SOUTH ASIAN JOURNAL OF SOCIAL SCIENCES & HUMANITIES

ISSN: 2582-7065 (Online) SAJSSH, VOL 2, ISSUE 5, PP. 01-19

Challenges Faced by B.P.L. Population in Availing Public Healthcare – Analysing Government Initiatives, Technology and Cultural Barriers in Aligarh District, U.P

Fahad Afzal[1], P.S. Raychaudhuri[2*], Mohd Atif Afzal[3] & Afaq Amir Ahmad[4]

[1]Research Scholar, Indian Institute of Health Management Research (IIHMR), Jaipur, Rajasthan, 302029, India.
ORCID: 0000-0001-8213-2119
[2]Assist. Professor, Department of Health and Pharmaceutical Management, School Management and Business Studies, Jamia Hamdard, New Delhi, 110062, India.
[3]Researcher, Department of Commerce, Aligarh Muslim University, Aligarh, 202001, India
ORCID: 0000-0001-8308-4622
[4]Surveillance Medical Officer, National Public Health Surveillance Project, WHO Country Office, Sasaram, Bihar, 821115, India
ORCID: 0000-0001-6029-6497

Corresponding Author: Dr. P.S. Raychaudhuri, **Email:** psray61@rediffmail.com

Received: 13th June 2021 **Accepted:** 8th August 2021 **Published:** 4th October 2021

ABSTRACT

Public healthcare and government health initiative have always been in question regarding their availability, efficiency, and quality. This matter most for the poor section of society who have to go through various hurdles to avail the basic treatment, besides financial problems. The aim of this survey study was to analyze the present scenario of public healthcare system and the challenges in availing public healthcare faced by BPL (Below Poverty Line) and low-income population of Uttar Pradesh. A cross-sectional survey (direct interview) of 104 respondents was conducted in March 2021. Thematic analysis of generated qualitative data was done using ATLAS.ti (version 9.0.15). The quantitative data was analyzed by using SPSS (version 22.0.0.0). The respondents were from 2 rural areas near the Aligarh district in UP. The secondary data from published research articles and government sources were also analyzed. Analysis of data revealed there are various challenges faced by low-income population while availing public healthcare services. The nature of challenges has a considerable variation, from lack of information to documents' unavailability, from technical issues in government schemes to cultural pressure. Data analysis revealed, the majority of respondents (59%) faced one or more types of challenges during treatment from public health facilities. Awareness level is identified as a significant problem among respondents. Analysis of secondary data and literature review revealed uneven resource allocation and discrepancies in government initiatives toward UHC (Universal Health Coverage). Results indicated the contrasting nature of healthcare in Uttar Pradesh. Data analysis revealed the disparity of 'average OOP travelling expenditure' for male and female. The correlation analysis revealed that there is negative correlation ($y = -0.1377x + 11.119$) of 'age of respondent' and 'average satisfaction from public health service' ($r = -0.911$; $R^2 = 0.8301$). This research article provides the evidence that there exists a communication gap between policymakers and end-users (BPL & low-income section). This article underscored some technical flaw in the UHC policies that act as a barrier for low

DOI: 10.48165/sajssh.2021.2501

socio economic and BPL population. This article suggests strategies to control various identified challenges.

KEYWORDS

Public Health, Challenges, BPL, Poverty, Universal Health Coverage, Uttar Pradesh, Low Income

INTRODUCTION

A significant portion of the Indian population is still living under the poverty line, and these low-income sections are most deprived of health facilities. The public healthcare and government health initiatives have always been in question regarding its availability, efficiency and quality. If low-income section opts for private sector healthcare as a dire case alternative, it leads to substantial out-of-pocket expenses (OOPE) and catastrophic health expenditure. One of the reasons behind is various challenges they face that act as hurdles for a successful medical treatment. In India approximately 103 million people are living under "extreme poverty" condition, which makes 7% of country's entire population (World Poverty Clock, 7th February 2021). The target set by Government of India (GoI) is reducing poverty incidence to 10.95%, but the SDG index report (2019) revealed that 21.9% of the Indian population is still living under the poverty line. There have been different government initiatives in last few decades with an aim of defining poverty line, develop a poverty measurement tool, and measure the actual figures of individuals living under poverty. These initiatives are namely Lakdawala Committee, Prof. Tendulkar Committee, Rangarajan Committee, etc. Among these, Prof. Tendulkar Committee (2011) is considered most accurate, realistic and comprehensive. As per the Prof. Tendulkar Committee Report, 21.9% population of India is living under the poverty line. As per Multidimensional Poverty Index (2015) states, 27.9% of population in India is living under the poverty line. This shows there is a significant increase of 6% of BPL population. As per the report of National Institute of Transforming India (SDGs-2019), Uttar Pradesh is the most populated state of India (approximately 228 million) with dramatically high poverty rate 29.43% of total population. As per MoHFW report (2018), in UP, there is a massive burden on the healthcare sector, which is increasing with the increase of population. In a report published by the Ministry of Health & Family Welfare (MoHFW) in 2018, there are approximately 739024 beds in the public healthcare sector, which gives a ratio of 1 government bed per 1873 people. The private healthcare sector is growing at a fast pace, but it is not suitable for BPL & weaker sections. The families with medium to high income could bear the cost of private hospital but low-income and BPL section cannot. If somehow, they arrange the funds for treatment, the cost becomes "catastrophic health expenditure" in most of the cases of in-patient (IP) treatment. As per Economics Times report (2020), there is a lack of fund allocation to public healthcare in India as compared to European countries; only 1.5% of GDP is spent, whereas in European countries 7-8% of GDP is spent on healthcare sector. In India, it's causing persistent unavailability of facilities and poor infrastructure, which requires re-shaping the public healthcare. Munjan (2019) reported that there exists an understandable gap between the

DOI: 10.48165/sajssh.2021.2501

perception and expectation of weaker section of people and available healthcare infra structure for this section, which ultimately takes the form of a hurdle while availing medical service. He also stated that use contaminated drinking water, poor sanitation, bad housing conditions, presence of environmental risks and use of biomass fuels in daily life of low-economic section often results in increased prevalence of various diseases like respiratory infections, malnutrition, skin diseases. He also stated that the BPL population in urban slum areas is facing health issues due to lack of essential amenities like hygiene, garbage disposal and potable water. The problem is further worsening due existence of an unhealthy competition between private healthcare service providers, medical malpractices inflation and concealed referral of patients to private hospitals by a doctor or paramedic in return for monetary incentive, leading to increased OOP treatment cost (Jindal, 1998; Vij, 2019; Kumar, 2020). In Indian subcontinent, private healthcare providers are more inclined towards offering services to the masses with higher paying capacity with an aim of profit maximization, ultimately ignoring healthcare needs of BPL and low-income population (Baru, 2003). The reason behind could be capitalist nature of private healthcare providers and the no government control over the pricing of private healthcare service, leading to unbearable costs of acquiring service for weaker section. Some government efforts are proven to be partially fruitful; as per Rangarajan Committee Report, approximately 91 million people were lifted above the poverty line. Other initiatives such as 'Swachh Bharat Mission', which was launched in 2014, have also assisted in mitigating the overall living condition of low-income section. Dandabathula et al. (2019) reported that acute diarrheal disease has followed a declining trend due to Swatch Bharat Mission. A study revealed that the low-income groups like Schedule Tribe, Schedule Caste, Nomadic tribes, etc. are the most vulnerable and deprived of various public services, especially healthcare due to poverty and illiteracy (Barik et al., 2015). They also concluded that the utilization and access is very low in these sections of population. John et al. (2020) found that in India there is dramatic variation in public health infrastructure and spreading of infectious diseases is in non-uniform pattern (in terms of socio-economic status), in light of 2019 coronavirus outbreak; the most affected group is low-income population, such as migrant workers and laborers. Jahan (2014) stated the national and international agencies are putting pressure on low-income states (low HDI ranked states) to improve their health indicators; for that these states need huge resources that cannot be made available in the short run, as these states cannot generate extra resources. These deprived states have developed a vast physical public health infrastructure over the years, still they do not have sufficient and trained workforce to deliver efficient healthcare services and their utilization is low, because of sub-

standard quality, and on the other hand, these poor states have immense strength of private health personnel who are competent and are much in demand with the public requirements. Still, they do not come forward to join the public health sector because of lack of incentives and a clear-cut government policy. The Public-Private Partnership in the healthcare sector is increasing in last few years and have enormous potential to assuage current healthcare challenges faced by low-income and BPL section of India (Jahan, 2014). A report published by Hospaccx Healthcare (May 2019) highlighting the utilization pattern of public health services in Uttar Pradesh, revealed that public health sector needs infrastructural development, and there is a shortage of healthcare professionals. In a report published by NITI Aayog in collaboration with the World Bank and MoHFW (2019) based on Health Index (HI) value, UP is at 21 ranks among all stated, with a HI value 28.61 in 2017-18. This report also found that HI index value decreased by 5.8 from 2015-16 to 2017-18, and UP is among the "Not Improved" state category.

Integration of Technology with Public Sector Healthcare:

In the advent 20th century, various states of India realized the advantages of telemedicine in healthcare delivery, which could be achieved by state governments cooperating with the central government in establishing state-wide telemedicine networks to strengthen the healthcare facilities (Mishra et al., 2009).

As per Indian Pharmaceutical Alliance (2020), e-pharmacy and telemedicine are going to be a "new normal" for the Indian population in post COVID era. In the near future, technology will play a pivotal role and will act as a backbone of whole system of out-patient (OP) treatment in big cities. But despite some of these encouraging trends, telemedicine and e-pharmacy remain a challenge for Indian healthcare system. Some of the key challenges identified include patient data privacy concerns, trust issues, concern about substitution practices, technological illiteracy, and lack of adequate infrastructure in rural areas, tier 2 and tier 3 cities (Indian Pharmaceutical Alliance, 2020). Ever since the outbreak of the COVID-19 virus and following nationwide lockdown, India has witnessed a dramatic increase in usage of e-pharmacies, and the attitude of Indian population has shifted up to some extent (Indian Pharmaceutical Alliance, 2020). A report published by the Federation of Indian Chambers of Commerce & Industry, stated that before COVID-19 outbreak, there were 3.5 million households using e-pharmacies; this dramatically increased to 9 million by May 2020. This study also forecast that in the post-COVID era, the dependency on e-pharmacy will increase and could rise up to 70 million families by 2025.

DOI: 10.48165/sajssh.2021.2501

Cultural Barriers:

Piet-Pelon et al. (1999) reported that religion plays a vital role; females belonging to the Muslim (Islam) religion are most deprived of healthcare. Mohapatra, et al. 2002, proved the presence of cultural barriers, which restrict certain groups of the population from getting healthcare treatment. Kumar et al. (2018) found that medical mistrust, traditional believes and myths act as a barrier for seeking healthcare in rural parts and low-socioeconomic strata of India. This is corroborated by McGuinness et al. (2020). They also found that cultural barriers exist in the form of "consequences of reporting disease", such as epilepsy which is considered as social stigma. Studies have reported that gender bias is a crucial determinant; women are deprived of essential health information and holistic health services (Kaur et al., 2020). Similarly, there are variables like castes, family type social beliefs due to illiteracy, to be explored that are acting as hindrances in getting healthcare services.

RESEARCH METHODOLOGY

This research is qualitative and cross-sectional in nature, conducted between 1st March to 25th March 2021. The study is based on primary as well as secondary data. The primary data was collected by direct interview from low-income patients or their family members approaching to Community Health Centers (CHC) of Jawan and Khair regions in Aligarh district, UP. Initial contact with the respondents were made at CHC, the study method and purpose was explained to take consent. Those who gave consent were interviewed later at their residence. Total of 121 respondents were interviewed, out of which 104 were included in the study.

After identifying various variables from past researches, a questionnaire was designed that contained two parts. First part had 10 open ended questions, that generated qualitative data. The first part was focused on ten variables, namely; (i) awareness, (ii) documentation, (iii) expenditure, (iv) healthcare service quality, (v) utilization pattern of government insurance schemes, (vi) patient load at CHC hospitals, (vii) utilization pattern of AYUSH services, (viii) cultural influences, (ix) COVID-19 impact, (x) ethical conformity. Thematic analysis was done using ATLAS.ti (version 9.0.15). The second part contained 2 questions, that generated quantitative data, which was analysed by using SPSS (version 22.0.0.0). The first question was focussed on the OOP cost that occurs while availing free treatment services at public hospital, for this 'cost of travelling from residence to government hospital in last IPD treatment of self or blood relative family member' was used as variable. Second question focussed on measuring the overall satisfaction towards public healthcare on scale of 10 (1 being least and 10 being highest). Interviews were done in local language by the researchers and volunteers. All

interviews were recorded using ASR Voice Recorder® mobile app (version 243ARM64-v8a). All audio files were transcribed in English.

Sampling Technique: The method of convenient sampling was opted, due to time and resource constraints.

Sampling Criteria: For being a respondent, the individual should be residing nearby CHC and have a BPL card or income lower than ₹ 1286 per family member per month. The age of respondent should be above 15 years.

All respondents who volunteered were clearly informed about the purpose of conducting this survey and were also informed about the confidentiality of their responses. Help of 2 volunteers were taken, who were local resident of Khair and Jawan area.

The secondary data available from various state and central government report, WHO reports, Government website, published researches and online articles were also analyzed.

RESULTS

Analysis of collected data from 104 BPL respondents revealed that majority of respondents were male (71%). About 58% respondents from Khair CHC, whereas 42% Jawan CHC. About 59% of respondents faced one or more types of challenges, varying from lack of infrastructural issues to cultural barriers.

The data collected revealed some common challenges faced by BPL and low-income section.

Lack of Information: Approximately 61% of respondents reported that they are not well informed about the free health facilities. Further, there is a transparency issue, allocation, utilization, information regarding free medicines, surgeries, and vaccination are kept concealed. The reason outlined was lack of direct communication between policymakers and poor section, or between policymakers and field workers (implementers).

Expenditure in availing free services: 25% of respondents mentioned that there are miscellaneous expenditures even in free services such as patient transportation, any special medicine not available in government hospital, food cost of patient's attendant, etc.

Documents Problem: About 27% of respondents agreed that they do face problems in getting a government ID (Adhaar card and BPL card). The respondents also agreed that lack of documents leads to problem while availing public medical services. They stressed on wrong personal information on government IDs is also a main issue. Approximately 41% of respondents reported that arranging various government-issued documents such as Adhaar

DOI: 10.48165/sajssh.2021.2501

card, BPL card, Income Certificate is a daunting task for them, especially in case when urgent medical treatment is required. Same hindrance is faced while availing service under AB-PMJAY scheme.

Service Quality: About 47% of respondents consider the overall quality of public hospital substandard, the attitude of staff towards patients, and deficient infrastructure are the most crucial factor.

Underutilization of Government Insurance Scheme: About 35% of respondents consider AB-PMJAY insufficient, the reason highlighted are private hospital refusing to provide cashless service due to very low rates set by government. For instance, unilateral cataract treatment cost ₹ 15,000-20,000 in any private hospital, but as per the AB-PMJAY rate sheet, it is between ₹ 7,000-10,000.

> *"we have a Ayushman Bharat insurance card, I went to one empaneled private hospital, they refused to offer service, told me various technical issues, and told me to pay directly from my pocket, it was a huge financial burden for the family…"* (respondent no 76, Jawan location)

Underutilization of PMBJP: 8% of respondents were not aware of PMBJP centers (Janaushadi Kendra). 15% of respondents mentioned they do not opt for PMBJP centers because of the perception of substandard quality of medicines. They highlighted that this perception is formed due to word of mouth.

Overcrowding in Public Sector Hospitals & Underutilized AYUSH Medicine: About 51% of respondents stated that government allopathic hospitals are overburdened, and 64% of respondents opt for alternative medicine in case of minor diseases only, such as common cold.

Cultural Hindrances: About 18% of respondents mentioned avoiding discussing disorders related to psychological or sexual diseases with their family members and relatives. The respondents highlighted the sense of social embarrassment.

> *"family do not care about mental health, my relatives will declare me mentally retarded, they will either make fun of me or just ignore me…"* (respondent no. 27, male, Khair location)
>
> *"I feel very shy in talking about any sex related topic, either its disease or any decision. In my family women are discouraged to discuss these topics, even with husband..."* (respondent no. 15, female, Jawan)

COVID-19 overshadowing other diseases: 47% of respondents mentioned that due to COVID-19 pandemic, other diseases getting less attention and hampered the regular mode of treatment in government facilities. They highlighted dengue fever and malaria.

Ethical Conformance of Staff: 5% of respondents mentioned there exist malpractice of referring (advising) patients to avail private treatment. In some cases, doctors refer patients to their private clinics, or transfer patients to private hospital for commission. In both the cases, there is a huge financial burden on patient's family.

> *"sometimes when there is delivery or road accident, we have to carry our patient to hospitals of nearby cities. In travelling by private ambulance cost is very high and if we take help of government ambulance service, sometimes we have to pay additional amount to avail free service…"* (respondent no. 10, Jawan location).

Qualitative data analysis revealed that there exists a disparity of 'average OOP travelling expenditure' for male and female. In case of male, the average OOP travelling expenditure to hospital for availing IPD services is ₹ 2972 per visit (± 224), whereas ₹ 1574 (±220) for females (referred to graph no. 1). This could be corroborated by 5 respondents who mentioned males do get preferences, and if better treatment is available even at a far location, family opt for that, which may explain higher cost per males.

To find out the impact of age on average satisfaction score correlation analysis was performed. The correlation analysis revealed that there is negative association (coefficient of correlation, $r = -0.911$) between 'age of respondent' and 'average satisfaction from public health service' ($R^2 = 0.8301$). Please refer to graph no. 2.

DISCUSSION & CONCLUSION

Despites the efforts of government, there still exist many hurdles for BPL & low-income section in the way of getting medical treatment. Besides lack of funds, many factors are in play and acting as hindrances. The nature of the barrier varies; some challenges are due to lack of information, some are due to human factors, and some due to technical faults in the planning. The lack of knowledge about government health schemes and available free services among the poor section is mainly due to inadequate penetration to target masses by the government. This is also due to less emphasis on awareness generation. As BPL and low-income population have high incidence of illiteracy, the task of educating them about public health services becomes more daunting as well as pivotal.

DOI: 10.48165/sajssh.2021.2501

Government, while planning and developing any health scheme, should consider the mindset and education level of BPL and low-income sector. Incorporating information technology in public health system is the first step towards Universal Health Coverage, but making poor people aware of it and training them how to utilize it is also very crucial; otherwise, it will lead to underutilization of the system. This trend is observed in the data collected in case of AB-PMJAY and PMBJP. The Ministry of Health & Family Welfare launched Rashtriya Swasthya Bima Yojana (RSBY) in 2008 and later "Ayushman Bharat" under PM-JAY scheme. Both are cashless treatment facility that could be availed at private hospitals. The aim of AB-PMJAY is aligned with RSBY, and just like RSBY, AB-PMJAY has its own shortcomings (Gosh et al. 2017). Only in-patient (IP) treatment: Ayushman Bharat covers only IP treatment costs with admission up to 15 days only. Again there is a burden of OP treatment cost, as doctor consultation and medical investigations are expensive in private healthcare. The price for different services is determined by the sponsor (government); IPD treatment cost coverage is only Rupees 500,000 per annum per family (National Health Profile report 2012). Still, it is a welcome move by the government. There is single rate card problem; the cost of different services (packages cost) are set and controlled by government and only empanelled hospitals offer cashless service under this scheme. From the private hospital perspective, AB-PMJAY Scheme is not aligned with their profit maximization aim, so some of these private healthcare providers either do not get empanelled for this scheme, or they get empaneled, and indirectly refuse to offer service to the patient.

The healthcare sector in India have some discrepancies in terms of policy making and allocation of resources (Munain, 2019; John et al. 2020). Most of the Indians are troubled with diseases which could be treated easily, yet the dangers of severe but rare sicknesses get more consideration. Many diseases that could be prevented to a great extent by simple practices like hygiene, sanitization, healthy lifestyle, potable water are getting less attention of policymakers, such as typhoid, diabetes, cardiac conditions, etc. The same could be said for diseases which could be easily treated by "essential medicines". In the current scenario, since 2019 Wuhan outbreak of COVID-19, government may have overlooked other diseases. Afzal et al. (2019) reported there is high to moderate level of Covid-19 community awareness, due to repeated government interventions. Covid-19 has taken the limelight from endemics like dengue and malaria which are affecting the lives of BPL & poor socio-economic class of society more than the privileged class with medium to high income. As per NVBDCP report (2020) dengue spiked dramatically, 2161 cases plus unreported cases from January 2020 to November 2020 in UP alone.

Indian regions with low Human Development Index (HDI) are experiencing development of physical public health infrastructure in the last two decades, but there is a shortage of workforce to deliver healthcare services; therefore, utilization is low or not first choice for treatment. Whereas, these states have massive number of skilled private healthcare personnel, but they do not want to serve in the public sector due to lack of incentives and ambiguous policies by government (Jahan, 2014; Barik et al., 2015; John et al., 2020). For instance, as per India 11th Five Year Plan, the doorstep delivery of health services for disease control have been emphasized upon heavily, but scheme-wised expenditure report revealed the discrepancy in expenditure pattern on National Rural Health Mission (NRHM) during the 11th five-year plan. 90% of the allocated resources to NRHM were spent on family welfare programs, whereas 7.7% for disease control (National Health Authority, Annual Report 2018-19).

In parallel to government health insurance, PMBJP scheme was implemented to accomplish the goal of providing best quality generic medicines at inexpensive cost for all, especially for BPL and low-income population (Pareek et al., 2019). The product basket of this scheme covers over 404 surgical items, consumables and 1250 medicines. As of 12th October 2020, 6634 PMBJP centers are functional in the country. These centers are run by entrepreneurs in 732 districts out of 734 all over India (Press Information Bureau, July 2019). As per AK Choubey Report on state-wise data of numbers of PMBJP centers, which when compared with the number of BPL individuals living in that state/UT, and 3 years average Public Expenditure in Health by States/UT revealed a clear discrepancy in resource allocation, this is most significant in Northern states, especially in UP & Bihar (refer to table no. 1).

PMBJP scheme also suffers from the same problem, lack of awareness among poor section. Also, PMBJP service quality is deteriorating due to slow supply chain (Pareek et al., 2019). A Significant portion of poor population is facing challenges due to absence of government-issued documents or typo errors in the government ID. In India, there is a portion of population that are living under poverty line but do not have BPL card, wrong/misprinted information in Aadhaar card, like name and address spelling mistake (Dept. of Information & Technology, 2015). This all leads to problems while availing free medical services. Common Service Centre (CSC) scheme (under National E-Governance) was deployed to provide a swift one-stop solution for these kinds of problem, still, there exist issues related to awareness and human nature. The CSCs are manned by Village Level Entrepreneur (VLE), a locally appointed authorized individual to deliver these services. VLEs could be considered as ambassadors of Digital India. Besides lack of awareness, the staff of CSC needs close monitoring by the

DOI: 10.48165/sajssh.2021.2501

government to prevent malpractices such as demand of bribes or additional charges, which has become a burden for poor section.

In last two decades, the Indian Government has implemented many schemes & policies to expand alternative medicines branches, namely Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy; this is very promising in reducing the cost of treatment and decreasing load from allopathic medicine (Rudra et al., 2017). But, despite many efforts, there still exist a gap. From the results, it is very evident that AYUSH is underutilized in current scenario in India. In light of recent COVID-19 pandemic, Indian healthcare faced a shortage of allopathic clinical personnel in addition to high prevalence of work-related burn-out (Khasne et al., 2020.) To mitigate the shortage crisis, CCIM (Central Council of Indian Medicine) and MoHFW, has given a green signal to AYUSH healthcare workers to treating a broader range of diseases with the aim of diverting the patient load from allopathic to AYUSH. CCIM issued an amendment to the Indian Medicine Central Council Regulations 2016. The amendment lists 58 surgical procedures that postgraduate students of Ayurveda can practice independently after formal training. By taking these kinds of initiatives, patient load could be distributed among various branches of medicines. From the results, it can be concluded that there exist some cultural barriers also, the reason behind illiteracy, lack of awareness, and diseases considered as a social stigma rather than a medical condition. These could be rectified by proper education and awareness camps.

SUGGESTIONS

The government should focus on awareness generation regarding various underutilized public health schemes. Special attention should be given to reaching out to illiterate masses, remote rural areas, and BPL population. The government should take steps towards making the whole public health system more transparent, from allocation of funds to availability of beds in each CHC. The government should make a strategy to fulfill the needs of unaccounted BPL and poor sections, especially those who do not have BPL card. In parallel government should also make strategy by using the existing CSC scheme to track down unaccounted BPL population and issue them proper government ID (Aadhaar and BPL card). In post-COVID-19 era, telemedicine remains underutilized, that could prove very promising in controlling infection spread, and prompt treatment. A mobile app could be launched for consultation with doctor. A direct survey of expectations and challenges faced by poor population should be beneficial in exploring the minute details and exploring the root cause of challenges faced. There are various committees, each with different poverty measurement technique, and different poverty numbers, such as Prof. Tendulkar Committee, Rangarajan Committee, MPI index etc. GoI must

develop a standardized, comprehensive and universal poverty measurement tool incorporating various socio-economic parameters. Expenditure by state/UT per BPL individual should be considered as an indicator while drafting healthcare policies and resource allocation. To reduce the OOP cost and prevent catastrophic health expenditure of low-income population, GoI could develop policies as an instrument of control for over pricing of private medical facilities.

LIMITATIONS

This study depicts the overview of public healthcare system of UP, India at a given point of time, which may change over a period of time. As this research is not funded by any institution or organization, the primary data was collected from respondents from only 2 CHC of UP province. Because of the human nature of subjectivity, Hawthorne Effect and Recall Biases may have occurred while interviewing respondents. Errors may have occurred while transcribing and translating responses. Confounders like technological awareness were present. Due to less time and funding constrains, researchers were not able to capture responses from more respondents. In the future, similar researches should be conducted overcoming these limitations, and including human resource aspects like ASHA and USHA impact.

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to Mr. Sartaj Ahmad (Manager, Soch NGO, Aligarh) and his organization, for assisting us at every step and providing local volunteers from Khair and Jawan. I would also like to thanks Ms Daniya Hasan (Graduate Student, Aligarh Muslim University) who assisted us voluntarily in data collection.

Declaration of Conflicting Interests: The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Ethical Clearance & Confidentiality: Ethical clearance and permission was obtained from local authorities. Any data recorded during the study will be kept strictly confidential and will not be shared or used anywhere except the present research.

Funding: The authors received no financial support for the research, authorship and/or publication of this article.

ABBREVIATIONS

AB-PMJAY	Ayushman Bharat Pradhan Mantri Jan Arogya Yojana
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy

DOI: 10.48165/sajssh.2021.2501

BPL	Below Poverty Line
CHC	Community Health Centre
CCIM	(Central Council of Indian Medicine)
COVID-19	Corona Virus Disease 2019
CSC	Common Service Centre
GDP	Gross Domestic Product
GoI	Government of India
HI	Health Index
IMA	Indian Medical Association
IP	In-Patient
MoHFW	Ministry of Health and Family Welfare
NITI Aayog	National Institution for Transforming India Commission
NRHM	National Rural Health Mission
NVBDCP	National Vector Borne Disease Control Programme
OOP	Out-of-Pocket
OPD	Out-Patient
PMBJP	Pradhan Mantri Bhartiya Janaushadhi Pariyojana
RSBY	Rashtriya Swasthya Bima Yojana
SDG	Sustainable Development Goals
UHC	Universal Health Coverage
UP	Uttar Pradesh
UT	Union Territory
VLE	Village Level Entrepreneur
WHO	World Health Organization

"He who has health, has hope; and he who has hope, has everything."

Thomas Carlyle

A great philosopher, historian, essayist, translator, teacher, and mathematician.

REFERENCES

Barik, D., & Thorat, A. (2015). Issues of Unequal Access to Public Health in India. *Frontiers in public health*, *3*, 245. DOI: https://doi.org/10.3389/fpubh.2015.00245

Baru, R.V. (2003). Privatisation of health services: A South Asian perspective. *Economic and Political Weekly*, *38*(42), 4433-37. Available at: https://www.jstor.org/stable/4414156?seq=1

CCIM, GoI, India. (2020). Amendment to the Indian Medicine Central Council Regulations 2016. Available at: https://www.ccimindia.org/pdf

Central Bureau of Health Intelligence, MoHFW. (2019) National Health Profile. Available at: www.cbhidghs.nic.in/index1.php?lang=1&level=1&sublinkid=75&lid=1135

Choubey, A.K. (2019) 5440 JAKs functional in India. *Press Information Bureau*. Available at: https://www.expresspharma.in/latest-updates/5440-jaks-functional-in-india-ashwini-kumar-choubey/

Dandabathula, G., Bhardwaj, P., Burra, M., Rao, P.V.P., & Rao, S.S. (2019). Impact assessment of India's Swachh Bharat Mission–Clean India Campaign on acute diarrheal disease outbreaks: Yes, there is a positive change. *Journal of family medicine and primary care*, *8*(3), 1202.

Economic Policy Report (2020). India's overall spending on health sector 'low'. *Economic Times* Available at: https://health.economictimes.indiatimes.com/news/industry/indias-overall-spending-on-health-sector-low-says-niti-aayog-member-v-k-paul/79302765

Federation of Indian Chambers of Commerce & Industry. (2020). ePharmacies at COVID-19 Frontline Fighting The Odds: Serving the Nation. Available at: https://ficci.in/spdocument/23316/FICCI-ePharmacy-Whitepaper.pdf

Afzal, F., Siddiqui, R., Khan, M., Afzal, M., & Usmani, N. (2020). COVID-19- a public health emergency: what do we know? A cross-sectional study on community awareness level towards COVID-19 in Uttar Pradesh, India. *International Journal of Community Medicine And Public Health, 7*(11), 4562-4569. Available at: http://dx.doi.org/10.18203/2394-6040.ijcmph20204762

Ghosh, S., & Gupta, N.D. (2017). Targeting and effects of Rashtriya Swasthya Bima Yojana on access to care and financial protection. *Econ Polit Wkly*, *52*(4), 61-70.

Hospaccx Healthcare Business Consultancy. (2019). Healthcare Scenario of Uttar Pradesh Hospaccx Healthcare. Available at: https://hhbc.in/healthcare-scenario-of-uttar-pradesh

Indian Pharmaceutical Alliance Report. (2020). Healthcare goes mobile: Evolution of Teleconsultation and e-pharmacy in New Normal.

Jahan, B.I. (2014) Access to and utilisation of public versus private health care services: a study in Lucknow metropolis. Available at: https://shodhganga.inflibnet.ac.in/handle/10603/223578

Jindal, S. (1998). Privatisation of health care: new ethical dilemmas. *Issues Med Ethics*, 85-6.

John, S., & Kukreja, A. (2020). Tackling Covid-19: Critical Evaluation of India's Response. *Indian Journal of Public Health Research & Development*, *11*(7). 905-27. DOI: https://doi.org/10.37506/ijphrd.v11i7.10192

Kaur, M., Kaur, R., & Walia, P. (2020). Exploring gender disparity in nutritional status and dietary intake of adolescents in Uttarkashi. *Indian Journal of Human Development*, *14*(1), 115-127. DOI: https://doi.org/10.1177/0973703020917502

Khasne, R.W., Dhakulkar, B.S., Mahajan, H.C., & Kulkarni, A.P. (2020). Burnout among healthcare workers during COVID-19 pandemic in India: Results of a questionnaire-based survey. *Indian Journal of Critical Care Medicine: Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine*, *24*(8), 664. DOI: 10.5005/jp-journals-10071-23518

Kumar, N.K. (2020) Medical Negligence & Malpractices in India: Perspective of Tortious Law. *Journal of Law of Torts and Consumer Protection Law*. *3*(1), 24-38. Available at: http://lawjournals.celnet.in/index.php/jltcpl/article/view/473

Kumar, S., & Sharma, R. (2018). Key barriers in the growth of rural health care: an ISM-MICMAC approach. *Benchmarking: An International Journal*. *25*(7), 2169-83. DOI: https://doi.org/10.1108/BIJ-05-2017-0095

McGuinness, S. L., O'Toole, J., Ayton, D., Giriyan, A., Gaonkar, C. A., Vhaval, R., ... & Leder, K. (2020). Barriers and enablers to intervention uptake and health reporting in a water intervention trial in rural

DOI: 10.48165/sajssh.2021.2501

India: a qualitative explanatory study. *The American journal of tropical medicine and hygiene*, *102*(3), 507-517. DOI: https://doi.org/10.4269/ajtmh.19-0486

Ministry of Human Recourse Development (2015) Multidimensional Poverty Index.

Mishra, S.K., Kapoor, L., & Singh, I.P. (2009). Telemedicine in India: current scenario and the future. *Telemedicine and e-Health*, *15*(6), 568-575. DOI: https://doi.org/10.1089/tmj.2009.0059

Mohapatra, P. & Mohanty, B. (2002) Elite women of India. APH Publishing;. New Delhi

MoHFW, PIB Delhi (2018) Hospitals in the Country. Available at: https://pib.gov.in/PressReleasePage.aspx?PRID=1539877

Munian A (2019) Urban Poverty and Its Impacts on Economic and Health Status a Case Study Of Chennai City India. Available at: https://shodhganga.inflibnet.ac.in/handle/10603/297809

National Health Authority, GoI (2018-19) Annual report. Available at: https://pmjay.gov.in/sites/default/files/2019-09/Annual%20Report%20-%20PMJAY%20small%20version_1.pdf

NVBDCP, GoI. (2020). Dengue/DHF Situation In India. Available at: https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=431&lid=3715

NITI Aayog, GoI. (2020) State Statistics. Available at: https://niti.gov.in/state-statistics

NITI Aayog, World Bank & MoHFW. (2019). Healthy States Progressive India: Report on the Ranks of States and Union Territories. Available at: http://social.niti.gov.in/

Pareek, M., & Prakash, D. M. (2019). Providing generic medicines to the poor in India: An overall assessment of government-run generic medicine scheme Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP) with reference to the experience of store owners in the city of Jaipur. Available at SSRN 3382656.

Piet-Pelon, N.J., Rob, U., & Khan, M.E. (1999). *Men in Bangladesh, India, and Pakistan: Reproductive Health Issues*. Hindustan Publishing Corporation (India).

Planning Commission, Government of India. (2014) Dr. C. Rangarajan Committee Report. Available at: https://niti.gov.in/planningcommission.gov.in/docs/reports/genrep/index.php?repts=b_repgen.htm

Planning Commission, Government of India. (2011) Press Note on Poverty Estimates.

Prabhu, K.S. (1994). World Development Report 1993: Structural Adjustment and the Health Sector in India. *Social Scientist*, *22*(9), 89-97. DOI: https://doi.org/10.2307/3517916

Rudra, S., Kalra, A., Kumar, A., & Joe, W. (2017). Utilization of alternative systems of medicine as health care services in India: Evidence on AYUSH care from NSS 2014. *PloS one*, *12*(5), e0176916. DOI: https://doi.org/10.1371/journal.pone.0176916

SDGs India Index, NITI Aayog. (2019) Available at: https://sdgindiaindex.niti.gov.in/#/ranking

The Department of Information Technology, Ministry of Communications and Information Technology, GoI. (2015). Implementation Guidelines For The Project "CSC 2.0- A Way Forward". Available at: https://www.meity.gov.in/writereaddata/files/CSC%202%200%20Guidelines%20-Final-%203rd%20December%202015.pdf

Vij, D. (2019) Health Care Infrastructure in India: Need for Reallocation and Regulation. *Research Review International Journal of Multidisciplinary*. *4*(3), 289-296. Available at: https://www.researchgate.net/publication/342170461_Health_Infrastructure_in_India_Need_for_Reallocation_and_Regulation

Wijayanti, E. (2020). The correlation between behavior intention and family support on adult pulmonary TB patients in Central Jakarta. *International Journal of Public Health Research*, *10*(2), 1209-1214.

World Poverty Clock. Accessed on 1st February 2021. Available at: https://worldpoverty.io/map

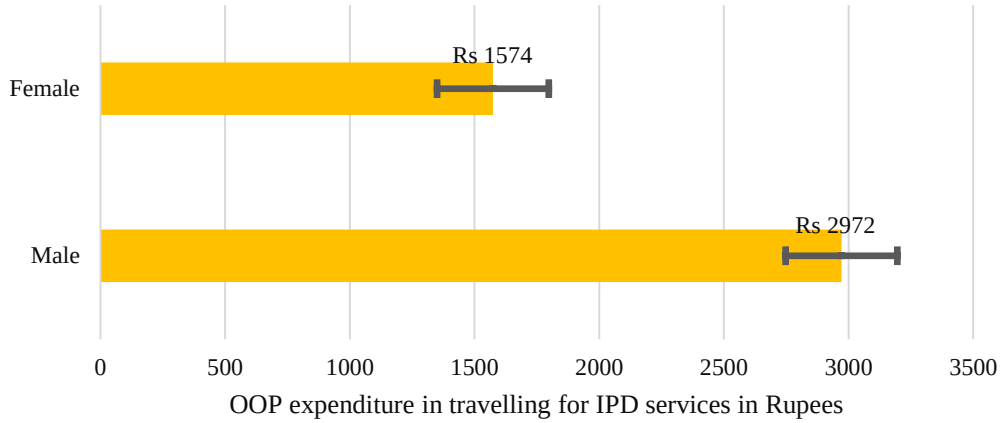
Table 1: Depicting state-wise poverty population, numbers of PMBJP and average expenditure by state/UT governments.

S. No.	State / Union Territory	[A] Population living under Poverty Line *(Source: Planning Commission of India and SDG report)*	[B] No. of PMPJB Centres as on 26th July 2019 *(Source: NHA, GoI)*	[C] Average Public Health Sector Expenditure of 2016-17, 2017-18, 2018-19 *(MoHFW, GoI 2019)*	Per BPL individual expenditure by State/UT government (C/A)
1	Andhra Pradesh	4561093	181	₹ 6,31,06,597	₹ 13.8
2	Arunachal Pradesh	479738	24	₹ 81,06,230	₹ 16.9
3	Assam	9979543	79	₹ 4,39,96,834	₹ 4.4
4	Bihar	35123155	155	₹ 6,40,98,279	₹ 1.8
5	Chhattisgarh	10200198	206	₹ 3,81,40,232	₹ 3.7
6	Goa	74240	8	₹ 78,96,841	₹ 106.4
7	Gujarat	10051121	494	₹ 8,01,87,488	₹ 8.0
8	Haryana	2829223	160	₹ 3,62,88,130	₹ 12.8
9	Himachal Pradesh	553287	57	₹ 1,95,32,516	₹ 35.3
10	Jammu & Kashmir	1269638	56	₹ 2,82,66,271	₹ 22.3
11	Jharkhand	12192414	54	₹ 2,76,79,131	₹ 2.3
12	Karnataka	12775027	524	₹ 6,77,22,326	₹ 5.3
13	Kerala	2355127	465	₹ 5,85,06,492	₹ 24.8
14	Madhya Pradesh	22986385	145	₹ 6,65,37,373	₹ 2.9
15	Maharashtra	19496947	358	₹ 11,68,60,105	₹ 6.0
16	Manipur	948217	35	₹ 58,81,862	₹ 6.2
17	Meghalaya	352170	1	₹ 72,52,548	₹ 20.6
18	Mizoram	223830	19	₹ 56,25,106	₹ 25.1
19	Nagaland	373541	15	₹ 57,70,023	₹ 15.4
20	Orissa	13679398	174	₹ 4,80,15,077	₹ 3.5
21	Punjab	2291600	164	₹ 3,26,60,081	₹ 14.3
22	Rajasthan	10083475	127	₹ 9,32,31,504	₹ 9.2
23	Sikkim	50006	2	₹ 31,32,928	₹ 62.7
24	Tamil Nadu	8138185	539	₹ 9,18,07,745	₹ 11.3
25	Tripura	516185	24	₹ 77,51,749	₹ 15.0

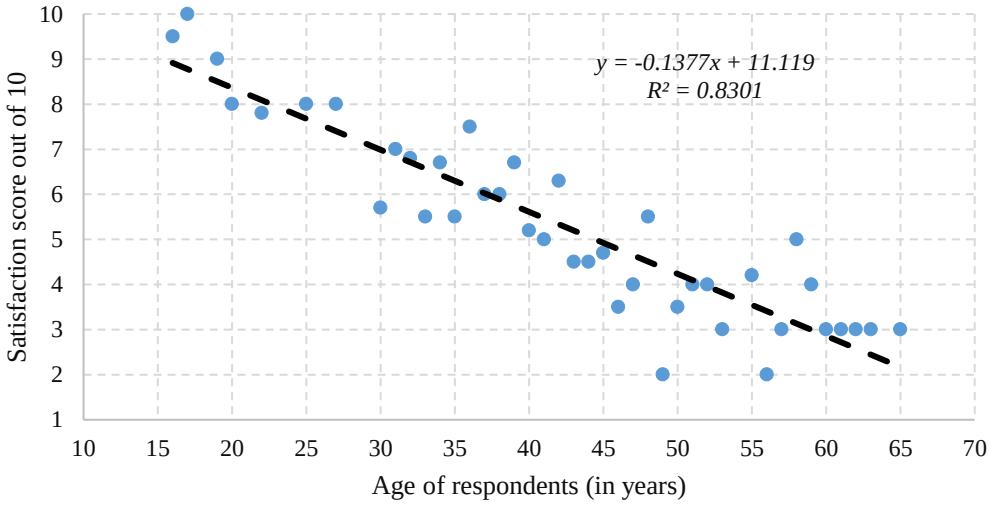
DOI: 10.48165/sajssh.2021.2501

26	Uttar Pradesh	58804772	840	₹ 16,66,38,229	₹ 2.8
27	Uttarakhand	1135716	176	₹ 1,76,02,637	₹ 15.5
28	West Bengal	18236968	106	₹ 8,12,73,459	₹ 4.5
29	Andaman & Nicobar Islands	3806	2	₹ 32,97,643	₹ 866.5
30	Chandigarh	230194	5	₹ 40,44,379	₹ 17.6
31	Dadra & Nagar Haveli	230264	14	₹ 11,91,657	₹ 5.2
32	Daman & Diu	5135	4	₹ 6,19,165	₹ 120.6
33	Delhi	1663685	96	₹ 4,75,27,645	₹ 28.6
34	Lakshadweep	1786	0	₹ 6,85,033	₹ 383.6
35	Puducherry	120927	14	₹ 50,88,428	₹ 42.1
36	Telangana	Data Not Available	Data Not Available	₹ 5,44,18,088	Cannot be calculate

Graph No. 1: Depicting Average & Confidence Interval of OOP expenditure in travelling to residence to the healthcare facility for a single IPD patient



Graph No. 2: Depicting correlation between age of respondents and average satisfaction score for nearby public health services



DOI: 10.48165/sajssh.2021.2501