

Accessibility to Health facilities for the poor would be the same in Post COVID-19 Situation – Evidence from Raipur City

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Abstract

Urban Poor and migrant workers on one side share the urban infrastructure and economy, whereas the provisions kept for them on health background seem negligible. During the COVID-19 scenario, these communities are considered to be the most vulnerable and sufferer irrespective of health policies. This is primar-

ily due to the discriminatory nature of the communicable disease, COVID-19 experienced in recent time. Hence, it is required to understand the behaviour of the community pertaining to Health so that proper policy can be designed which would make them comfortable and satisfied. The current paper aims to examine health-related current practices and their behaviour observed in normal time by the slum community and lead to a discussion of how it may affect the Post COVID-19 scenario based on some available grey literature. The coss sectional and explorative research design with cluster-based random sampling is used to collect the information from four slums of Raipur City, Chhattisgarh. The sample size is calculated to be 422 by adopting the formulae $n = 1.96^2 * pq / (d^2) * (1 - NR)$ by assuming the prevalence of accessibility of health facility to 50 %. The bivariate analysis result shows that 64.2 % of the respondents are suffering from general illness followed by Tuberculosis, Hypertension, and accidental injuries. The community prefers government health facilities, but local private clinics and private paramedical staffs are preferring equally due to wage loss and lack of income. Quality of services, good behaviour of staff, and free services are the motivational factors for them. However, the same is not relevant during the COVID-19 situation. The association between disease and distance from the health facility is found to be significant through the chi-square test value 22.277($p=.022$). The government must facilitate the local level health facility with good services and the capacity of the health professionals should be increased after the post-COVID-19 scenario.

(Keywords: Urban Poor, COVID-19, Migrant labourer, Health System, Communicable and Non-communicable disease)

Introduction

The new novel coronavirus disease (COVID-19) emerged from the Wuhan city of China has now become dispersed to many countries and triggered many challenges in front of human society today. As compared to the world's affected data on Corona, in South East Asia the figure is much less than other regions such as Europe, Americas, Eastern Mediterranean, and Western Pacific ("WHO Coronavirus Disease (COVID-19) Dashboard", 2020). In our country, according to

the Indian Council of Medical Research (ICMR) report, till today 2,71,94,434 samples are tested for SARS-CoV-2 out of which 1,18,447 are confirmed cases. However, with a large variation among the state and districts, the national death rate is calculated to be 3.02 % and recovery rate of 40.97 % (SARS-CoV-2 (COVID-19) Testing: Status Update 22 May 2020, 09:00 AM IST, 2020). Irrespective of this figure, nobody has accurately estimated the population affected by the asymptomatic symptoms of the disease for the coming future. In the lack of vaccine and 100 % effective treatment so far, to save lives and human beings, different governments have taken steps to mitigate the spread of the pandemic virus infection by adopting various strategies which include lock-down in various phases, maintaining social distancing, isolation, quarantine, and issuing an advisory for remaining safe. However, in the long run, the lockdown has resulted in the shutdown of various industries, agricultural work, academic institutions, and different business opportunities which feeds the economy of the country.

The most sufferer population in this crucial time are the migrant labourers and the slum dwellers who are primarily uneducated, daily wage labourers and living their life in a temporarily scanty and dense environment. Earlier studies on the slum community reveal that accessibility to health infrastructure depends primarily on many factors such as the distance of the health facility, type of family, income of the family and peer pressure, etc. Besides, literature also shows that unhealthy conditions of slums and other urban poor settlements along with lack of services and lack of accessibility to the health facility make the urban poor vulnerable to health-related risks. The National Family Health Survey (NFHS) segregated data from round 3 also envisaged the same characteristics. It is also evident that socio-economic condition and lifestyle also plays a crucial role in determining health-seeking practices and barriers related to poor utilization of health services. In this scenario, when India is going through a tough pandemic time, the accessibility to the health facility in cities by the slum dwellers and migrant workers is questionable. Keeping the above rationale in view, this paper tries to attempt the health-related practices of the slum community with respect to communicable and non-communicable diseases before the post-COVID-19 situation.

Health related practices among the slum community or migrant workers

Convenience to health facilities and service professional is a key parameter to improve the health system of any country. However, due to the nomadic nature of the migrant population they behave differently for seeking health services. In a study conducted among the indigenous migrant community of Indian eastern city shows that visit of any health worker to their houses is very rare. However, for seeking curative treatment services, they are primarily dependent on private service providers which includes unqualified local practitioners and incur a major proportion of their income (Bonthaet. *al.*, 2010).

18 % of the global population resides in our country. And, numerous of the State's population is equal to the total population of some countries. However, the lack of information on morbidity creates a barrier to strengthen the health system over time. In the lack of plenty of literature on morbidity and health-seeking practice in Raipur as well as Chhattisgarh state, one of the studies found that morbidity is linked with the progression of age and prevailed among the females as well as those belonging to the slums. The study also highlights the use of private health care facilities more as contrasted to the government health facility (Naushad *et al.*, 2016). In another study conducted at Bhilai and Durg city of Chhattisgarh, the author reported that Blood pressure and Diabetes are more prevalent in the slums. Besides, safe potable water and cleanliness are found to be linked with diseases like diarrhoea, typhoid, hepatitis, leprosy, and filariasis in the city of Durg and Bhilai. The study concludes that in slums of two cities, communities are more dependent on the public health care facilities (Waghelaet. *al.*, 2018). Hence, we can say that the behaviour changed from city to city and depends on many factors which need to be researched. It has been revealed that accessibility of the health facilities is mainly dependent on inexpensiveness, hospital infrastructure, the closeness of health facility and health facilities which are fully equipped with all services, good behaviours of doctors, and superiority of services (Sodaniet *al.*, 2010). In research conducted among rural Gujarat, it was also found that poor people incurred more amount of their income expenditure on health compared to their annual income

(Ratnawali, 2012). What does it mean? If any of the migrant laborer or slum dwellers do not have money with them, they cannot go to any health institutions for seeking treatment. Raipur with 282 notified slums is encompassing 60 % of the slum community and these notified slums are not uniform in nature. Some of the health centers are nearer to the slum whereas some are distant. Hence, it is necessary to understand the behaviour of them, so that the National Urban Health Mission (NUHM) framework can be strengthened from their demand. It is worthwhile to note that Chhattisgarh is the first state in the country to execute the concept of urban sub-health center i.e., Swasthya Suvidha Kendra, in a locality of 5000 slum population.

Methodology

Due to lack of sufficient literature on the convenience of health infrastructure in the Chhattisgarh state, the current study is executed in Raipur city which has encompassed the maximum percentage of slum population in the state. Hence, to address the research question, a primary research study encompassing cross-sectional in nature and explorative cum descriptive study design is administered in selected four slums from Raipur city from June to August 2019 i.e., before the COVID-19 scenario. The selection of the slums is made based on the distance of the health facility and represented one from each direction, i.e. north, South, East, and West. Assuming the accessibility to health facilities as 50 % by the slum dwellers, a sample size of 427 is calculated by using the formulae $n = 1.96^2 * pq / (d^2) * (1 - NR)$. The name of the four slums is Changora Bhata (99 samples), Sakti Nagar (99 Samples), Purena (125 samples) and Mahaymaya Para (99 samples). 5 incompleting households are dropped in the analysis, hence 422 is the final sample size. To select the slums, a list of slums available with the city program management unit of NUHM is considered, and with 150-200 number of households artificial clusters are formed. Followed to this, from each slum, one cluster is selected randomly to collect the data. The selection of households is done by a random sampling method. A pre-designed and tested schedule is used to gather the information through a household survey. As ethics, informed consent is taken from the adult resident of each of the households and are informed regarding the aim of the study. The persons willing to enroll

as a respondent is interviewed with the schedule. The study variables used in the study to understand the morbidity pattern are respondents' views who are diagnosed within the last six months before the survey. For the health-seeking behaviour of the community, health facility preference for self and family members along with satisfaction and dissatisfaction is enquired. The data are entered in the CS pro and analysis is carried out in SPSS 21.0 version.

Key Findings

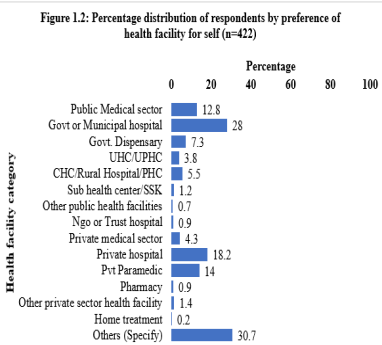
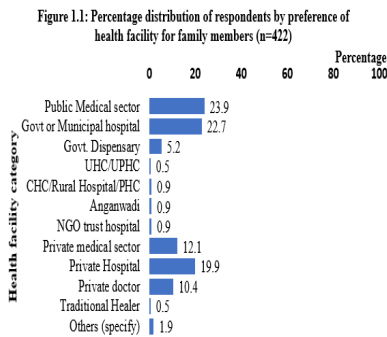
Socio-Economic Profile

The three fifths (59.2 %) of the participants of the current study fit in the age-group of 30-50 years, and 70.9 % are females. 84.6 % are reported to be currently married which means husband of them are living with them. 32 % of the respondents are illiterate, followed by 24.2 % have educated up-to primary class, and most preferably living in a nuclear family (57.1 %). Among the respondents, 56.6 % believe that their household is located nearby the government health facility whereas 43.4 % believe that health facility is away from their locality. 61.4 % of the respondents are working and the majority belongs to the private sector.

Opinion on Health Seeking Behaviour for seeking “treatment of family members” and “for self”

Many factors decide the preference of health facility for availing advice and treatment for any illness and it varies from individuals and family members during certain situations(Barik and Thorat, 2015). To understand the behaviour, the question of preference on health facility is asked to the respondents for self and or family members treatment. **Figure 1.1** depicts that 23.9 % goes to the public medical sector followed by 22.7 % to government facilities. It is also reported that around 5.2 % goes to government dispensary and 0.5 % to urban primary health centers. As compared to the government sector, the data also shows that 12.1 % prefer to go to the private sector followed by 19.9 % to private hospitals and 10.4 % to private doctors. Compared to this, **Figure 1.2** shows that for self-treatment, 28 % of respondents prefer government health facility and 18.2 % prefer private hospitals. For self-treatment, the private medical sector

means big hospitals are less preferred by the respondents.



To understand the accessibility of health facilities by combining these facilities into three key categories i.e. government, private and home, and distance of the slum locality, it is seen that for family members treatment preference is given to government facilities by whose house is at distance place. Private institutions are preferred by the households who stay near the health facility. For self-treatment, the same trend is seen as family members. The chi-square association is tested to understand the association between the distance and preferred institutions which is estimated to be statistically significant at $p=.030$, which is less than the alpha level of .05 (**Table 1.1**).

Table 1.1: Location of health facility wise percentage distribution of respondents' opinions by the preference of health facility by treatment for family members and self.

Opinion on the preference of facilities	The location from the selected health-facility, n (%)			Chi-square value	p-value
	Away from the slum	Total			
Near the slum					

For Family Members	Gov- ernment health facility	122 (51.0)	107 (58.5)	229(54.3)	4.757	.093
	Private health facility	110 (46.0)	75 (41.0)	185(43.8)		
	Home treatment	7 (2.9)	1 (.5)	8(1.9)		
**For self	Gov- ernment health Facility	130(54.4)	120(65.6)	250(59.2)	7.030	.030
	Private health Facility	106(44.4)	63(34.4)	169(40.0)		
	Home treatment	3(1.3)	0(0.0)	3(0.7)		
	Total	239 (56.6)	183 (43.4)	422(100.0)		

*** $p < 0.001$, ** $p < 0.05$, * $p < 0.10$

Reasons on Satisfaction and Dissatisfaction of participants

Accessibility is dependent on various factors and the negative factors must be bridged to ensure utilization of the health facilities. As evident from Table 1.1, it is seen that for both categories, respondents are preferring government health facilities, and some are not. Among those who are not preferring the earlier, 14.0 % do not prefer due to lack of time, followed by 11.4 % as the distance of the health facility is farther. 10.9 % says that government doctors prescribed a high value of medicines and 8.3 % as less quality of services and non-availability of medicines (4.7 %). As compared to this, the reasons for preferring government health facilities are 26.3 % participants felt the distance of the health facility is less, 12.3 % of the participants opined that it requires more time to get the treatment, 8.5 percent believed that good quality of care is given followed by easy and convenient transport facility is available and 6.9 percent prefer due to the

availability of drugs. Comparing these two dimensions of quality, it shows that distance of the health facility and type of disease may be a concern for the slum dwellers as well as the migrant community. To understand this, the paper tries to attempt the existing morbidity pattern in the studied slums.

Morbidity Pattern in the studied slums

The study found different health-seeking behaviour within the slum aboutthe general, communicable, and non-communicable diseases. It is seen that 64.2 % of the household members are suffering from some disease within the last six months. Among them, 33.6 % of the respondents are affecting by general illnesses like “fever”, “cough”, “general headache” etc. trailed by Tuberculosis (14.8 %) and Hypertension (13.3 %). The percentage of diabetes patients is reported at 5.2 % of households. Many other diseases such as headache, jaundice, eye pain, etc. percentage are reported to be one fourth (24.0 %).The distribution of diseases by location of the health facility illustrates that general illness (37.7 %) is more seen in the slums from where health facilities are away. The trend is same for other diseases like tuberculosis (21.7 %), accidental injury (7.5 %), Measles (0.9 %), Whooping cough (0.9 %), Malaria (0.9 %), Typhoid (0.9 %) and other disease (15.1 %). However, hypertension (15.8 %) and Diabetes (6.1 %) i.e. non-communicable diseases, are reported to be more in the slums which are nearer to the health facilities. The association between diseases and location of the slums from the health facility for curative care behaviour is reported to be statistically significant with the chi-square value is $\chi^2 = 22.277(p=.022)$ which is less than the alpha value of .05 (**Table 1.2**). However, the reasons need to be re-searched on why the diseases are more in the slums nearer to the health facility.

Table 1.2:Percentage distribution of respondents opinion by type of disease and location of health facility in the selected slums

Type of dis- ease**	location of the Health facility n (%)		Total
	Near the slums	Away from the slums	
General illness	51 (30.9)	40 (37.7)	91 (33.6)

Type of disease**	location of the Health facility n (%)		Total
	Near the slums	Away from the slums	
Hypertension	26 (15.8)	10 (9.4)	36 (13.3)
Diabetes	10 (6.1)	4 (3.8)	14 (5.2)
Accidental injury	7 (4.2)	8 (7.5)	15 (5.5)
Body pain	1(0.6)	1(0.9)	2 (0.7)
Tuberculosis	17 (10.3)	23 (21.7)	40 (14.8)
Measles	2 (1.2)	1 (0.9)	3 (1.1)
Whooping cough	0 (0.0)	1 (0.9)	1(0.4)
Malaria	0 (0.0)	1 (0.9)	1(0.4)
Typhoid	0 (0.0)	1 (0.9)	1(0.4)
Gonorrhea	2 (1.2)	0 (0.0)	2(0.7)
Other diseases	49 (29.7)	16 (15.1)	65 (24.0)
Total	165 (60.9)	106 (39.1)	271(100.0)
Pearson Chi-Square value is $\chi^2 = 22.277$ (p=.022), P < 0.05			

***p<0.001, **p<0.05, *p<0.10

Discussion

The current findings show that participants are suffering from general illness (33.6%), followed by tuberculosis (14.8 %), Hypertension (13.3 %), accidental injury (5.5 %), diabetes (5.2 %), etc. and diseases such as headache, jaundice, eye pain, etc. percentage are reported to be around one fourth (24.0%).A report on Chhattisgarh disease burden of profile (1990-2016) reflects that non-communicable disease burden in the state is around 50.4 % followed by 11.9 % from injuries. “Communicable, maternal, neonatal, and nutritional diseases” (CMMND) for the state was reported to be 37.7 % (ICMR, 2017).The study findings say that in-spite of preferring government health facilities, slum dwellers are also going to private health service providers especially those who are easily accessible due to less distance. The same kind of pattern is evident in

slum areas of Bhilai and Durg city of Chhattisgarh where society prefers government health facilities. The importance of the use of public health facilities with better quality of care is recommended by a research study to ensure easy accessibility for communicable and non-communicable diseases (Waghela *et al.*, 2018, Velhal and Durgawale, 2015). However, a study in Bangladesh reflects the same that the slum dwellers seek good treatment to avoid time off work (Heijden *et al.*, 2019). This may be one of the reasons why the slum dwellers are preferring services from the private clinic and private paramedical staff. But this practice has been reported a negative impact on the health results (Jahan *et al.*, 2016, Kanungo, *et al.*, 2015). A study from Ethiopia (Mebratie, 2014), Agra (Jain *et al.*, 2006), and Hyderabad (Thomas *et al.*, 2012) also reflect the same result.

Census 2011 shows highlights that the total number of internal migrants is 45.36 crore (37% of the total population) and increased to 50 crores in 2016 as per the economic survey in our country. In the lack of migration information, and based on estimation on the census, NSSO and economic survey data, it shows that 65 million are inter-state migrants and among them 33 % are migrant workers. These migrants workers have settled themselves in notified and non-notified slums of different cities. Estimated calculation shows that among 33 % of migrant workers, 30 % are casual workers and 35 percent are working on the informal sector regularly (Singh, 2020). Another study conducted by Azim Premji University shows that 29 percent of the migrant populations are daily wage labourer. The migrant labourers are dominated by Uttar Pradesh (25 %) and Bihar (24%), Rajasthan (6%) and Madhya Pradesh (4%). The earnings of these labourers range from up-to 2000 (22 %) to Rs. 20000 (8%) monthly (Singh, 2020) and is evident the uses of private service provider by them is opted as a second option as the findings of this study.

To date Chhattisgarh state has 128 confirmed cases on 22nd May 2020, the recovery rate of the patients is 46.09 with no casualty. Although the total migration percentage has been reduced as compared to Census 2001 in the country, the inter migrant has been found to increase i.e., within districts of the same state. It means migrants workers are making more earning opportunities near

their own homes. Data also shows that maximum migration occurs due to work or business purposes, followed by education, marriage, after birth, or with household and others. Keeping this scenario now migrant labourers are returning to their districts and states with more vulnerability of asymptomatic cases of COVID-19 and majority of them are not interested to return (The Hindu, 2020). Hence, in the scenario of reverse migration, now questions come that with previous disease history, if some migrant population moves to rural part where they would approach first for seeking treatment. Most of the COVID testing centers are constituted at the district level and symptoms among them may appear after a month. This current study also finds that most of the slum dwellers are not seeking treatment on the same day and prefer delayed treatment due to many reasons. In the time of COVID-19, currently when our health system is not prepared completely to address the treatment for comorbidity and COVID-19 push these populations to more vulnerability. The earning of these migrant workers is no more with them and majority of them have lost jobs and earnings. Given this crucial condition, it is a big question whether the slum dwellers and migrant labourers will prefer government or private health service providers as they did earlier.

Conclusion and Suggestion

The dependency on seeking treatment from local service providers to manage the loss of wage by the slum community is not new and reveals in the current study too. This behaviour is seen irrespective of the low-socio-economic profile. It has been also seen that the community is aware of the existing health care system available at the local level and preferred them for getting treatment, although many services are found free of cost at the government facilities. The state of Chhattisgarh has initiated an urban health center as an innovation in 2013 which aimed to reduce the morbidity of the slums but it seems that due to lack of facilities in those health care facilities slum dwellers are approaching the private health care facilities and practitioners. It means the government has to think to equip these primary health care facilities with good quality of services along with facilities for tests, availability of drugs for treating an ailment, and availability of health care providers in those facilities. Second, now when the

migrant workers are returned to the home, they may approach the government health system but in rural parts the systems are not so well developed in terms of quality and demand of the community. This means as per the present study findings the earlier pattern of preference of government health facility for seeking treatment will be continue and health system should prepare themselves. No doubt, both the community and government need to work with each other by generating demand and bridging it with quality services. It is a big challenge and community health workers can perform a key role in lowering the co-morbidity due to COVID-19 and other diseases. Hence, at the local level capacity of the community health worker on contact tracing and counseling and referral pattern need to be strengthened by the government.

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