Stress and its associated factors among caregiver of cancer patient attending a selected hospital, Nepal

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ABSTRACT

INTRODUCTION

The study aims to assess the level of stress and contributing factor among the caregiver of cancer patients attending a selected hospital ,Nepal.

METHODS

Quantitative method and cross-sectional study design was used to assess the level of stress among caregiver of cancer patients .The Interview questionnaire schedule was used as a data collection tool and data was collected using Kingston Care Giver Stress Scale and Caregiver Burden Inventory. Written consent was taken from the all participants.

RESULTS

The majority of the participants had experienced moderate stress 60.1% followed by mild stress 21.7% and severe stress 4.3%. The socio-demographic and socio-economic variables is not significantly associated with stress. Cancer patients and caregiver related variables like duration of illness 0.077 ($p<0.05$) was significantly associated with stress. Also, first degree relatives were found to be more stress than second degree relatives 0.001 ($p<0.05$) in our study.

CONCLUSIONS

Majority of the participants had experienced moderate stress followed by mild stress attending the cancer hospital, whereas very few had extreme level of stress.

KEY WORDS

Stress, Caregiver, Cancer, Psycho-Oncology, Nepal, Associated Factors, Mental Health, Burden, Cross-sectional Study, Coping.

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INTRODUCTION

According to WHO, "Stress is the response of people towards demands and pressures which exceeds there knowledge and ability and challenge their ability to cope"[1]Responsibility of caregiver lead to increase stress.[2] Chronic stress cause high blood pressure, diabetes and compromised immune system which shorten life expectancy.[3]Caregiver stress is associated with various factor like financial burden, stage of cancer, relationship with patient and duration of treatment.[4] Caregiver occupation, culture and supportive resources also act as a factor associated with caregiver burden.[5] Caregiver refer to those person providing care to those who are unable of taking care of themselves.[6] Caregiver refer to those people who provide help to those person who need help for taking care of themselves .[7]This may include children ,the elderly ,people with chronic illness or are disabled.[8] Family member are the most important care provider for physical and emotional support [9].The majority of caregiver are first degree relatives and reported that caregiving experiences as a burden.[7] Caring for loved one may lead to the strain even for the most resilient person[2] . Symptoms like anger ,rage ,anxiety, depression ,exhaustion ,easy annoyance ,sleep disturbance ,lack of interest in social activities are shown by the caregiver.[10] Cancer is the leading cause of death ,1 on 6 deaths occur due to cancer worldwide.[11] Any disease that can affect any region of the body is referred to as cancer[11]. Neoplasms and malignant tumours are other words that are used. One characteristic of cancer is the quick development of aberrant cells that expand outside of their normal borders, infiltrate other body components, and eventually move to other organs. [11] Each year, the American Cancer Society estimates the numbers of new cancer cases and deaths in the United States 1,958,310 new cancer cases and 609,820 cancer deaths are projected to occur in the United State in 2023.[12]High proportion of cancer are caused by consumption of calorie dense food, smoking, tobacco intake, insufficient physical activities, alcohol, overweight and obesity. Risk factor for cancer varies as per country and region. [8] Cancer affects every age group of people and represent a tremendous burden on patient, family and society. The economic impact of the cancer is significant and is increasing .The four most occurring common cancer are female breast, lung 1 bowel and prostate cancer.[13]Worldwide there was 28 million new cases each year by 2040.[13] Nepal Cancer Hospital and Research Centre, National Hospital and Cancer Centre, Bhaktapur Cancer Hospital, B.P Koirala Memorial Cancer Hospital, Suresh Wagle Memorial Cancer Hospital, Kathmandu Cancer Centre, etc. are the few cancers hospital of Nepal. Out of which, B.P Koirala memorial cancer hospital (BPKMCH) is the first national cancer care centre of Nepal established on .This hospital provide services like diagnosis, treatment and research on cancer.[14] Hospital provides services that are safe, innovative and affordable. Hospitals has different department which cater services to the patients such as Medical, Surgical, Radiology and Pathology department.[14]This research will help to provide overview of issue faced by cancer patient caregiver on Psychology basis and its contributing factor. Usually, most of the research are conducted focusing the stress and Psychology state of the patients so this study is done to know level of stress and its associated factor among the caregiver of cancer patients. Stress among caregiver needed to be studied and reduce for positive health outcome on patients.

METHODS

Study Design

Cross-sectional study

Study Population

The study population was caregiver of cancer patients attending a selected cancer hospital in Chitwan

Study duration

6 months

Study Area

Selected Cancer Hospital, Nepal

Sampling Unit

Caregiver of cancer patients

Ethical Clearance

Ethical approval taken from Pokhara University Institutional Review Committee , Written permission from Bharatpur Metropolitan and written consent from every participant

Inclusion Criteria:

Caregiver aged more than 18yrs providing unpaid care and family member as a main caregiver was confirmed by the patient.

Exclusion Criteria:

Visitors that refuse to participate and those caregivers accompanying the patients on that particular day only was excluded.

Sample size

Sample size was calculated by following formula:

Sample size(n) = Z2pq/d 2

THEN

p=0.9 (The study conducted in Oncology Centre, India the prevalence of stress among the caregiver of cancer patients is 90%)[21]

q=0.1

Allowable error (d)=0.05

Sample size = Z 2 pq/d 2

= (1.96)2x0.9x0.1/ (0.05) 2

=138.29

=138

Therefore, the sample size was 138.

RESULTS

Sociodemographic variables

This section describes about sociodemographic characteristics of participants, which include information about their participants, which and marital status of the participants.

Table 1 Distribution of the participants on the basis of sociodemographic Variables

Characteristics	Frequency(n)	Percentage (%)
Age(n=138)		
≤ 20	8	5.8
21-40	82	59.4
41-60	44	31.9
>60	4	2.9
Max=68, Min=18, Median age=34		
Sex(n=138)		
Male	99	71.7
Female	38	28.3
Ethnicity(n=138)		
Janajati	51	37.0
Brahmin/Chhetri	39	28.3
Madhesi	27	19.6
Dalit	10	7.2
Muslim	7	5.1
Others (Bengali and Dashami)	4	2.9
Marital Status (n=138)		
Married	111	80.4
Unmarried	27	19.6
Family type (n=138)		
Joint family	64	46.4
Nuclear family	49	35.5
Extended family	25	18.1

Table 1 shows information about demographic characteristics of caregiver of cancer patients. Nearly three fifth (59.4%) belonged to age group of 21-40 years, followed by just below a third (31.9%) of participants of age group 41-60 where the minimum age was 18 and maximum age was 68. Regarding gender, Majority (71.7) of the participants were male and rest of them were female. Similarly, just above a third (37.0%) were janajati, likewise more than two fifth (28.3%) were brahmin/ Chhetri. Likewise, four fifth (80.4%) were married and rest of them were unmarried. More than two fifth (46.4%) had joint family followed by above a third (35.5%) had nuclear family.

Socioeconomic Variables

This section includes the information about socioeconomic characteristics of caregiver of cancer patients which include information.

Table 2 Socioeconomic variables

Variables	Frequency (n)	Percentage (%)
Education status (n=138)		
Illiterate	34	24.6
Basic Education	55	39.9
Secondary Education	34	24.6
Undergraduate	12	8.7
Post graduate	3	2.2
Occupation (n=138)		
Agriculture	39	28.3
Labor	28	20.3
Housewife	21	15.2
Business	19	13.8
Service	16	11.6
Student	11	8.0
Pensioner	2	1.4
Unemployed	2	1.4
Monthly income		
5000-10000	34	24.6
11000-40000	70	50.7
> 40000	34	24.6
Minimum =5000 maximum= 800000		
Median = 15,500		

Above table 2 shows the socioeconomic characteristics of the participants, among all participants, nearly two fifth (39.9%) of the participants had attained up to primary level of education where nearly a quarter (24.6%) were illiterate. Similarly, more than a quarter (28.3%) of the participants occupation was agriculture followed by labor (20.3%). Likewise, Half (50.7%) of the participants had monthly income range from 11,000-40,000, nearly a quarter (24.6%) had below 10,000 and above 40,000.

Cancer and caregiver related variables

This section contains information about caregiver related characteristics.

Table 3 Caregiver related variables

Variables	Frequency (n=138)	Percentage (%)
Relationship		
First degree relationship	108	78.3
Second degree relationship	19	13.8
Others	11	8
Disease diagnosed		
<6 month	82	59.4
6month -1 year	27	19.6
1 -2year	14	10.1
2-5 year	8	5.8
> 5 years	7	5.1
Cancer type		
Lung's cancer	28	20.3
Oral cancer	26	18.8
Breast cancer	24	17.4
Cervical cancer	16	11.6
Gastrointestinal cancer	10	7.2
Osteosarcoma	8	5.8
Blood cancer	7	5.1
Urethral cancer	5	3.6
Pancreatic cancer	4	2.9
Colorectal cancer	3	2.2
Testicular cancer	3	2.2
Brain tumor	3	2.2
Bone marrow	1	0.7
Stage of cancer		
Stage I	49	35.5
Stage II	27	19.6
Stage III	16	11.6
Stage IV	7	5.1
Unknown	39	28.3

Table 3 shows that among 138 cancer caregiver, Majority (78.3%) of the caregiver were first degree relatives (i.e., Husband, wife, sibling, children, parents) of patients and slightly more than one ten (13.8%) were second degree relatives likewise, more than a half (59.4%) of the cancer patients the disease was diagnosed less than six months followed by less than a fifth (19.6%) of the cancer patients was diagnosed six to 1 year. Similarly, one fifth (20.3%) of the cases were of lung cancer. Just over a third (35.5%) of the cases were of stage I and slightly less than a fifth (19.6 %) of the cases were of Stage II.

Table 4 Stress related characteristics

Statements	Frequency (percentage %)				
	No stress n (%)	Some stress n (%)	Moderate stress n (%)	A lot of stress n (%)	Extreme stress n (%)
Feelings of being overwhelmed, overworked and/or burdened.	17 (12.3%)	22 (15.9%)	21 (15.2%)	45 (32.6%)	33 (23.9%)
Change in your relationship with your spouse/ relatives.	117 (84.8%)	12 (8.7%)	1 (0.7%)	5 (3.6%)	3 (2.2%)
Noticing changes in your social life	27 (19.6%)	21 (15.2%)	31 (22.5%)	51 (37.0%)	8 (5.8%)
Conflict with your previous daily commitments (work/ volunteering)	6 (4.3%)	17 (12.3%)	21 (15.2%)	40 (29.0%)	54 (39.1%)
Feelings of being trapped or confined by the responsibilities or demands of caregiving.	19 (13.8%)	17 (12.3%)	16 (11.6%)	46 (33.3%)	40 (29.0)
Sometime you are having doubt about your ability to take care of someone properly.	20 (14.5%)	15 (10.9%)	18 (13.0%)	33 (23.9%)	52 (37.7%)
Concern about future need of your spouse/ relatives.	5 (3.6%)	11 (8.0%)	11 (8.0%)	18 (13.0%)	93 (67.4%)
Conflicts within your family over care decisions.	110 (79.7%)	12 (8.7%)	4 (2.9%)	10 (7.2%)	2 (1.4%)
Conflicts within your family about the amount of support you are receiving	92 (66.7%)	11 (8.0%)	20 (14.5%)	14 (10.1%)	1 (0.7%)
Financial difficulties associated with care giving.	8 (5.8%)	15 (10.9%)	16 (11.6%)	34 (24.6%)	65 (47.1%)

Table 4 shows that the cancer caregiver has extreme stress due to future concern of the relatives (67.4%), similarly (47.1%) had extreme stress due to financial difficulties associated with caregiving and 39.1% had the extreme stress due to conflict with previous daily commitments and the factor least responsible to cause extreme stress was change in the relationship, conflicts within your family over care giving decisions and conflicts within the amount of support receiving.

Dependent Variables

Level of stress among caregiver

Table 5 prevalence of stress

Level of stress	Frequency (n)	Percentage (%)
No stress	19	13.8
Mild stress	30	21.7
Moderate stress	83	60.1
Severe stress	6	4.3

Table 5 shows the information about level of stress among caregivers of cancer patients. Among 138 participants,60.1% had moderate stress followed by 21.7% had mild stress and 4.3% had severe stress.

Caregiver Burden Inventory

This section shows the information about the caregiver burden. It includes various physical health item, development item, emotional item, social relationship item and time dependency item

Table 6 Caregiver Burden Inventory

Characteristics	Frequency (percentage%)				
	Never	Rarely	Sometimes	Quite frequently	Always
Time dependency burden item					
He/she need my help to perform every day task	21 (15.2)	21 (15.2)	31 (22.5)	36 (26.1)	29 (21.0)
He/she is dependent on me	21 (13.8)	21 (14.5)	31 (34.1)	36 (21.7)	29 (15.9)
I have to watch him/her constantly	18 (13.0)	19 (13.8)	52 (37.7)	36 (26.1)	13 (9.4)
I have to help him/her with many basic functions	19 (13.8)	27 (19.6)	49 (35.5)	35(25.4)	8 (5.8)
I don't have a minute's break from his/her chores	27 (19.6)	40 (29.0)	46 (33.3)	21 (15.2)	4 (2.9)
Emotional burden item					
I feel embarrassed over his/her behavior.	132 (95.7)	6 (4.3)			
I feel ashamed of him/her.	134 (97.1)	3 (2.2)	1 (0.7)		
I resent him/her.	135 (97.8)	2 (1.4)	1 (0.7)		
I feel uncomfortable when I have friends over.	131 (94.9)	6 (4.3)	1 (0.7)		
I feel angry about my interaction with him/her.	127 (92.0)	8 (5.8)	2 (1.4)	1 (0.7)	
Development burden items					
I wish I could escape from this situation.	8 (5.8)	3 (2.2)	21 (15.2)	73 (52.9)	33 (23.9)
My social life has suffered.	7 (5.1)	19 (13.8)	47 (34.1)	61 (44.2)	4 (2.9)
I feel emotionally drained due to caring for him/her.	15 (10.9)	17 (12.3)	51 (37.0)	44 (31.9)	11 (8.0)
I expected that things would be different at this point in my life.	63 (45.7)	14 (10.1)	39 (28.3)	20 (14.5)	2 (1.4)
I feel that I am missing out on life.	13 (9.4)	11 (8.0)	36 (26.1)	60 (43.5)	18 (13.0)
Physical Health burden items					
I'm not getting enough sleep.	15 (10.9)	21 (15.2)	29 (21.0)	55 (39.9)	18 (13.0)
My health has suffered.	49 (35.5)	10 (7.2)	38 (27.5)	38 (27.5)	3 (2.2)
Caregiving has made me physically sick.	35 (25.4)	13 (9.4)	43 (31.2)	38 (27.5)	9 (6.5)

I'm physically tired.	17 (12.3)	8 (5.8)	30 (21.7)	57 (41.3)	26 (18.8)
Social Relationship burden item					
I don't get along with other family members as well as I used to	117 (84.6)	10 (7.2)	6 (4.3)	4 (2.9)	1 (0.7)
My care giving efforts aren't appreciated by others in my family.	118 (85.5)	9 (6.5)	9 (6.5)	1 (0.7)	1 (0.7)
I've had problems with my marriage (or other significant relationship).	128 (92.8)	6 (4.3)	4 (2.9)		
I don't get along as well as I used to with others.	120 (87.0)	12 (8.7)	2 (1.4)	4 (2.9)	
I feel resentful of other relatives who could but do not help	65 (47.1%)	14 (10.1%)	20 (14.5%)	35 (25.4%)	4 (2.4%)

Table 6 shows that above a third (23.9%) of the caregiver want to escape from the situation, regarding the time dependency above a fifth (21.0%) always find it as a burden to help to perform every task. Similarly, Regarding, physical health item less than a fifth (18.8%) felt physically tired. Similarly, very less participants felt uncomfortable and ashamed.

Caregiver Burden Inventory

This section shows the information about the burden among the caregiver. Score

Table 7 Care Burden Inventory

Caregiver Burden Inventory	Frequency (n=138)	Percentage (%)
No/lower burden	87	63
Higher burden	51	37

Table 7 shows that more than three fifth don't take care giving as a burden, nearly two fifth of them considered as a burden

Coping mechanism

This section includes the information about coping strategies adopted by participants.

Table 8 Coping Mechanism

Coping Mechanism	Frequency (n=138)	Percentage (%)
Yes	98	71
No	40	29

Table 8 shows that nearly three quarter use the coping mechanism and just below a third don't use any coping mechanism.

Coping Mechanism

This section includes the information about the various coping mechanism adopted by the participants

Table 9 Types of coping mechanism used by participants

Coping Mechanism	Frequency (n=98)	Percentage (%)
Exercise	15	15.80
Self-care	13	13.70
Family support	62	65.30
Praying and mediating	52	54.70
Alcohol	5	5.30
Engaging with other caregivers	23	24.20
Multiple Response*		

Table 9 display that most frequently used coping mechanism is family support, praying and meditating followed by engaging with another caregiver.

Association of stress among caregiver with sociodemographic variables

In order to identify factor associated with stress among caregiver's chi-square test was used. Findings of the statistical test is depicted in different tables below

Table 10 Association of stress level with socio-demographic variables of the participants.

Variables		Stress		χ2	p-value
		Yes n (%)	No n (%)		
Sex	Male	84 (84.8%)	15 (15.2%)	0.565	0.588 (Fisher's Exact test)
	Female	35 (89.7)	4 (10.3%)		
Age group	≤ 40	75 (83.3%)	15 (16.7%)	1.831	0.205 (Fisher Exact test)
	>40	44 (91.7%)	4 (8.3%)		
Ethnicity	Brahmins /Chhetri	34 (87.2%)	5 (12.8%)	0.083	0.773
	others	81 (85.3%)	14 (14.7%)		
Marital status	Married	96 (86.5%)	15 (13.5%)	0.031	0.860
	Unmarried	23 (85.2%)	4 (14.8%)		
Family type	Joint	57 (89.1%)	7 (10.9%)	1.261	0.532
	Nuclear	42 (85.7%)	7 (14.3%)		
	Extended	20 (80.0%)	5 (20.0%)		

*p-value significant at <0.05

Table 10 shows the association of socio-demographic variables with stress level among caregivers. There is no significant association between stress and socio-demographic variables.

Association of stress among caregiver with socioeconomic variables

Table 11 Association of stress in caregiver with socio-economic variables

Variables		Stress		χ2	p-value
		Yes n(%)	No n(%)		
Education	Up to primary level	77 (86.5%)	12 (13.5%)	0.017	0.896
	Secondary and above	42 (85.7%)	7 (14.3%)		
Monthly Income	≤ 40,000	90 (86.5%)	14 (13.5%)	0.033	1.000 Fisher
	>40,000	29 (85.3%)	5 (14.7%)		
Occupation	Agriculture	34 (87.2%)	5 (12.8%)	0.041	0.839
	others	85 (85.9%)	14 (14.1%)		

*p-value significant at <0.05

Table 11 shows association of socioeconomic variables with stress level among the participants. There is no significant association between stress and any socio-economic variables.

Association of stress with cancer and caregiving related variables

Table 12 Association of stress with cancer and caregiving related variables

Variables		Stress		χ2	p-value
		Yes n (%)	No n (%)		
Caregiver relationship	First degree relatives	99 (91.7%)	9 (8.3%)	12.360	0.001* (Fisher's)
	Others	20 (66.7%)	10 (33.3%)		
Illness duration	≤ 1 year	91 (83.5%)	18 (16.5%)	3.293	0.077* (Fisher's)
	>1 year	28 (96.6%)	1 (3.4%)		
Types of Cancer	Lung cancer	24 (20.2%)	4 (21.1%)	0.008	1.000 (Fisher's)
	others	95 (79.8%)	15 (79.8%)		
	Breast cancer	22 (18.5%)	2 (10.5%)	0.723	0.527 (Fisher's)
	others	97 (81.5%)	17 (89.5%)		
	Oral cancer	24 (2.2%)	2 (10.5%)	0.996	0.527 (Fisher's)
	others	95 (79.8%)	17 (89.5%)		
Stage of cancer	Stage I	40 (33.6%)	9(47.4%)	1.354	0.245
	others	79 (66.4%)	10 (52.6%)		

*p-value significant at <0.05

Table 12 shows the association between cancer and caregiving related variables with stress level among the participants. The level of relationship with cancer caregiver was significantly associated with level of stress ($p<0.05$) i.e., relatives who have first degree relationship with cancer patient have more symptoms of stress in comparison to others. Furthermore, Illness duration of the patient was significantly associated with stress.

Association of burden with Socio-demographic variables

Table 13 Association of burden with Socio-demographic variables

Variables	Response		χ2	P-value
	No/Low burden	Higher burden		
Age				
18-40	54 (60.0%)	36 (40.0%)	1.029	0.357
41 and above	33 (68.8%)	15 (31.3%)		
Sex				
Male	65 (65.0%)	35 (35.0%)	0.529	0.440
Female	22 (57.9%)	16 (42.1%)		
Marital status				
Married	72 (64.9%)	39 (35.1%)	0.808	0.369
Unmarried	15 (55.6%)	12 (44.4%)		
Ethnicity				
Brahmins/ Chettri	28 (71.8%)	11(28.2%)	1.658	0.198
Others	57 (60.0%)	38 (40.0%)		
Family type				
Joint family	42 (65.6%)	22 (34.4%)	0.418	0.518
Others	44 (60.3%)	29 (39.7%)		

*p-value significant at <0.05

Table 13 shows association of sociodemographic variables with burden among the participants. There is no significant association between burden and any socio-demographic variables.

Association of burden with Socio-economic variables

Table 14 Association of burden with Socio-economic variables

Variables	Response		χ2	P-value
	No/Low burden	Higher burden		
Education				
Up to primary	56 (62.9%)	33 (37.1%)	0.002	0.968
Secondary and above	31 (63.3%)	18 (36.7%)		
Monthly Income				
≤40,000	62 (59.6%)	42 (40.4%)	2.129	0.145
>40,000	25 (73.5%)	9 (26.5%)		
Occupation				
Agriculture	26 (66.7%)	13(33.3%)	0.354	0.552
Others	60 (61.2%)	38(38.8%)		

*p-value significant at <0.05

Table 14 shows association of socioeconomic variables with burden among the participants. There is no significant association between caregiver burden and any socio-economic variables.

Association of burden with cancer and caregiver related variables

Table 15 Association of burden with cancer and caregiver related variables

Variables	Response		χ2	P-value
	No/Low burden	Higher burden		
Relatives				
First degree	62 (57.9%)	45 (42.1%)	4.878	0.027*
Others	24 (80.0%)	6 (20.0%)		
Illness Duration				
≤ 1 year	68 (63.0%)	40 (37.0%)	0.008	0.930
>1 year	18 (62.1%)	11 (37.9%)		
Types of cancer				
Lung Cancer	16 (57.1%)	12 (42.9%)	0.478	0.490
Others	70 (64.2%)	39 (35.8%)		
Stage of Disease				
Stage I	36 (75.0%)	12 (25.0%)	4.726	0.030*
Others	50 (56.2%)	39 (43.8%0		
Family type				
Joint family	42 (65.6%)	22 (34.4%)	0.418	0.518
Others	44 (60.3%)	29 (39.7%)		

*p-value significant at <0.05

Table 15 shows association of burden with cancer and caregiver related variables. The degree of relationship with cancer caregiver was significantly associated with level of stress (p<0.05) i.e., relatives who have first degree relationship with cancer patient feel more burden in comparison to other. Furthermore, stage of the cancer was significantly associated with stress.

Association of stress with coping mechanism

Table 16 Association of stress with coping mechanism

Variables	Stress		χ2	p-value
	Yes	No		
Yes	86(87.8%)	12(12.2%)	0.661	4.416
No	33 (2.5%)	7(17.5%)		

Table 16 shows the association between stress and coping mechanism among the participants. There is no significant association.

This study focuses on the level of stress among the caregiver of cancer patients. Very few studies are conducted in Nepal in this context but few of those are conducted in some part of world like India. Hence the findings of this study are discussed and compared with other studies.

DISCUSSION

Prevalence of stress

In this study ,60.1%were having symptoms of moderate and 4.3% were having symptoms of extreme stress which is quite similar to the study conducted in Maharashtra ,India where prevalence of moderate and high stress was 55% and 35% respectively.[7] In contrast, the prevalence of stress in our study is lower than study conducted in Mangalore, India [21] Likewise ,Study in Tamil Nadu, India revealed that the prevalence of moderate and severe stress among caregiver 67% and 29% respectively. In Toronto ,Canada study reveals 53% of caregiver shows the symptoms of depression .[19]Study conducted in Iran shows severe anxiety among 32% of the caregivers. [28] A study conducted in USA shows that most of the caregiver 69.2% expressed caregiving as moderately to very stressful.[18] Whereas, the study conducted in Vietnam[2],Korea[29] and Australia [30] shows generally lower prevalence of stress ranging from 6% to 20%.

Association of stress level with socio-demographic factors

In this study majority of caregiver were male than female, But the study conducted in USA, Turkey ,India maximum number of caregiver were female. [7,28]A study conducted in Korea found that female caregiver are more likely get depression than male[31] ,however our study doesn't reproduce these result. In our study married caregiver have more stress compared to unmarried. In addition study conducted in Taiwan and India married caregivers were more stress than unmarried caregiver.[24]None of the socio-demographic factors were associated with stress level of the participants in this study. Whereas, the study conducted in Iran and Maharashtra, India showed significant association with age of the caregivers.[7,32] Similarly, study in Mangalore ,India shows significant association of stress wit Gender of the participants.[21]

Association of stress with socio-economic variables

None of the socio-economic variables (monthly income, education, occupation) were significantly associated in this study. In the study of Maharashtra ,educational level was significantly associated with stress.[7] As for education level , study participants who completed secondary school and higher were approximately twice likely to have psychological distress than those who completed primary school.[2] A study conducted on Vietnam high educational level have significant association with stress[2]

Association of cancer and caregiving related variables with stress level

The cancer and caregiving related variables in our study are degree of relationship, cancer type, stage of cancer and illness duration. In our study illness duration have significant relation with stress among the caregiver which is similar to the findings to the study conducted in Maharashtra, India.[7] Additionally, degree of relationship was significantly associated in our study.

Association of caregiver burden

In this study participants reported moderate -to-severe burden and no-to-mild burden 37% and 63% respectively which is lower in contras of study conducted in India 70.22% of cancer caregiver reported mild-to moderate burden and 21.8% reported moderate-to-severe burden.[20] Caregiver burden shows significant association with degree of relationship and stage of disease.

Association of stress with coping mechanism

In this study Family support, praying and mediating, talking with caregiver of other patients, Physical exercise, involving in self-care are the most frequently used coping mechanism. The least use coping strategies were use of alcohol and substance use. There is no significant association between the stress and coping strategies. In the study conducted in berlin following the normal routine, getting support from others and religious coping are mostly used coping mechanism.[33]Coping attitude used most frequently

by family was active planning, seeking external aid and religious asylum.[28]

Limitation

It is a single-center study, the findings may not be generalized. Cross-sectional design prevents establishing causality.

Clinical Implications:

I. Caregivers experience high levels of stress, highlighting the need for routine psychological screening in oncology settings.

II. Early identification of high-risk caregivers—especially those caring for longer durations or closely related to the patient—is essential.

III. Hospitals should integrate caregiver support programs, including counseling, stress-management education, and support groups.

CONCLUSION

The current study conclude that caregiver of cancer patients is experiencing higher level of stress. In our study three fifth of the participants had experienced moderate stress and less than a quarter of responded showed mild stress. Illness duration and degree of relationship were found to be statistically significant with stress among caregiver of cancer patients. Just above a third find caregiving as a higher burden. Degree of relationship and stage of cancer were found to be associated with higher burden. Appropriate public health interventions should be implemented to reduce caregiver psychological distress and enhance their quality of life to help improving patient care. Most of the participants use family support, praying and mediating as a coping strategy to reduce the stress.

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