Morbidity Pattern and Role of Community Health Workers in Urban Slums of Durg and Bhilai City of Chhattisgarh

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Abstract

Introduction: In 2002, the Government of Chhattisgarh initiated a Community Health Worker program called the Mitanin Program, to strengthen the health system of Chhattisgarh. The current study was conducted with the twin objectives to assess morbidity pattern and health-seeking behavior in urban slums of Durg and Bhilai to understand the role of Mitanins in health seeking of their slum population. Methods: Ten urban slums, five each from Durg and Bhilai were selected through simple random sampling for the study. Household survey was done using prestructured questionnaire. A total of 1025 households representing 4997 family members were surveyed. Results: The study found that diseases which were most prevalent in the urban slums of Durg and Bhilai are blood pressure and diabetes mellitus. Diseases such as diarrhea, typhoid, hepatitis, tuberculosis, leprosy, and filariasis which have strong association with safe drinking water and sanitation are prevalent. For chronic communicable disease and reproductive and child health (RCH), people from both cities prefer going to public health-care facilities. About a fourth of the population came in contact with the Mitanins to seek health care mostly in relation to chronic communicable diseases and RCH. Conclusion: The study shows an increase in the prevalence of chronic lifestyle diseases among the slum population. There is a case for inclusion of chronic conditions, as specified under Comprehensive Primary Health Care. There is a need to reprioritize Mitanin’s role in early diagnosis through point-of-care diagnostics and ensuring prompt referrals and follow-up.

Keywords: Health-seeking behavior, Mitnanin, morbidity

Introduction

Chhattisgarh is one of the nine high priority states in India with poor health indicators such as high infant mortality and maternal mortality rates and high prevalence of morbidities. Realizing the need to strengthen the public health system, the State Health Resource Centre (SHRC) initiated a community health worker program called the Mitinan programme in 2002. It was introduced with broad objectives of health education and improved awareness of health and provision of immediate relief for common ailments.

Mitnanins are women volunteers selected by the community. Their role is to undertake family outreach services, community organization, and social mobilization on health and its determinants. The roles and responsibilities assigned to the Mitnanins under the Mitinan Programme are to promote health, provide preventive health care to the community, treat minor ailments, health education, and referral. They act as the main link between the community and the public health system.

The Accredited Social Health Activist (ASHA) initiative under the National Health Mission (NHM) is based on the Mitinan experience of Chhattisgarh. However, the Mitinan Programme has few critical difference over the ASHA Programme of Government of India. Mitinan programme has an elaborate and ongoing training under SHRC. Initially, the program specified that the Mitnanins would work for social recognition and any payment to them would be made only by the community they serve. Post-NHM, this changed to task-based financial incentives for specific activities such as accompanying pregnant women for antenatal checkup and institutional delivery, accompanying infants for immunization, identification of severe acute malnourished children and their

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referral for treatment, motivating for sterilization, detection of cases of malaria, tuberculosis, leprosy, and motivating them for complete treatment. A study done to compare the performance of Mitanins and ASHAs shows that the Mitanins have performed better specifically on certain parameters such as reproductive and child health (RCH). Another similar study shows postimplementation of the Mitanin programme, Chhattisgarh had witnessed a remarkable decline in the infant mortality rate in the year 2004.

Health-seeking behavior of a population is determined by various factors, the commitment of health workforce toward health-care needs of the population is a significant one. Literature explaining health-seeking behavior of the population in relation to the type of morbidity and role of Mitanins in this has been scanty. Therefore, the study was conducted with the following twin objectives:

1. To assess morbidity pattern and health-seeking behavior in urban slum hamlets of two cities (Durg and Bhilai)
2. To understand the role of Mitanins (community health workers) in health seeking of their slum population.

**Methods**

A cross-sectional study was undertaken in a total of ten urban slums, five each from Durg and Bhilai, between June and July 30, 2017. Durg and Bhilai city are major industrial zones of Chhattisgarh and hence selected for the study. To attain maximum sample size, data collection from 500 households was estimated for each city. Average number of households in each urban slum hamlet of the cities vary from 75 to 150. So, in order to cover 500 households, five urban hamlets were selected for the study. A total of 1025 households representing 4997 family members were surveyed. For sample selection, cluster sampling method was used. An urban primary health center (UPHC) of each city was selected through simple random sampling. Five slums falling in the catchment area of the UPHCs were selected randomly. Names of five hamlets for each city were drawn using the computer-based application. Data were collected through household survey. One resident, preferably an adult of each household in the hamlet was explained the nature, purpose, and objectives of the study. The person willing to be enrolled as a study participant was interviewed using the prestructured questionnaire. Informed verbal consent of the Mitanins and respondents from every household was sought before the data collection.

The study variables employed to understand the morbidity pattern in urban slums were number of people with symptoms or diagnosed conditions in the past 15 days, number of people suffering from any chronic disease, that is, disease with more than 3 months of duration. Variables used to understand health-seeking behavior of the population were treatment-seeking behavior; contact with Mitanins; referral to public health-care facilities including subcenters, UPHCs, and district hospital; and referred to private facilities or traditional healers.

**Results**

**Socioeconomic status of the slum population**

One-fourth of the women respondents were illiterate in both cities. Less than one-fourth had completed secondary level of education in Durg, whereas slightly more than one-fourth had completed so in Bhilai. A quarter of the population in Durg and more than half in Bhilai did not have water supply sources at their houses. They had to use the community water supply source to get drinking water. 85% and 61% of population from Durg and Bhilai, respectively, had private toilets at their houses.

**Morbidity pattern**

Out of the total population covered in Durg, that is, 2818, 512 (18%) suffered from one or more disease, whereas among the 2179 population covered in the city Bhilai, 427 (19.6%) people were suffering from one or more diseases. The diseases recorded were classified as follows:

i. Acute communicable diseases including cough and cold, fever, chicken pox, typhoid, diarrhea, and pneumonia
ii. Chronic communicable diseases including tuberculosis, leprosy, HIV AIDS, and filariasis
iii. Chronic noncommunicable diseases including hypertension, diabetes mellitus, anemia, thyroid, asthma, congenital disability, paralysis, mental disorders, cardiovascular diseases, renal diseases, and cancer
iv. Others including emergencies such as injuries, eye, ENT, and skin-related ailments.

The most prevalent acute communicable diseases were upper respiratory tract infection and fever in both the cities. The most prevalent chronic noncommunicable disease is blood pressure followed by diabetes mellitus in both the cities. Moreover, the most prevalent chronic communicable disease in the slums of Durg and Bhilai is tuberculosis.

**Health seeking behavior of slum population**

Table 1 shows that the common health-care problems for which people went to the public health-care facilities are chronic communicable diseases and RCH related. However, for health-care problems such as acute diseases and chronic noncommunicable diseases, people from urban slums of Durg went to private health-care facilities.

**Role of Mitanins in health-care seeking of the population**

In slums of Durg city, only one-fourth of the population came in contact with the Mitanins, whereas in Bhilai, slightly less than one-fourth came in contact with the Mitanins after feeling ill. People came in contact with Mitanins mainly to get their advice and help to reach health-care facility for treatment. Table 2 illustrates the conditions, for which advise from Mitanins were primarily sought. It shows that most people who came in contact with Mitanins went to public health facilities. Common health problems in relation to which people came in contact with Mitanins were chronic communicable disease and RCH related. Very few people suffering from acute diseases and chronic noncommunicable conditions sought advice from Mitanins.
**Discussion**

A quarter of the respondents, that is, mostly the women of the slums, were illiterate in both cities and far less than one-fourth of them had attained graduation. Various studies have shown a correlation between the educational status of the population and their health-seeking behavior. Increased perception and awareness on health problems are associated with literacy.\[^{5,6}\]

Water and sanitation is one of the key determinants of public health. Secure access to safe drinking water and sanitation is crucial to prevent morbidities.\[^{7,8}\]

The study shows diseases such as diarrhea, typhoid, hepatitis, tuberculosis, leprosy, and filariasis which have strong association with safe drinking water and sanitation are prevalent where some significant number of households still do not have access to toilets and safe drinking water in both cities. The prevalence of disability and acute diseases perceived in the study is less than that reported in the Annual Health Survey (AHS) 2011–2012. This difference might be due to underreporting of illness. Another explanation could be due to seasonal trends which could not be adequately addressed in the cross-sectional study. However, the prevalence of chronic noncommunicable diseases as per the study is comparable to that in AHS 2011–2012 data. It shows that the prevalence of chronic lifestyle diseases is increasing over years.

The study findings show that, in Bhilai, the public health-care facilities are better utilized than in Durg. The type of health-care facility people prefer to seek health care from is determined by various factors such as awareness of people about the availability of health care facility, their accessibility, their past experiences and satisfaction with the health care provider, and other social determinants of health.\[^{9,10}\]

People of the urban slums in Durg were observed to be less aware about the availability of UPHC may be because of their geographical location, which are placed away from the slums. In contrast, the slums in Bhilai are close to the UPHC and ANM center. For health care related to chronic communicable disease and RCH, people from both cities prefer going to public health-care facilities. It might be because these health-care problems which are considered to be of public health importance are given high priority by the public health system and Mitanins have been successful in ensuring that people with such seek proper health care and opt to seek it from public health-care facilities. This also shows that the work of Mitanins has been incentive based and Incentives are playing an important role in motivating the Mitanins toward their work. However, the increasing prevalence of the chronic diseases in the urban slum population should also be a cause of concern.

**Conclusion**

Public health-care facilities need to widen the range of services and also include adequate primary curative care services related to noncommunicable diseases, communicable diseases, and emergencies so that, people of urban slums with poor economic status can access health care with less expenses. There is a

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Table 1: Health-care seeking practices

| Type of health problem | Durg | Bhilai |
|------------------------|------|--------|
| **Total cases (prevalence)** | 150 | 18 |
| Acute communicable | 18 | 274 |
| Chronic noncommunicable | 274 | 25 |
| Emergency, ENT, eye, Dental | 25 | 12 |
| Skin related | 12 | 74.0 |
| RCH related | 27 | 3.7 |

**Percentage**

- **Durg**
  - Acute communicable: 12.8%
  - Chronic noncommunicable: 16.7%
  - Emergency, ENT, eye, Dental: 16.7%
  - Skin related: 16.7%
  - RCH related: 74.0%

- **Bhilai**
  - Acute communicable: 83.3%
  - Chronic noncommunicable: 83.3%
  - Emergency, ENT, eye, Dental: 83.3%
  - Skin related: 83.3%
  - RCH related: 74.0%
need to reprioritize role of Mitanins in early diagnosis through point-of-care diagnostics and ensuring prompt referrals and follow-up of patients suffering from acute and chronic noncommunicable diseases.

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Conflicts of interest
There are no conflicts of interest.

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| Type of health problem          | Durg  | Bhilai           |
|----------------------------------|-------|------------------|
|                                 | Cases | Sought advice from Mitanins regarding seeking treatment (%) | Cases | Sought advice from Mitanins regarding seeking treatment (%) |
| Chronic communicable disease     | 18    | 100              | 6     | 16.7             |
| RCH related                      | 27    | 85               | 26    | 92.3             |
| Emergencies, ENT, eye, dental    | 25    | 32               | 41    | 12.2             |
| Chronic noncommunicable         | 274   | 27               | 149   | 13.4             |
| Skin related                     | 12    | 3                | 10    | 30.0             |
| Acute communicable disease       | 150   | 18               | 152   | 19.1             |

RCH: Reproductive and child health

Table 2: Contacts with Mitanins for health-related conditions