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Original Research Article

Knowledge, attitude and practice among mothers regarding common childhood illness

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ABSTRACT

Background: Since 1990 the global under-5 mortality rate has dropped from 91 deaths per 1000 live births in 1990 to 43 in 2015. But the rate of this reduction in under-5 mortality was insufficient to reach the MDG target of a two-thirds reduction of 1990 mortality levels by the year 2015. Leading causes of death in children under-5 years are preterm birth complications, pneumonia, birth asphyxia, diarrhoea and malaria.
Methods: Present study is a cross sectional observational study conducted in the Department of Paediatrics, in JJM Medical College, Davanagere. Source of data was primary caregivers (mothers, fathers, grandparents, other relatives or guardians) of children between the age group of 1 month-5 years. This study is a structured questionnaire based cross-sectional observational study. Data collected was analysed using descriptive and inferential statistics.
Results: Out of the 350 primary caregivers, 146(41.71%) were mothers, 97(27.71%) were fathers, 57(16.28%) were grandparents. Taboos and cultural beliefs to ward of illness were commonly practiced among this study group. 26% believed in skin branding their children during febrile episodes or convulsions. 8% believed that ear piercings would prevent diarrhoeal illnesses and infant deaths while 6% felt that amulets prevent respiratory illness and mortality. Overall knowledge among primary caregivers regarding common childhood illnesses was found to be good.
Conclusions: Knowledge and attitude among primary caregivers regarding common childhood illnesses is favourable but the practices and perceptions are not satisfactory. Improving literacy rates will have a significant impact on reduction of childhood mortality. Socioeconomic development of the urban community can improve care seeking behaviour during the childhood illness.

Keywords: Attitude, Caregivers, Children, Education, Family, Illness, Knowledge

INTRODUCTION

Leading causes of death in children under-5 years are preterm birth complications, pneumonia, birth asphyxia, diarrhoea and malaria. About 45% of all child deaths are linked to malnutrition. More than half of these under 5 child deaths are due to conditions that could be prevented or treated with access to simple, affordable interventions. Around 5.9 million children under age five died in 2015, 16,000 every day.[1] For some of the most deadly childhood diseases, such as measles, polio, diphtheria, tetanus, pertussis, pneumonia due to *Hemophilus influenzae* type B and *Streptococcus pneumonia* and diarrhoea due to rotavirus, vaccines are available and can protect children from illness and death. Major causes of under-five mortality are newborn causes like preterm related or intrapartum related complications (Figure 1).

Respiratory illnesses

ARIs are the major cause of mortality among children aged less than 5 years especially in developing countries.

Emergence of newer pathogenic organisms, re-emergence of disease previously controlled, widespread antibiotic resistance, and suboptimal immunization coverage even after many innovative efforts are major factors responsible for high incidence of ARI. In developing countries, on an average every child has five episodes of ARI/ year accounting for 30%-50% of the total pediatric outpatient visits and 20%-30% of the pediatric admissions.

Diarrhoeal illnesses

Diarrhoea is the second leading cause of early child deaths accounting for around 9% of under-5 mortality. It is responsible for 5 lakh child deaths/ year. In low income countries, children under 3 years old experience an average of 3 episodes of diarrhea every year. Each episode deprives the child of nutrition necessary for growth and as a result it is a major cause of malnutrition.

Emerging priorities for children's health

Congenital anomalies, injuries, and non-communicable diseases (chronic respiratory diseases, acquired heart diseases, childhood cancers, diabetes, and obesity) are the emerging priorities in the global child health agenda. Injuries (road traffic injuries, drowning, burns, and falls) rank among the top 3 causes of death and lifelong disability among children aged 5-15 years.[1]

Indian scenario

Approximately 28% of newborns deaths and 23% of infant deaths in the world occurs in India. An estimated 0.6-0.7 million children under five years in India die from diarrhoea every year. India accounts for the highest burden of under-5 mortality in the world1. As per SRS 2012, the under-5 mortality is 52 per 1000 live births.[2] The country has failed to achieve the Millennium Development Goal (MDG) 4 because of related socio-economic, maternal, demographic and environmental determinants, which need to be urgently addressed.[3]

Integrated management of childhood illness

India adopted this protocol in 2003 aiming to reduce neonatal, infant and under-5 mortality burden. The IMNCI as renamed in India includes treatment of sick newborns and children and incorporates home visits for early newborn care.

Objectives were to assess the knowledge of caregivers regarding common childhood illnesses and their danger signs, the perceptions and practice of caregivers in common childhood illness, care-seeking behavior among caregivers during childhood illness, to study the effect of sociodemographic, economic and disease-related variables on care-seeking behavior.

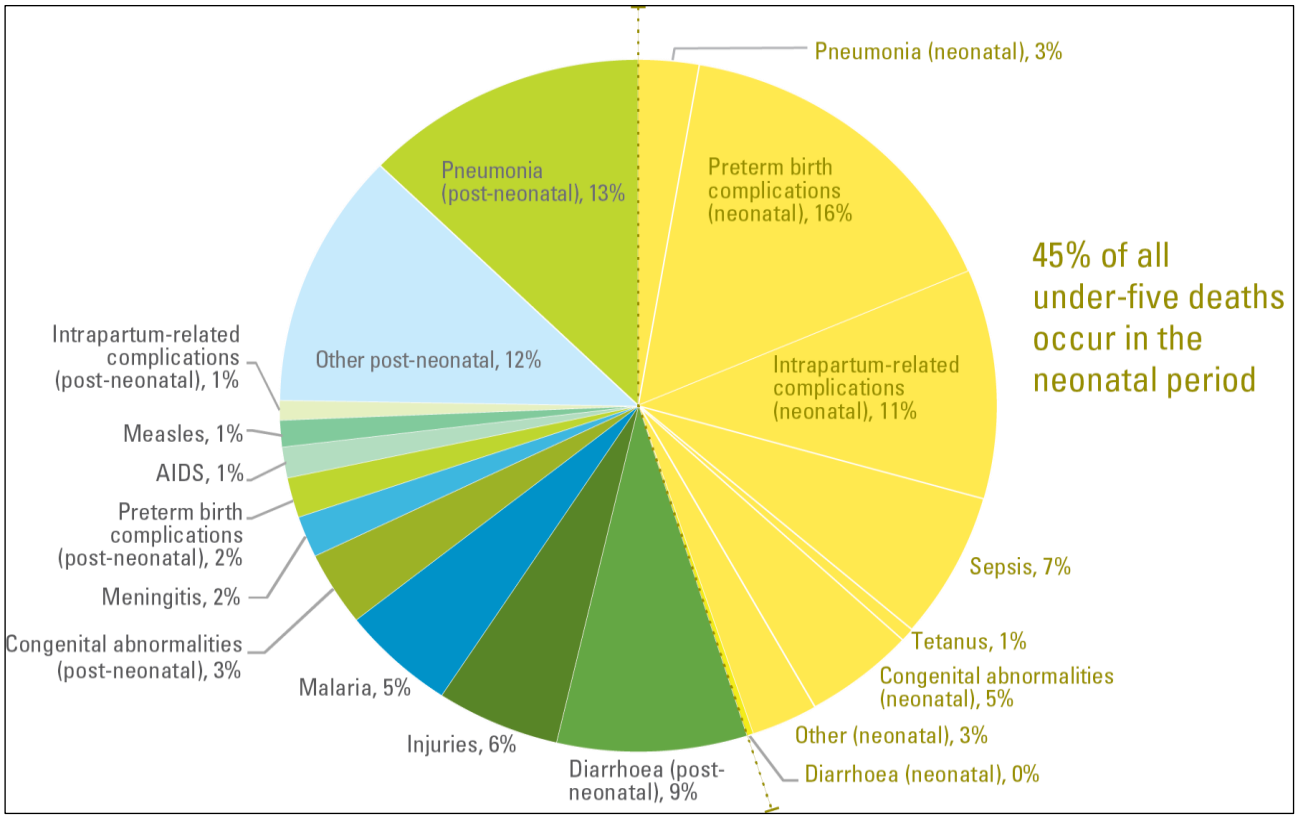

Figure 1: Causes of under-5 mortality.

METHODS

Present study is a cross sectional observational study conducted in the Department of Pediatrics, in two hospitals attached to JJM Medical College, Davanagere.

- Bapuji Child Health Institute and Research Centre
- Chigateri General Hospital, Davanagere

Source of data was primary caregivers (mothers, fathers, grandparents, other relatives or guardians) of children between the age group of 1 month-5 yrs.

- Attending the Pediatric OPD in Bapuji Child Health Institute and Research Centre and Chigateri General Hospital, Davanagere
- Interviewed during home visits to neighbouring villages

Method of collection of data was primary caregivers of children 1 month-5 years attending the OPD at Bapuji Child Health Institute and Research Centre and Chigateri General Hospital during the study period from November 2015 to June 2017 were considered for the study.

Inclusion criteria

- Caregivers (mothers, fathers, grandparents, other relatives or guardians) of children between 1 month-5 years who were able to understand English, Kannada or Hindi
- The primary caregivers who were available at the Paediatric OPD or during home visits at the time of data collection

Exclusion criteria

- Caregivers not willing to participate in the study
- Caregivers of critically ill children

Sample size and design of this study was structured questionnaire based cross-sectional observational study. Random sampling procedure was done to obtain 350 study subjects who satisfied the inclusion and exclusion criteria.

Study methods

The 350 study subjects were selected by means of convenience sampling. Verbal consent was taken from the caregivers and structured questionnaire was administered to assess knowledge regarding danger signs, acute respiratory illness, diarrhoeal diseases, care seeking behavior, nutrition and breast-feeding and safe practices during childhood illnesses.

A total of 20 questions were used to assess the level of knowledge among primary caregivers. A score of 1 was given to every correct response and 0 for wrong response. Good knowledge was score 13-20, average knowledge = 7-12 and poor knowledge =<7.

Likert scale was used to grade the attitude of caregivers to common childhood illnesses. The score grading was: 1= strongly disagree, 2= disagree, 3= not sure, 4= agree and 5= strongly agree for positive responses and vice versa for negative responses. A total of 10 items were used to assess their attitude. Favorable attitude was considered for scores between 30-50, average favorability for scores 15-30 and unfavorable attitude for scores <15.

Statistical methods

Data collected was analyzed using descriptive and inferential statistics. Descriptive statistics was used to analyze the knowledge of caregivers regarding common childhood illnesses.

ANOVA test was used to assess the association of variables and care-seeking behavior.

RESULTS

The study was a cross sectional observational study with 350 study subjects chosen by random sampling procedure. Out of the 350 primary caregivers, 146(41.71%) were mothers, 97(27.71%) were fathers, 57(16.28%) were grandparents. Other caregivers included relatives (10.28%) and guardians (4%). 63(18%) of them had not received any formal education. 140(40%) had studied up to 5th standard. 119(34%) had received high school education up to 10th standard and only 28(8%) held a professional degree.

Out of 350 primary caregivers, 147(42%) were home makers or unemployed. 91(26%) were daily wage Laboure's, 84(24%) were employed as skilled workers and 28(8%) were professionals. Authors analyzed this study population based on Socioeconomic status as per modified B.G Prasad (BGP) classification. Majority of them, 161(46%) belonged to Class 4, followed by 120(34.28%) belonging to Class 3. The others belonged to Class 2, 35(10%) and 28(8%). A small minority 6(1.7%) belonged to Class 1 socioeconomic status as per modified BGP classification.

The primary caregivers selected for the study were those accompanying children between the age of 1 month to 5 years. 125(35.71%) children were below the age of 6 months, 120(34.26%) were between 6 months to 1 year and 105(30%) were older than 1 year of age and below 5 years. Of these 203(58%) were boys and 147(42%) were girls. 182(52%) caregivers recalled that their child had 2-3 episodes of acute diarrhoeal illness in the past. 309(86%) sought hospital treatment and 231(66%) were aware of oral rehydration therapy (ORS) for treatment of diarrhoeal disease. 245(70%) had the wrong perception to with-hold feeds during these illnesses.

Among those interviewed, 168(48%) noted that the child had suffered from around 2-3 episodes of acute respiratory illness (ARI) in the past. 119(34%) had experienced 3-5 episodes of ARI while 63(18%) had around 5-10 such episodes. 324(94%) have received medical treatment in the past for ARI.

Table 1: Health seeking for common illnesses.

Medical treatment for	Frequency (N=350)	Percentage (%)
Diarrhoeal Illness	306	86
Acute Respiratory Illness (ARI)	324	94
Convulsions	315	90
Rash	294	84

Of the total children, the common illness for which health care was seeked was respiratory illness and for convulsions (Table 1).

Knowledge regarding vaccines and immunization was assessed. 315(90%) believed vaccines were helpful in preventing certain communicable diseases, but only 231 (66%) had complete immunization as per the National Immunization Schedule. 112(32%) had missed previous doses of vaccines and 7(2%) had never been immunized. Taboos and cultural beliefs to ward off illness were commonly practiced among this study group. 26% believed in skin branding their children during febrile episodes or convulsions. 8% believed that ear piercings would prevent diarrhoeal illnesses and infant deaths while 6% felt that amulets prevent respiratory illness and mortality.

Overall knowledge among primary caregivers regarding common childhood illnesses was found to be good with a mean score of 13.01±4.49 (CV=0.34). Attitude among caregivers regarding common illnesses in children was favorable with mean score of 31.9±12.37 (CV=0.38).

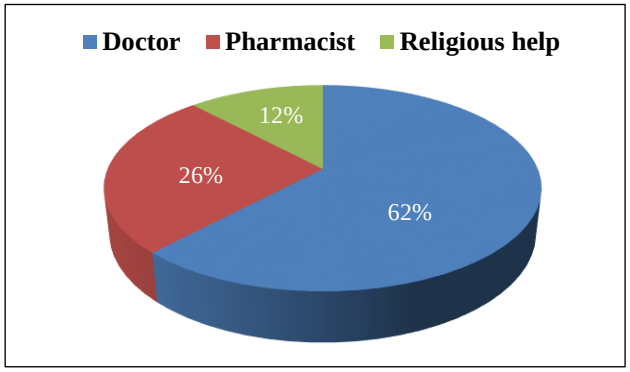

Figure 2: Care Sought During Illness.

There were 217 (62%) consulted a doctor during an illness. 91(26%) sought treatment directly from a pharmacist, while 42 (12%) sought religious help (Figure 2).

210(60%) said they would seek medical help for fever, refusal to feed, hurried or difficult breathing or blood in stools. 217(62%) consulted a doctor during an illness.

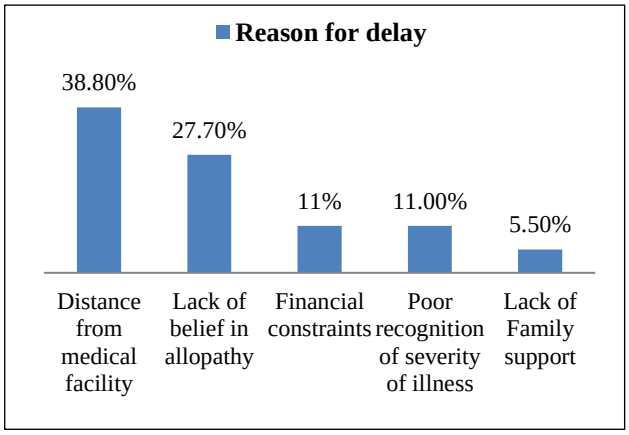

Figure 3: Delay in seeking care.

The commonest reason for delay in seeking treatment was distance from a medical facility (38.8% cases), lack of belief in allopathy (27.7%), financial constraints (11%), poor recognition of severity of illness or danger signs (11%) and lack of family support (5.5%) (Figure 3).

The primary decision maker in the family regarding seeking care during an illness is the father (56%), grandparents (22%) and mother (18%).

DISCUSSION

In this study authors noted that mothers most commonly accompany the child to a medical facility and are the primary caregivers. Several studies have reported a positive relationship between maternal education and care seeking behavior which is in agreement with the present study. Most of this study population belongs to low socioeconomic background which influenced their knowledge, attitude and perceptions of common childhood illnesses.

Out of 60% of this study population were able to recognize danger signs of childhood illnesses and sought appropriate prompt care. 26% purchased medicines directly from the pharmacy without consultation with a doctor and a few believed in religious interventions before seeking medical help. Sreeramareddy et al, also reported similar findings in their study.[4]

This study revealed a larger proportion of people sought medical help for convulsions and rash as compared to previous studies.[4-6] This could be attributed to increased incidence of febrile seizures and fever associated with rash in this geographical region.

In this study as well, authors noted that male children are given preference while seeking care. Acute Respiratory Illness (ARI) and Acute Diarrhoeal Diseases (ADD) were

the commonest childhood illnesses encountered in our study, similar to other studies.[7-10]

A majority of primary caregivers seek medical treatment for these illnesses. Even though there is good awareness regarding availability and use of oral rehydration therapy or ORS in acute diarrhoeal illness, authors noted that feeds were commonly withheld. Benakappa et al, also reported similar findings.[11-13]

Knowledge regarding malaria transmission was found to be average with 70% believing that it is transmitted by mosquitoes but the remaining 30% had false misconceptions. The region this study was conducted in is endemic for malaria and it is crucial to educate the population regarding transmission, recognition of symptoms and danger signs and preventive measures to help reduce morbidity and mortality. Tarimo et al, noted similar results in their study and made recommendations to improve knowledge among caregivers through better implementation of Integrated Management of Childhood Illness programmes in government health facilities.[14] Mohan et al, have reported that training doctors in counselling mothers can improve their appreciation of the need to seek prompt and appropriate care for serious episodes of childhood illness.[15]

In this study it was seen that the knowledge regarding vaccines and immunization among primary caregivers was good but 32% had missed the previous doses of vaccines for various reasons (no reported adverse events following immunization). Even though there is good knowledge and attitude about vaccines, the practice among caregivers is not satisfactory. More efforts are needed to stress the importance of adhering to the set schedule of immunization and likely dangers from missed doses of vaccines. The government needs to make stronger policies and programmers which emphasize a strict immunization schedule and ensure proper follow up through the immunization card.

In central Karnataka, where this study was conducted, there are certain common cultural beliefs, myths and taboos regarding care during illnesses. Skin branding is a dangerous practice done during febrile episodes and convulsions with the notion that it would reduce the fever and terminate convulsive episodes. Ear piercings and amulets are also widely practiced toward off infections but these itself have been noted to be a source of infection. It was also revealed that grandparents and other elder household members believed in these myths and encouraged these practices even while the parents opposed it. Efforts need to be made to counsel grandparents regarding the dangers of skin branding and appropriate supportive care during fever spikes and convulsions.

Knowledge and attitude among primary caregivers regarding common childhood illnesses was the main objective of this study. authors found that there is good knowledge and favorable attitude in this study population similar to studies conducted by Sreeramareddy et al, Awasthi et al, and Herbert et al.[16] Primary caregivers need to be educated to approach trained medical personnel as certain danger signs of childhood illnesses may be missed by pharmacists leading to delay in seeking appropriate care. It must be stressed that religious interventions might even prove to be harmful to the child.

Author noted in study that fathers are the primary decision makers followed by grandparents. It was surprising to note that mothers did not have much say in making decisions regarding seeking care during illness. This is probably due to low socioeconomic status and presence of a male dominated society with less women empowerment. The government and NGOs must take necessary steps to improve this situation as mothers can recognize danger signs in children earlier than others and hence if given opportunities to seek care, delay in presentation to hospitals can be averted.

The commonest reason for delay in seeking medical care was distance from a medical facility. Equipped infrastructure and proper round-the-clock transport facilities need to be made available to reduce under 5 child mortality. Previous studies have also shown that lack of money, distance to the facility and perception that illness is not serious were the main factors for children not to be taken to the health facility.[17] Other reasons for delay were cited as lack of belief in allopathy, financial constraints and poor family support. These can be prevented by better counselling about danger signs and need for immediate care, provision of subsidized rates for medical services and free medical insurance.

Community-based intensive behavioral communication strategies complementing clinic-based IMCI programmes are essential in reinforcing mothers' perception of illness severity and enhance their cues to appropriate action.[18-20]

CONCLUSION

Knowledge and attitude among primary caregivers regarding common childhood illnesses is favourable but the practices and perceptions are not satisfactory. Improving literacy rates will have a significant impact on reduction of childhood mortality. Total family income, mother's education, primary caregivers' perceptions about severity of illness are predictors of the health seeking behaviour. Women empowerment and counselling of family members about common childhood illnesses is crucial to reduce childhood mortality. Special emphasis must be made to avoid practicing harmful cultural beliefs and taboos.

Complementary introduction of community based IMCI programmes may improve family's care seeking behaviour and their ability to recognize danger signs of childhood illness. Socioeconomic development of the urban community can improve care seeking behaviour

during the childhood illness. IMNCI training must be modified to suit the local population, to help better implementation of services and prevent dangerous practices.

Limitations of this study was author relied on self-reported answers, and these may be subject to recall and reporting bias. Unidentified predictors or confounders are still possible regarding attitude and perceptions of people about illness and health seeking behaviour. Further research is needed to improve upon these limitations.

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REFERENCES

1. World Health Organization. World Health Statistics, 2015. Available at; https://www.who.int/gho/publications/world_health_statistics/2015/en/. Accessed 9 June 2017.
2. UNICEF Statistics. The State of the World's Children, 2012. Available at: https://www.unicef.org/publications/files/The_State_of_the_Worlds_Children_2007_e.pdf. Accessed 8 June 2017.
3. Office of Registrar General of India. Sample Registration System Statistical Report, 2012. Available at: http://censusindia.gov.in/vital_statistics/SRS_Report_2012/1_Contents_2012.pdf. Accessed 9 May2017.
4. Sreeramareddy CT, Shankar RP, Sreekumaran BV, Subba SH, Joshi HS, Ramachandran U. Care seeking behaviour for childhood illness-a questionnaire survey in western Nepal. BMC int health human righ. 2006;6(1):7.
5. Awasthi S, Verma T, Agarwal M. Danger signs of neonatal illnesses: perceptions of caregivers and health workers in northern India. Bull WHO. 2006;84:819-26.
6. Athumani J. Knowledge, Attitudes and Practices of mothers on symptoms and signs of integrated management of Childhood Illnesses (IMCI) strategy at Buguruni Reproductive and Child Health clinics in Dar es Salaam. Dar Es Sala Medi Stud J. 2008;15(1):4-8.
7. Adegboyega AA, Onayade AA, Salawu O. Care-seeking behaviour of caregivers for common childhood illnesses in Lagos Island Local Government Area, Nigeria. Niger J medi: J Natio Assoc Resid Doc Nige. 2005;14(1):65-71.
8. de Silva MA, Wijekoon A, Hornik R, Martines J. Care seeking in Sri Lanka: one possible explanation for low childhood mortality. Soci Sci Medi. 2001;53(10):1363-72.
9. Assefa T, Belachew T, Tegegn A, Deribew A. Mothers' health care seeking behavior for childhood illnesses in derra district, northshoa zone, oromia regional state, ethiopia. Ethio J Health Sci. 2008;18(3).
10. de Zoysa I, Bhandari N, Akhtari N, Bhan MK. Careseeking for illness in young infants in an urban slum in India. Soci Sci Medi. 1998;47(12):2101-11.
11. Benakappa AD, Shivamurthy P. Beliefs regarding diet during childhood illness. Indi J Commun Medi: Offic Publicat Ind Assoc Prevent Soci Medi. 2012;37(1):20.
12. Rehan HS, Gautam K, Gurung K. Mothers needs to know more regarding management of childhood acute diarrhea. Ind J PrevSoc Med. 2003;34(1):40-5.
13. Madhavi S, Kiran PB. Madhavi D. Beliefs and Practices among Mothers Regarding Diet during Childhood Illness in a Tertiary Care Hospital, Visakhapatnam. J Evid Based Medi Health. 2015;2(42):7372-9.
14. Tarimo DS, Lwihula GK, Minjas JN, Bygbjerg IC. Mothers' perceptions and knowledge on childhood malaria in the holendemic Kibaha district, Tanzania: implications for malaria control and the IMCI strategy. Trop Medi Int Health. 2000;5(3):179-84.
15. Mohan P, Kishore B, Singh S, Bahl R, Puri A, Kumar R. Assessment of implementation of integrated management of neonatal and childhood illness in India. J Health, Popul, Nutr. 2011;29(6):629.
16. Herbert HK, Lee AC, Chandran A, Rudan I, Baqui AH. Care seeking for neonatal illness in low-and middle-income countries: a systematic review. PLoS medi. 2012;9(3):e1001183.
17. Merga N, Alemayehu T. Knowledge, perception, and management skills of mothers with under-five children about diarrhoeal disease in indigenous and resettlement communities in Assosa District, Western Ethiopia. J Health, Popul, Nutr. 2015;33(1):20.
18. Ministry of Health and Family Welfare, Government of India, Students' Handbook for Integrated Management of Neonatal and Childhood Illness.2003.
19. World Health Organization. Counsel the mother: Management of childhood illnesses,1997. Available at: https://www.who.int/maternal_child_adolescent/documents/pdfs/imci_adaptation_guide_1a.pdf?ua=1. Accessed 7 June 2017.
20. Geldsetzer P, Williams TC, Kirolos A, Mitchell S, Ratcliffe LA, Kohli-Lynch MK, et al. The recognition of and care seeking behaviour for childhood illness in developing countries: a systematic review. PloS one. 2014;9(4):e93427.

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