THE ICFAI UNIVERSITY JHARKHAND

Synopsis of the Research Proposal

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Ph. D. Programme (Part-Time) in Management

by

Scholar Name: Naboshree Bhattacharya

UID No.: 19FMRCJHN01008

Under

Research Supervisor: Prof. (Dr.) Satyendra Kishore

ICFAI University, Jharkhand

Ranchi, India

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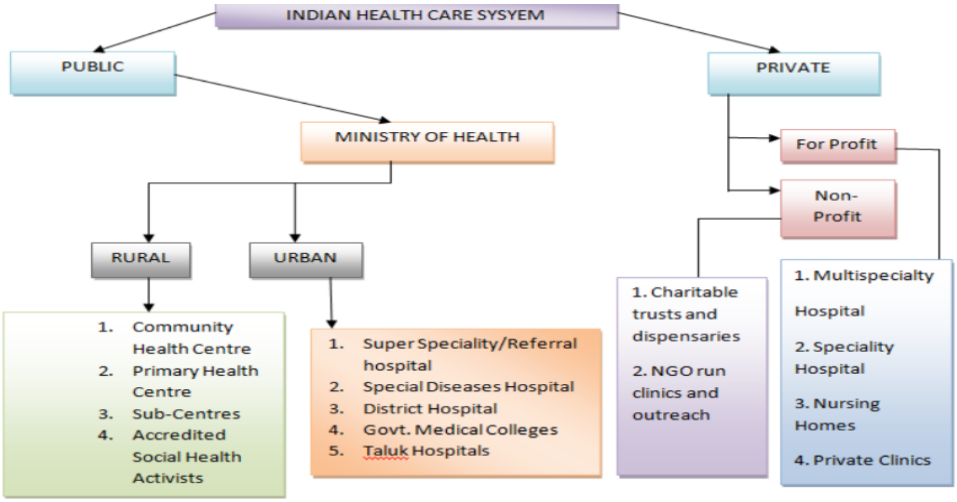
TITLE: A STUDY ON THE QUALITY DIFFERENTIAL IN THE DELIVERY OF HEALTHCARE SERVICES THROUGH PUBLIC-PRIVATE PARTNERSHIP MODE

INTRODUCTION

Health is not only the absence of illness but also the ability of the people to develop their potential throughout their lifetime. Health affects the economic growth and development directly through increase in labour productivity, decrease in illness and hence reduction in absenteeism. It also affects the development indirectly through the increase in enrolment ratio and level of education. Various macroeconomic studies have shown that health positively affects the growth. (Ivinson, A. J. (2002)). The term healthcare management (or healthcare administration) is defined as supervising the functions of healthcare organizations. Healthcare managers tasks include providing leadership, management and direction to healthcare units (such as hospitals or other health care systems) in order to ensure the best delivery of the available healthcare services. Health care management encompasses the efforts involved in planning, directing, and coordinating nonclinical activities within health care systems, organizations, and networks. This is a much-focused branch of management that requires specific knowledge of health care operations and technology along with soft skills such as the ability to motivate team members, collaborate with multiple stakeholders, and proactively implement needed changes.



Public sector in healthcare targets to increase the welfare through public services whereas private sector enhances the value of the resources. Private sector in healthcare has the potential to exploit the commercial potential of the Govt. assets through various types of PPPs. Under PPP in healthcare, the private sector is responsible for the designing, building, maintaining and operating of hospital whereas public sector takes care of core medical services such as patient care, recruitment of doctors and nurses. (Ondategui-Parra,2009). The government has experience and expertise in providing clinical services and ensuring that the welfare of patients is well taken care of, while non-critical services are handled by the private sector. (Ondategui-Parra,2009). There is no one widely

accepted definition of public-private partnerships (PPP). The PPP Knowledge Lab (World Bank Group) defines a PPP as "a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance".

Features of common PPP models in healthcare

Historically, governments have engaged the private sector to deliver services through healthcare PPPs to achieve one or more of six functions:

Finance – financing or co–financing of the project

Design – design of the project, including design of the infrastructure and care delivery model

Build – construction or renovation of facilities included in the project

Maintain – maintenance of hard infrastructure (facilities as well as equipment as applicable)

Operate – supply of applicable equipment, IT and management/delivery of nonclinical services

Deliver – delivery and management of specified clinical and clinical support services

The majority of facility–based PPPs bundle these functions into three models:

Infrastructure–based model – to build or refurbish public healthcare infrastructure

Discrete Clinical Services model – to add or expand service delivery capacity

Integrated PPP model – to provide comprehensive package of infrastructure and service delivery

Type of Private Partner	Content of PPC	Process or Service	Time range of commitment	Contribution of private partner	Form of PPC	Level of Care	Area	Type of Public Partner
Profit Oriented	Infrastructure	Core process or Service	Long Term	Finances	(Partial) Privatization	Tertiary	Urban	National
Non Profit Oriented	Service	Support Process or Service		Expertise and Finances	Contracting Out	Secondary		State
Idealistic or Altruistic	Management	Management Process or Service	Short Term	Expertise	Outsourcing	Primary	Rural	Community
	Innovation				Procurement			

India has systematically rolled out a PPP program for the delivery of high-priority public utilities and infrastructure and, over the last decade or so, developed what is perhaps one of the largest PPP Programs in the world. According to the World Bank, close to 2000 PPP projects are identified in various stages of implementation in various sectors in India. India is one of the leading countries in terms of readiness for PPPs. Public-Private Partnership is gaining importance globally and India is also trying to acquire its position. In spite of engagements

in multiple projects initiated by Govt. of India as per PPP models in various sectors, health sector is lagging behind. One of the projects undertaken by Department of Health and Family Welfare, Government of Himachal Pradesh in healthcare sector is in Himachal Pradesh-Setting up of Hemodialysis Unit for Maintenance of Hemodialysis Unit in the State of Himachal Pradesh on PPP at Zonal Hospital, Dharamshala. Jharkhand is also trying to implement PPP model in healthcare sector and the pace has increased during the COVID-19 crisis.

Jharkhand, a low-income state in eastern India, faces a significant shortfall in public health delivery services aggravated by a severe lack of health diagnostic services. The lack of quality and standard diagnostic services force people to either forgo them or purchase services from private facilities of mostly poor and varying quality, while incurring heavy out of pocket expenses and additional costs related to travel and over-testing. It sought support from IFC to structure and implements the Radiology and Pathology centres on a Public Private Partnership (PPP). International Finance Corporation assisted Govt. of Jharkhand to establish PPP model in healthcare sector to develop Radiology centers across the state in collaboration with HealthMap Diagnostics Private Limited (a JV of a major Indian Health player Manipal Health and Philips) on November 16, 2015. International Finance Corporation assisted Govt. of Jharkhand to establish PPP model in healthcare sector to develop Pathology centers across the state in collaboration with Medall Healthcare Private Limited and SRL Limited on April 30, 2015 and May 8, 2015 respectively. During the time of COVID-19, 500 beds are allocated at Sadar Hospital at Ranchi under PPP mode. Even the sub-divisional hospitals were allocated 300 beds under the same PPP mode and buildings are constructed by state govt. (Newspaper Report).

As per the WHO, equity, gender and right based assessment approaches and tools should be used systematically to collect, collate, and analyze the evidence on health inequalities. Various research has led to the identification that England has developed Health Index to show the demographic and socioeconomic inequality in terms of healthcare and also how healthcare development could reduce such inequalities. But up till now very few initiatives are taken to develop any Holistic Healthcare Index to measure the impact of healthcare on the development of the region. This research aims to measure the total healthcare in the region based on the demographic, socio-economic and quality differentials offered; to better understand the health of the population in Jharkhand.

THEORETICAL FRAMEWORK

1. Kaldor-Pasinetti Theory of Distribution [Cambridge Growth Model]
    a. The most remarkable results of Kaldor-Pasinetti approach to growth and income distribution are known as Cambridge Theorem.
    b. It states that the rate of profit in an economy on the long period growth path is the ratio of the natural rate of growth to pure capitalists' propensity to save.
    c. In an economy with institutional investors, investment and hence growth are likely to be influenced by the decisions of such investors. But under modern capitalism there are many high technology firms which present institutional investors with substantially greater problems of risk and asymmetric information than firms with less dynamic technologies. It is therefore

reasonable to assume a correlation between technological level and the degree to which accumulation is financed from retained profits.

d. Private Sector is motivated by the returns on capital and hence will not invest in the public goods like healthcare.

2. Utility Theory of Value

   a. The theory attempts to explain the exchange value or price of goods and services.
   b. Key questions it tries to address are:

      i. Why goods and services are priced as they are?

      ii. How the value of goods and services comes about? and

      iii. How to calculate the correct price of goods and services (if such a value exists)?

   c. This explains the price/cost of providing social goods such as healthcare.

3. Pareto Optimality Principle

   a. Pareto Efficiency is a situation where no individual or preference criterion can be made better off without making at least one individual or preference criterion worse-off.
   b. Market success is defined as the ability of a set of idealized competitive markets to achieve an equilibrium allocation of resources that is Pareto optimal in terms of resource allocation.
   c. Market failure is defined as an inefficient allocation of resources; it implies Pareto Inefficiency.

4. Health Production Function Model: This model examines the relationship between healthcare inputs (such as healthcare expenditure, number of healthcare providers, etc.) and health outcomes. It could be used to analyse the efficiency and effectiveness of healthcare spending and interventions in improving population health.
5. Grossman Model of Health Demand: This model views health as a durable capital stock that produces an output of healthy time. It could be applied to understand how individuals make decisions about investing in their health through healthcare utilization and lifestyle choices, and how this affects health outcomes and healthcare costs.
6. Principal-Agent Model: This model is relevant in the context of healthcare providers (agents) acting on behalf of patients (principals). It could be used to examine issues such as information asymmetry, provider incentives, and how these factors influence healthcare quality and costs.
7. Bounded Rationality: This concept, introduced by Herbert A. Simon, suggests that when individuals make decisions, their rationality is limited by the available information, cognitive limitations, and time constraints. In the context of healthcare, this could explain why patients may not always choose the most cost-effective or quality-optimal healthcare options.

8. Social Norms: People's behavior is often influenced by what they perceive as normal or acceptable within their social context. Leveraging social norms could be effective in promoting healthy behaviours or encouraging the utilization of healthcare services.

These models offer complementary perspectives on healthcare delivery, quality assessment, decision-making processes, and resource allocation. By integrating insights from economic theories like the Kaldor-Pasinetti model and Pareto optimality with healthcare-specific frameworks like the Health Production Function model, this study aims to provide a nuanced analysis of the factors driving quality differentials between public and private healthcare facilities in Jharkhand.

CONCEPTUAL FRAMEWORK

The conceptual framework for patients in this study is designed to examine the various factors that influence patients' perceptions of healthcare quality in public and private facilities under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme in Jharkhand. This framework incorporates key dimensions of healthcare quality as identified in the literature, including safety, effectiveness, patient-centeredness, and efficiency. It also considers patient characteristics, hospital attributes, and broader contextual factors that may shape patients' experiences and evaluations of care quality. By mapping these interrelated components, the framework provides a structured approach to analyzing the quality differentials between public and private healthcare delivery from the patient's perspective.

The conceptual framework for hospital staff in this study is designed to examine the various factors that influence healthcare quality from the perspective of those directly involved in delivering care. This framework incorporates key dimensions of healthcare quality as identified in the literature, including safety, effectiveness, efficiency, and patient-centeredness. It also considers organizational factors, such as leadership, teamwork, and resource availability, that may impact staff performance and, consequently, the quality of care provided. By mapping these interrelated components, the framework provides a structured approach to analyzing the quality differentials between public and private healthcare delivery from the healthcare provider's perspective.

LITERATURE REVIEW

Arbuzova, A., & Pazdnikova,N. (2021) emphasizes on the need for social partnership which fundamentally talks of the participation of various stakeholders including the Govt. and other social actors who would together address the socially significant problems of the society. The paper has highlighted the need for an economic evaluation of the participatory processes which is either not duly undertaken or partially done owing to cost, complexity and resistance. Tadiri, C. P., Gisinger, T.,Kautzky-Willer, A.,Kublickiene, K., Herrero, M. T., Norris, C. M., ... & Pilote, L. (2021) emphasizes on the significance of the relation between gender and various social determinants which throws light on the perceived health and unmet care. It showcases the impact of social environment on overall health. Also, to gain a broader outlook of social determinants of health. An overview of the importance of Critical Success Factors on the Public-Private Partnership especially in developing countries in a sustainable way. It discusses various theories and models undertaken by various researchers to study the working of PPP. It also explains the selection and rejection of CSFs for PPP.

Glover, Saundra; Xirasagar, Sudha; Jeon, Yunho; Elder,Keith; Piper, Crystal N.; and Pastides, Harris (2009) studies the Project EXPORT which targets to increase the health services research in vulnerable and undeserved communities especially Afro-American in Carolina through multidisciplinary research, education, training, and service. Silverman, Rachel. "Julia Kaufman, Janeen Madan Keller, and." (2021) focuses on the DHC and DFI's role to build regional manufacturing hubs for healthcare, provide R&D for biotechnology and support supply chain for the health adjacent services and delivery models. It addresses on the pandemic crisis in and importance of equitable access to healthcare products and innovation.

Yinka, A. T., David, A. O.,Musa, T. H., Muhideen, S.,Tassang, A. E., Reed, L., & Chen, S. (2021) studies the importance of telemedicine in low-medium income countries especially in Africa due to remoteness during the COVID-19 crisis and its after effects on reducing poverty. It also mentions that telemedicine can provide solutions improve quality of life, and ensure universal healthcare access during public health emergencies. Glaeser, E., & Poterba, J. (2021) explains the role of economic analysis in the infrastructure investment. It mentions the importance of ex-ante project cost and benefit. Also, the feasibility of Public-Private Partnership in infrastructure building. Moon, C., Amos, A., Mehta, P. V., Betti, L., & Evers, H. (2021) explains the importance of Trans-Oriented Development as an urban strategy to provide a range of benefits to residents. It mentions the close coordination and communication is required among a range of different stakeholders. Public sector actors, such as planning and transport authorities, should work closely with private developers and service providers, along with non-profit actors and community organizations.

Kim, S., & Kwa, K. X. (2019) reviews the global trends, various definitions, types for enhanced team-based care of patients and improved population health outcomes. It also explains the development of an institutional assessment instrument. Flaherty, K. T., Doroshow, J. H., Galbraith, S., Ribas, A., Kluetz, P. G., Pazdur, R., & Theoret, M. R. (2021) assess the impact of COVID-19 pandemic on major changes in cancer clinical trials. It also explains the aftermath as the community has an opportunity to incorporate some of these changes as part of the future of trial conduct to make it more patient centred. Dorsey, E. R. (2021) talks about the advances in technology like AI in health care system. It also explains the spread of telemedicine in the world especially during this COVID-19 era. da Silva, R. G. L., Chammas, R., & Novaes, H. M. D. (2021) presents a critical thinking about the contemporary asymmetries in the technical and political infrastructures available for particular approaches in Science Technology &Innovation in health, such as precision medicine, and for public health systems worldwide, uncovering a persistent gap in the translation of knowledge and technologies to adequately coordinated responses to the pandemic.

Derakhshani, N., Maleki, M., Pourasghari, H., & Azami-Aghdash, S. (2021) presenting the factors and classifying them in the framework of control knobs, facilitates the recognition of these factors according to their nature and the main area for countries and provides the basis for measures to correct and cover weaknesses in the health system of countries. Winberg, D. R., Lu, Y., Chen,Y., & Shi, L. (2021) talks about the Health Technology Assessment as an opportunity to decrease the global drug gap and increase access to essential medicines by overcoming barriers to medicine access. It also explains how the use of HTAs can lift the population out of poverty and force fewer people into poverty by creating better health outcomes at affordable prices.

Lince-Deroche, N., Ruhago,G., Castillo, P. W., Williams, P., Muganyizi, P., & Bankole, A. (2021) talks about the reproductive health of Tanzanian women and Post Abortion Care services to meet women's needs and its affordability. Also, it explains the importance of the use of contraceptives. Tougher, S., Hanson, K., & Goodman, C. A. (2021) provide an insight about the subsidized distribution through both public and for-profit sectors. Also, Private sector subsidies may have a role in bolstering access to effective malaria treatments, including among the poor. Kavanagh, A., Hatton, C., Stancliffe, R. J., Aitken, Z., King, T., Hastings, R., ...& Emerson, E. (2021) presents new information about differences in the health and health care experiences of people with and without disability in the early stages of the COVID-19 pandemic in the UK.

Kosycarz, E. A., Nowakowska, B. A., & Mikołajczyk, M. M. (2019) analyses Polish PPP projects, all the factors affecting the failure of the ventures. It also explains that Central and local governments play a critical role in the development and management of PPP and the uncertainty affecting investment and funding. Caballer-Tarazona, M., & Vivas-Consuelo, D. (2016) analyzes one of the public-private partnership models within the health services field, specifically focusing on the Alzira model, which is the most widespread PPP model in Spain. It studies the case in which a private company delivers both the hospital service and the primary care for a designated geographic area, so public-private partnership involves full-service provision. Gharaee, H., Tabrizi, J. S., Azami-Aghdash, S., Farahbakhsh, M., Karamouz, M., & Nosratnejad, S. (2019) evaluates the implementation of the Health Evaluation Plan in Iran and implemented PPP in PHC policy in order to achieve UHC, which have significant differences with the country model. The results of the study indicate that the main goal of this policy was to realize UHC with an emphasis on marginalized areas, expansion of service packages, and reduction of out-of-pocket payments.

Sadeghi, A., Barati, O., Bastani, P., Jafari, D. D., & Etemadian, M. (2016) studies the implementation of the PPP model in the hospital sector had positive implications. As per the paper the model was found to be a powerful and efficient tool for the survival of public hospitals and improved quality of services in today's changing environments. Thadani, K. B. (2014) talks about the implementation of PPP and its impact on the working of various health care schemes and policies undertaken by the govt. The Public and Private sectors are now working together in close association under various working models in the health sector to balance and supplement their resources, skills and expertise. Pal, R., & Pal, S. (2009) explains the impact of PPP on PHC in various states of India. It also mentions that deficiencies of the public health system could be overcome by reforms in the health sector. One of the important reform strategies is collaborating with the private sector in the form of PPP.

Wang, Y., & Zhang, L. (2019) analyses the factors affecting the willingness to pay attitudes and other socioeconomic factors in the cost sharing intentions. This study provides ample information for the policy makers to formulate the health-related strategies through medical reforms in China. Riaz, B. K., Ali, L., Ahmad, S. A., Islam, M. Z., Ahmed, K. R., & Hossain, S. (2020) explains the provision of healthcare services, community clinics have emerged as a flagship programme of the Government of Bangladesh aiming at making health services available at the doorstep of rural people. It also explains that health education and counselling through CCs have created mass awareness of many health problems and of the necessity of seeking care from the formal health professionals instead of the quacks and traditional healers.

Ramakrishnan, D. (2012) gives an overview of PPP in the context of the health sector is an instrument for improving the health of the population. PPP is to be seen in the context of viewing the whole medical sector as a national asset with health promotion as goal of all health providers, private or public. The Private and Non-profit sectors are also very much accountable to overall health systems and services of the country. Maslova, S. V., & Sokolov, M. Y. (2017) paper's key argument is that it is necessary to use both objective and justified criteria to define the concept of risks in PPP projects and establish their classification. This allows defining the concept of risks in order to manage these risks better and to systematize the classification of risks in PPP projects. Another outcome of this paper is the identified groups of risks inherent in PPP projects in health care. Etemadian, M., Shadpour, P., Soleimani, M. J., Biglar,M., Hadi Radfar, M., & Jarrahi, M. (2013) paper introduces a new Iranian-Islamic model of PPP based on a combination of previously described PPP features, including DBFO, co-location, and not-for profit partnership. In addition to operating a new hospital, this model provides a framework for renovation and modernization of an old hospital. Minjire, E. K. (2015) established that PPPH projects have contributed significantly in the improvement of healthcare sector in the country.

Raman, A. V., & Björkman, J. W. (2008), the Public-private partnerships are increasingly advocated to alleviate deficiencies in the public health system as well as to reduce economic stress on those who seek services from an expensive, and unregulated private health sector. Based on in-depth case studies from different states of India and drawing on experiences in other countries, the authors analyse challenges, opportunities and benefits of implementing public-private partnerships and explore whether partnership with the private sector can be designed to deliver health care services to the poor as well as the consequences for beneficiaries. Vecchi, V., & Hellowell, M. (2018), explained Public–Private Partnership (PPP) as a widespread model to fund and develop infrastructure in the last 20 years. The model still remains an option for Governments across the world to cope with curtailed public budget and the need to make public services more efficient and effective. However, the complexity of the model requires the development of an adequate set of skills in order to inform the policymaker and to structure and execute more sustainable contracts.

Glasow, P. A. (2005) paper provides the meaning and various definitions of the Survey research. It explains the sample size, survey methods use of statistical tools. It also provides information on the survey instrument development, measurement errors and survey process. This paper provided specific guidance for the design and implementation of survey research. Groves, R. M., Fowler Jr, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2011) explains the meaning of survey, survey methodology, various types of survey design suitable for different types of research, methodology to be used as per the research and various ethical issues in survey methodology. Avedian, A. (2014) Harvard Law School explains the purpose of the survey, types of surveys by study design and how to construct a valid questionnaire along with the guidelines to ask the justified questions. It also explains the various methods of computerized. Groves, R. M. (2011) explains the various eras of development of survey methods adapted to the changes in the society and exploited new technologies when proved valuable to the field. The survey method is both the strengths and deficit that are the reflections of the societies data collection including the privacy and ethics in survey research. It has also explained the sample errors and types of questions through suitable examples and pictures.

Kaplan, R. M., Bush, J. W., & Berry, C. C. (1976) have discussed regarding the Health Index that will be comparatively easy to apply. They have tried to answer the question of validity by including all possible level of functions and a clear relation to the death state. Kirshner, B., & Guyatt, G. (1985) explained tests used in clinical practice and research have three basic purposes: to discriminate between individuals along a continuum of health, illness or disability; to predict outcome or prognosis; and to evaluate within-person change over time. While for most testing procedures, the prerequisites for each role are complementary, in the case of quality of life measures the requirements may not only be independent, but competing.

As per the National Centre For Health Statistics, USA,1966 before any index can be constructed and evaluated, however, there must be a clear definition of what is to be measured. This report has reviewed conceptual problems encountered in deciding what to measure and proposed one method of measurement that seems both suitable and feasible. Kuh, F. S., Chiu, G. S., & Westveld, A. H. (2020) develops a model-based Latent Causal Socioeconomic Health (LACSH) index at the national level. They have built upon the latent health factor index (LHFI) approach that has been used to assess the unobservable ecological/ecosystem health. This framework integrative models the relationship between metrics, the latent health, and the covariates that drive the notion of health. In this paper, the LHFI structure is integrated with spatial modelling and statistical causal modelling, so as to evaluate the impact of a continuous policy variable (mandatory maternity leave days and government's expenditure on healthcare, respectively) on a nation's socioeconomic health, while formally accounting for spatial dependency among the nations.

For detailed review kindly refer to Annexure I Systematic Literature Review.xlsx

RESEARCH GAP

A literature review led to the following research gaps regarding the study -

1. No evaluation is done to measure the trend and budgetary allocation and actual spending on public healthcare facilities including PPP in Jharkhand.
2. No study is done to measure the quality differential in access and delivery of public and private health care facilities in Jharkhand.
3. No evaluation is done to measure and assess the success or failure of PPP in healthcare delivery system.

Addressing these research gaps can provide valuable insights to inform policy decisions and improve healthcare delivery in Jharkhand.

RESEARCH QUESTIONS AND RESEARCH OBJECTIVES

The research questions and the corresponding research objectives to study the quality differential in delivery of healthcare services through PPP in Jharkhand-

Research Questions	Research Objectives
1. What basic and specialty healthcare facilities (both public and private) are available in Jharkhand?	1. To study the availability of basic and specialized healthcare services in Jharkhand.
2. What is the trend in budgetary allocation and actual spending on public healthcare facilities (including those in the PPP mode) in Jharkhand?	2. To study the trend of government expenditure on healthcare services in Jharkhand.
3. Is there a need for PPP model in delivering healthcare facilities in Jharkhand?	3. To assess the need of adoption of PPP mode in the healthcare sector in Jharkhand
4. Does a quality differential exist in delivery of public and private healthcare facilities in Jharkhand?	4. To map the quality differentials between public and private healthcare facilities in Jharkhand. In addition, the study throws some light on the existence of quality differential in the access and delivery of public and private healthcare facilities in Jharkhand.

RESEARCH HYPOTHESES

1. **H1:** The quality of healthcare facilities/services provided by private entities is better than those provided by the public-entities/healthcare system/network
2. **H2**: The proportion of patients who rank the quality of care as good in private hospitals is higher than the proportion of patients who rank the quality of care as good in public hospital

H_{2A}: Safety aspect of Quality differential- Procedures and systems put in place for preventing errors from happening are perceived to be better at private hospitals than at public hospitals.

H_{2B}: Patient Centredness aspect of Quality differential- Waiting time, post-admission, for a visit by the doctor is perceived to be lesser in private hospitals than in public hospitals.

H_{2C}: Effectiveness aspect of Quality differential- Doctors and nursing staff at private hospitals are perceived to be more competent than those working in public hospitals.

H_{2D}: The mean sentiment score of private hospitals is greater than that of public hospitals.

3. **H3:** The proportion of Medicare staff who rank the quality of care as good in private hospitals is higher than the proportion of Medicare staff who rank the quality of care as good in public hospital.

RESEARCH DESIGN AND METHODOLOGY

Research Questions	Research Objectives	Data Source	Analysis
What basic and specialty healthcare facilities (both public and private) are available in Jharkhand?	To study the availability of basic and specialized healthcare services in Jharkhand.	Annual Economic Surveys, NFHS Reports, State Health Reports, Field Work.	Trend analysis.
What is the trend in budgetary allocation and actual spending on public healthcare facilities (including those in the PPP mode) in Jharkhand?	To study the trend of government expenditure on healthcare services in Jharkhand.	Annual Economic Surveys, NFHS Reports, State Health Reports.	Trend analysis.
Is there a need for PPP model in delivering healthcare facilities in Jharkhand?	To assess the need of adoption of PPP mode in the healthcare sector in Jharkhand	NFHS Reports, State Health Reports, Field Work.	Trend Analysis of Unmet need analysis based on OOPS
Does a quality differential exist in delivery of public and private healthcare facilities in Jharkhand?	To map the quality differentials between public and private healthcare facilities in Jharkhand. In addition, the study throws some light on the existence of quality differential in the access and delivery of public and private healthcare facilities in Jharkhand	Literature Survey and Field Work.	Principal Component Analysis, Multiple Regression Analysis, Z Test of Proportions and Sentiment Analysis

SAMPLING

For collecting data, a comprehensive list of all the different types of hospitals empanelled in AB PM-JAY within the Ranchi district was compiled. The current structure of healthcare providers was then divided into two clusters: Public Hospitals and Private Hospitals.

Patients, which represents the demand side, select a hospital on the basis of their perceptions and as they visit the hospital, their perceptions. The experience regarding the hospital will be based on the four major factors i.e., efficiency, effectiveness, safety and patient centeredness (Srinivasan, 2010). There are other factors which

also affects the selection of the hospital apart from their experiences, those are the cost of treatment, distance of the hospital from their home and hospital speciality. However, except the perception regarding the hospital, cost is nullified by considering only AB-PMJAY empanelled hospitals and patients. Also, only those hospitals will be considered where other hospitals are present within the 5kms radius. This will eliminate the transportation cost and time spent. In the study only OPD patients will be considered which nullifies the speciality of the hospital as a reason for selecting a particular hospital. Same hospitals will be considered for collecting data from hospital staffs, which represents the supply side.

Data Sampling Method:

- Structured Questionnaire
- Observation
- Google Reviews

Sampling Design:

- Simple Random Sampling
- Cluster Sampling
- Purposive Sampling

RELEVANCE OF PROJECTED FINDINGS

The purpose of my research is to study the quality differentials in healthcare facilities from the demand and supply perspective in Jharkhand. The findings from the research may help the policy makers at central or state level by providing required inputs for creation of new policy / scheme or modify / update the existing one.

CHALLENGES AND DIFFICULTY

There may be some challenges to talk and discuss with patients and understand their views as few of the rural and urban areas are sensitive in terms of taboo related to diseases, caste or religion. Also, surveying the hospitals and other healthcare institutions regarding the facilities available could pose some challenges.

HELP REQUIRED FROM UNIVERSITY

Continuous guidance and suggestion from Vice Chancellor Prof. (Dr.) ORS Rao sir, my guide Prof. (Dr.) Satyendra Kishore sir and other faculty members are required. Library accessibility within the IUJ campus and access to various journals is also needed. I also expect opportunity to present and publish my paper in National and International Conferences and also, information regarding the journals for increasing the publication is required.

ACKNOWLEDGEMENTS

It is two and half years since I took admission in ICFAI University Jharkhand in PhD-Management (part-time) and completed course work I and II and have given multiple presentations. I want to thank IUJ for giving me this

opportunity, extend my gratitude towards Vice Chancellor Prof. (Dr.) ORS Rao sir, my guide Prof. (Dr.) Satyendra Kishore sir and our co-ordinator, Dr. Rumna Bhattacharya ma'am for their continuous support and guidance. And at the same time, I want to take this opportunity to thank other faculty members and my friends with whom I have discussed time to time and seek their guidance.

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Timeline for Completion of the Study

SL.	MILESTONE	START DATE	END DATE
1	Questionnaire Development	25 July 2022	10 August 2022
2	Pilot Survey	15 August 2022	15 September 2022
3	Final Questionnaire and Schedule	20 September 2022	05 October 2022
4	Sample Survey	10 October 2022	10 January 2023
5	Data Cleaning and Collation	15 January 2023	31 January 2023
6	Data Analysis and Interpretation	01 February 2023	05 March 2023
7	Draft Thesis	10 March 2023	10 June 2023
	TOTAL ESTIMATED TIME		11 MONTHS