Factors affecting health care facility utilization in rural areas of Lucknow district

Vinita Shukla1*, Pratibha Gupta2

Department of Community Medicine, 1Career Institute of Medical Sciences and Hospital, 2Era’s Medical College and Hospital, Era University, Lucknow, Uttar Pradesh, India

Received: 05 March 2018
Revised: 21 March 2018
Accepted: 24 March 2018

*Correspondence:
Dr. Pratibha Gupta,
E-mail: pratibha2477@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Population is increasing rapidly so with the limited resources government alone cannot cater the health of whole population. Private health sector is equally important for the improvement of health of the people. In view of these facts the present study was planned to assess the utilization of health care services (both public and private) and to assess the reasons for visiting that particular health facility (public or private).

Methods: Study was cross sectional for 1 year period. Total sample size was 1024. In the present study only rural area was taken. By using multistage stratified random sampling 6 villages were selected and sample came out as 516. Data was analyzed by stata software version -12 for windows and chi square test.

Results: 50% respondents visited public, 38% private and 10% visited others (charitable, pharmacies etc.). 62% respondents belonged to lower socio economic status preferred public health care facility. The main reason for visiting public health facility was free services and for private was got cure earlier from that heath facility. Majority of people visited any health facility for illness. (344 out of 516) and 50% of them visited for respiratory diseases. For chronic illness majority (60%) preferred public health care facility.

Conclusions: Both public and private health care facilities should be made well equipped and affordable so that people can make choices and not forced to choose particular health facility.

Keywords: Utilization, Public, Private, Partnership, Chronic

INTRODUCTION

India is a developing country with a Gross Domestic Product (GDP) of 7.35%.1 Growth of any country directly reflect the wellbeing of its citizens e.g. health. Health is the fundamental human right. Government has been providing health care services and introducing various health programmes and schemes time to time to take good care of their citizens. In spite of economic growth and demographic transition, the Indian healthcare system is burdened by a rise in infectious and chronic degenerative diseases.2 Infectious, contagious and waterborne diseases such as dengue fever, diarrhoea, typhoid, viral hepatitis, measles, malaria, tuberculosis, whooping cough and pneumonia are major contributors to disease, especially among poor and rural Indians.3 Communicable diseases once thought to be under control (e.g. dengue fever, viral hepatitis, tuberculosis, malaria, and pneumonia) are still in existence in India, having reappeared with high levels of drug resistance, to the disadvantage of the poor. Since the population is increasing rapidly (it is 1.34 billion, with male population of 69.2 crore and female 65.2 crore) and 25% of rural and 14% urban population is living below the poverty line,4,5 With the limited resources government alone cannot cater
the whole population. The supply and demand cannot be met by the efforts of the government alone. Private health sector is equally important for the improvement of health of the people. A mix of health care delivery systems is needed like public, private and other (charitable etc.) and it exist since long back. 70% of the people live in the rural area (census 2011) but 80% of the health facilities, both in public and private are concentrated in urban area and are widely utilized by urban community. Private health sector has been expanding rapidly in the urban area but to a limited extent in rural area.

In view of these facts the present study was planned with the following objectives:

1. To assess the utilization of health care services both public and private.
2. To assess relationship of various socio demographic factors affecting utilization of health services.
3. To assess the reasons for visiting that particular health facility, public or private.

METHODS

Study design and study period

Study was cross sectional for a period of one year (August 2011 to July 2012).

Study area

Sample was drawn from rural and urban population of Lucknow district.

Study unit

All persons including children who have visited any health facility for any reason (maternal care, child immunization, family planning and treatment of illnesses) within last 3 months.

Sample size

Sample was calculated taking the utilization of Govt health facility <20% (National Population Policy 2002). By using the formula 4PQ/n² (P≤20%, Q=1-P and 5% absolute error). It has come as 256 and by applying design effect sample came as 256x2=512 (for each rural and urban). The final sample became 1024 (512+512).

Sampling technique

In urban area first two wards Cis Gomti and Trans Gomti were taken. Then from each one slum and one non slum area were selected randomly. For convenience Dalibagh (slum) and Hazratganj (non slum) in Cis Gomti area and Badshahkhera (slum) and Daliganj (non slum) in trans gomti area were selected.126 respondents were taken from each slum and non slum area.

In Rural Area first 3 PHCs Kakori, Mohanlalganj and Nadarganj were selected randomly then 1sub centre (Madhopur, Mohanlalganj and Chillava) from each PHC was selected as per convenience. Two villages from each sub centre were selected (Bigaria, Mallapur, Dhanwra, Chillava and Behesa) and after rounding off 86 respondents from each village were interviewed. In this way the sample size for rural area became 516 instead of 512. So in this way by using multistage stratified random sampling 6 villages were randomly selected with 86 respondents from each village.

Data analysis

Data was analysed using the stata software version – 12 for windows, for relationship with health care facility utilization and demographic factors chi square test was used.

RESULTS

The respondents who visited public or private health care facility are included in the present discussion and so 467 out of 516 were taken into consideration.

In the present study the majority 90% of respondents were married, 82% were females, 76% belonged to 20-40 yrs of age group. Most of the respondents were Hindus belonging to backward class (90%). About 48% were illiterate, 61% were unemployed and majority 65% belonged to lower socio economic status.

In this study out of 516 rural respondents about 50% visited public health facility, 38% private and about 10% visited other than these two like charitable hospitals and clinics as shown in Figure 1. 467 respondents either visited public or private health care facility. No association was found between the type of health facility visited with age, sex, marital status, religion, literacy and type of family. Majority about 70% of general cast and scheduled caste Hindus preferred public health facility. Majority 73% of unemployed respondents visited public health facility.
Table 1: Distribution of the population according to socio-demographic characteristics.

| Socio-demographic characteristics | Rural Public (n=267) | Private (n=200) | Total (n=467) | P value |
|-----------------------------------|---------------------|----------------|---------------|---------|
|                                   | No. (%)             | No. (%)        | n (%)         |         |
| **Age**                           |                     |                |               |         |
| <20                               | 10 (41.67) (3.75)   | 14 (58.33) (7) | 24 (5.1)      |         |
| 20-40                             | 213 (59.33) (79.78) | 146 (40.67) (73)| 359 (76.87)   | 0.148   |
| >40                               | 44 (52.38) (16.48)  | 40 (47.62) (20)| 84 (17.99)    |         |
| **Sex**                           |                     |                |               |         |
| Male                              | 45 (54.22) (16.85)  | 38 (45.78) (19)| 83 (17.77)    | 0.548   |
| Female                            | 222 (57.81) (83.15) | 162 (42.19) (81)| 384 (82.23)   |         |
| **Marital status**                |                     |                |               |         |
| Married                           | 243 (57.58) (91.01)| 179 (42.42) (89.5)| 422 (40.36)   | 0.829   |
| Unmarried                         | 6 (50.3) (2.25)     | 6 (50) (3)     | 12 (2.57)     |         |
| Other                             | 18 (54.55) (6.74)   | 200 (46.45) (7.5)| 33 (7.07)     |         |
| **Religion**                      |                     |                |               |         |
| Hindu                             | 217 (56.66) (81.27)| 166 (43.34) (83)| 383 (82.01)   | 0.631   |
| Muslim                            | 50 (59.52) (18.73)  | 34 (40.48) (17)| 84 (17.99)    |         |
| Other                             | 0 (0)               | 0 (0)          | 0 (0.00)      |         |
| **Caste (Hindu)**                 |                     |                |               |         |
| General                           | 53 (72.6) (24.42)   | 20 (27.4) (12.05)| 73 (19.06)    | 0.00*   |
| OBC                               | 115 (48.32) (53)    | 123 (51.68) (74.1)| 238 (62.14)   |         |
| SC                                | 49 (68.22) (58.5)   | 23 (31.94) (13.86)| 72 (18.8)     |         |
| **Family type**                   |                     |                |               |         |
| Nuclear                           | 134 (56.54) (50.19)| 103 (43.46) (51.5)| 237 (50.75)   | 0.779   |
| Joint                             | 133 (57.83) (49.81)| 97 (42.17) (48.5)| 230 (49.25)   |         |
| **Education**                     |                     |                |               |         |
| Illiterate                        | 117 (52) (43.82)    | 108 (48) (54)  | 225 (48.18)   | 0.063   |
| Literate                          | 150 (61.99) (56.18)| 92 (38.01) (46)| 242 (51.82)   |         |
| Primary /just literate            | 31 (70.45) (11.61)  | 13 (29.55) (6.5)| 44 (9.42)     | -       |
| Middle                            | 51 (62.46) (19.1)   | 30 (32.04) (15)| 81 (17.34)    | -       |
| High school                       | 27 (60) (10.11)     | 18 (40.9)      | 45 (9.64)     | -       |
| Intermediate                      | 17 (45.95) (6.37)   | 20 (54.05) (10)| 37 (7.92)     | -       |
| Graduate                          | 21 (65.63) (7.87)   | 11 (34.38) (5.5)| 32 (6.85)     | -       |
| Professional degree               | 3 (100) (1.12)      | 0 (0)          | 3 (0.64)      | -       |
| **Occupation**                    |                     |                |               |         |
| Employed                          | 70 (56) (26.21)     | 55 (44) (27.5)| 125 (26.77)   | 0.001*  |
| Unemployed                        | 197 (73.78) (57.6)  | 145 (72.5) (42.4)| 342 (73.23)   |         |
| **Socioeconomic status**          |                     |                |               |         |
| Upper                             | 13 (76.47) (4.57)   | 4 (23.53) (2)  | 17 (3.64)     | -       |
| Middle                            | 63 (44.37) (23.6)   | 79 (55.63) (39.5)| 142 (30.41)   |         |
| Lower                             | 191 (62.01) (71.53)| 117 (37.99) (58.5)| 308 (65.95)   | 0.001*  |

*Multiple Response (%) values within parenthesis are column percentage; p<0.05=Consider significant.

Table 2: Association of type of disease amongst population and type of health facility visited.

| Diseases/ illness         | Rural Public (n=154) | Private (n=190) | Total (n=344) | P value |
|---------------------------|----------------------|----------------|---------------|---------|
|                           | No. (%)              | No. (%)        | No. (%)       |         |
| **Nature of illness**     |                      |                |               |         |
| Tuberculosis              | 1 (25)               | 3 (75)         | 4 (4)         | 0.421   |
| Malaria                   | 2 (66.67)            | 1 (33.33)      | 3 (3)         | 0.446   |
| Leprosy                   | 2 (100)              | 0 (0)          | 2 (2)         | 0.116   |
| Filaria                   | 5 (100)              | 0 (0)          | 5 (5)         | 0.5     |
| Reproductive tract infection | 1 (12.5)           | 7 (87.5)       | 8 (8)         | 0.062   |

Continued.
Diseases/ illness | Rural (n=154) | Private (n=190) | Total (n=344) | P value
--- | --- | --- | --- | ---
Respiratory tract infection | 68 | 38.42 | 109 | 61.58 | 177 | 0.011*
Diarrhoea | 4 | 18.18 | 18 | 81.82 | 22 | 0.009*
Acid peptic disease | 11 | 78.57 | 3 | 21.43 | 14 | 0.010*
Diabetes | 4 | 100 | 0 | 0 | 4 | 0.026*
Cardio-vascular disease | 9 | 69.23 | 4 | 30.77 | 13 | 0.072
Emergency care | 11 | 42.31 | 15 | 57.69 | 26 | 7.83
Cancer | 0 | 0 | 0 | 0 | 0 | 0
Other | 41 | 62.12 | 25 | 37.88 | 66 | 0.002*

| Disease | Rural (n=154) | Private (n=190) | Total (n=344) | P value
--- | --- | --- | --- | ---
Respiratory tract infection | 68 | 38.42 | 109 | 61.58 | 177 | 0.011*
Diarrhoea | 4 | 18.18 | 18 | 81.82 | 22 | 0.009*
Acid peptic disease | 11 | 78.57 | 3 | 21.43 | 14 | 0.010*
Diabetes | 4 | 100 | 0 | 0 | 4 | 0.026*
Cardio-vascular disease | 9 | 69.23 | 4 | 30.77 | 13 | 0.072
Emergency care | 11 | 42.31 | 15 | 57.69 | 26 | 7.83
Cancer | 0 | 0 | 0 | 0 | 0 | 0
Other | 41 | 62.12 | 25 | 37.88 | 66 | 0.002*

| Reason | Rural (n=467) | Private (n=200) | Total (n=467) | P value
--- | --- | --- | --- | ---
Got cure earlier | 53 | 19.85 | 120 | 60 | 173 (37.04) | 0.000*
Nearer to House | 126 | 47.19 | 119 | 59.5 | 245 (52.46) | 0.009*
Doctor listens patiently | 6 | 2.24 | 15 | 7.5 | 21 (4.5) | 0.011*
Waiting time less | 2 | 0.75 | 5 | 2.5 | 7 (1.5) | 0.144
Gets medicine from doctor | 5 | 1.87 | 5 | 2.5 | 10 (2.14) | 0.751
Known doctor | 37 | 13.86 | 22 | 11 | 59 (12.63) | 0.4
Free service / Fees less | 173 | 64.79 | 12 | 6 | 185 (39.61) | 0.000*
Heard from others that centre is good | 11 | 4.12 | 1 | 0.5 | 12 (2.57) | 0.016*
Behaviour is good (Doctor and staff) | 25 | 9.26 | 5 | 2.5 | 30 (6.42) | 0.004*
Minor Illness | 2 | 0.75 | 4 | 2 | 6 (1.28) | 0.409
Specialists are there | 18 | 6.74 | 5 | 2.5 | 23 (4.9) | 0.050*
Facilities available | 44 | 16.48 | 6 | 3 | 50 (10.71) | 0.000*
Doctor is competent | 31 | 11.61 | 9 | 4.5 | 40 (8.57) | 0.007*
Baby was delivered there | 3 | 1.12 | 4 | 2 | 7 (1.5) | 0.468
Others | 7 | 2.65 | 9 | 4.5 | 16 (3.43) | 0.312

Multiple response (%) values within parenthesis are column percentage; *p<0.05= Consider significant.

Majority (62.01% i.e. 191 out of 308) of people belonging to lower socioeconomic status visited the public health facility as shown in Table 1. The main reasons for visiting public health facility were the free services (64%), nearer to house (48%), got cure earlier, facilities for investigation and procedure were there in public health facility and competency of doctor. Those who visited the private health facility the main reasons (by >60%) were the got cure earlier and nearer to house as shown in Table 3.

Out of 516,344 visited the health facility for illnesses/diseases and rest of them for maternal services (like ANC, PNC), immunization and family planning services. 50% of 344 visited public health facility for respiratory illnesses. 60% of 344 visited public health care facility for chronic illnesses as shown in Table 2.

**DISCUSSION**

In the present study out of 516 respondents about 50% visited public health facility, 38% private and about 10% visited other than these two like charitable hospitals and pharmacies. This was similar to a study by Chauhan where 56.4% have visited public, 34.4% private and 11.6% other and was in contrast with the findings of Arya where 11% visited public health facility, 67% private and 22% visited charitable heath facility.8,9

No association was found between the type of health facility visited and age, sex, marital status, religion,
literacy and type of family. Similar findings were also
found in a study by Chauhan. In a study by Rai et al,
Muslims utilized more public health care facility. In
contrast to this literacy had a positive impact on public
health facility utilization in the study by Purohit et al, Rai
et al and the study by Malhotra et al. Majority (72.60%) of
general cast and scheduled caste Hindus preferred public health facility. In contrast to this study, SC/ST had limited access to public health facility utilization in study by Purohit. This may be because of poor paying capacity of the respective social groups. In contrast to this in a study by Rai et al upper caste preferred private health facility.

Majority (73.78% i.e. 197 out of 342) of unemployed visited public health facility. Majority (62.01% i.e. 191 out of 308) of people belonging to lower socioeconomic status visited the public health facility similar to a study by Purohit. Majority (73.78% i.e. 197 out of 342) of unemployed visited public health facility. Unemployment and lower socioeconomic status indicate the poor paying capacity of people. Because of this, in this study, this free services came out as the main (by 64%) reason for visiting the public health facilities. The other reasons for visiting public health facility were nearer to house (48%), got cure earlier, facilities for investigation and procedure were there in public health facility and competency of doctor. This is a positive sign for government’s effort especially of NHM programme. Similar to this a study by Patrick also found these as main reasons for visiting the public health facility like closeness, affordability, availability of facilities. Study by Chauhan et al also found free services and availability of facilities as main reasons for preferring public health services.

CONCLUSION

We have seen in this study that public health facilities are better equipped than private in rural area. Further strengthening and capacity building of public health facility should be done regularly. Young doctors should be motivated to work in the rural area for some time to serve the people. Further public private health facility partnership should be encouraged in the form of insurance policy so that people can choose the particular (public or private) health facility rather than forced to do because of lack of money.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Statista accounts: Real GDP rate from 2012 to 2022 (compared to previous year). Available at: https://www.statista.com/statistics. Accessed on 2 February 2018.
2. De Costa A, Diwan V. Where is the public health sector? Public and Private sector healthcare provision in Madhya Pradesh, India. Health Policy. 2007;84:269–76.
3. Duggal R. Poverty and health: criticality of public financing. Indian J Med Res. 2007;126:309-17.
4. Real time statistics for current population of any country based on latest UN data. Available at: countrymet.info. Accessed on 2 February 2018.
5. Press note on Poverty Estimate 2011-2012, Govt of India. Available at: planningcommissionnic.in/news/pre-pov2307.Pdf. Accessed on 2 February 2018.
6. Rural urban distribution of population in India. Available at: http://censusindia.gov.in/2011-prov-results/paper2/data_files/india/Rural_Urban_2011.pdf. Accessed on 2 February 2018.
7. Ahmed SM, Adams AM, Chaudhary M, Bhuia A. Changing health seeking behavior in Matlab, Bangladesh: do development intervention matters? Health Policy Planning. 2003;18(3):306-15.
8. Chauhan RC, Manikandan, Purty AJ, Samuel A, Singh Z. Determinants of health care seeking behavior among rural population of a coastal area in South India. Int J Sci Rep. 2015;1(2):118-22.
9. Arya SB. A Comparative Study of public and private health services in Mumbai Region Availability and Utilization pattern, 2012. Available at: http://shodhganga.inflibnet.ac.in/bitstream/10603/7213/1/14_synopsis.pdf. Accessed on 2 February 2018.
10. Rai PK, Nathawat MS. Utilization_of_Health_Care_Services_in.Varanasi_District_A_Geographical_Analysis. Available at: https://www.researchgate.net/publication/262886905. Accessed on 2 February 2018.
11. Brijesh C Purohit. Demand for Health Care in India 07 march 2013. Available at: www.Pagepress journals.org/index.php/his/article/view/his.2013.e7. Accessed on 2 February 2018.
12. Malhotra C, Do YK. Socio economic disparities in Health System Responsiveness in India 2013. Available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3584994. Accessed on 2 February 2018.
13. Patrick M. Public and Private Health Care Institution. Preference and Expenditure 2017. Available at: www.cppr.in/upload/2017/06. Accessed on 2 February 2018.