Do the Caregivers Of Under-Fives Have Proper Health Care Seeking Behaviour for Their Children? A Study from Urban Slums of a City in Eastern India

Parimala Mohanty1, Sudhir Kumar Satpathy2, Sibabratta Patnaik3 and Lipilekha Patnaik1

1Department of Community Medicine, Institute of Medical Sciences and SUM Hospital, Siksha ‘O’ Anusandhan deemed to be University, Bhubaneswar, India
2School of Public Health, KIIT University, Bhubaneswar, India
3Department of Paediatrics, Kalinga Institute of Medical Science, KIIT University, Bhubaneswar, India

Correspondence:
Lipilekha Patnaik
Department of Community Medicine, Institute of Medical Sciences and SUM Hospital, Siksha ‘O’ Anusandhan deemed to be University, Bhubaneswar, India.
Email: drlipilekha@yahoo.co.in

ABSTRACT

Introduction: The morbidity and mortality among under-five children are many times higher in slums than more privileged urban neighbourhoods. This could be correlated with the caregivers’ behaviour too. Therefore, we intended to assess the health care seeking behaviour for their children among caregivers of under-five children in urban slums of Bhubaneswar city.

Methods: It was a cross-sectional study conducted during Jan 2019 to April 2019 in Bhubaneswar, India. Data regarding health care seeking behaviour of 530 caregivers of under-five (U5) children residing in urban slums of Bhubaneswar, whose children suffered from any illness in last one month, were collected.

Results: The most common childhood illnesses for which healthcare were sought were diarrhoeal diseases (30.4%) followed by respiratory infections (29.1%). A concept analysis of the predisposing factors was built up as “socio cultural context”, “economic context”, “education context”, and “individual preference” to know the health care seeking pattern. The health care seeking behaviour among the caregivers of under-five children was significantly associated with sex of child, size of the household, social group of caregiver, mother with mass media knowledge, age, education and occupation of mother, mother having BPL card, if suffering from chronic disease, decision making person for seeking health care, time lapse in approaching the health care facility and income loss due to U5 children illnesses.

Conclusions: The challenge is to know about signs and symptoms of ill-health and to recognise when to seek health care services. Measures can be taken to promote awareness for seeking timely appropriate care. There is a need to develop locally adapted behaviour change communication interventions for childhood Illnesses.

Keywords: health facilities; health seeking behaviour; urban slum; under-five children

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INTRODUCTION
Children are the most vulnerable population across the globe and under-five mortality rate (U5MR) being an important indicator for the progress of any country. Declining of mortality in children under five years of age by over 50% in the last 25 years is the greatest achievement across the world. Despite the progress, millions of children suffer from illnesses which could be easily prevented by affordable simple interventions. However, U5MR in India is still higher than the targeted Sustainable Development Goal of 25 deaths per 1000 births in 2030. In a developing country like India, the common cause of illness and death are infectious diseases. However, without appropriate treatment and lack of accessibility to health facility, under five children (U5C) continue to die. The unavailability of health facilities is not the only barrier but lack of motivation and inability of individuals to seek medical care are also major barriers.

Parents usually decide about the type and frequency of healthcare service accessed, so seeking healthcare in children is dependent on caregiver’s knowledge and attitude. Moreover, a mother’s health care seeking behaviour (HCSB) for their sick children is influenced by a varying number of socio-cultural factors.

In Odisha, U5C deaths were reduced from 91 per 1000 live births in 2005 - 2006 to 45 per 1000 live births in 2015 - 2016 (NFHS). More importantly, this unmet need to access to health was higher amongst poorer sections. Under the National Health Mission free care in public hospitals are given, but the availability of staff, equipment and drugs varies significantly. It forces patients to seek care in the more expensive private sector. Because of these catastrophic health care costs, more than 63 million Indians are faced with impoverishment every year.

The health indicators in slum populations are poorer than urban averages or similar or even worse than those of rural populations. The risk of infectious diseases, malnutrition and possibly impaired cognitive development are more in the children of urban slums. The overall child morbidity and mortality rates are many times higher in slums than in more privileged urban neighbourhoods. An effort was made to assess the HCSB for their children, among caregivers of under-fives in urban slums of Bhubaneswar city.

METHODS
This study was a community-based cross-sectional study conducted in slums of Bhubaneswar city of Odisha, India from January 2019 to April 2019. The caregivers, whose children under five years of age were suffering from illnesses in last one month, were interviewed with prior consent. Approval by the institutional ethics committee was taken. Total 530 caregivers of U5 children, participated in the study. They were interviewed using a pre-designed and pre-tested schedule based on the National Sample Survey Office (NSSO) health consumption schedule 25.0, adapted to the study and contextualised to the local situation. The data collection was done in local language Odia. A recall period of one month was used to avoid any recall bias. The sample size for the study was calculated as 530. The samples were collected using multistage cluster sampling technique. The data were entered by using Epi Collection 5. The data were coded, cleaned, and extracted in .csv format and exported to R software version 3.1.1, using packages like “Epicalc”, “epitools”, “gmodels” etc. Then statistical analysis was done using univariate and bivariate analysis (chi-squared test).

Operational Definitions:
- Caregiver: Caregivers were family members, in our case mother who were primarily responsible for supervising their child's health
- Healthcare-seeking behaviour (HCSB): Any activity undertaken by the caregivers who perceived their children to have a health problem and reached health care facility for the purpose of finding a remedy. This was based on the recognition of symptoms, and how they were interpreted by individuals

RESULTS
Among the 530 respondents, the mean age of their children was 3 ± 1 year. 51.1% children were males and 48.9% children were females. The mean age of
the mothers was 24.9 ± 1.4 years. Among them only 29% of families were having a regular wage occupation. The mean monthly expenditure of houses was INR 6345.1 ± 1569.2 ($ 84.67 ± 20.94). The most common childhood illness in last one month preceding the date of interview was diarrhoeal disease (30.4%) followed by respiratory infection (29.1%). Other detailed background characteristics of illness and nature of treatment are explained in table 1.

73.6% had Government insurance scheme for health expenditure, 3.8% had some other scheme for health insurance and 22.6% of the caregiver family didn’t have any coverage for the health insurance scheme. Those benefiting medical services free of cost were only by 16.4% whereas 33.2% children received partly free treatment and a large proportion of children (34.2%) availed

| Variables                          | Number (%) | Number (%) |
|------------------------------------|------------|------------|
| **Variables**                      |            |            |
| **Age of child (Completed in years)** |            |            |
| 1                                  | 29 (5.5)   |            |
| 2                                  | 85 (16)    |            |
| 3                                  | 270 (50.9) |            |
| 4                                  | 121 (22.8) |            |
| 5                                  | 25 (4.7)   |            |
| **Sex of Child**                   | Male 271 (51.1) | Female 259 (48.9) |
| **Health care sought type**        | Visited only OPD/Clinics 276 (52.2) | Admitted in IPD 146 (27.5) | Not visited any health facility 107 (20.2) |
| **Nature of ailment in U5C**       | Diarrheal disease 161 (30.4) | Respiratory infection 154 (29.1) | Malaria 75 (14.2) | Wound and skin diseases 94 (17.7) | Measles 3 (0.6) | Other illness 43 (8.1) |
| **No. of times visited OPD**       | 0 108 (20.4) | 1 363 (68.5) | 2 54 (10.2) | 3 5 (0.9) |
| **Suffering from any chronic ailment** | Yes 44 (8.3) | No 486 (91.7) |
| **Hospitalized in last 30 days**   | Yes 146 (27.5) | No 384 (72.5) |
| **Number of times hospitalized in last 30 days (n = 146)** | 1 144 (98.6) | 2 2 (1.4) |
| **Type of ward (IPD) admitted (n = 146)** | Free 93 (63.7) | General ward on payment 52 (35.6) | Special ward on payment 1 (0.7) |

73.6% had Government insurance scheme for health expenditure, 3.8% had some other scheme for health insurance and 22.6% of the caregiver family didn’t have any coverage for the health insurance scheme. Those benefiting medical services free of cost were only by 16.4% whereas 33.2% children received partly free treatment and a large proportion of children (34.2%) availed
The health care seeking approach was such that the majority of caregivers (47.4%) of U5 children consulted a government allopathic doctor, whereas 27.7% consulted a private allopathic doctor, 9.1% consulted to traditional healers and 8.1% consulted to pharmacists. Similarly 4.7% consulted to ayurveda, unani or siddha, homoeopathy, yoga and naturopathy (AYUSH), 2.1% adopted home remedies or consulted family friend advice and 0.9% did not seek any treatment.

The association of HCSB of caregiver was analysed using Chi Squared test. The health care sought was taken as the outcome variable and its association with the exposure variable was checked. The association is depicted in (Figure 1) as a concept analysis of HCSB where all predisposing factors are themed as “socio cultural context”, “economic context”, “education context”, and “individual preference” to know the health care seeking pattern.

In socio cultural context “sex of child” (P = 0.001) significantly contributed to HCSB. Moreover on comparison, caregiver’s attitude for U5C illnesses among male and female child remarkably varied. Male children visited OPD and IPD (65.20%-OPD, 51.40%-IPD) more frequently as compared to female (34.80%-OPD, 48.60%-IPD). 85% percent of female children did not visit OPD or IPD during illness, whereas 15% male children did not visit health care. Other variables significantly associated were “size of the household” (p = 0.001) “social group” of caregiver (P = 0.001), “age of mother” (p = 0.001), “decision making person” while seeking health care (p = 0.001). In economic context variables significantly related were “loss of
### Table 3. Factors associated with health care seeking behaviour of caregivers

| Variables                                      | Visited OPD | Visited IPD | Not visited OPD / IPD | p-value |
|------------------------------------------------|-------------|-------------|------------------------|---------|
| Sex of child                                   |             |             |                        |         |
| Male                                           | 65.20%      | 51.40%      | 15.00%                 | 0.00    |
| Female                                         | 34.80%      | 48.60%      | 85.00%                 |         |
| Household size                                 |             |             |                        |         |
| 0 to 4 members                                 | 35.90%      | 56.20%      | 34.60%                 | 0.00    |
| Above 5 members                                | 64.10%      | 43.80%      | 65.40%                 |         |
| Religion of care giver                         |             |             |                        |         |
| Hindu                                          | 94.20%      | 90.40%      | 93.50%                 | 0.341   |
| Others                                         | 5.80%       | 9.60%       | 6.50%                  |         |
| Social group of care giver                     |             |             |                        |         |
| SC & ST                                        | 59.10%      | 41.10%      | 46.70%                 | 0.001   |
| Others                                         | 40.90%      | 58.90%      | 53.30%                 |         |
| Mother with mass media knowledge                |             |             |                        |         |
| without mass media exposure                    | 2.90%       | 16.40%      | 80.40%                 | 0.00    |
| with mass media exposure                       | 97.10%      | 83.60%      | 19.60%                 |         |
| Age of mother                                  |             |             |                        |         |
| 25 years and Below                             | 84.40%      | 30.10%      | 72.90%                 | 0.00    |
| Above 25 years                                 | 15.60%      | 69.90%      | 27.10%                 |         |
| Literacy status of mother                      |             |             |                        |         |
| Illiterate                                     | 3.60%       | 19.20%      | 70.10%                 | 0.00    |
| Literate                                       | 96.40%      | 80.80%      | 29.90%                 |         |
| Occupation of mother                           |             |             |                        |         |
| Employed                                       | 1.80%       | 20.50%      | 11.20%                 | 0.00    |
| Non-employed                                   | 98.20%      | 79.50%      | 88.80%                 |         |
| Type of family                                 |             |             |                        |         |
| Nuclear                                        | 35.90%      | 65.80%      | 34.60%                 | 0.00    |
| Joint family                                   | 64.10%      | 34.20%      | 65.40%                 |         |
| Mother having BPL card                         |             |             |                        |         |
| No                                             | 2.20%       | 13.00%      | 89.70%                 | 0.00    |
| Yes                                            | 97.80%      | 87.00%      | 10.30%                 |         |
| Duration of stay in slum                       |             |             |                        |         |
| Less than 6 years                              | 1.40%       | 26.20%      | 24.30%                 | 0.00    |
| 7 years and above                              | 98.60%      | 73.80%      | 75.70%                 |         |
| Whether suffering from chronic disease         |             |             |                        |         |
| No                                             | 98.60%      | 74.00%      | 98.10%                 | 0.00    |
| Yes                                            | 1.40%       | 26.00%      | 1.90%                  |         |
| Healthcare type                                |             |             |                        |         |
| Govt. Health care                              | 51.70%      | 61.00%      | 58.30%                 | 0.187   |
| Private Health care                            | 48.30%      | 39.00%      | 41.70%                 |         |
| Decision making person while seeking health care|             |             |                        |         |
| Mother                                         | 1.90%       | 6.60%       | 22.20%                 | 0.00    |
| Others                                         | 98.10%      | 93.40%      | 77.80%                 |         |
| Medicine take on advice                        |             |             |                        |         |
| No                                             | 3.60%       | 0.00%       | 39.40%                 | 0.00    |
| Yes                                            | 96.40%      | 100.00%     | 60.60%                 |         |
| Diagnostic test conducted                      |             |             |                        |         |
| No                                             | 35.40%      | 23.90%      | 93.90%                 | 0.00    |
| Yes                                            | 64.60%      | 76.10%      | 6.10%                  |         |
| Whether treated on medical advice              |             |             |                        |         |
| No                                             | 2.90%       | 0.00%       | 90.70%                 | 0.00    |
| Yes                                            | 97.10%      | 100.00%     | 9.30%                  |         |
| Whether continued treatment after hospitalization|            |             |                        |         |
| No                                             | 19.40%      | 30.10%      | 100.00%                | 0.00    |
| Yes                                            | 80.60%      | 69.90%      | 0.00%                  |         |
| Time lapse in approaching the health care facility|            |             |                        |         |
| Immediately                                    | 45.40%      | 15.80%      | 2.90%                  | 0.00    |
| 2 days above                                   | 54.60%      | 84.20%      | 97.10%                 |         |
| Loss of wage due to U5C ailment                |             |             |                        |         |
| No wage loss                                   | 39.30%      | 0.00%       | 82.10%                 | 0.00    |
| Wage loss                                      | 60.70%      | 100.00%     | 17.90%                 |         |
household income” due to absent from work for treatment of U5C ailment (p = 0.001) and status of “mother having BPL card” (p = 0.001). In education context “education of the mother” (p = 0.001), “occupation of the mother” (p = 0.001), Mother with “mass media knowledge” (p = 0.001) were connected to influence HCSB. In individual preference “time lapse in approaching the source from where treatment was taken” (p = 0.001), “whether treated on medical advice” (p = 0.001), “whether treated on medical advice continued after hospitalisation” (p = 0.001) and “whether suffering from chronic disease” (p = 0.001) linked to HCSB. The relationship between care givers predisposing factors and health care seeking status of respondent as mentioned in the table-3.

DISCUSSION

This study highlighted on the aspect of HCSB of the caregivers towards childhood illnesses in the urban slum of Bhubaneswar, India. The mean age of the caregiver was about 24.9 ± 1.4 years. Around 21.5% of them were illiterate and 91.1% were unemployed. Similar findings have also been observed in studies in respect of unemployment. In a previous study conducted at Bhubaneswar, 77.69% were unemployed and in Tamil Nadu 76.54% were unemployed which was much less as compared to this study. In this study 30% of the under-five children had diarrhoeal disease which is approximately at par with that of earlier findings at Debrebirhan referral hospital (31.7%) and at a health centres in Ethiopia (30%).

In this study as regards to the place of preference for seeking care, 47.4% consulted a “government allopathic doctor”, 27.7% consulted an “allopathic private doctor”, 4.7% consulted to “Ayurveda, Unani or Siddha, Homoeopathy, Yoga and Naturopathy” (AYUSH), 9.1% consulted to “desi dawai or traditional healers”, 8.1% consulted to “pharmacists”, 2.1% had “self-care” (home remedies or family friend advice) and only 0.9% had “no treatment.” In another study, treatment was opted in government hospital (30.59%) followed by medicine store, private clinics, anganwadi centres and quacks (2.28%). Similarly in a study at urban slum of Lucknow, India, the respondents primarily preferred qualified private practitioner (65.4%), followed by unqualified private practitioner (26.9%) and tertiary care health centre (7.8%). However in another study in Tamil Nadu reported around 81.15% of the caregivers preferred private doctors during any childhood illness and as few as 18.85% preferred a government health centre. This difference in utilisation of healthcare facility may be because of the difference in accessibility and quality of the health care delivered in those regions.

In this study, decision-making person for seeking health care were mostly fathers (26%). It was seen in a study that the decision making abilities of the mothers mostly influence the HCSB. However, the concept analysis of this study clearly indicates the following HCSB aspects of the caregivers, which are broadly grouped under: “economic context”, “Socio cultural context”, “education context”, “individual preference.” Concept analysis have been done in another study discussing the antecedents of concept for HCSB. As regards to “economic context” influencing HCSB of caregivers are “loss of household income”, “mother having BPL card”, “Socio cultural context” covers factors like “sex of child”, “size of the household”, “social group”, “age of mother” and “decision making person” etc. One study clearly describes how these socio-economic factors are acting as barriers to access health care. However in our study it has been observed that the sex of child plays a very important role in HCSB of caregiver. As has been observed, male as compared to female child had more often visited OPD and IPD. It was surprising that 85% percent of female didn’t visit either OPD or IPD during illness. However in another study 30% of the female children, received no treatment which was much lower as compared to our study. Multiple studies show that various factors, such as age and sex of the children, wealth index, the education of the mother, access to electronic media and household lifestyle factors were significantly associated with care-seeking behaviours.

As regards to “education context” the factors affecting to HCSB of caregivers are like “mother education”, “occupation of the mother”, mother with “mass media knowledge.” In this respect
another study revealed similar findings, where the caregivers with secondary school education were four times more likely to seek healthcare than non-educated ones. Mother’s education is associated with good hygiene and HCSBs resulting in decrease in childhood illness. The “individual preference” influencing HCSB of caregivers are “time lapse in approaching the source from where treatment was taken”, “whether treated on medical advice” etc. Similar findings have also been observed in another study. Although our research has tried to dwell upon the various factors associated with health care seeking behaviour of caregivers, it is a cross-sectional study using a self-administered questionnaire and pattern of HCSB over time could not be assessed. Chance of recall bias leading to variation of results was a possibility, even though illness within last one month was considered. These facts would limit us to generalise our findings to the entire general population. We expect that further larger, more comprehensive, prospective studies in the future would shed more light upon this subject.

CONCLUSIONS

This study highlights the HCSB of caregivers of under-five children in urban slums. This study recognises socio cultural determinants like sex of child, size of the household, social group of caregiver, mother with mass media knowledge, age of mother, education of the mother, occupation of the mother, decision making person for seeking health care, delay in approaching for treatment and wage loss were associated with health care seeking behaviour for their under-five children illnesses. The challenge is to know about signs and symptoms of ill-health and to recognise when to seek health care services. Measures can be taken to promote awareness for seeking timely appropriate care. There is a need to develop locally adapted behaviour change communication interventions for childhood Illnesses.

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