and design effect of 2 was applied. These gave a sample size of 612 mothers of index under five children.

One urban kebele (Gundomeskel) and three Peasant Associations (PA) were selected through the following sampling Procedure. All peasant associations were grouped into three clusters using local community's naming of the clusters in the different directions from gundomeskel. The three clusters have range of climatic conditions ("Kolla", "Dega" and "Woinadega") to represent the district. Then from each cluster one Kebele was selected randomly. All households with under five children in the selected kebeles were registered to prepare sampling frame of the study population. The sample size for the rural community (n=306) was allocated to each of the selected kebeles equally. To identify both urban and rural study households, simple random sampling technique was employed. In the cases where there were more than one index mother of under five children per household, one was selected by lottery method. When there were more than one illegible child per mother, mothers were asked about the morbidity experiences of the last three children to capture their health seeking behavior for childhood illnesses considering the differentials in morbidity even among children with the household.

Data were collected using interviewer administered pre-tested structured questionnaires. The data were edited, coded, entered in to a computer, cleaned and analyzed using SPSS for windows version 12.0.1. Descriptive analysis followed by bivariate and then logistic regressions analyses were performed to assess the relative impact of predictor variables on health care seeking behavior.

Wealth quintiles were constructed by asking the presence or absence of durable assets at the household level and then giving a score of 1 if present and score of 0 if absent. The asset mean scores were re-categorized into in five different wealth quintiles of equal proportion (Lowest, Second, Middle, Fourth and Highest wealth quintile groups).

Knowledge score was calculated by asking different questions on the main cause, symptoms, prevention and control measures of childhood illnesses and by coding the responses as 1 for correct answer and as 0 for incorrect answer and summing all the values. Respondent who scored above or equals to the mean she were labeled as having good knowledge and those scored below the mean were labeled as poor knowledge about childhood illnesses.

The proposal was ethically reviewed and approved by Faculty of Public Health ethical review committee and oral consent of all mothers was obtained before interview.

The following operational definitions were used;

Acute respiratory infection: all cases who had cough accompanied by short or rapid breathing in the two weeks preceding the survey as perceived by mothers or care takers.

Community health worker*: was defined as a trained person who was serving the community including Trained Traditional Birth Attendants and Health Extension Workers.*

***Diarrhea*:** is determined as perceived by mother or caretaker, or three or more loose or watery stools per day, or blood in stool was reported.

***Fever*:** - *perceived by mother as fever or hot body f*or any child two weeks preceding the survey.

Health seeking behavior: was defined as mother's response for signs and symptoms of illnesses to reduce severity, complication or even death after she recognized her child's illness and if she reported visiting any health institutions; health center, health post, privet clinic or at least community health worker. Mothers that did not report visiting any health institution for the perceived common childhood were considered as healthcare non-seeker.

Rural: Inhabitants economic activities were mainly based on agriculture and lakes public facility like telephone, high school, health center, road and the like.

Urban: for the purposes of this study urban was defined as inhabitants economic activities were mainly based on non agriculture and which have a minimum public services and facility like telephone, high school, and health center and year round road.

RESULTS

A total of 563 mothers were involved in the study giving an overall response rate of 92%. Of these, 282 were from urban with the response rate 92.2 % and 281 mothers were from rural with 91.8 % response rate.

Two hundred fourteen (76.2 %) of urban and 187 (66.5%) of rural mothers were less than 30 years of age. Majority, 230 (81.6%) of urban and 271 (96.4%) of rural mothers were married and 188 (66.7%) of urban and 175 (62.3%) of rural mothers were orthodox by religion. Amhara were the dominant ethnic group in both community, urban 177 (62.8%) and rural 172 (61.2%). Two hundred seventy one (96.0%) of rural mothers had no formal education as compared to 201(71.3%) urban mothers. Regarding their occupation, 236(84.0%) of rural and 199 (70.6%) of urban mothers were housewives. The overall household size was 5.4 persons, the rural and urban being 5.9 persons (± 2.1SD) and 4.9 persons (±2.2 SD) per household, respectively. More than 4% of the rural mothers had three under five children as compared to only 0.7% of the urban. Mean live births were 3.6 (±2.2SD) and 5.5 (±3.3SD) children for urban and rural mothers, respectively. 279 (49.6%) of the study population was found in the second wealth quintiles of these, the rural households were 161(57.3%) and are larger than urban 118(41.4%) (Table1).

Table 2. Comparison of health seeking behavior by residence of mothers, Derra woreda, Shoa zone, Oromia Regional State, 2007.

Variables	Urban No. (%)	Rural No. (%)	Total No. (%)
Children taken to health facilities U (n=47), R (n=111)			
Yes	41(87.2)	48(43.2)	89(56.3)
No	6(12.8)	63 (56.8)	69(43.7)
Time of health seeking after onset of the illness U (n= 61), R (n=57)			
First day	10(16.4)	6(10.5)	16(13.5)
2nd and 3rd	22(36)	19(33.3)	41(34.7)
4th and 5th day	12(19.7)	9(15.7)	21(17.8)
After 5th day	17(27.9)	23(40.3)	40(33.9)
Place of treatment U (n=41),R(n=48)			
Health center	22(53.7)	16(33.3)	37(41.6)
Private clinics	18(43.9)	10(20.8)	28(31.5)
Health post	0 (0)	18(37.5)	18(20.2)
Community health worker	1(2.4)	4(8.3)	5(5.6)
Reason for visiting HF U (n=41), R (n=48)			
Child's condition worsened	39(94.4)	46 (95.7)	95(95.0)
Other peoples' advise	3(5.6)	2(4.3)	5(5.0)

U= urban, R= rural

Table1. Socio-demographic characteristics of mothers, Derra woreda, North Showa Zone, Oromia Regional State, 2007.

Variables	Urban (n=282)		Rural (n=281)		Total (N=563)	
	No.	%	No.	%	No.	%
Mothers age						
<=30	215	76.2	187	66.5	402	71.4
>=31	67	23.8	94	33.5	161	28.6
Marital states						
Married	230	81.6	271	96.4	501	88.9
Currently not married	52	19.4	10	3.6	62	11.1
Religion						
Orthodox	188	66.7	175	62.3	363	64.5
Muslim	89	31.6	106	37.7	195	34.6
Protestant	5	1.8			5	0.9
Ethnicity						
Amhara	177	62.8	172	61.2	349	62.0
Oromo	103	36.5	109	38.8	212	37.6
Other [§]	2	0.7	0	0	2	0.4
Formal education						
Has formal education	81	28.7	10	3.6	91	16.2
No formal education	201	71.3	271	96.4	472	83.8
Occupation						
Houses wives	199	70.6	236	84	435	77.3
Not houses wives	83	29.4	45	16	128	23.7
Number of U5 children per HH						
1	222	78.7	159	56.6	381	67.7
2	58	20.6	110	39.1	168	29.8
3	2	0.7	12	4.3	14	2.5
No live births (parity)						
≤ 3	204	72.3	129	45.9	333	59.1
≥ 4	78	27.7	152	54.1	230	40.9
Family size						
≤ 6 persons	256	80.1	167	59.4	393	69.8
≥ 7 persons	26	19.9	114	40.6	170	30.2
Wealth quintiles						
Lowest	68	24.1	90	32.0	158	28.1
Second	118	41.8	161	57.3	279	49.6
Middle	75	26.6	29	10.3	104	18.5
Fourth	14	5.0	1	0.4	15	2.7
Highest	7	2.5	0	0	7	1.2

[§] Gurage

Of those under five children who had diarrhea, fever, ARI and other illnesses two weeks preceding the survey, higher proportion of those from urban community were taken to health facilities or providers than rural. 19 (86.4%) of urban children who had diarrhea and 17(75.0%) who had fever were taken to health facilities or providers compared to rural children where only 25(45.5%) with diarrhea, 16(34.8%) with ARI and 11(34.4%) with fever were taken for treatment to health facilities or health care provider. when we see care seeking preference by the type of illnesses, the same proportion of urban mothers sought care for diarrhea and ARI compared to rural mothers who sought care more frequently for diarrhea than ARI and fever (Fig. 1).

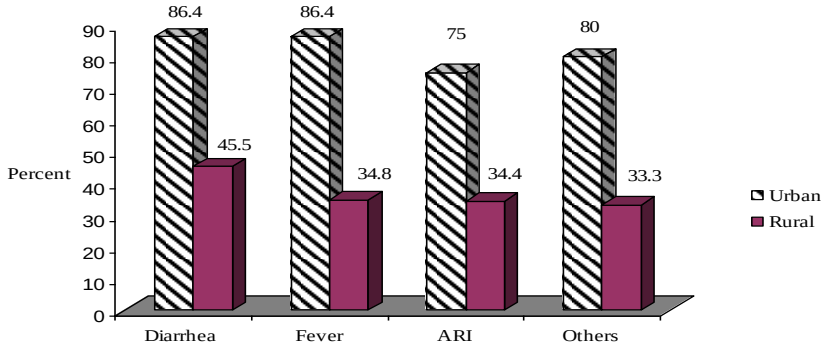

Figure 1. Care seeking practice to the reported illnesses, Derra, 2007.

When we see the overall health care seeking, out of 111 sick rural children only 48 (43.2%) were taken to health facilities as compared to 41(87.2%) urban cases. Health center 22(53.7%) and private clinic 18 (43.9) were frequently visited by urban mothers. Whereas the rural mothers frequently visited health post 18(37.5%) and health center 16(33.3). Of the total treated episodes of illnesses, care was sought on the first day of perceived onset of illness only for 10(16.4%) and 6(10.5%) of urban and rural, respectively. For the rest, 51(89.5%) of rural and 51(83.6%) of urban episodes of illnesses, care seeking was started on the second and subsequent days of perceived onset of illnesses. As explained by the respondents, worsening of illness 95(95.0%) was the main reason that initiated to visit the health facilities for both urban and rural mothers (Table 2).

Mothers' main reasons for not seeking care from health facilities were lack of money 30 (36%), far distance from health facility 23(27.7%) and perceived illness was not serious 21(25.3%) as presented in Figure 2. In bivaraite analysis economic statuses of mothers (OR=2.3, 95% CI, 1.11, 4.96), illness perception (OR=2.43, 95%CI, 1.2, 4.85), residences (OR=8.99, 95%CI, 3.46, 23.1) and knowledge of mothers (OR=2.9, 95%CI, 1.42, 5.99) had significant association. In addition, to identify the predictor variable of health care seeking practice multivariate logistic regression analysis was performed, as the result revealed mothers who live in urban area and who had good knowledge about childhood illnesses were more likely to seek care from the health facilities than the others with the odds ratio of (OR=5.58 95% CI, 2.05, 15.2) and (OR= 2.27, 95% CI, 1.01, 5.17), respectively. However, illness perception and socioeconomic statuses were no longer significant after adjusted to the other factors (Table 3).

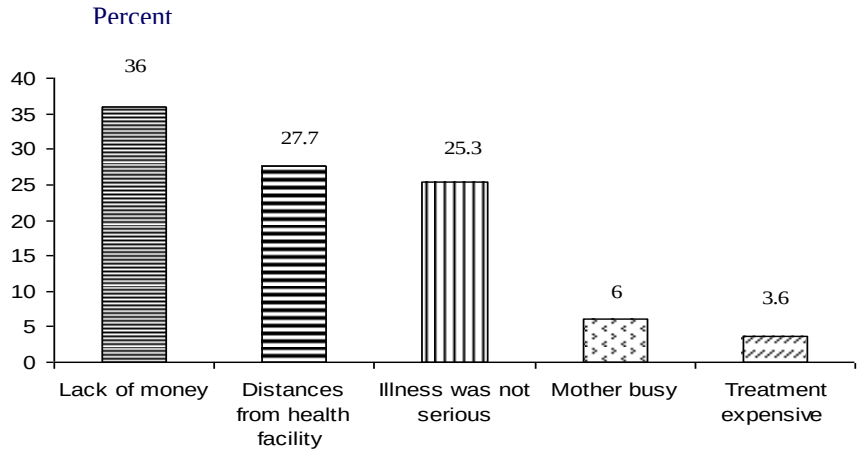

Figure 2. Main reasons for not seeking treatment from health, cilities, Derra woreda, North Shoa, Oromia Regional State, 2007

Variables	Health care Seeking		Odds Ratio (95%CI)	
	Yes	No	Crude	Adjusted

Residences				
Rural	41	58	1	1
Urban	38	6	8.99 (3.46, 23.1)	5.58 (2.05, 15.2)**
Mothers' age				
≤30 years	57	38	1	1
≥31 years	22	26	0.56 (.28,1.13)	0.50(0.16, 1.5)
Family size				
≥7person	26	30	1	1
≤6person	53	34	1.7 (0.91, 3.54)	1.16 (0.42, 3.22)
Mothers education				
Non formal	71	59	1	1
Formal	8	5	1.33 (0.41, 4.28)	0.65 (0.13, 3.1)
Illness perceptions				
Mild	23	32	1	1
Severe	56	32	2.43 (1.2, 4.85)*	1.87 (.85, 4.1)
Wealth quintiles				
First and second	32	14	1	1
Third and above	47	50	2.3 (1.11, 4.96)*	1.2 (0.41, 3.58)
Occupation	61	55		
Housewives	18	13	1	1
Not housewives			1.15 (0.51, 2.5)	1.1(0.33, 3.7)
Knowledge				
Poor	4039	48	1	1
Good		16	2.9 (1.42, 5.99)*	2.27 (1.01, 5.17)*

Table 3. Logistic regression analysis to identify independent predictor of health are seeking from health facilities or providers (n=143), Derra, 2007.

Note- * p< 0.05, ** p < 0.001

DISCUSSION

Care seeking interventions have the potential to substantially reduce child mortality, in the country where common childhood illnesses are a major problem. Prompt and appropriate care seeking practices have importance to avoid many deaths attributed to delays and not seeking care particularly in developing countries (4). However, in this study, care was sought from health facilities only for less than half sick rural children in addition for most care seeking was started on the second and subsequent days. Worsening of illness initiated almost all mothers to visit health facility. The possible reason for delay could be trying of home care including traditional treatment, lack of money and access to health facilities. Similar findings were reported from Ethiopia (11, 12, 13) and other developing countries (14) while, better practices were recorded from studies in Kenya and Nigeria (13, 16). This could be due to differences in accesses to health facilities, educational backgrounds, cultural factors and socio economic status. Rural mothers sought medical treatment to diarrhea than fever and ARI which is consistent with the findings of other studies (17, 18).

In this study, mothers' responses and practices were frequently influenced by their perception of severity of illness which is consistent with reports of other studies (18, 19, 20). In South Africa, perceived severity of illness and socioeconomic status were strong predictors of place of treatment (21), while the Sudan finding was inconsistent (22). This might be due to socio-demographic and cultural differences.

Ideally, the principles of primary health care in both communities (urban and rural) should have similar care seeking behavior for common childhood illness. To realize this, the Ethiopian Ministry of Health of has launched a new innovative household level health service through health extension program during the 2nd health sector development program (HSDP) (2002/03-2004/05). However, in the present study rural and urban mothers have differences in treatment-seeking pattern which is in accordance with reports of others studies that showed

residence was the major predictor for health seeking behavior (23, 24).

Poverty is a serious constraint on a family's choices about how to treat children's illnesses. In addition, the availability of modern health facilities within the community has a substantial impact on the type of providers sought to treat children's illnesses (25). This study also showed that the major reasons why treatment was not sought from health facility were lack of money and distances from health facilities as shown in figure2. In other studies proximity to the health facility and availability of finance were factors that determine health care seeking (20, 23, 25).

Considering the illness was not serious was reported as a reason for not seeking care from the health facilities in this study which could be explained by mothers' ability to recognize when children need treatment. Another reason given for not seeking care out side home was mothers' being busy, which is in agreement with other studires where mother's obligations to remain at home and fulfill other household responsibilities were negatively associated with care seeking (26,13).

The finding from the logistic regression analysis showed that mothers who live in urban area were more likely to seek care from the health facilities than the rural mothers consistent with other studies (21, 23, 24). In addition, mothers who had good knowledge about childhood illnesses were more likely to seek care from health facilities than mothers who had poor low knowledge similar to reports from other studies (27, 28).

In conclusion for the preventable childhood illnesses with the existing interventions care seeking practices were low. On top of this, there is a great difference in treatment seeking practices between urban and rural mothers which calls for a serious consideration to the rural mothers. Seeking appropriate health care and promoting care for these prevalent illnesses were not only low but also were delayed. Lack of money, distances from health facilities and mothers' being busy with household chores were challenges to seek health care. To improve health seeking behaviors of mothers, basic health care services should be strengthened at the community level.

The started Health Extension Program should be strengthened with basic curative services for common childhood illnesses at community level. Tailored IEC/BBC strategies should be considered to enhance appropriate and prompt health care seeking practices with proper home based care.

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