

Assess the Level of Stress Among Family Members of Cancer Patients Admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner, with A View to Develop an Information Booklet

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Abstract:

Context: Stress refers to the individual's reaction to disturbing factor in the environment. Stress is defined as an adaptive response as behaviour that maintains the integrity of the individual. Adaptation is viewed as positive and is correlated with healthy responses. Stressors are demands made by the internal or external environment that upset balance, thus affecting physical and psychological well-being and requiring action to restore balance. A diagnosis of cancer is a major event for the person diagnosed and also to his or her family and caregivers. According to some studied it is reported that a cancer diagnosis actually has a greater impact on family members than patients. Most of the cancer care is community based. It is important for the mental health professionals to support the family members and provide interventions when most needed since they have a better understanding of the impact of stress and burden that individuals go through in an oncology setting.

Aim: To Assess the level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner, with a view to develop an information booklet.

Methods: In view of the objectives of the present study, a Quantitative Approach was found to be suitable to assess the level of stress among family members of cancer patients. The research design selected for the study was Descriptive Non-Experimental Research Design. In this study research variable is Level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner. A self-developed questionnaire for demographic variables and self-developed perceived stress scale was prepared in order to attain the objectives of the study. Seven experts did the content validation of demographic tool and standard academic stress scale. Pilot study conducted on 10 family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner. This gave a basis to conduct research study. Reliability of self-developed perceived Stress Scale was established by Cronbach's Alpha Method. The value of reliability coefficient ($r_{\text{cronbach's}}$) is 0.78, which proved that the tool is reliable. Actual study was conducted on 80 family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner.

Results: Findings Related to Level of Stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner. After analysis of responses of sample after the administration of self-developed perceived stress scale. Major findings reveal that 27 (34%) family members have low stress, 45 (56%) family members have moderate stress, 8 (10%) family members have high perceived stress. So maximum number of family members have moderate level of stress and maximum score is 40, of which mean is 17.96, mean percentage is 44.9% and standard deviation is 6.3. In case of finding association between level of stress and selected socio demographic variables chi square test was worked out the association between level of stress and selected socio demographic variables marital status was found not significant at 0.05 level of significance. Association between level of stress and selected socio demographic variables viz: age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment was found significant at 0.05 level of significance.

Conclusions: It can be concluded that there is significant amount of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner and socio demographic variables such as age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment affect the level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner.

Keywords: Level of stress, cancer Patients, information Booklet.

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Introduction

Stress refers to the individual's reaction to disturbing factor in the environment. Stress is defined as an adaptive response as behaviour that maintains the integrity of the individual. Adaptation is viewed as positive and is correlated with healthy responses. When behaviour disrupts the integrity of the individual, it is perceived as maladaptive. The conceptualization of stress reported by Selye is basically a physiological one in which stress response is seen as necessary adjunct to the organisms fight for survival. By causing various body changes the stress response prepare the individual to fight against emergency or to take flight from it. The complex relationship between physical and psychological health is not well understood. Scientists know that psychological stress can affect the immune system, the body's defence against cancer; however, it is not yet known whether stress increases a person's susceptibility to disease.

Need for the study: Cancer has rapidly developed into a chronic health problem because of increased incidence, improvements in diagnosis and treatment, and the resultant longer survival times. A new report by the World Health Organization's International Agency for Cancer Research (IARC) suggests that the incidence of cancer worldwide will grow by 75% by the year 2030, nearly doubling in some of the developing countries. It is important for the mental health professionals to support the family members and provide interventions when most needed since they have a better understanding of the impact of stress and burden that individuals go through in an oncology setting.

Review of literature: Antony Lovely et. al. (2018). A mixed method study was conducted among caregivers of cancer patients on palliative care using mixed method approach and triangulation design at Kozhikode, Kerala, India. Data were gathered using self-administered stress rating scale, brief COPE inventory, and structured interview schedule. Nested sampling technique was adopted. The sample size for quantitative approach was eighty and qualitative approach was eight. The results showed that 74% of the participants were females and 30% of them belong to the age group between 51 and 60 years.

Hiremath PGS, et al (2017) A quantitative non-experimental study was conducted on family burden and stress among caregiver of oral cancer patients at Krishna hospital Karad. 40 caregivers of patients with oral cancer were selected through convenience sampling technique. A stress of the caregiver was

assessed by the PSS. Demographic variable shows that maximum sample belongs 40-50 (40%) years of age group, male gender (65%), married (90%), nuclear family (65%), house wife by occupation (60%), spouse to the patients (45%), below graduated education (72%), 6 months to 1 year in providing care (47%), having health benefit from government (52%), and accompanying patient regularly to the hospital (72%). In this study, 3 (7.5%) caregivers were said that no burden, 13 (32.5%) samples shown mild burden, 15 (37.5%) relative indicated moderate burden, and 9 (22.5%) samples shown severe burden; 4 (10%) samples shown low stress, 22 (55%) caregiver presented moderate stress, and 14 (35%) samples had high stress.

Karabulutlu EY, (2014) A descriptive study was conducted on coping with stress of family caregivers of cancer patients in Turkey. The study was conducted as descriptive research at the Medical Oncology Clinic. The study sample group comprised of 127 family caregivers. In the collection of the data, the Personnel Information form and Attitude of coping with Stress Inventory were used. The coping attitude used most frequently by family caregivers was active planning, and the least used coping attitude was avoidance isolation (biochemical). There was no significant statistical difference between the coping attitudes depending on the descriptive characteristics of the family caregivers ($P > 0.05$).

Objectives of the Study

1. To assess the level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner,
2. To find out the association between level of stress and selected socio-demographic variables among family members of cancer patients Admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner.
3. To develop an information booklet on stress management.

Hypotheses

H1: There will be a significant association between the levels of stress of family members of cancer patients and selected socio demographic variables that is age (in years), gender, marital, relation with patient, type of family, level of education, occupation, monthly income of family, stage of

cancer, duration of treatment at 0.05 level of significance.

H0: There will be no significant association between the levels of stress of family members of cancer patients and selected socio demographic variables that is age (in years), gender, marital, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment at 0.05 level of significance.

Materials and Methods

The research approach adopted for this study was Quantitative research approach. The research design adopted for the study was descriptive Nonexperimental research design for to assess the level of stress among family members of cancer patients. The target population was family members of cancer patients, and a sample size of 80 family members of cancer patients was selected using a Non probability convenient sampling technique. research variable was Level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner.

The study was conducted by using self-developed questionnaire for socio-demographic variables and self-developed perceived Stress Scale to assess the level of stress among family members of cancer patients.

The tool consisted of two sections:

Section I: Socio Demographic Performa.

Section II: Self-developed perceived Stress Scale.

Section I: Socio Demographic Variables: It describes the socio demographic variables. It comprises of 10 items for obtaining information

regarding age (in years), gender, marital, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment.

Section II: Self-developed perceived Stress Scale.

Each item had five response 0 times, 1 time, 2 times, 3 times, 4 or more times Each response carries a score of '0', '1', '2', '3' and '4' respectively.

The total items were 10. Therefore 40 (4 x 10) is the maximum possible score the resulting scores were ranged as follows:

Total Score - 40

Assessment Criteria: low stress (0-13), moderate stress (14-26), high perceived stress (27-40)

The tools were validated by experts from Mental health nursing and a Pilot study was conducted from 17/07/2019 to 23 /07/2019 at SMS Hospital Jaipur to confirmed feasibility. Reliability of self-developed perceived Stress Scale was established by Cronbach's Alpha Method. The value of reliability coefficient ($r_{\text{cronbach's}}$) is 0.78, which proved that the tool is reliable. No modification was made. Thus, tool was found to be valid, reliable and feasible for the purpose of study. The data collection period extended from 07/09/2019 to 14/09/2019. A sample of 80 family members of cancer patients who fulfilled the inclusion criteria of the study were selected using convenient sample technique with informed consent and ethical approvals obtained. The data collection tools took approximately 30–40 minutes per participant. The data were analyzed using descriptive and inferential statistics, including find out the association between the level of stress and selected demographic variable. 'Chi-square' test was used in the inferential analysis of the study.

Results: Section I

Table 1: Frequency and percentage distribution of sample as per socio demographical variables N=80

S.N.	Socio Demographical variables		Frequency(F)	Percentage {%}
1	Age (Years)	20-30	31	38.75
		31-40	28	35
		41-50	5	6.25
		51-60	16	20
2	Gender	Male	54	67.5
		Female	26	32.5
3	Marital status	Single	16	20
		Married	64	80
		Divorced /separated	0	0
		Widow /widower	0	0
4	Relation with patients	Spouse /partner	16	20
		Daughter /son	21	26.25
		Parents	43	53.75
5	Type of Family	Nuclear	35	43.75
		Joint	45	56.25

6	Level of education	Up to secondary	43	53.75
		Up to graduate	21	26.25
		Illiterate	16	20
7	Occupation	Government	1	1.25
		Private	62	77.5
		Unemployed	17	21.25
8	Monthly income of family	Below 10000	32	40
		10000 to 20000	28	35
		Above 20000	20	25
9	Stage of cancer	First stage	26	32.5
		Second stage	23	28.75
		Third stage	31	38.75
		Fourth stage	0	0
10	Duration of treatment	1-6 months	35	43.75
		7-12 months	20	25
		13-18 months	24	30
		More than 18 months	1	1.25

Section II: Description of Level of Stress Among Family Members of Cancer Patients

Table 2: Frequency and Percentage Distribution of Level of Stress among family members of cancer patients - (N=80)

Sr. No.	Level of stress (stress score)	Frequency {f}	Percentage %
1	Low stress (0-13)	27	33.75
2	Moderate stress (14-26)	45	56.25
3	High perceived stress (27-40)	8	10

Table no 2 shows that 27 (34%) family members have low stress, 45 (56%) family members have moderate stress, 8 (10%) family members have high

perceived stress. So maximum number of family members have moderate level of stress.

Table 3: Mean, mode, median And Standard Deviation of Level of Stress Score N=80

S. No.	Maximum score	Mean	Mode	Median	Standard Deviation
1	40	17.96	16	16	6.3

Table no.3 depicts of that maximum score is 40, the obtain mean, median and mode are 17.96, 16 and 16 respectively which means that the data is almost normally distributed and all the three statistics lies in moderate level of stress. Above table also states that a standard deviation score of 6.3 indicates the less variability of the scores and the group is found to be less heterogeneous.

Section- III: Association of Level of Stress with Selected Socio- Demographic Variables

Interpretation: Table number 4 reveals that in case of the finding of association between level of stress and selected socio demographic variable marital status the obtained chi square value is less than tabulated value at 0.05 level of significance with their respective degree of freedom. So, the association between level of stress and selected socio demographic variable marital status is not significant but by chance.

Hence researcher fails to reject the null hypothesis. It means these variables do not affect the level of stress among family members.

Whereas in case of finding association between level of stress and selected socio demographic variables viz: age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment, the obtained chi square value is more than tabulated value at 0.05 level of significance with their respective degree of freedom.

So, the association between level of stress and selected socio demographic variables viz: age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment is significant and not by chance. Hence the researcher rejects the null hypothesis and accept research hypothesis. It means these socio demographic variables affect the level of stress among family members.

Table 4: Association of Stress Score of Family members With Selected Demographic Variables (N=80)

S. No.	Demographical Variables	Categories	Frequency			Calculated chi-square	df	Tabulated value	L.O.S @0.05
			Low stress	Moderate stress	High perceived stress				
1	Age (Years)	20-30	0	28	3	65.03	6	12.59	S
		31-40	24	2	4				
		41-50	3	0	0				
		51-60	0	15	1				
2	Gender	Male	24	26	4	8.68	2	5.99	S
		Female	3	19	4				
3	Marital Status	Single	0	15	1	12.03	6	12.59	NS
		Married	27	30	7				
		Divorced /Separated	0	0	0				
		Widow/Widower	0	0	0				
4	Relation with Patients	Spouse / Partner	0	15	1	24.07	4	9.49	S
		Daughter / Son	3	16	2				
		Parents	24	14	5				
5	Type of Family	Nuclear	3	30	2	22.43	2	5.99	S
		Joint	24	15	6				
6	Level of Education	Up to Secondary	9	29	4	38.55	4	9.49	S
		Up to Graduate	18	1	3				
		Illiterate	0	15	1				
7	Occupation	Government	0	0	1	22.11	4	9.49	S
		Private	27	29	6				
		Unemployed	0	16	1				
8	Monthly income Of family	Below 10000	0	29	5	48.44	4	9.49	S
		10000 to 20000	9	16	1				
		Above 20000	18	0	2				
9	Stage of cancer	First stage	9	16	1	29.58	6	12.59	S
		Second stage	18	2	3				
		Third stage	0	27	4				
		Fourth stage	0	0	0				
10	Duration of treatment	1-6 Months	10	28	3	41.82	6	12.59	S
		7-12 Months	17	0	2				
		13-18 Months	0	17	2				
		More than 18 Months	0	0	1				

Note- df- degree of freedom, S- Significant, N.S- Not significant

Major Findings of the Study

Finding related to Demographic Variables:

Distribution of family members on the basis of age majority 31(39%) of the sample are in the age group of between 20 to 30 years, 28 (35%) of them belong to 31-40 years of age, 16 (20%) of them belong to 51-60 years and 5(6%) have belonged to 41-50 year age. Distribution of family members on the basis of gender in which 54 (67%) are male and 26(33%) are female. Distribution of family members according to their marital status in which 16 (20%) are single and 64(80%) are married. Distribution of family members according to their relationship with patients in which 43, (54%) parents of cancer patients, 21 (26) daughter/son and 16(20) spouse /

partner of cancer patients. Distribution of family members according to their type of family in which 45 (56%) family members belong to joint family and 35 (44%) family members belong to nuclear family. Distribution of family members according to their level of education in which 43(54%) up to secondary, 21(26 %) up to graduate and 16(20%) family members were illiterate. Distribution of family members according to their occupation in which 1(1%) government, 62(78%) private and 17(21%) family members are unemployed. Distribution of family members according to their monthly income of family in which 32(40) family member's income is below 10000, 28(35%) family members income is 10000-20000 and 20(25%) family members income is below 20000.

Distribution of family members according to stage of cancer of patients in which 26(32) whose patients in first stage of cancer, 23(29%) patients in second stage of cancer, 31(39%) patients in third stage of cancer and no one family member whose patients in fourth stage of cancer. Distribution of family members according to duration of the treatment of patients in which 35(43.75) family members whose patient getting treatment from 1-6 months, 20(25%) from 7-12 months, 24(30) from 13-18 months and 1(1.25%) family members whose patient getting treatment from more than 18 months.

Findings Related to Level of Stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner. After analysis of responses of sample after the administration of self-developed perceived stress scale. Major findings reveal that 27 (34%) family members have low stress, 45 (56%) family members have moderate stress, 8 (10%) family members have high perceived stress. So maximum number of family members have moderate level of stress and maximum score is 40, of which mean is 17.96, mean percentage is 44.9% and standard deviation is 6.3. In case of finding association between level of stress and selected socio demographic variables chi square test was worked out the association between level of stress and selected socio demographic variables marital status was found not significant at 0.05 level of significance. Association between level of stress and selected socio demographic variables viz: age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment was found significant at 0.05 level of significance.

Conclusions

So it can be concluded that there is significant amount of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner and socio demographic variables such as age (in years), gender, relation with patient, type of family, level of education, occupation, monthly income of family, stage of cancer, duration of treatment affect the level of stress among family members of cancer patients admitted in Acharya Tulsi Cancer Research Institute, PBM Hospital, Bikaner.

Recommendations: The following recommendations are drawn:

1. As the study was conducted on only 80 people of PBM hospital of Bikaner, hence, the same study needs to be conducted on a large scale and also in different setting.
2. A Comparative study can be conducted on perceived stress level in family members of cancer patients and general people can be done.

3. A pre-experimental study can be conducted to assess the effectiveness of interventional programme to reduce the stress among family members of cancer patients.

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