

Effect of Education and Socioeconomic Status on Anxiety, Depression and Stress Level of Cancer Patients

Arti Sonara^{1*}

ABSTRACT

The prevalence of psychological distress among cancer patients is high, and they are at higher risk of developing severe anxiety, depression and potential mood disorders. The present research examined educational level and socioeconomic status differences in the degree of anxiety, depression and stress among cancer patients. The sample consisted of 540 patients within the age range of 25-45 years. The sample for the study was obtained from the various Hospitals of Ahmedabad city. The purposive sampling technique was used because the patients were selected on the basis of the inclusion-exclusion criteria such as 1) age range within 25-45 years; 2) willingness to participate in the present research; 3) suffering from lungs and breast cancer in the first stage; and 4) being treated in outdoor settings of public hospitals of Ahmedabad city. Results of present research work demonstrate that there is an influence of education level and socioeconomic status of cancer patients on anxiety, stress and depression level of cancer patients. The government should focus on characteristics of lower-income occupation and lower educational attainment group to develop more accurate and effective prevention and treatment strategies for cancer.

Keywords: *Cancer patients, Anxiety, Depression, Stress, Educational and Socioeconomic status*

The term cancer covers more than 100 different medical conditions all involving the abnormal and excessive divisions of human cells. Cancer is also known as 'malignant disease'. Tumour and growth are alternative terms which are sometimes used for cancers (Barracough, 2000). Cancer is caused by the abnormal growth of cells. Cancer is perceived as a serious and chronic disease which contains hopelessness and uncertainties, reminds of a painful death, evokes guilt and anxiety, and creates panic and confusion. In this sense, cancer causes a disaster and a dramatic breakdown in the psychic balance of the person.

Anxiety is an internalized fear, arousal by an impulse to commit. Anxiety is a danger signal to the ego that dangerous impulse is about to break, in fact, it is an unconscious reaction to depressed tendencies characterized by over concern which may turn over to panic or severe fear. Physical and Psychological symptoms include sweating, trembling of lips and hands,

¹ (Research Scholar, Dept. of Psychology, Gujarat University, Gujarat, India)

*[Responding Author](#)

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rapid breathing, rapid heartbeat, dryness of mouth, frequent urination; tenseness, irritability, imagined danger, sleeplessness, lack of concentration and inability to make a decision etc. Anxiety has detrimental effects.

The definition of clinical depression is defined as the indicative symptoms of depression meets the Diagnostic and Statistical Manual-IV criteria for depressive disorder. In DSM-IV the term depression is not a normal, a temporary mood caused by life events or grieving. A person is diagnosed depressed on the basis of the criteria for the clinical depression (DSM-IV, 1994). Depression is a severe mood disorder covered a variety of negative moods and behavioural changes and is the fourth leading cause of social incapacitation in the world. In India, about 5% of people are living with depression and anxiety disorders. In India psychological problem like depression among students is neglected public health problem as we have just one psychiatrist for four lakh citizens. We have only about 4,000 psychiatrists, 1,000 psychologists and 3,000 social workers for the whole of the country (Prabhakar & Dubouis, 2013).

Stress is the emotional and physical reaction that occurs when changes, that disturb or threaten to disturb daily life, force a person to adapt (Cohen, Janicki-Deverts, & Miller, 2007). In normal ranges, stress does not have to be a problem, because life is never free of stress. However, stress does become a problem when the changes threaten someone's well-being or when an individual feels incapable of dealing with the situation (Sklar & Anisman, 1981). Such a larger stress reaction causes physiological changes that can be harmful to someone's health (Brysbart, 2006). It is therefore important to treat the stress of cancer patients early. Among others, it is shown that cancer is a severe stressor by the distress that patients feel even years after the treatment (Deimling et al., 2002).

This study conducted by Hellstadius et al. (2017) was aimed to establish the prevalence and predictors of anxiety and depression among esophageal cancer patients, post-diagnosis but prior to curatively intended surgery. This was a cross-sectional study using data from a hospital-based prospective cohort study, carried out at St Thomas' Hospital, London. Potential predictor variables were retrieved from medical charts and self-report questionnaires. Anxiety and depression were measured prior to esophageal cancer surgery, using the Hospital Anxiety and Depression Scale. Prevalence of anxiety and depression was calculated using the established cutoff indicating cases of 'possible-probable' anxiety or depression, and multivariable logistic regression analyses were performed to examine predictors of emotional distress. Among the 106 included patients, 36 scored above the cutoff for anxiety and 24 for depression. Women were more likely to report anxiety than men, and patients reporting limitations in their activity status had more than five times greater odds of reporting depression. A substantial proportion of esophageal cancer patients report anxiety and/or depression prior to surgery, particularly women and those with limited activity status, which highlights a need for qualified emotional support.

Another study conducted by Al Jadili & Thabet (2017) aimed to examine the mental health status of the diagnosed with cancer and the coping strategies that adopted by them in front of stressful situation. The sample consisted of 358 diagnosed with cancer in the oncology clinic at Shifa Hospital in Gaza Strip. Participants were interviewed individually by questionnaire include socioeconomic questionnaire, PTSD scale, and Ways of Coping Scale. The group of 40 years and less were significantly higher in re-experiences than 71 years and above among

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the study sample. Findings revealed that there is a the need for therapeutic and educational programmes-including counseling for those patients with cancer and their families, support groups, and behavioural therapy for patients with P.T.S.D, and other psychiatric disorders.

Statement of problem:

The present investigation attempts to study about “*Effect of Education and Socioeconomic Status on Anxiety, Depression and Stress Level of Cancer Patients*”.

Operational Definitions:

Anxiety: Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional and behavioural components. These components combine to create an unpleasant feeling that is typically associated with uneasiness, fear or worry. Anxiety is a generalized mood or state that occurs without an identifiable triggering stimulus. Anxiety is a normal reaction to stress. It may help a person to deal with a difficult situation, for example at work or at school, by prompting one to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder.

Depression: In the present study, the term “Depression” refers to symptoms of depression such as hopelessness and irritability, as well as physical symptoms that were measured by the Beck Depression Inventory, Beck & Beamesdefer, (1974).

Stress: Stress is a normal physical response to events that make you feel threatened or upset your balance in some way. When you sense danger—whether it’s real or imagined—the body’s defences kick into high gear in a rapid, automatic process known as the “fight-or-flight-or-freeze” reaction, or the *stress response*.

Cancer: A term for diseases in which abnormal cells divide without control and can invade nearby tissues. Cancer cells can also spread to other parts of the body through the blood and lymph systems.

Objectives:

1. To find the level of Anxiety, Depression and Stress among primary, secondary and higher educational status cancer patients.
2. To find the level of Anxiety, Depression and Stress among lower, medium and high socioeconomic status of Cancer patients.

Hypotheses:

1. **H₀₁** There is no significant mean difference between scores of Anxiety, Depression and Stress among primary, secondary and higher educational status cancer patients.
2. **H₀₂** There is no significant difference between scores of Anxiety, Depression and Stress among lower, medium and high socioeconomic status cancer patients.

Research design:

The present study is not possible experimentally because of the nature of the investigation. The researcher adopted the quantitative descriptive research for gaining the objectives of the study. It is the survey quantitative research in which the event has already occurred and the effects of the variables were studied by qualitative analysis.

Variables:

Two independent variables i.e. educational status and socioeconomic status were selected for the present research work, whereas the level of anxiety, depression and stress of cancer patients were selected as a dependent variable.

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Inclusion criteria

- 1) Age range within 25-45 years;
- 2) Willingness to participate in the present research;
- 3) Suffering from brain and breast cancer in the first stage;
- 4) Being treated in outdoor settings of public hospitals of Ahmedabad city.

Sample:

For the present research work researcher has selected 540 cancer patients age range between 25 to 45 years with the help of purposive random sampling techniques. The sample was selected from various government hospitals like Civil hospital, Gujarat Cancer Research Institute etc. as well as private hospitals and clinics of Ahmedabad City of Gujarat state.

Table:- Showing categorization and details of sample

Educational Status	Socioeconomic Status			Total
	Low	Middle	High	
Primary	60	60	60	180
Secondary	60	60	60	180
Higher	60	60	60	180
Total	180	180	180	540

Tool:

The tool for the present study was selected in a manner to achieve an optimum level of confidence by the researcher for the objectives of the study.

Anxiety, Depression and Stress Scale: - This scale was developed by Bhatnagar, P. et al. (2011) and published by National Psychological Corporation. This scale consists of 48 items divided into Three Sub Scale –

- I. Anxiety,
- II. Depression and
- III. Stress.

This scale was administered to 1177 adults. This scale consists of satisfactory validity and reliability.

Scoring:

In the present study, scoring of the obtained data was done with help of respective manuals available for the test. The data have been arranged in the respective table according to the statistical test applied.

Statistical Analysis:

In the present study to find out the significant difference between the groups i.e. primary, secondary and higher educated cancer patients and lower, middle and high socioeconomic status cancer patients 'F' test, Mean and SD were calculated.

RESULTS AND DISCUSSION

Table 1:- Showing Mean, SD & F value among the cancer patients of primary, secondary and higher education for dependent variable Anxiety.

Educational Status (B)	N	Mean	SD	F	Sig.
Primary (B1)	180	11.43	2.81	14.87	$p < .01$
Secondary (B2)	180	10.54	2.73		
Higher (B3)	180	10.08	3.24		

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Table no.1 shows F value and mean score for educational groups of cancer patients in which F ratio is reported significant $F(1,180) = 14.87, p < .01$. Mean score obtained by cancer patients with primary level educated is 11.43 (SD = 2.81), for secondary level educated cancer patient is 10.54 (SD=2.73) and for higher level educated cancer patients is 10.08 (SD = 3.24) respectively. It can be said that primary level educated cancer patients have greater symptoms of anxiety than the rest of two groups of cancer patients i.e. secondary level educated and higher level educated.

Table 2:- Showing Mean, SD & F value among the cancer patients of primary, secondary and higher education for dependent variable depression

Educational Status (B)	N	Mean	SD	F	Sig.
Primary (B1)	180	9.17	3.44	30.241	$p < .01$
Secondary (B2)	180	8.75	3.38		
Higher (B3)	180	6.97	2.64		

Table no.2 highlights F value and mean value for educational groups of cancer patients for depression in which F ratio is indicated significant $F(1,180) = 30.24, p < .01$. Mean score observed by cancer patients with primary level educated is 9.17 (SD = 3.44), for secondary level educated cancer patient is 8.75 (SD=3.38) and for higher level educated cancer patients is 6.97 (SD = 2.64) respectively. It can be said that primary level educated cancer patients have greater symptoms of depression as compared to the rest of two groups of cancer patients i.e. secondary level educated and higher level educated.

Table 3:- Showing The Mean, SD & F value among the cancer patients of primary, secondary and higher education for dependent variable Stress.

Educational Status (B)	N	Mean	SD	F	Sig.
Primary (B1)	180	6.66	3.49	14.430	$p < .01$
Secondary (B2)	180	5.98	3.27		
Higher (B3)	180	5.95	3.37		

Table no. 3 displayed F value and mean score for educational groups of cancer patients in which F ratio is reported significant $F(1,180) = 14.43, p < .01$. Mean score obtained by cancer patients with primary level educated is 6.66 (SD = 3.49), for secondary level educated cancer patient is 5.98 (SD=3.27) and for higher level educated cancer patients is 5.95 (SD = 3.37) respectively. One can well imagine that primary level educated cancer patients have greater symptoms of depression than the rest of two groups of cancer patients i.e. secondary level educated and higher level educated.

Hence, hypothesis no.1 also rejected. Anxiety, depression and stress are influenced by the level of education and education level creates awareness and improves the level of knowledge about cancer and its complications.

The finding of the current research is in agreement with the finding of *Srivastava, V., et al. (2016)*, reported that majority of women were Illiterate or low education level were found to be with the highest prevalence of breast cancer. For the impact of psychiatry morbidity due to education level, the prevalence of anxiety was more in women with Illiterate or low education level as compared with high education level (secondary or college/university).

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Findings might be interpreted in terms of the fact that cancer patients with higher educational levels have a greater opportunity to be aware of their disease and its related aspects.

Table 4:- Showing Mean, SD & F value among the cancer patients of low, middle and high socioeconomic status for dependent variable Anxiety

Socio-economic Status (C)	N	Mean	SD	F	Sig.
<i>Lower (C1)</i>	180	9.96	3.58	12.810	<i>p</i> <.01
<i>Middle (C2)</i>	180	11.18	2.58		
<i>High (C3)</i>	180	10.91	2.55		

As results reported in Table no.4 indicates F value and mean score for socioeconomic status groups of cancer patients in which F ratio is observed significant $F(1,180) = 12.18, p < .01$. Mean score obtained by cancer patients with lower socioeconomic status is 9.96 (SD = 3.58), for a middle-level socioeconomic status cancer patient is 11.18 (SD=2.58) and for high socioeconomic status cancer patients is 10.91 (SD = 2.55) respectively. It can be said that middle socioeconomic status cancer patients have greater symptoms of anxiety than the rest of two groups of a cancer patient's i.e. higher and low socioeconomic status.

Table 5:- Showing Mean, SD & F value among the cancer patients of low, middle and high socioeconomic status for dependent variable Depression.

Socio-economic Status (C)	N	Mean	SD	F	Sig.
<i>Lower (C1)</i>	180	7.53	3.05	19.51	<i>p</i> <.01
<i>Middle (C2)</i>	180	8.01	2.68		
<i>High (C3)</i>	180	9.34	3.84		

As the findings revealed in Table no.5 that F value and mean score for socioeconomic status groups of cancer patients in which F ratio for depression is observed significant $F(1,180) = 19.51, p < .01$. Mean score observed by cancer patients with lower socioeconomic status is 7.53 (SD = 3.05), for middle-level socioeconomic status cancer patient is 8.01 (SD=2.68) and for high socioeconomic status cancer patients is 9.34 (SD = 3.84) respectively. It can be said that middle socioeconomic status cancer patients have greater symptoms of anxiety than the rest of two groups of a cancer patient's i.e. higher and low socioeconomic status.

Table 6:- Showing Mean, SD & F value among the cancer patients of low, middle and high socioeconomic status for dependent variable Stress

Socio-economic Status (C)	N	Mean	SD	F	Sig.
<i>Lower (C1)</i>	180	4.84	2.03	68.988	<i>p</i> <.01
<i>Middle (C2)</i>	180	5.18	2.41		
<i>High (C3)</i>	180	7.80	4.11		

As findings represented in Table no.6 indicates F value and mean score for socioeconomic status groups of cancer patients in which F ratio is reported significant $F(1,180) = 68.98, p < .01$. Mean score gained by cancer patients with lower socioeconomic status is 4.84 (SD = 2.03), for a middle-level socioeconomic status cancer patient is 5.18 (SD=2.41) and for high socioeconomic status cancer patients is 7.80 (SD = 4.11) respectively. It can be said that higher socioeconomic status cancer patients have elevated stress level than the cancer patients with low and middle socioeconomic status.

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Thus, hypothesis no.2 is also rejected. As again anxiety, depression and stress are influenced by the socioeconomic status and it creates a different level of anxiety among cancer patients. Although, all the groups of cancer patients with different socioeconomic status have a severe level of anxiety, high socioeconomic status cancer patients have statistically greater anxiety than their counterparts.

CONCLUSION

In conclusion, we can well imagine that cancer survivors can be confronted with different psychological problems. However, it is not entirely clear which aspects or situations may have an impact on psychological distress. Results of present research work demonstrate that there is an influence of education level and socioeconomic status of cancer patients on anxiety, stress and depression level of cancer patients. The government should focus on characteristics of lower-income occupation and lower educational attainment group to develop more accurate and effective prevention and treatment strategies for cancer.

IMPLICATION

This present study suggests that strategies and awareness programme should design to develop more accurate and effective cancer prevention and treatment strategies aimed specifically at patients with lower educational attainment levels.

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Conflict of Interest

There is no conflict of interest.

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