

# An Observational Study to Assess the Socioeconomic Status and Demographic Profile of Advanced Cancer Patients Receiving Palliative Care in a Tertiary-Level Cancer Hospital of Eastern India

Gaurav Kumar, Nibedita Panda, Rakesh Roy, Gautam Bhattacharjee

Palliative Care Unit, Saroj Gupta Cancer Centre and Research Institute, Kolkata, West Bengal, India

## Abstract

**Introduction:** Socioeconomic status (SES) comprises of not just gross income but also educational qualification, financial security and individual perceptions of social status and class. It has been observed that people with low SES have less access and utilization of palliative care services. With this background, this observational study was carried out at SGCCRI to assess and evaluate the SES of patients attending the palliative care department and analyse the major social concerns of patients in the last days of life. **Objectives:** Assessment of socioeconomic status and demographic profile of patients with advanced cancer receiving palliative care. **Materials and Methods:** From May 2017 to October 2017 we assessed the demographic features and socio-economic status of 80 advanced cancer patients receiving palliative care by interviewing them face to face with the help of a self designed social assessment sheet. **Results:** A total of 80 patients consented to be interviewed with regards to assessment of their socio-economic conditions. Majority were male patients (64%) with the highest percentage in the age group of 60-70years (33%). 38% of the patients interviewed were from rural surroundings. Only 38% of the patients had completed their basic education. Approximately 30% of the patients interviewed had income less than 1lakh/month while majority (>60%) had income in the bracket of 1lakh- 2lakh. In 30% of cases, the patient was the sole earner in the family. **Conclusion:** It was observed that majority of patients and their family were constrained with regards to financial resources and large percentage of patients had social insecurity with respect to future of family members.

**Keywords:** Demographics, palliative care, socioeconomic status

## INTRODUCTION

The present-day global incidence of new cases of cancer is 14.1 million per year, and the number of cancer-related deaths is 8.2 million deaths/year.<sup>[1]</sup> India being the second most populous country backs the global data with 2.5 million people living with cancer, 0.7 million new cases diagnosed with cancer, and 0.55 million cancer-related deaths annually.<sup>[2]</sup> Medical science has dominated the field of oncology in the last few decades with advances in cancer therapeutics and the introduction of screening for early detection of certain cancers.<sup>[3]</sup> For an increasing proportion of cancer patients, survival becomes a way of life. However, increased survival is associated with adversities such as chemotoxicity, socioeconomic insecurities, increased

dependence on caregivers, and social isolation. A cancer diagnosis may threaten any of patient's responsibilities at home, workplace, and recreationally which may result in a range of potential social problems which are an underlying reflection of life and socioeconomic status (SES) of individual patients.<sup>[4]</sup> Assessment of social concerns is, however, not considered a routine part of standard cancer care as the primary preoccupation of the oncology team is usually to emphasize

**Address for correspondence:** Dr. Gaurav Kumar,  
Department of Palliative Care, Balco Medical Centre, Sector 36,  
Naya Raipur - 493 661, Chhattisgarh, India.  
E-mail: drgauravasthana10@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** reprints@medknow.com

**How to cite this article:** Kumar G, Panda N, Roy R, Bhattacharjee G. An observational study to assess the socioeconomic status and demographic profile of advanced cancer patients receiving palliative care in a tertiary-level cancer hospital of Eastern India. *Indian J Palliat Care* 2018;24:496-9.

### Access this article online

#### Quick Response Code:



**Website:**  
www.jpalliativecare.com

**DOI:**  
10.4103/IJPC.IJPC\_72\_18

on maintaining survival.<sup>[5]</sup> Although many patients develop good coping strategies to having had a cancer diagnosis and treatment,<sup>[6]</sup> there are others who may struggle and who would benefit from good psychosocial support.<sup>[7]</sup>

Studies from western countries found that SES impacted inequities in healthcare system with low SES patients having less access to medical resources and high-volume service providers.<sup>[8]</sup> A growing body of literature suggests a persistent relationship between SES and health status with SES influencing survival in several common cancers.<sup>[9]</sup>

Detection and characterization of social problems have been found to improve care of cancer patients and result in improved quality of life. With this background, this study aims to identify the character and prevalence of social problems experienced by cancer patients.

## SUBJECTS AND METHODS

This was a prospective, single-institutional, observational study carried out in the Department of Palliative Care at Saroj Gupta Cancer Centre and Research Institute (SGCCRI), Kolkata.

Patients were invited to participate by a palliative care consultant in outpatient clinics, and consenting patients were recruited for assessment and analysis. Information regarding the demographics and SES was collected from the medical notes and patients. An interview guide was designed [Table 1] incorporating general introductions followed by the question format.

Eighty patients were analyzed over a period of 7 months from July 2017 to December 2017. Patients with advanced cancer above 18 years of age attending palliative care outpatient

department (OPD) and consenting to participate in the study were included. Patients were assessed using a self-designed social assessment sheet and modified Kuppuswamy scale to determine SES in face-to-face interviews during their presentation to palliative care OPD.<sup>[10]</sup>

Modified Kuppuswamy scale using education, occupation, and monthly family income to calculate the socioeconomic scale was used, and the patients were scored into five different socioeconomic classes based on their respective scores.<sup>[11]</sup>

## Ethical consideration

Subjects were explained the purpose of the study, and those who gave consent to participate in the study were interviewed to collect the desired information on the designed assessment sheet. In case of respondents who were very sick, assent was taken from primary caregivers. Confidentiality of responses was assured.

## RESULTS

Of the 80 patients interviewed, 39% ( $n = 31$ ) belonged to the age group of 60–70 years followed by 24% being in the age bracket of 50–60 years and minimal representation from adolescents and children. Sixty-four percent of the patients ( $n = 51$ ) were males while 36% ( $n = 29$ ) were females [Table 2]. Approximately 54% of the participants stayed >25 km from the hospital and for whom communication to the hospital at regular intervals was a concern.

Of the type of cancer affected, 37.5% had cancers of gastrointestinal tract followed by 20% afflicted with gynecological cancers, 12.5% each of head and neck and thoracic cancers, and the remaining being genitourinary, brain, and bone cancers [Table 3].

**Table 1: Assessment sheet to evaluate socio-economic status**

Socio-economic Assessment Sheet				
Name of Patient				
UHID				
Diagnosis				
Age:				
Sex				
Address				
Educational qualifications				
Total number of family members				
Contact No.				
Name of Family member	Relationship with patient	Age	Occupation	Income
Main Caregiver at home:				
Family income holder				
Monthly income of family				
Dwelling status				
Home gadgets				
Social concern				
Date				
Assessed by:				
Signature of assessor				

There was an equal mix of patients from rural ( $n = 31$ ) and urban areas ( $n = 33$ ) with a minority 20% of patients ( $n = 16$ ) from semi-urban locales of Kolkata. Majority of the participants of the study had attained basic level of education of up to matriculation ( $n = 29$ ) [Table 2].

Applying the modified Kuppaswamy scale, 61% of participants had a score of <15 belonging to lower middle and lower SES, 26.25% had a score between 16 and 25 and belonged to the upper middle class, while 12.5% had scores between 26 and 29 and belonged to upper class of

Patient characteristics	Number of patients (n)	Percentage
Age		
20 - 30 years	6	7.5
31-40 years	6	7.5
41 - 50 years	13	16.25
51 - 60 years	19	23.75
61 - 70 years	31	38.75
71 - 80 years	4	5
>80 years	1	1.5
Patient characteristics	Number of patients (n)	Percentage
Sex:		
Male	49	61.25
Female	31	38.75
Living surroundings:		
Urban	33	41.25
Semi-urban	16	20
Rural	31	38.75
Distance from hospital		
>25 km	37	46.25
Within 25 km	43	53.75

Type of Cancer	Number of patients	Percentage
Gastrointestinal tract	30	37.5
Gynaecological	16	20
Head and Neck	10	12.5
Lung	10	12.5
Genitourinary	08	10
Bone	03	3.75
Brain	03	3.75

Kuppaswamy score	SES	Number of patients	Percentage
26 - 29	Upper	10	12.5
16 - 25	Upper middle	21	26.25
11 - 15	Lower middle	22	27.5
5 - 10	Upper lower	15	18.75
<5	Lower	12	15

the society [Table 4]. In 30% of the patients and families studied, patient himself/herself was the sole bread earner of the family [Table 4].

The major social problems were listed as follows:

- Insecurities regarding family members future in 32.5% of participants
- Financial insecurity in 26.25% of participants
- Maintaining independence in 12.5% of participants
- Progression of disease in 10% of participants
- Unable to overcome the psychological stress of being inflicted with a life-limiting condition in 18% of participants.

## DISCUSSION

The study gives us a brief understanding regarding the SES of cancer patients presenting to palliative care OPD of SGCCRI, Kolkata. Social problems that dominated the study scenario were (a) future insecurities for family; (b) financial insecurities; (c) maintaining independence; and (d) fear regarding disease progression and terminality of disease.

These corroborated in most of the concerns with a study conducted by Wright *et al.*<sup>[5]</sup> Our study contradicted with Wright *et al.* and Keller and Henrich.<sup>[5,12]</sup> in view of gender inequalities in which female representation was higher as compared to male representation. It was observed that patients with low SES had reduced coping to psychological distress as compared to patients with high SES and required referral to a psychologist which corroborated with similar findings from a study conducted by Schock,<sup>[13]</sup> who linked higher income with access to better healthcare and more resources with which to make better health decisions.

Our study has certain limitations which must be considered while interpreting the results. We used data from a single cancer hospital which caters to a particular area and not entirely representative of the entire region. As a result, the demographic and socioeconomic characteristic of the cancer cases from this hospital may be different from the nationwide data.

## CONCLUSION

In this population-based observational study, it was observed that majority of patients and their families were constrained with regard to financial resources and large percentage of patients had social insecurity with respect to future of family members after patient's death. In a subgroup of patients, concern regarding maintaining independent activities of daily living was major distress. Participants of low SES were found to have difficulties in coping with their diagnosis and predicament and required intervention by a psychologist to relieve their anxiety and psychological distress. Furthermore, in a large percentage of patients, the patient himself/herself was the sole earner of the family and the diagnosis of cancer brought economic crisis to patient's family and thereby leading to financial insecurities.

Our study provides a correlation between SES and level of coping mechanisms of patients suffering from advanced cancer. This provides direction to screen patients for social and psychological distress and address them at the appropriate time.

Further studies in a larger population of patients to clarify and establish this correlation may be performed.

#### Financial support and sponsorship

Nil.

#### Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. Available from: <http://www.who.int/mediacentre/factsheets/fs297/en>. [Last accessed on 2018 Sep 12].
2. Available from: <http://www.cancerindia.org.in/statistics>. [Last accessed on 2018 Sep 12].
3. Sparreboom A, Verweij J. Advances in cancer therapeutics. *Clin Pharmacol Ther* 2009;85:113-7.
4. Pearce N Why Study Socioeconomic Factors and Cancer *ARC Sci Publ*. 1997;138:17-23. Review PMID: 9353660.
5. Wright EP, Kiely MA, Lynch P, Cull A, Selby PJ. Social problems in oncology. *Br J Cancer* 2002;87:1099-104.
6. Zebrack BJ. Psychological, social, and behavioral issues for young adults with cancer. *Cancer* 2011;117:2289-94.
7. Cull A, Stewart M, Altman DG. Assessment of and intervention for psychosocial problems in routine oncology practice. *Br J Cancer* 1995;72:229-35.
8. Chang CM, Wu CC, Yin WY, Juang SY, Yu CH, Lee CC, *et al.* Low socioeconomic status is associated with more aggressive end-of-life care for working-age terminal cancer patients. *Oncologist* 2014;19:1241-8.
9. Zell JA, Rhee JM, Ziogas A, Lipkin SM, Anton-Culver H. Race, socioeconomic status, treatment, and survival time among pancreatic cancer cases in California. *Cancer Epidemiol Biomarkers Prev* 2007;16:546-52.
10. Bairwa M, Rajput M, Sachdeva S. Modified Kuppaswamy's socioeconomic scale: Social researcher should include updated income criteria, 2012. *Indian J Community Med* 2013;38:185-6.
11. Kuppaswamy B. Manual of socio economic status scale (urban) Delhi: Manasayan; 1981.
12. Keller A, Henrich G. Illness-related distress: Does it mean the same for men and women? Gender aspects in cancer patients distress and adjustment. *Acta Oncol* 1999;38:747-55.
13. Schock T. Socioeconomic Status and Cancer Outcomes in the United States: Examining Geographic Dissidence in Incidence and Mortality Rates; 2016.