

An Observational Study to Assess Stress and Knowledge Regarding Stress Management Among Cancer Patients of Atal Bihari Vajpayee Regional Cancer Centre, Agartala, Tripura (West)

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ABSTRACT

Background- Stress is a word derived from the Latin word 'stringere', meaning 'to draw tight'. Stress is the nonspecific response of the body to any demand, whether it is caused by, or results in, pleasant or unpleasant conditions.

Objective- To assess the level of stress, the knowledge regarding stress management among cancer patients, to find out the correlation between level of stress and knowledge of cancer patients regarding stress management, to find out the association between level of stress of cancer patients regarding stress management with their selected socio demographic variables and to find out the association between knowledge of cancer patients with their selected socio demographic variables in Atal Bihari Vajpayee Regional Cancer Centre, Agartala, West Tripura.

Subjects & methods- Quantitative, descriptive approach was used in this research study to assess the stress and knowledge regarding stress management among 80 (Eighty) cancer patients who attended Out Patient Department, Chemo therapy, Radiation therapy units of Atal Bihari Vajpayee Regional Cancer Centre, Agartala, West Tripura. Their socio demographic data was analyzed. Modified Perceived Stress Scale was used to assess the stress regarding stress management among cancer patients. Structured knowledge questionnaire was used to assess the

knowledge regarding stress management among cancer patients.

Results- Among 80 (Eighty) cancer patients, 35% were from the age group of 50-59 years with male predominance with prevalence of Lung Cancer. 81% of cancer patients had severe stress. 41% of cancer patients had inadequate level of knowledge regarding stress management. There was significant correlation between level of stress and knowledge regarding stress management among cancer patients. The study findings also revealed that there was significant association between level of stress with their selected socio demographic variables except religion and there was significant association between knowledge of cancer patients regarding stress management with their selected socio demographic variables except religion, marital status, type of family, site of cancer at 0.05 level of significance.

Conclusion- The findings of the study revealed that there was a perfect negative correlation between level of stress and knowledge among cancer patients regarding stress management.

Keywords: stress, knowledge, stress management, cancer patients

INTRODUCTION

Human beings react to stress both physically and mentally in every change, events, and situations in their lives. Stress is experienced by people in different ways and

for different reasons. The reaction is based on perception of an event or situation.¹ Stress is considered a major precipitating psychological issue in cancer patients from diagnosis, through treatment and prognosis, even after the disease is long gone. Life uncertainty, disease severity, physical difficulties, medical treatments, psychological state and family issues are the common reasons of stress in cancer patients. Various negative impact of stress in cancer patients are either in compounding to psychiatric co-morbidities such as anxiety, depression, posttraumatic stress disorders. Stress is a word derived from the Latin word 'stringere', meaning 'to draw tight'. Stress is the nonspecific response of the body to any challenge caused by or results in pleasurable or un-pleasurable situations.² According to World Health Organization (WHO), cancer is the second leading cause of death globally and is responsible for an estimated 9.6 million deaths due to cancer in 2018. Globally, about 1 in 6 deaths is due to cancer.³ India had an estimated 1.16 million new cancer cases in 2018 as per a report published by World Health Organization (WHO) which also mentioned that 1 in 10 Indians will develop cancer during their lifetime and 1 in 15 Indians will die of the disease.⁴ According to first report of the Population Based Cancer Registry (PBCR) in Tripura (2010-2014), a total of 10,251 cases were registered, with overall age-adjusted incidence rates of 75.7 and 54.9 per 100,000 males and females respectively.⁵ Cancer patients are said to be the most vulnerable group in the society. Cancer affects not only the patients but also creates burden to his/her entire family. In addition to causing immense sufferings to the patient, it puts financial, personal and social stress on family members of a cancer patient. In the later stages of life, many cancer patients would prefer palliative care and opt to be at home surrounded by their family members and friends with help and

assist as well as overall supervision from palliative care team.⁶

MATERIALS & METHODS

Research Approach- Quantitative, descriptive approach

Research design- Descriptive survey design

Research setting- Atal Bihari Vajpayee Regional Cancer Centre, Agartala

Sampling technique- Purposive sampling technique

Sample size- 80 (Eighty) numbers of cancer patients

Description of Tool- a) Socio-demographic data b) Modified Perceived Stress Scale c) Structured knowledge questionnaire on stress management

Data collection method- Structured interview schedule method

Plan of data analysis: Descriptive & inferential statistics were used to analyze the data.

STATISTICAL ANALYSIS

The analysis and interpretation of data were done by using descriptive and inferential statistics. Frequencies and percentage were used to analyze the sample characteristics. Mean, Median and Standard Deviation were calculated. Karl Pearson's correlation coefficient formula was used to calculate correlation; 'r' value was -0.98 (~ -1, which indicated there was perfect negative correlation between level of stress and knowledge among cancer patients regarding stress management) and ANOVA were used to find out the significant association between level of stress with their selected socio-demographic variables and also used to find out the significant association between knowledge on stress management with their selected socio-demographic variables.

RESULT

a) Analysis of level of stress of cancer patients regarding stress management-

Table No. 1: Frequency & percentage distribution of level of stress regarding stress management among cancer patients (N=80) Minimum Score=1; Maximum Score=54

Level of Stress	Score	Frequency (f)	Percentage (%)
Mild Stress	1-18	0	0
Moderate Stress	19-36	15	19
Severe Stress	37-54	65	81

Data revealed that out of 80 (Eighty) cancer patients stress score range was 1-54 whereas maximum frequency 65 (81%) lied in stress score range of 37-54 had severe stress and minimum frequency 15 (19%) lied in stress score range of 19-36 had moderate stress.

b) Analysis of knowledge of cancer patients regarding stress management-

Table No. 2: Frequency & Percentage Distribution of Knowledge Score Regarding Stress Management among Cancer Patients (N=80) Minimum Score=1; Maximum Score=21

Level of Knowledge	Score	Frequency (f)	Percentage (%)
Inadequate	1-7	33	41
Moderately Adequate	8-14	20	25
Adequate	15-21	27	34

Data revealed that out of 80 (Eighty) cancer patients' knowledge score range was 1-21 whereas maximum frequency 33 (41%) lied in knowledge score range of 1-7 had inadequate knowledge and minimum frequency 20 (25%) lied in knowledge score range of 8-14 had moderately adequate knowledge.

c) Mean, Median and Standard Deviation of Knowledge score of cancer patients regarding stress management (N=80) Minimum Score=1; Maximum Score=21

Aspects	Mean	Median	Standard Deviation
Knowledge Score of cancer patients	10.48	9.22	5.65

Data showed that among 80 (Eighty) mean knowledge score of cancer patients regarding stress management was 10.48, median was 9.22 and Standard Deviation was 5.65.

d) Analysis of correlation between level of stress and knowledge among cancer patients regarding stress management-

Karl Pearson's correlation coefficient formula was used to find out the correlation between level of stress and knowledge among cancer patients regarding stress management. The calculated 'r' value was -0.98 (~ -1).

Thus, there was a perfect negative correlation between level of stress and knowledge among cancer patients regarding stress management.

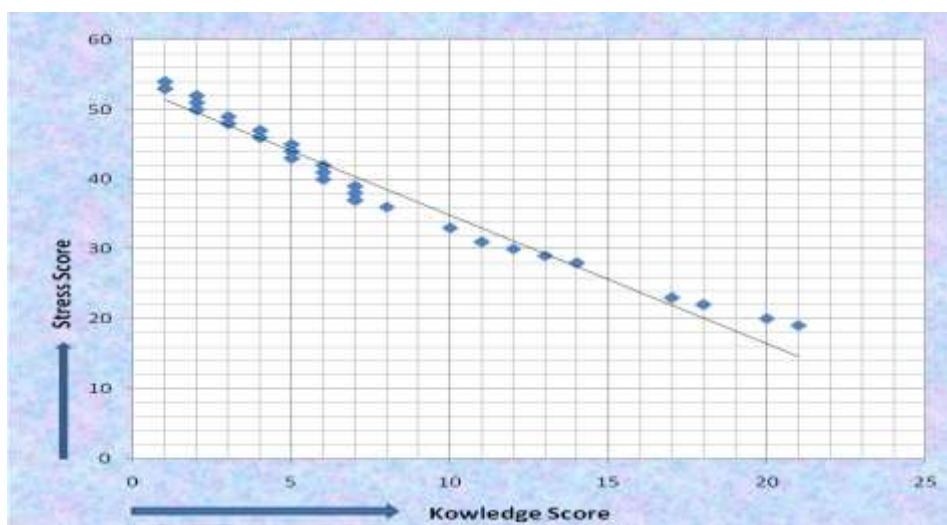


Figure: Scattered diagram showed perfect negative correlation between level of stress and knowledge score of cancer patients regarding stress management.

The scattered diagram showed that there was a perfect negative correlation between the stress score and knowledge score of cancer patients regarding stress management. All the points were scattered over the graph and show a rising tendency from the lower right hand corner to the upper left hand corner, which indicated that there was a perfect negative correlation that is there was a decrease of knowledge score as well as increase in stress score which estimated that study participants were suffered from severe stress as well as they had inadequate knowledge regarding stress management.

e) Analysis of association between level of stress of cancer patients regarding stress management with their selected socio-demographic variables-

ANOVA test was calculated to determine the significant association between level of stress of cancer patients regarding stress management with their selected socio-demographic variables in Atal Bihari Vajpayee Regional Cancer Centre, Agartala, West Tripura. Study results represented that there was significant association between level of stress of cancer patients regarding stress management with their selected socio-demographic variables (age, educational status, occupation, marital status, type of family, monthly family income, site of cancer and type of cancer treatment) at 0.05 level of significance. The study also revealed that there was no association between level of stress with religion of cancer patients.

f) Analysis of association between knowledge of cancer patients regarding stress management with their selected socio-demographic variables-

ANOVA test was calculated to determine the

significant association between knowledge of cancer patients regarding stress management with their selected socio-demographic variables in Atal Bihari Vajpayee Regional Cancer Centre, Agartala, West Tripura. Study represented that there was significant association between knowledge of cancer patients regarding stress management with their selected socio-demographic variables (age, educational status, occupation, monthly family income and type of cancer treatment) at 0.05 level of significance. The study also revealed that there was no association between knowledge with religion, marital status, type of family and site of cancer.

DISCUSSION

The statistical findings of the present study revealed that, 19% had moderate stress and 81 % had severe stress. The mean of stress level of cancer patients was 35.03, median was 53.25, SD was 8.49. According to conceptual framework based on Imogene King's theory of goal attainment theory, where the researcher (action, reaction, mutual goal setting, interaction) identified stress regarding stress management in cancer patients through Modified Perceived Stress Scale. The present study was supported by the findings of the study conducted by A. Renyi Collins ED, Kearings S (2017) among caregivers of cancer patients on palliative care and data were gathered using self administered stress rating scale. Assessment of stress revealed that 86% of participants had moderate stress and 14% had severe stress, participants adopted negative and positive coping.

The statistical findings of the present study revealed that 34% had adequate knowledge, 25% had moderately adequate knowledge and 41 % had inadequate knowledge. The mean of knowledge score regarding stress

management was 10.48, median was 9.22, SD was 5.65. According to conceptual framework based on Imogene King's theory of goal attainment theory, where the researcher (action, reaction, mutual goal setting, interaction) identified the knowledge regarding stress management among cancer patients through Structured Knowledge Questionnaire. The present study was supported by the findings of the study conducted by A. Renyi Collins ED, Kearings S (2017) which revealed mixed method research study among caregivers of cancer patients on palliative care using mixed method approach and triangular design. Assessment of knowledge revealed that 72% of participants had moderately adequate knowledge and 28% had inadequate knowledge.

The statistical findings of the present study revealed that the correlation between level of stress and knowledge of cancer patients regarding stress management was $r = -0.98$ (~ -1). This indicates there was a perfect negative correlation between level of stress and knowledge among cancer patients regarding stress management. Karl Pearson's Correlation coefficient formula was used for correlation. The present study was supported by the findings of a descriptive study conducted by T. Johnson, J. Biamonte, S.Kais (2018) on knowledge and stress regarding stress management among cancer patients.

This study revealed that there was significant relationship between knowledge of cancer patients and stress level of cancer patients regarding stress management. The calculated 'r' value was -0.24 at 0.05 level of significance. Karl Pearson's correlation coefficient formula was used. There was significant association between level of stress of cancer patients regarding stress management with their selected socio-

demographic variables like age, educational status, occupation, marital status, type of family, monthly family income, site of cancer and type of cancer treatment. The statistical findings of the present study revealed that there was no association between level of stress of cancer patients regarding stress management Religion at 0.05 level of significance. The present study was supported by the findings of a descriptive study conducted by T. Johnson, J. Biamonte, S.Kais (2018) on knowledge and stress regarding stress management among cancer patients.

This study also revealed that there was significant association between level of stress and age, religion, educational status and monthly family income at 0.05 level of significance. There was significant association between knowledge of cancer patients regarding stress management with their selected socio-demographic variables like age, educational status, occupation, monthly family income and type of cancer treatment.

The statistical findings of the present study revealed that there was no association between knowledge of cancer patients regarding stress management Religion, marital status, type of family and site of cancer at 0.05 level of significance. The present study was supported by the findings of a descriptive study conducted by T. Johnson, J. Biamonte, S.Kais (2018) on knowledge and stress regarding stress management among cancer patients. This study revealed that there was significant association between the knowledge score and religion, educational status and monthly family income at 0.05 level of significance.

CONCLUSION

From the findings of the present study, it can be concluded that, 19% had moderate

stress and 81 % had severe stress. 34% had adequate knowledge, 25% had moderately adequate knowledge and 41 % had inadequate knowledge. The findings of the study, $r = -0.98$ (~ -1) revealed that there was a perfect negative correlation between level of stress and knowledge among cancer patients regarding stress management. The study findings also revealed that there was significant association between level of stress with their selected socio demographic variables except religion and there was significant association between knowledge of cancer patients regarding stress management with their selected socio demographic variables except religion, marital status, type of family, site of cancer at 0.05 level of significance.

Declaration by Authors

Ethical Approval: Ethical approval was taken from the concerned authorities of the office and informed consent was obtained from the samples.

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