HEALTHCARE AT ARM'S LENGTH: EXPLORING THE EFFECTS OF DISTANCE ON HEALTH SERVICES UTILIZATION IN ODISHA, INDIA

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INTRODUCTION

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- Healthcare facilities are supposed to improve quality of life to enhance individuals’ efficiency and productivity and eventually reduce poverty (Mishra et al., 2019).
- Households and individuals may face barriers to healthcare facilities in the form of long distances, topographical challenges, and poor road and transportation networks (Verma & Dash 2020).
- The absence of healthcare facilities in the vicinity negatively affects households' socio-economic conditions (Loganathan et al., 2015).
- In India, households living in the Odisha province face inaccessibility to health services and impoverishment due to high Out-of-Pocket (OOP) expenditure on healthcare (Dehury et al., 2024, Sahoo & Senapati, 2022).

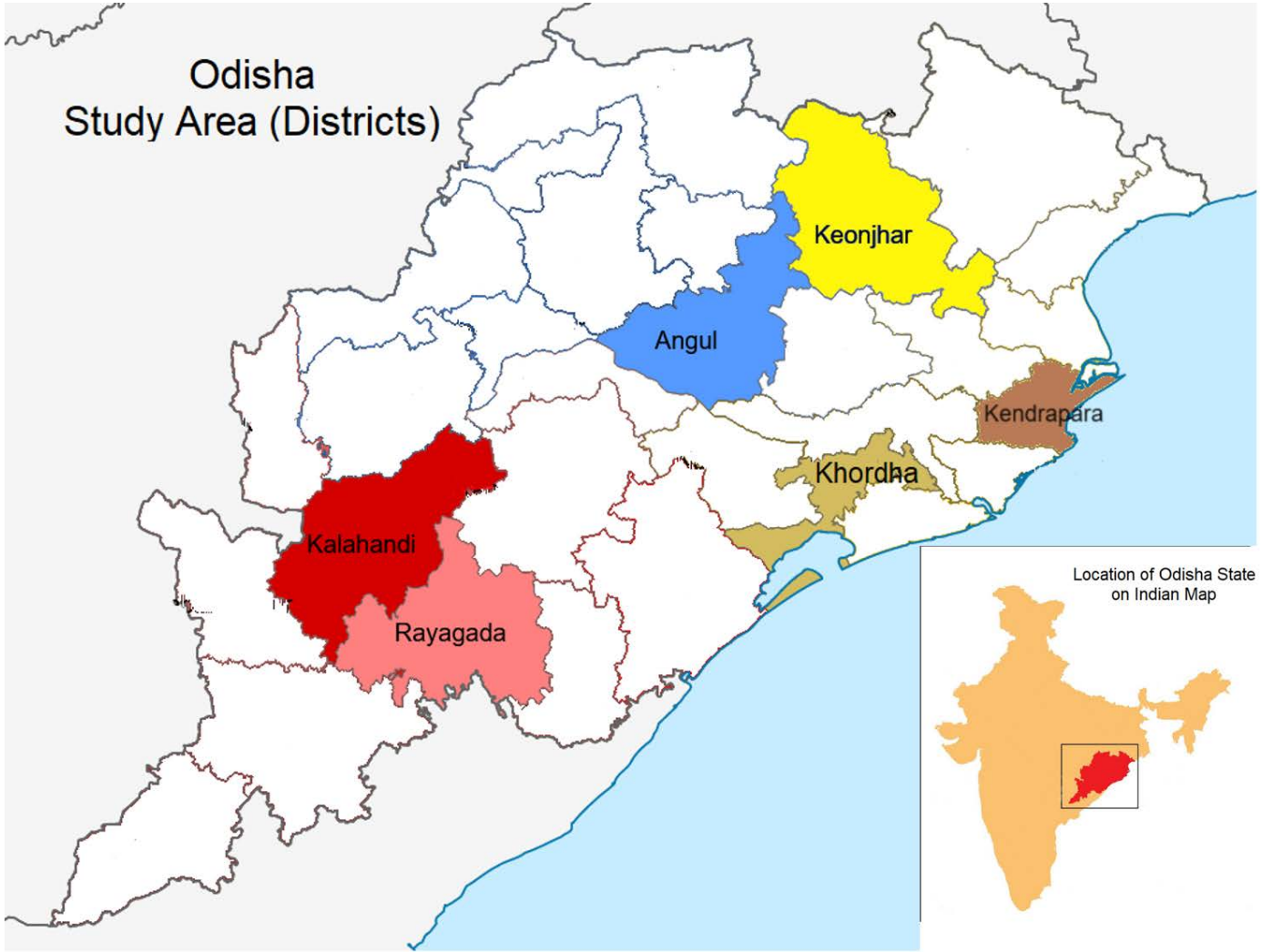
RESEARCH OBJECTIVE

The study aimed to analyse households' distance from healthcare facilities and its association with households' economic status.

METHODOLOGY

- The study is based on six purposively selected districts in the province of Odisha: Rayagada, Kalahandi, Angul, Keonjhar, Khordha, and Kendrapara.
- A cross-sectional household survey was conducted to collect the data. Households were chosen as the research unit. The survey took place from October 2023 to February 2024.
- OOP expenditure prevalence rate (found in Swain et al., 2018) was used to draw the sample size.
- Multistage cluster sampling was used to collect the data. Participant households were supposed to live in the chosen localities for at least the last five years. A minimum of two household members are required to live in the house.
- A structured household questionnaire was used to collect the data. 902 household data were collected.
- Bivariate data analysis is done using SPSS version 25.

GEOGRAPHICAL LOCATION OF THE SELECTED DISTRICTS IN ODISHA, INDIA



RESULTS & FINDINGS

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Characteristics	Categories	Frequency	Percentage	Total
Age	18-40	469	52.0	902
	41-60	354	39.2	
	60+	79	8.8	
Sex	Male	543	60.2	902
	Female	359	39.8	
Education	No schooling/ illiterate	272	30.2	902
	Primary	371	41.1	
	Secondary	133	14.7	
	Higher secondary	62	6.9	
	Graduation	64	7.1	
Occupation	Daily-wage labourer	250	27.7	902
	Agricultural labour	170	18.8	
	Farmer	151	16.7	
	Small shop/ business	116	12.9	
	Unemployed	91	10.1	
	Other	124	13.7	
Rural-Urban	Rural	744	82.5	902
	Urban	158	17.5	

DISTRIBUTION OF SAMPLE COLLECTED

Location	Districts	Frequency	Percentage
Coastal	Khordha	150	16.6
	Kendrapara	150	16.6
North	Angul	162	18
	Keonjhar	140	15.5
South	Rayagada	150	16.6
	Kalahandi	150	16.6
	Total	902	100

CORRELATIONS BETWEEN DV AND IV

- The dependent variable in this study is the household wealth index.
- The wealth index is prepared using the World Food Program guidance paper on the creation of a wealth index (Hjelm et al., 2017).
- The procedure included a list of household items, type of house and crowding data in the Principal Component Analysis (PCA) to draw the wealth index.
- Three household categories were made: poor-category households were coded as 1, middle-category households were coded as 2, and wealthy-category households are coded as 3.
- Independent variables were the time required to reach a private doctor/ hospital, public hospital, NGO-healthcare facility, and private pharmacist.
- The time to reach is categorised into three: less than one hour (<1 hour), do not know, and more than one hour (>1 hour). These categories are coded in ascending order. For example, less than one hour is coded 1, do not know as 2, and more than one hour is coded as 3.
- The correlation analysis of dependent and independent variables is shown below:

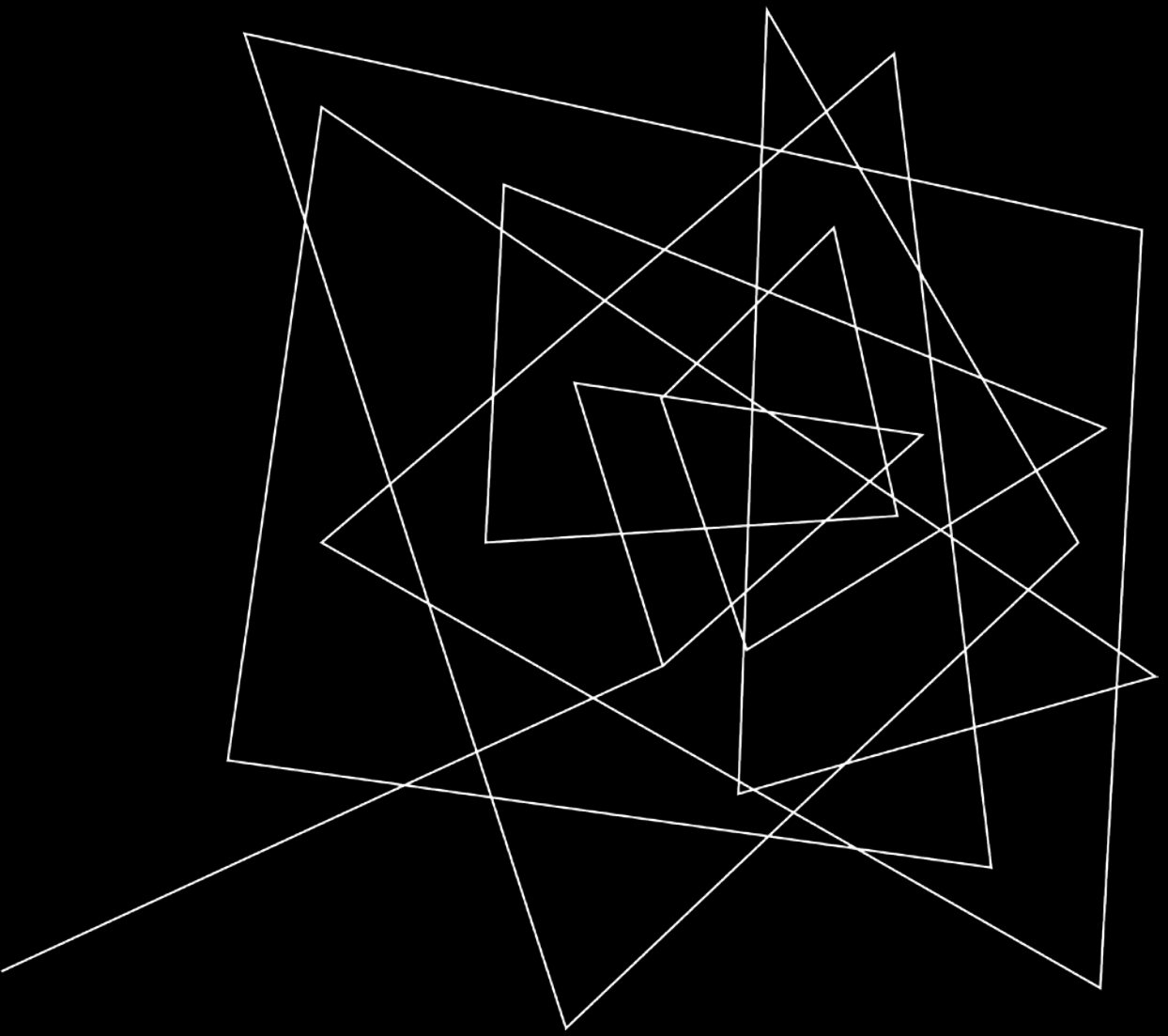
	HH wealth index	Significance
Private doctor/ hospital	-0.059	0.076
Public hospital	-.209**	0.000
NGO-run facility	-.161**	0.000
Private pharmacist	-.295**	0.000

** Correlation is significant at the 0.01 level (2-tailed).

ASSOCIATION BETWEEN HEALTHCARE FACILITIES AND HOUSEHOLD WEALTH INDEX

Healthcare facilities	Categories	Household wealth index categories			Total	Chi-square
		Poor	Middle	Wealthy		
Private doctor/hospital	Less than an hour	126 (33.6)	123 (32.8)	126 (33.6)	375 (100)	p<0.05
	Don't know	96 (28.3)	115 (33.9)	128 (37.8)	339 (100)	
	More than an hour	80 (42.6)	61 (32.4)	47 (25)	188 (100)	
Public hospital	Less than an hour	181 (30.4)	196 (32.9)	218 (36.6)	595 (100)	p<0.01
	Don't know	44 (23.9)	60 (32.6)	80 (43.5)	184 (100)	
	More than an hour	77 (62.6)	43 (35)	3 (2.4)	123 (100)	
NGO-run facility	Less than an hour	23 (39.7)	13 (22.4)	22 (37.9)	58 (100)	p<0.01
	Don't know	228 (30)	256 (33.7)	276 (36.3)	760 (100)	
	More than an hour	51 (60.7)	30 (35.7)	3 (3.6)	84 (100)	
Private pharmacist	Less than an hour	112 (23.7)	165 (34.9)	196 (41.4)	473 (100)	p<0.01
	Don't know	124 (37.8)	101 (30.8)	103 (31.4)	328 (100)	
	More than an hour	66 (65.3)	33 (32.7)	2 (2)	101 (100)	

Note: Frequency outside parenthesis and percentage inside parenthesis



DISCUSSION AND CONCLUSION

DISCUSSION

- The negative relationship between healthcare facilities' distance and household wealth index indicates that higher distance from healthcare facilities may lead to poorer household wealth scores. There are many repercussions of being situated far from healthcare facilities. For example, high transportation costs and the spread of Non-Communicable Diseases (NCDs) in low and middle-income countries (Biswas & Kabir, 2017).
- Private pharmacists are the first point of contact for illnesses in the communities because they save consultation fees and travel expenses (Ahmad et al., 2014). However, these benefits are only possible when private pharmacists are present in the vicinity. The present study shows private pharmacists are far away from poor households.
- Poor households in remote areas do not have access to healthcare services in general. A private pharmacy in the neighbourhood could be the prompt response to the lack of basic facility in rural areas (Kalita et al., 2023). There are also informal healthcare providers who serve in remote rural areas (Gautham et al., 2014). Their role is needed to be scrutinized and their services can be formally accommodated.

CONCLUSION

- Distance from healthcare services is one of the major factors that constitute access to healthcare. The socioeconomic condition of households should not deteriorate due to poor access to healthcare services.
- Quality and affordable healthcare services are supposed to be at arm’s length for every citizen. Innovative models of basic healthcare provisions can be emphasised to meet the objective. For example, the public-private partnership model of pharmacies. One such model is already functioning in India, known as Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). There is a need to revolutionise the spread of such pharmacies across India.
- Remote and rural areas need cost-effective connectivity to advanced centres of healthcare facilities across India. At regional levels, public hospitals must be accessible within one hour.

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THANK YOU

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