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A STUDY ON THE ASSOCIATION BETWEEN POVERTY, DEMOGRAPHICS, FAMILY SUPPORT, AND CANCER CARE IN JHARKHAND, INDIA

Imteyaz Ahmad[1], Padmaja Gadiraju*[1], Punam Singh*[2], Ranjit Kumar Dehury*[2], C. Vanlalhruaii*[1], MD Tabrez Alam*[3], Parthsarathi Dehury*[4]

1. Centre for Health Psychology, School of Medical Sciences, University of Hyderabad, Telangana - 500 046, India
2. School of Management Studies, University of Hyderabad, Telangana – 500 046, India
3. Indian Institute of Dalit Studies, New Delhi – 110 049, India
4. School of Public Health, AIPH University, Bhubaneswar- 754001, India

Correspondence: imteyazahmad777@gmail.com

ABSTRACT

OBJECTIVE:

The complex relationship between cancer care and poverty was examined in this paper. The study identified the association of various demographic factors with cancer care. The study also analyses the family's role and the support network in cancer care.

METHODOLOGY:

The study employed a mixed-method approach to understand cancer care in Jharkhand, India comprehensively. The study was conducted as a cross-sectional survey with 204 reproductive cancer patients. A structured interview schedule covered the socio-demographic variables and cancer care facilities. The study also used case study methods with three eligible adults who underwent or were currently undergoing cancer treatment. Descriptive statistics were used to summarise the study findings. The narratives of each case study construct a comprehensive understanding of each patient's journey with cancer care. The study has received ethical approval from the Institutional Review Board (IRB) and the cancer hospital.

RESULTS:

The survey results show that 47% of the respondents access treatment. Only 12.7% of respondents had taken the HPV vaccine, and 44.6% got physiotherapy during the treatment. Forty-four percent of respondents accessed counselling services from health services providers. Respondents' characteristics, such as age and gender, were strongly associated with access to counselling services. Education and family income were statistically associated with access to cancer care treatment. Only 7.4% of respondents arranged transport for treatment, and 11.8% arranged logistics and various treatment therapy for cancer care. Cancer patients from Jharkhand frequently face discrimination in receiving health care due to their economic condition. The case study perceived the differences in wealth, social class and family role in cancer care. As a result, cancer patients often feel hopeless and isolated, leading to depression and anxiety.

CONCLUSION AND IMPLICATION:

Poverty plays a negative role in providing and accessing cancer care in the state of Jharkhand. The role of family and society is essential for a cancer survivor. Psychological support from the family gives hope to life of the cancer patients. In

addressing the complex relationship between financial burden and cancer care, both government agencies and the social structures must implement comprehensive strategies.

KEYWORDS

Cancer care, poverty, demography, family support, Jharkhand, India

INTRODUCTION

Cancer is a leading cause of morbidity and mortality worldwide. The burden of incidence, morbidity, and mortality disproportionately affects the developing world. The world is hampered by cancers attributable to infectious diseases and risks associated with diet, tobacco, alcohol, lack of exercise, and industrial exposures [1]. India, marked by its diversity and complexity, is confronted with a pressing public health issue involving poverty and cancer care. A higher incidence of several cancers and lower survival rates are common among the poor. Poverty contributes to an increase in cancer incidence and mortality. Several factors are responsible for the increased mortality and morbidity from cancer among low-income people [2–4]. A study found the effect of poverty on increasing the death rate of cancer disease. Low-income countries have a higher rate of cancer mortality than high-income countries. The GDP income significantly impacts individuals' health, quality of life, and cancer mortality rates [5]. Many cancer cases in India are associated with tobacco use, infections, and other avoidable causes. The number of new cases of cancer diagnosed every year and the number of deaths is increasing in India [6,7]. A study found that lack of social support was associated with a higher cancer incidence and mortality risk. The study also identified that social support affects cancer onset and prognosis via a range of factors, including healthier lifestyles and adherence to therapeutic regimens [8].

Indian oncology clinicians identified three key challenges in cancer care: practical constraints, cultural values, and structural conditions. The practical constraints include access and treatment. Cultural values include communication, stigma, and the clinic. Structural conditions include inequalities related to place, gender, and class [9]. A study shows the age-standardized prevalence of cancer in India is estimated to be 97 per 100,000 persons, with a greater majority in urban areas. The average out-of-pocket spending on inpatient care in private facilities is three times greater than in public facilities [10]. Public expenditure on cancer in India is low compared to high-income countries. Out-of-pocket payments account for most of the cancer expenditures, leading to catastrophic expenditures for patients and their families [11]. A study found over 8,00,000 new cases and 5,50,000 deaths occur annually due to cancer in India, with the rural and underprivileged population representing the majority of patients [12]. Jharkhand, a state in eastern India, struggles with a multifaceted challenge concerning cancer care, where poverty plays a pivotal role in determining access to quality healthcare.

The complex relationship between cancer care and poverty is examined in this paper. The study identified the association of various demographic factors with cancer care. The study also analyses the family's role and the support network in cancer care.

METHODOLOGY

The study adopts a mixed-method approach to comprehensively reflect upon the interplay of poverty and cancer in a purposively selected region. The study design is an exploratory cross-sectional design. Structured interview schedule and open-ended in-depth interviews are tools used for data collection. The interview schedule comprised sections on demography, access to cancer care facilities and socioeconomic conditions of cancer patients. The survey method allowed for the collection of quantitative data to analyse various aspects of cancer care. In-depth interviews used to apply the case study methods which explored the impact of social determinants, poverty and other factors. The target population for the survey includes cancer patients who are currently receiving treatment or have received treatment in Jharkhand in the last year. Ranchi Cancer Hospital and Research Centre was approached for quantitative data collection. A purposive sampling technique was used to collect data.

The study was provided with ethical approval from the Institutional Review Board (IRB) at the University of Hyderabad. Cancer cases for in-depth-interviews were recruited from Ranchi Cancer Hospital and Research Centre and Rajendra Institute of Medical Sciences, Ranchi. The sample size was determined using the prevalence of cancer in Jharkhand. The sample calculated was 204 respondents. Three eligible adult participants were found in the oncology centres at different hospitals in Jharkhand; among them, one participant has undergone cancer treatment while two others were currently undergoing treatment. Descriptive statistics are generated as a part of the study findings using SPSS version 25.

Cancer patients' lived experiences are represented in the case studies. The three cases highlight three major issues pertaining to the cancer impact; the first is poverty, the second is fear and family support, and the third is about social stigma.

RESULTS

The socio-demographic characteristics of reproductive system cancer patients who took part in quantitative data collection were mostly of 40-59 years of age category and the mean age was 45.27 years. Female patients were considerably higher than men (74.5%). Highest patients were of Hindu religion background (69.6%). Comparison in terms of education reveals higher percentage share of patients who never attended formal schooling (43.1%). Rural-urban distribution of patients was similar, though, in rural areas number of patients were slightly higher than urban. In the three income groups shown in table 1 middle income group is observed with slightly higher incidences of reproductive system cancer. Otherwise, higher income groups are found with lesser incidences of reproductive system cancer.

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Respondents' characteristics	Category	Frequency	Percentage	Total (N)
Age	20 to 39 years	56	27.5	204
	40-59 years	123	60.3	
	60 years and above	25	12.3	
	Mean age	45.27		
Gender	Male	52	25.5	204
	Female	152	74.5	
Religion	Hindu	142	69.6	204
	Muslim	49	24.0	
	Christian	13	6.4	
Education	Not attended school	88	43.1	204
	Up to 10th standard	78	38.2	
	10th and above	38	18.6	
Type of Residence area	Urban	84	41.2	204
	Rural	87	42.6	
	Semi-Urban	33	16.2	
Infrastructure	Kutcha	30	14.7	204
	Semi-Pucca	94	46.1	
	Pucca	80	39.2	
Total Annual income of the family	Up to 100,000 INR	68	33.3	204
	100001-200000 INR	72	35.3	
	200001 INR and above	64	31.4	

Access to cancer care is critical for recovery. Vaccination and counselling services were satisfactorily accessible with regard to different age categories. Counselling services is more accessible by male patients compare to female. Christian patients get cancer treatment more often than Hindu and Muslim patients. Although, access to physiotherapy is negligible among Christian patients but common among Hindu and more common in Muslim patients. More than 63% patients who are educated up to 11th and above standards get treatment, which is highest among education categories.

TABLE 2: ACCESS TO CANCER CARE

	Respondents' characteristic	Treatment	Vaccinated (HPV)	Physiothe-rapy	Counselling services	Total
Age	20 to 39 years	46.4	1.8**	35.7*	66.1***	56
	40-59 years	48.8	17.9	51.2	35.0	123
	60 years and above	40.0	12.7	32.0	44.0	25
Gender	Male	42.3	17.3	38.5	61.5***	52
	Female	48.7	11.2	46.7	38.8	152
Religion	Hindu	45.8**	12.0	45.1***	40.8**	142
	Muslim	40.8	14.3	55.1	59.2	49
	Christian	84.6	15.4	0.00	30.8	13
Education	Not attended school	28.4***	10.2	44.3	42.0	88
	Up to 10th standard	60.3	12.8	42.3	44.9	78
	11th and above	63.2	18.4	50.0	50.0	38
Household income	Up to 100,000 INR	44.1	14.7	35.3**	47.1	68
	100001-200000 INR	45.8	11.1	56.9	41.7	72
	200001 INR and above	51.6	12.5	40.6	45.3	64
	Total	47.1	12.7	44.6	44.6	204

Significance: ***p<0.01, **p<0.05, *p<0.1

CASE STUDY 1 - POVERTY AND CANCER

Mohammad Hushen (name changed), a 38-year-old daily wage labourer, was battling with tongue and skin cancer. Hushen was not very educated. In his family, five members were there in aggregate (a couple and three children). Children were below seven years of age. Hushen was the sole earning member of the family. Four months ago, he was diagnosed with cancer. Despite being aware of the disease, he continued working as a daily wage labourer. He was more concerned about family expenses, including his treatment costs. His pain aggravated, and his energy to continue working went down substantially. The family came under excess financial pressure. Children's education is negatively affected. The family became financially indebted. The family was fearful of stigma; therefore, they did not tell others about the disease for long time.

Hushen lived in a small village where no good healthcare services were available. In the initial days of pain and suffering, he took pain relief tablets over the counter. It only wasted crucial time of diagnosis. He was diagnosed with cancer at an advanced stage. His treatment started, but the cost was unbearable. He sold inherited land and household items in the process of treatment.

Later, when his neighbours and community members came to know about his cancer. They came forward and helped him by crowdfunding. He felt bad about losing his physical ability and becoming dependent on others.

CASE STUDY 2 - FEAR AND FAMILY SUPPORT

Suman (name changed), a 26-year-old woman living in Bokaro (a city), Jharkhand, was diagnosed with reproductive cancer. She had been suffering from severe abdominal pain, nausea, and vomiting. Her family took her to the nearest hospital, but the doctors could not determine the disease properly. After continual suffering, she was referred to the RIMS Ranchi for diagnosis. It was eventually diagnosed as reproductive cancer after multiple hospital visits and tests. Suman lived a healthy and satisfied life until she was diagnosed with cancer. She was unable to come to terms with the cancer she was diagnosed with. It took a toll on the poor mental condition of her. She felt completely cut off from the family and community.

Suman was scared of going through chemotherapy and other treatments and was confused about the future and how to cope with the disease. She felt helpless as she could not do anything to eliminate the disease. Mainly the fear of death was overwhelming her. The physical pain and fatigue further worsened her mental trauma. She was constantly feeling tired and had no energy to do anything. She also felt isolated as she could not share her pain and suffering with anyone.

Her parent's struggle to manage treatment expenses was also distressing her. Fortunately, her parents found support from a non-governmental organisation (NGO). The NGO helped them financially and managed counselling sessions for Suman.

Suman was able to overcome the mental distress and gained confidence to fight the disease.

CASE STUDY 3 - STIGMA AND SOCIAL SUPPORT

Nisha (name changed), a 37-year-old married woman living in Hatia (a rural area), Jharkhand, was diagnosed with colon cancer. She was a mother of seven children. Her husband worked as a watchman. The family belonged to a lower-income stratum.

She suffered from abdominal pain and sought treatment from local healthcare providers. They could not detect cancer in many consultations. A physician asked to take a cancer test. Then, she was diagnosed with colon cancer. Her husband showed confidence that he would do everything to make her free from cancer. Initially, they did not know much about where to go and how to seek treatment. They lost a lot of money and sold assets in private physician treatment, but they got no relief. The family came under huge debt.

Relatives did not pay any attention to the family's distress. Later, her husband isolated her from the rest of the family due to the fear that she could infect others. Her family developed an understanding that this disease is caused due to her past sins. Nisha was told that she had brought shame to the family. As a result, she developed mental health issues like anxiety and insomnia.

She was brought to Ranchi Cancer Hospital and Research Centre while she went through all the stigma and trauma.

DISCUSSION

Cancer and financial distress are connected, and they interplay with stigma and deteriorated mental health. The adverse impact of cancer on poor families in India is phenomenal. It encompasses a lack of resources, fear, and stigma. The lack of public cancer care services also contributes to the problem. In rural and remote areas, patients take a long route to reach cost-effective and quality cancer care facilities.

Cancer treatments are costly, and all patients cannot afford the necessary care. This can lead to further emotional distress and a more significant burden on the family [13–16].

A study found financial difficulties arose due to the cost of treatment and the need to travel to receive it [17]. The study argues that patients suffering from cancer stay away from household work due to stigma and fear. This study addressed the NGOs assisting cancer patients in accessing adequate treatment. Similarly, a study argues that the role of philanthropic organisations was providing information about available cancer care facilities, helping them navigate the healthcare system, and sometimes even providing transportation to hospitals and financial aid [18]. Cancer patients from Jharkhand frequently face discrimination in receiving health care due to their economic condition. As a result, cancer patients often feel hopeless and isolated, leading to depression and anxiety [19].

CONCLUSION

The challenges posed by poverty are multifaceted and have far-reaching consequences for individuals as well as communities to cope with cancer in this region. Poverty not only limits access to early detection and timely treatment but also exacerbates the physical and emotional burdens faced by cancer patients and their families. The role of family and society is very important for a cancer survivor. Psychological support from the family gives hope to life of the cancer patients. Healthcare institutions should take counselling services and palliative care. In addressing the complex relationship between financial burden and cancer care in Jharkhand, it is the responsibility of both government agencies and non-governmental organisations to implement comprehensive strategies.

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CONFLICT OF INTEREST:

None

ETHICAL APPROVAL:

Was obtained from the University of Hyderabad ethical clearance committee..

CONSENT TO PARTICIPATE:

A written consent was obtained from participants before beginning the study.

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