

The psychological needs of family members of cancer patients

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ABSTRACT

The aim of this paper was to identify and study the psychological needs of the family members of cancer patients in India for their relationship to various psycho-socio-demographic factors. The different domains studied were Dealing with Sadness, Dealing with Anger, Dealing with Emotional Exhaustion, Dealing with Worry, Dealing with Fear, Dealing with Hopelessness, Need for Informal Support and Need for Formal Support. The psycho-socio-demographic factors that were studied for their relationship with the domains included: gender, age, and financial, familial and cultural factors. A questionnaire was created based on previous research and used to collect responses from family members, following which the responses were quantitatively analysed. The findings of this study were that family members of cancer patients did report having needs in almost all domains, and psycho-socio-demographic factors did influence these needs. This understanding would help increase and improve professional help for the family members of cancer patients.

Keywords: *Psychological needs domains, cancer patients, family members, psycho-socio-demographic factors*

Cancer is a long-term, chronic illness that affects many people in our society today. The experience of cancer not only affects the individual diagnosed with it but also family members and friends, particularly the family. This experience takes a toll on the individual and the family in many ways: physically, financially, psychologically, socially, and in overall quality of life. Caregivers face these challenges more acutely, often compromising self-care as they fulfil their responsibilities to their family member, as many researches have shown. But not as many researches focus on the experiences of family members in general, and especially not in India.

The aim of the current research is to identify and study the psychological needs of the family members of cancer patients in India. Knowing the psychological needs of family members of cancer patients will help in developing intervention models for this group and help overcome the challenges family members face in helping their terminally ill relative cope. This would also result in better care for cancer patients, terminally ill or otherwise.

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The central question of the study will be: What are the psychological needs of the family members of the cancer patient, and how do they relate to psycho-socio-demographic variables?

The term Psychological Needs refers to the psychological experience of family members of cancer patients, such as fear, anxiety, sadness and depression, loneliness and so on. The term family members include immediate family (parents, children and siblings) and extended family (aunts, uncles, cousins, grandparents, in-laws). The phrases 'ill/sick relative of participant' and 'cancer patient' are used interchangeably.

REVIEW OF LITERATURE

A study on the psychosocial impact of cancer patients on their family members showed that family members of cancer patients were less employed, more functionally limited and had lower self-rated health compared to control subjects. They also had a significantly higher level of stress, history of depression and current depressive symptoms. However, the association of the presence of a cancer patient in the family with current depressive symptoms was no longer significant after adjustment for other relevant psychosocial variables such as household income, educational level and employment status. The study concluded that cancer patients were more susceptible to depression, possibly due to adverse changes in socioeconomic status (Lim et al., 2013).

Another study was conducted on the needs of families of dying children to examine their needs and the degree to which they were met, explore the relationship of needs to functional outcomes, and the relationship of identified needs to child and family characteristics. Case synthesis revealed differences in needs and need satisfaction across demographic variables such as the child's age, diagnosis and family structure. Also, a significant relationship was observed between the proportion of identified needs met within a family and the family's overall functioning (Mesmer, 2005).

A recent study (Jackson, D.B., 2015) showed that informal caregivers who were also family members of the terminally ill prioritized their own needs below those of the ill, and faced considerable stress, particularly as the terminally ill relative's suffering progressively increased. However, their caregiver role brought increased intimacy, love and nurturing to their relationship with the ill relative. Another study (Ishii et al., 2012) identified right factors while creating an assessment for needs of informal caregivers, which include Burden of Care, Balance of Work and Care, Concerns about Home Care Doctor and Home Care Service, Patient Pain and Condition, and Relationship between Family Caregivers and their Families. Researchers also (Kim et al., 2010) developed a scale to assess needs of caregivers and found that psychosocial needs dominated the array of unmet needs. They also found that unmet psychosocial needs were consistently linked with greater psychosocial distress. It was found that in comparison to non-caregivers, the caregivers reported poorer psychological and physical health, more financial stress, more conflict and less social support from their spouse and family members. The probability of caregivers experiencing clinical depression was 50% higher than for non-caregivers (Butterworth et al., 2010). A content analysis of responses to open-ended questions on caregivers' emotional and practical experiences during the last months of the patient's life yielded largely negative results—about two-thirds. The themes that emerged were emotional suffering of caregivers, caregiver burden, both psychological and physical, powerlessness and anger at professionals for perceived inadequate support and information (Morasso et al., 2008). Caregivers were also seen to

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experience unwarranted negative feelings and pessimism as a result of underestimating the extent to which they were helping their ill relative (Hisamura et al., 2011).

A study in Korea found that socio-demographic factors had a great impact on caregiver burden and stress, and that this stress was mediated by the social support that the caregiver received (Park et al., 2012).

The questionnaire created for the current study drew its questions from existing research. The eight domains of psychological needs it covered were: Dealing with Sadness (Lim et al., 2013), Dealing with Anger (Morasso et al., 2008), Dealing with Emotional Exhaustion (Jackson, D.B., 2015; Kim et al., 2010; Lim et al., 2013), Dealing with Worry and Fear (Schur et al., 2014), Dealing with Hopelessness (Stenberg et al., 2010), Need for Informal Support (Jackson, D.B., 2015; Park et al., 2012) and Need for Formal Support (Morasso et al., 2008).

The items also address the relationships between family members (Kim et al., 2010) and financial concerns (Stenberg et al., 2010). However, many of the above studies focus on family caregivers of the cancer patient rather than family members in general. Family caregivers are at risk for depression and anxiety (Schur et al., 2014). They fear the unpredictable future and deterioration of the relative's health (Stenberg et al., 2010). They struggle with feelings of helplessness, feeling overwhelmed, and emotional and mental exhaustion. Family caregivers also struggle with physical problems such as sleep disturbance and fatigue. Family caregivers experience isolation and loneliness, particularly in the absence of their own family members and friends. Information was seen to be one of the most important support needs for family caregivers of cancer patients. When clinicians did not provide it, the family caregivers felt frustrated, angry and helpless (Morasso et al., 2008; Stenberg et al., 2010). Caregivers were also seen to need social support from family members and friends in order to cope effectively with their situation (Ryan et al., 2008). Thus, research has identified a need for interventions by professionals to equip family members and caregivers of cancer patients so that both they and the patient may have a better quality of life (Jackson, D.B., 2015).

METHODOLOGY

The aim of the current research is to identify and study the psychological needs of the family members of cancer patients in India.

Research Design

The quantitative approach was used for this study, with a survey design. The purpose of the study was to identify and study the psychological needs of family members of cancer patients in a population (i.e., the Indian population) where not much is previously known about said needs. However, ample research exists on the subject in other populations. This information was used as a starting point to identify the needs that are most salient in the Indian populations. Initial exploration of the factors contributing to these needs was done using simple demographic data. A quantitative research approach with a survey method served for both purposes. A pilot study was also carried out with a sample size of 32 and the same method as described below. IRB approval was obtained for the study prior to beginning the research.

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Sample

The sample consisted of 334 family members of individuals who are or were cancer patients. They were chosen from the Indian population in Bengaluru and spoke English, Hindi and Kannada.

Data Collection

The Needs Questionnaire was used to collect demographic details and information about the needs of the participants. It was distributed online and in person for individuals who were unable to access the questionnaire online. Appropriate permissions were obtained from the organisation where questionnaires were handed out to family members of cancer patients.

Tools

A Needs Questionnaire was created for the purposes of this study, measuring the intensity of various domains psychological needs. Eight domains were selected to be represented in the questionnaire, based on results of previous research on needs of family members and caregivers of cancer patients: Dealing with Sadness, Dealing with Anger, Dealing with Emotional Exhaustion, Dealing with Worry, Dealing with Fear, Dealing with Hopelessness, Need for Informal Support, Need for Formal Support. The questionnaire was preceded by an informed consent form.

Data Analysis

The data obtained from the Needs questionnaire was summarised using descriptive statistics. Following this, the Needs domains were compared with psycho-socio-demographic details of family members of cancer patients to determine factors contributing to the existence of the needs and the level of needs experienced by the family members.

RESULTS

Descriptive Results

The tables show summaries of the psycho-socio-demographic variables and the domains of psychological needs measured by the Needs Questionnaire. All tables are provided in the Appendix.

A total of 334 participants were studied. Of these, 165 were female (49.4%) and 169 were males (50.6%); that is, males and females each made up approximately half the sample. 69 of the participants were single (20.7%), 257 were married (76.9%), 7 were widowed (2.1%) and 1 was divorced (0.3%).

Table 1 Age Distributions

	Age groups					
Participant's age	18-29	30-39	40-49	50-59	60+	
Frequency (%)	79 (23.7)	73 (21.9)	93 (27.8)	55 (16.5)	34 (10.2)	
Cancer patient's age	<12	13-24	25-36	37-48	49-60	60+
Frequency (%)	14 (4.2)	8 (2.4)	28 (8.4)	59 (17.7)	90 (26.9)	135 (40.4)

Table 1 shows the age distributions of cancer patients and their family members who participated in the study. Only adults were allowed to participate in the study. There is a fairly even distribution of participants across the different age groups from 18 years and above; except for participants of 60 years and above, who make up only 10% of the sample.

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Table 2 Stage of Cancer

Stage of Cancer	f	%
Don't know	58	17.4
Stage 0 (means there's no cancer, only abnormal cells with the potential to become cancer)	14	4.2
Stage I (means the cancer is small and only in one area. This is also called early-stage cancer)	77	23.1
Stage II and III (means the cancer is larger and has grown into nearby tissues or lymph nodes)	114	34.1
Stage IV (means the cancer has spread to other parts of the body)	71	21.3
Total	334	100.0

Table 2 details the distributions of patients across the stages of cancer progression. We see that most of the participants in the current study had family members who were in either Stage II or Stage III of cancer.

Table 3 Financial and Proximity Factors

Financial and Proximity factors	Responses			
	Yes		No	
	n	%	n	%
Financial Contribution to patient's treatment	207	62	127	38
Loan taken by participant for treatment	40	12	294	88
Did the relative have health insurance	101	30.2	222	66.5
Participants who were primary caregivers	276	82.6	58	17.4
Participant living on same premises as patient	253	75.7	81	24.3
Current patient	281	84.1	51	15.3
Family structure	Joint family		Nuclear family	
	241	72.2	93	27.8

Table 3 shows the responses given by participants on questions involving finances in relation to the patient's treatment, whether participants were primary caregivers to the patient, whether the participants lived on the same premises as the patient. Nearly two-thirds of the participants were financially contributing to their sick relative's treatment, though only 12% had taken a loan. Two-thirds of the participants said their sick relative did not have health insurance.

More than 80% of the participants were primary caregivers for their sick relative. Responses are also recorded on whether the patient was currently suffering from cancer, or if the cancer was a thing of the past, as would be the case if the patient had gone into remission or had passed away. Most of the participants had family members who were current patients.

Another important thing to note is that nearly 75% of the participants reported living in joint families, which also explains why around the same percentage of participants reported living on the same premises as the cancer patient. This is a factor more common in Indian culture than many others, particularly in the West; and is likely to affect the emotional state of family members differently than in nuclear families, when one person falls ill.

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Table 4 Relationship and Attachment Level

Relationship of patient to participant	Responses Frequency (%)				
	Child	Parent	Sibling	Spouse	Extended family
Level of attachment to patient	42 (12.6)	106 (31.7)	30 (9)	75 (22.5)	81 (24.3)
	Not at all	A little bit	Somewhat	Quite a bit	Very much
	2 (0.6)	5 (1.5)	14 (4.2)	8 (2.4)	305 (91.3)

Table 4 shows the distributions of different family relationships between the participants and the cancer patients. There is a majority in the number of participants whose parents are cancer patients, followed by extended family members such as grandparents, uncles, aunts, cousins, in-laws etc. This table also shows levels of attachment reported by participants towards the patients. There is a very clear majority of participants who reported very high levels of attachment to their relative suffering from cancer.

Table 5 Psychological Needs Domains and Responses

Needs Domains	Not at all	A little bit	Somewhat	Quite a bit	Very much
Sadness	4 (1.2)	8 (2.4)	38 (11.4)	33 (9.9)	251 (71)
Anger	201 (60.2)	39 (11.7)	82 (24.6)	9 (2.7)	3 (0.9)
Emotional Exhaustion	39 (11.7)	30 (9)	75 (22.5)	53 (15.9)	137 (41)
Worry	52 (15.6)	87 (26.1)	58 (17.4)	131 (39.8)	6 (1.8)
Fear	52 (15.6)	23 (6.9)	56 (16.8)	30 (9)	173 (51.8)
Hopelessness	14 (4.2)	30 (9)	65 (19.5)	80 (27)	135 (40.4)
Need for Informal Support	21 (6.3)	9 (2.7)	83 (24.9)	35 (10.5)	186 (55.7)
Need for Formal Support	52 (15.6)	59 (17.7)	24 (7.2)	70 (21)	129 (38.6)

Table 5 shows the averaged responses of the participants on the different psychological needs domains. Most of the participants reported very high levels of sadness, low levels of anger, high levels of emotional exhaustion, fear, hopelessness, and need for formal and informal support. Most participants also reported high levels of worry.

T-test Results

No significant differences between the male and female genders were found for all eight psychological needs domains. Tables 6 to 12 show the results of t-tests conducted to study differences among participants based on different factors such as financial contribution to patient's treatment, whether or not the participant was the primary caregiver, whether they lived on the same premises as the patient, whether the family was a joint or nuclear family, and whether the patient was currently ill or not. The results of analyses with significant results are discussed below.

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Financial contribution

Table 6 Differences in Domains Based on Financial Contribution

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	No	127	4.307	1.06	-3.34**	332
	Yes	207	4.640	.74		
Emotional Exhaustion	No	127	3.177	1.48	-4.41***	332
	Yes	207	3.85	1.27		
Worry	No	127	2.63	1.06	-2.13*	332
	Yes	207	2.87	.97		
Fear	No	127	3.61	1.52	-.70	332
	Yes	207	3.73	1.54		
Anger	No	127	1.71	.98	.40	332
	Yes	207	1.66	.93		
Hopelessness	No	127	3.72	1.19	-1.34	332
	Yes	207	3.90	1.14		
Need for Informal Support	No	127	4.20	1.02	2.23*	332
	Yes	207	3.89	1.32		
Need for Formal Support	No	127	3.27	1.49	-2.09*	332
	Yes	207	3.62	1.44		

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 6 shows differences in the eight needs based on whether or not the participants were financially contributing to the treatment of the patient. Sadness was found to be significantly higher in participants who were contributing financially to their relative's treatment ($M=4.64$, $SD=.74$) than for participants who were not [$M=4.30$, $SD=1.01$; $t(332) = 3.34$, $p=.002$]. Emotional exhaustion was also significantly higher in participants who were contributing financially to their relative's treatment ($M=3.85$, $SD=1.27$) than for participants who were not [$M=3.17$, $SD=1.48$; $t(332) = 4.41$, $p=.000$]. Worry was significantly higher in participants who were contributing financially to their relative's treatment ($M=2.87$, $SD=.97$) than for participants who were not [$M=2.63$, $SD=1.06$; $t(332) = 2.13$, $p=.034$]. Need for Informal Support was significantly lower in participants who were contributing financially to their relative's treatment ($M=4.20$, $SD=1.02$) than for participants who were not [$M=3.89$, $SD=1.32$; $t(332) = 2.23$, $p=.018$]. Finally, Need for Formal Support was significantly higher in participants who were contributing financially to their relative's treatment ($M=3.62$, $SD=1.49$) than for participants who were not [$M=3.27$, $SD=1.44$; $t(332) = 2.09$, $p=.037$].

Loan

Table 7 Differences in Domains Based on Loan Withdrawal

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	No	294	4.47	.92	-2.35**	332
	Yes	40	4.82	.54		
Emotional Exhaustion	No	294	3.52	1.41	-2.52**	332
	Yes	40	4.11	1.11		
Worry	No	294	2.77	1.04	-.56	332
	Yes	40	2.86	.70		
Fear	No	294	3.66	1.53	-.83	332
	Yes	40	3.87	1.51		
Anger	No	294	1.68	.94	-.27	332
	Yes	40	1.72	1.01		
Hopelessness	No	294	3.78	1.17	-1.97*	332
	Yes	40	4.17	1.00		

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Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Need for Informal Support	No	294	4.04	1.22	1.30	332
	Yes	40	3.77	1.22		
Need for Formal Support	No	294	3.43	1.50	-2.00*	332
	Yes	40	3.92	1.11		

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 7 shows differences in the eight needs based on whether or not the participants were financially contributing to the treatment of the patient. Emotional exhaustion was higher for participants who had taken a loan for their relative's cancer treatment ($M=4.11$, $SD=1.11$) than for participants who did not [$M=3.52$, $SD=1.41$; $t(332) = 2.52$, $p=.004$]. Sadness was higher for participants who had taken a loan for their relative's cancer treatment ($M=4.82$, $SD=.54$) than for participants who did not [$M=4.47$, $SD=.92$; $t(332) = 2.35$, $p=.001$]. Hopelessness was also higher for participants who had taken a loan ($M=4.17$, $SD=1.00$) than for participants who did not [$M=3.78$, $SD=1.17$; $t(332) = 1.97$, $p=.049$]. Lastly, Need for Formal Support was higher for participants who had taken a loan for their relative's cancer treatment ($M=3.92$, $SD=1.11$) than for participants who did not [$M=3.43$, $SD=1.50$; $t(332) = 2.00$, $p=.015$].

Health Insurance

Table 8 Differences in Domains Based on Health Insurance

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	No	222	4.71	.69	5.85***	321
	Yes	101	4.11	1.12		
Emotional Exhaustion	No	222	3.74	1.34	2.34*	321
	Yes	101	3.34	1.50		
Worry	No	222	2.96	.93	5.01***	321
	Yes	101	2.37	1.08		
Fear	No	222	3.98	1.44	5.11***	321
	Yes	101	3.06	1.59		
Anger	No	222	1.73	.96	1.85	321
	Yes	101	1.52	.90		
Hopelessness	No	222	4.07	1.05	5.36***	321
	Yes	101	3.34	1.27		
Need for Informal Support	No	222	3.92	1.28	-2.32*	321
	Yes	101	4.26	1.04		
Need for Formal Support	No	222	3.81	1.35	5.60***	321
	Yes	101	2.86	1.52		

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 8 shows differences in the eight needs based on whether or not the patients had health insurance. Sadness was very significantly lower for participants when the patient had health insurance ($M=4.11$, $SD=1.12$) than for those participants whose relatives did not have health insurance [$M=4.71$, $SD=.69$; $t(332) = 5.85$, $p=.000$]. Emotional exhaustion was also significantly lower for participants when the patient had health insurance ($M=3.34$, $SD=1.50$) than for those participants whose relatives did not have health insurance [$M=3.74$, $SD=1.34$; $t(332) = 2.34$, $p=.019$]. Worry was very significantly lower for participants when the patient had health insurance ($M=2.37$, $SD=1.08$) than for those participants whose relatives did not have health insurance [$M=2.96$, $SD=.93$; $t(332) = 5.01$, $p=.000$]. Fear was also very significantly lower for participants when the patient had health insurance ($M=3.06$, $SD=1.59$) than for those participants whose relatives did not have health insurance [$M=3.98$,

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SD=1.44; $t(332) = 5.11, p=.000$]. Fifthly, Hopelessness was very significantly lower for participants when the patient had health insurance ($M=3.34, SD=1.27$) than for those participants whose relatives did not have health insurance [$M=4.07, SD=1.05; t(332) = 5.36, p=.000$]. Finally, participants whose relatives had health insurance had a significantly lower need for Formal Support ($M=2.86, SD=1.52$) than participants whose relatives did not [$M=3.81, SD=1.35; t(332) = 5.60, p=.000$]. However, one of the needs showed a different pattern. Need for Informal Support was significantly higher for participants when the patient had health insurance ($M=4.26, SD=1.04$) than for those participants whose relatives did not have health insurance [$M=3.92, SD=1.28; t(332) = 2.32, p=.013$].

Primary Caregiver

Table 9 Differences in Domains Based on Primary Caregiver Factor

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	No	58	4.02	.94	-4.69***	332
	Yes	276	4.61	.85		
Emotional Exhaustion	No	58	2.69	1.22	-5.64***	332
	Yes	276	3.78	1.35		
Worry	No	58	2.25	.90	-4.45***	332
	Yes	276	2.89	1.00		
Fear	No	58	3.41	1.26	-1.48	332
	Yes	276	3.74	1.58		
Hopelessness	No	58	3.18	1.04	-4.79***	332
	Yes	276	3.97	1.14		
Need for Informal Support	No	58	3.94	1.14	-.50	332
	Yes	276	4.02	1.24		
Need for Formal Support	No	58	2.68	1.43	-4.72***	332
	Yes	276	3.65	1.42		

* $p<0.05$. ** $p<0.01$. *** $p<0.001$.

Table 9 shows differences in the eight needs based on whether the participant was the primary caregiver of the cancer patient. Five of the needs showed significant differences. Sadness was very significantly higher in participants who were the primary caregivers of their sick relatives ($M=4.61, SD=.85$) than in participants who were not [$M=4.02, SD=.94; t(332) = 4.69, p=.000$]. Emotional Exhaustion was also very significantly higher in participants who were primary caregivers ($M=3.78, SD=1.35$) than in participants who were not [$M=2.69, SD=1.22; t(332) = 5.64, p=.000$]. Third, Worry was very significantly higher in participants who were primary caregivers ($M=2.89, SD=1.00$) than in participants who were not [$M=2.25, SD=.90; t(332) = 4.45, p=.000$]. Hopelessness was also very significantly higher in participants who were primary caregivers ($M=3.97, SD=1.14$) than in participants who were not [$M=3.18, SD=1.04; t(332) = 4.79, p=.000$]. Finally, Need for Formal Support was very significantly higher in participants who were primary caregivers ($M=3.65, SD=1.42$) than in participants who were not [$M=2.68, SD=1.43; t(332) = 4.72, p=.000$].

Same premises

Table 10 Differences in Domains Based on Premises

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	Not Same	81	4.19	.92	-3.78***	332
	Same	253	4.61	.86		
Emotional Exhaustion	Not Same	81	2.87	1.33	-5.62***	332
	Same	253	3.82	1.33		
Worry	Not Same	81	2.41	1.01	-3.86***	332
	Same	253	2.90	.98		

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Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Fear	Not Same	81	3.41	1.44	-1.83	332
	Same	253	3.77	1.55		
Hopelessness	Not Same	81	3.41	1.05	-3.85***	332
	Same	253	3.97	1.16		
Need for Informal Support	Not Same	81	4.20	1.03	1.60	332
	Same	253	3.95	1.28		
Need for Formal Support	Not Same	81	2.89	1.38	-4.30***	332
	Same	253	3.68	1.45		

*** $p < 0.001$

Table 10 shows differences in the eight needs based on whether or not the participant lived on the same premises as the patient. Sadness was very significantly higher in participants who lived on the same premises as their ailing relative ($M=4.61$, $SD=.86$), when compared to those participants who did not [$M=4.19$, $SD=.92$; $t(332) = 3.78$, $p=.000$]. Emotional exhaustion was also very significantly higher in participants who lived on the same premises as their ailing relative ($M=3.82$, $SD=1.33$), when compared to those participants who did not [$M=2.87$, $SD=1.33$; $t(332) = 5.62$, $p=.000$]. Thirdly, Worry was very significantly higher in participants who lived on the same premises as their ailing relative ($M=2.90$, $SD=.98$), when compared to those participants who did not [$M=2.41$, $SD=1.01$; $t(332) = 3.86$, $p=.000$]. Hopelessness was very significantly higher in participants who lived on the same premises as their ailing relative ($M=3.97$, $SD=1.16$), when compared to those participants who did not [$M=3.41$, $SD=1.05$; $t(332) = 3.85$, $p=.000$]. Lastly, Need for Formal Support was very significantly higher in participants who lived on the same premises as their ailing relative ($M=3.68$, $SD=1.45$), when compared to those participants who did not [$M=2.89$, $SD=1.38$; $t(332) = 4.30$, $p=.000$].

Family Structure

Table 11 Differences in Domains Based on Family Structure

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	Nuclear	241	4.48	.89	-1.05	332
	Joint	93	4.59	.90		
Emotional Exhaustion	Nuclear	241	3.54	1.37	-.99	332
	Joint	93	3.72	1.43		
Worry	Nuclear	241	2.72	1.02	-1.80	332
	Joint	93	2.94	.96		
Fear	Nuclear	241	3.56	1.56	-2.44*	332
	Joint	93	4.00	1.41		
Hopelessness	Nuclear	241	3.76	1.15	-1.66	332
	Joint	93	4.00	1.18		
Need for Informal Support	Nuclear	241	3.97	1.20	-.91	332
	Joint	93	4.11	1.28		
Need for Formal Support	Nuclear	241	3.36	1.48	-2.45*	332
	Joint	93	3.80	1.40		

* $p < 0.05$

Table 11 shows differences in the eight needs based on the type of family the patient and participant had— nuclear or joint. Fear was significantly higher for participants who lived in joint families ($M=4.00$, $SD=1.41$) than for those who lived in nuclear families [$M=3.56$, $SD=1.56$; $t(332) = 2.44$, $p=.015$]. Need for Formal Support was significantly higher for

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participants who lived in joint families ($M=3.80$, $SD=1.40$) than for those who lived in nuclear families [$M=3.36$, $SD=1.48$; $t(332) = 2.45$, $p=.015$].

Current Patient

Table 12 Differences in Domains Based on Currentness of Cancer

Needs Domains (DV)	Grouping variable	N	Mean	SD	t	df
Sadness	Not Current	51	4.14	.90	-3.21**	330
	Current Patient	281	4.58	.88		
Emotional Exhaustion	Not Current	51	2.59	1.24	5.85***	330
	Current Patient	281	3.78	1.34		
Worry	Not Current	51	2.31	.87	3.63***	330
	Current Patient	281	2.86	1.01		
Fear	Not Current	51	3.59	1.22	-.45	330
	Current Patient	281	3.70	1.59		
Hopelessness	Not Current	51	3.14	1.01	4.86***	330
	Current Patient	281	3.97	1.14		
Need for Informal Support	Not Current	51	3.89	1.16	-.79	330
	Current Patient	281	4.04	1.24		
Need for Formal Support	Not Current	51	2.66	1.44	4.54***	330
	Current Patient	281	3.65	1.42		

** $p<0.01$, *** $p<0.001$

Table 12 shows differences in the eight needs based on whether or not the patient was currently ill when the participant contributed to the study, as opposed to those whose relatives were in remission or passed away. Sadness was significantly higher in participants whose relatives were still cancer patients ($M=4.58$, $SD=.90$) than in those whose relatives were not current patients [$M=4.14$, $SD=.88$; $t(332) = 3.21$, $p=.001$]. Emotional exhaustion was significantly higher in participants whose relatives were still cancer patients ($M=3.78$, $SD=1.34$) than in those whose relatives were not current patients [$M=2.59$, $SD=1.24$; $t(332) = 5.85$, $p=.000$]. Worry was significantly higher in participants whose relatives were still cancer patients ($M=2.86$, $SD=1.01$) than in those whose relatives were not current patients [$M=2.31$, $SD=.87$; $t(332) = 3.63$, $p=.000$]. Hopelessness was significantly higher in participants whose relatives were still cancer patients ($M=3.97$, $SD=1.14$) than in those whose relatives were not current patients [$M=3.14$, $SD=1.01$; $t(332) = 2.44$, $p=.015$]. Need for Formal Support was significantly higher in participants whose relatives were still cancer patients ($M=3.65$, $SD=1.42$) than in those whose relatives were not current patients [$M=2.66$, $SD=1.44$; $t(332) = 4.54$, $p=.000$].

ANOVA Results

Patient's Age

Table 13 One-Way Analysis of Variance of the Domains by Patient's Age

Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
Sadness	Between Groups	9.570	5	1.914	2.432*	.035
	Within Groups	258.119	328	.787		
	Total	267.689	333			
Hopelessness	Between Groups	13.039	5	2.608	1.950	.086

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Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
	Within Groups	438.530	328	1.337		
	Total	451.568	333			
Emotional Exhaustion	Between Groups	29.590	5	5.918	3.147**	.009
	Within Groups	616.844	328	1.881		
	Total	646.434	333			
Need for Support	Informal					
	Between Groups	8.987	5	1.797	1.192	.313
	Within Groups	494.703	328	1.508		
	Total	503.689	333			
Anger	Between Groups	4.523	5	.905	.993	.422
	Within Groups	298.968	328	.911		
	Total	303.491	333			
Worry	Between Groups	17.854	5	3.571	3.619**	.003
	Within Groups	323.670	328	.987		
	Total	341.524	333			
Need for Support	Formal					
	Between Groups	35.533	5	7.107	3.393**	.005
	Within Groups	687.045	328	2.095		
	Total	722.578	333			
Fear	Between Groups	26.435	5	5.287	2.283*	.046
	Within Groups	759.556	328	2.316		
	Total	785.991	333			

* $p < 0.05$. ** $p < 0.01$, 2-tailed test.

Table 13 shows the results of one-way analyses of variance conducted of the eight dependent variables by the relative's age. The significant values are discussed in detail below.

There was a statistically significant difference in sadness based on the patient's age, as determined by one-way ANOVA [$F(5,328) = 2.432, p = .035$]. A Tukey post hoc test revealed that the level of sadness experienced by the participants was significantly greater ($p = 0.36$) when their suffering relative was younger, that is, for the age group 37-48 ($M = 4.78, SD = 0.53$) in comparison with the age group 49-60 ($M = 4.34, SD = 1.06$). There was no statistically significant difference in sadness found between the other age groups.

Similarly, there was found to be a statistically significant difference in the emotional exhaustion felt by participants based on the patient's age [$F(5,328) = 3.147, p = .009$]. The Tukey post hoc test revealed that the level of emotional exhaustion experienced by the participants was significantly greater ($p = 0.008$) when they had younger relatives of the age group 37-48 ($M = 4.05, SD = 1.16$) than when they had older relatives of 60 years and above ($M = 3.31, SD = 1.45$). The differences in emotional exhaustion for relatives of other age groups were not found to be significant.

There was also found to be a statistically significant difference in the worry felt by participants based on the patient's age [$F(5,328) = 3.619, p = .003$]. The Tukey post hoc test showed that worry in the case of patients of ages 37-48 ($M = 3.03, SD = 0.86$) was significantly greater ($p = 0.022$) than in the case of patients of age 60 and above ($M = 2.54,$

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SD=1.06). Differences between worry levels for the other age groups was not found to be significant.

Fear levels were also seen to significantly differ based on the patient's age [$F(5,328)=2.283, p=.046$]. However, the Tukey post hoc test did not show significant differences between fear levels for the different age groups of patients. This might be because of the large sample size. Large sample sizes have been known to show significant differences in the ANOVA test where no true difference exists, as the post hoc tests show (Pallant, 2010). Finally, the need for formal support felt by participants differed significantly with the patient's age [$F(5,328)=2.283, p=.046$]. The Tukey post hoc test showed that the need for formal support was significantly higher ($p=.029$) for participants whose suffering relatives were aged below 12 ($M=4.47, SD=1.08$) years old than when they were above 60 ($M=3.23, SD=1.45$).

Religion

Table 14 One-Way Analysis of Variance of the Domains by Religion

Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
Sadness	Between Groups	8.782	3	2.927	3.715*	.012
	Within Groups	258.431	328	.788		
	Total	267.213	331			
Hopelessness	Between Groups	51.179	3	17.060	14.086**	.000
	Within Groups	397.250	328	1.211		
	Total	448.428	331			
Emotional Exhaustion	Between Groups	51.435	3	17.145	9.483**	.000
	Within Groups	593.013	328	1.808		
	Total	644.448	331			
Need for Informal Support	Between Groups	4.800	3	1.600	1.056	.368
	Within Groups	496.931	328	1.515		
	Total	501.731	331			
Anger	Between Groups	5.388	3	1.796	1.999	.114
	Within Groups	294.627	328	.898		
	Total	300.015	331			
Worry	Between Groups	29.270	3	9.757	10.300**	.000
	Within Groups	310.681	328	.947		
	Total	339.950	331			
Need for Formal Support	Between Groups	79.529	3	26.510	13.619**	.000
	Within Groups	638.461	328	1.947		
	Total	717.990	331			
Fear	Between Groups	54.284	3	18.095	8.150**	.000
	Within Groups	728.231	328	2.220		
	Total	782.515	331			

* $p<0.05$. ** $p<0.01$, 2-tailed test.

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Table 14 shows the results of one-way analyses of variance conducted of the eight dependent variables by the participant's religion. The significant values are discussed in detail below.

One-way analysis of variance showed a significant difference in sadness felt by participants based on the participant's religion [F (3,328)=3.715, $p=.012$]. The Tukey post hoc test showed that sadness was significantly higher ($p=.009$) for Muslims (M=4.87, SD=0.46) than for Hindus (M=4.55, SD=0.89). The differences among sadness levels for participants of other belief systems such as Buddhism, Christianity and atheism were not significant.

There was also a significant difference in hopelessness based on the participant's religion [F (3,328)=14.086, $p=.000$]. The Tukey post hoc test showed that Muslim participants (M=4.61, SD=0.65) experienced significantly higher ($p=.012$) hopelessness than Hindu participants (M=4.00, SD=0.89), and that Hindu participants experienced significantly higher ($p=.008$) hopelessness than Christian participants (M=4.35, SD=0.96). The differences between hopelessness levels for participants of other belief systems such as Buddhism and atheism were not significant.

The same was found for worry, emotional exhaustion, need for formal support and fear levels.

Participants showed a significant difference in worry based on their religion [F (3,328)=10.30, $p=.000$]. The Tukey post hoc test showed that Muslim participants (M=3.36, SD=0.55) experienced significantly higher ($p=.043$) worry than Hindu participants (M=2.90, SD=1.02), and that Hindu participants experienced significantly higher ($p=.001$) worry than Christian participants (M=2.47, SD=0.99). The differences between worry levels for participants of other belief systems such as Buddhism and atheism were not significant.

Fear levels were found to be significantly different based on participants' religion [F (3,328)=8.150, $p=.000$]. The Tukey post hoc test showed that Muslim participants (M=4.51, SD=1.13) experienced significantly higher ($p=.000$) fear than Christian participants (M=3.29, SD=1.50); and that Hindu participants (M=3.83, SD=1.5) also experienced significantly higher ($p=.012$) fear than Christian participants. The differences between fear levels for participants of other belief systems such as Buddhism and atheism were not significant.

Finally, there was found to be a significant difference in participants' need for formal support based on their religion [F (3,328)=13.61, $p=.000$]. The Tukey post hoc test showed that Muslim participants (M=4.30, SD=.98) experienced significantly higher ($p=.000$) fear than Christian participants (M=2.96, SD=1.41); and that Hindu participants (M=3.75, SD=1.46) also experienced significantly higher ($p=.000$) fear than Christian participants. The differences between fear levels for participants of other belief systems such as Buddhism and atheism were not significant.

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Relationship with cancer patient

Table 15 One-Way Analysis of Variance of Domains by Relationship with Cancer Patient

Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
Sadness	Between Groups	7.356	4	1.839	2.324	.056
	Within Groups	260.333	329	.791		
	Total	267.689	333			
Hopelessness	Between Groups	15.135	4	3.784	2.852*	.024
	Within Groups	436.433	329	1.327		
	Total	451.568	333			
Emotional Exhaustion	Between Groups	51.458	4	12.864	7.114**	.000
	Within Groups	594.976	329	1.808		
	Total	646.434	333			
Need for Informal Support	Between Groups	9.706	4	2.427	1.616	.170
	Within Groups	493.983	329	1.501		
	Total	503.689	333			
Anger	Between Groups	1.041	4	.260	.283	.889
	Within Groups	302.450	329	.919		
	Total	303.491	333			
Worry	Between Groups	11.903	4	2.976	2.970*	.020
	Within Groups	329.621	329	1.002		
	Total	341.524	333			
Need for Formal Support	Between Groups	32.202	4	8.050	3.836**	.005
	Within Groups	690.376	329	2.098		
	Total	722.578	333			
Fear	Between Groups	35.064	4	8.766	3.841**	.005
	Within Groups	750.927	329	2.282		
	Total	785.991	333			

* $p < 0.05$. ** $p < 0.01$, 2-tailed test.

Table 15 shows the results of one-way analyses of variance conducted of the eight dependent variables by the participant's relationship with the cancer patient. The significant values are discussed in detail below.

One-way analysis of variance showed a significant difference in hopelessness felt by participants based on the participant's relationship to the cancer patient [F (4,329)=2.852, $p=.024$]. Tukey post hoc tests showed that hopelessness felt by participants whose siblings had cancer (M=4.28, SD=.76) was significantly greater ($p=.02$) than for those participants whose extended family members had cancer (M=3.5, SD=1.16). Comparisons of hopelessness levels experienced for other family members with cancer did not show significant results.

There was also a significant difference in emotional exhaustion based on the participant's relationship to the cancer patient [F (4,329)=7.11, $p=.000$]. Tukey post hoc tests showed that emotional exhaustion was significantly greater for participants whose immediate family

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members, that is, children ($M=3.69$, $SD=1.28$, $p=.023$), parents ($M=3.75$, $SD=1.35$, $p=.000$), spouses ($M=3.89$, $SD=1.29$, $p=.000$) and siblings ($M=4.00$, $SD=1.21$, $p=.002$) were cancer patients than for those participants whose extended family had cancer ($M=2.92$, $SD=1.45$). Participants also showed a significant difference in worry based on their relationship to the cancer patient [$F(4,329)=2.97$, $p=.02$]. Tukey post hoc tests showed that worry felt by participants whose siblings had cancer ($M=3.10$, $SD=.72$) was significantly greater ($p=0.41$) than for those participants whose extended family members had cancer ($M=2.49$, $SD=.97$). Comparisons of hopelessness levels experienced for other family members with cancer did not show significant results.

Similarly, fear levels were found to be significantly different based on participants' relationship to the cancer patient [$F(4,329)=3.84$, $p=.005$]. Tukey post hoc tests showed that fear felt by participants whose siblings had cancer ($M=4.48$, $SD=1.07$) was significantly greater than for those participants whose parents ($M=3.58$, $SD=1.65$, $p=.03$), spouses ($M=3.49$, $SD=1.58$, $p=.022$) and extended family members ($M=3.46$, $SD=1.46$, $p=.016$) had cancer.

Finally, there was found to be a significant difference in participants' need for formal support based on their relationship to the cancer patient [$F(4,329)=3.83$, $p=.005$]. Tukey post hoc tests showed that need for formal support felt by participants whose spouses ($M=3.69$, $SD=1.47$, $p=.029$) and siblings ($M=4.00$, $SD=1.12$, $p=.013$) had cancer was significantly greater than for those participants whose extended family members had cancer ($M=3.01$, $SD=1.48$). Differences in need for formal support experienced by participants for other family members with cancer did not show significant results.

Stage of cancer

Table 16 One-Way Analysis of Variance of Domains by Stage of Cancer

Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
Sadness	Between Groups	12.869	4	3.217	4.154**	.003
	Within Groups	254.820	329	.775		
	Total	267.689	333			
Hopelessness	Between Groups	23.460	4	5.865	4.507**	.001
	Within Groups	428.108	329	1.301		
	Total	451.568	333			
Emotional Exhaustion	Between Groups	9.133	4	2.283	1.179	.320
	Within Groups	637.301	329	1.937		
	Total	646.434	333			
Need for Informal Support	Between Groups	2.891	4	.723	.475	.754
	Within Groups	500.798	329	1.522		
	Total	503.689	333			
Anger	Between Groups	5.428	4	1.357	1.498	.202
	Within Groups	298.063	329	.906		
	Total	303.491	333			
Worry	Between Groups	12.080	4	3.020	3.016*	.018
	Within Groups	329.443	329	1.001		
	Total					

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Dependent variables	Source	Sum of Squares	df	Mean Square	F	Sig.
	Total	341.524	333			
Need for Formal Support	Between Groups	29.717	4	7.429	3.528**	.008
	Within Groups	692.861	329	2.106		
	Total	722.578	333			
Fear	Between Groups	45.123	4	11.281	5.009**	.001
	Within Groups	740.868	329	2.252		
	Total	785.991	333			

* $p < 0.05$. ** $p < 0.01$, 2-tailed test.

Table 16 shows the results of one-way analyses of variance conducted of the eight dependent variables by the stage of the relative's cancer progression. The significant values are discussed in detail below.

One-way analysis of variance showed a significant difference in sadness felt by participants based on their relative's cancer progression, i.e., stage of cancer [$F(4,329)=4.15, p=.003$]. Tukey post hoc tests showed that family members of stage 1 cancer patients ($M=4.18, SD=1.08$) reported significantly lower levels of sadness compared to those who did not know their relative's cancer stage ($M=4.62, SD=.87, p=.035$), and family members of stage 2 and 3 ($M=4.54, SD=.85, p=.044$) and even stage 4 cancer patients ($M=4.73, SD=.65, p=.001$).

There was also a significant difference in hopelessness based on the relative's cancer progression [$F(4,329)=4.50, p=.001$]. Tukey post hoc tests showed that family members of stage 1 cancer patients ($M=3.42, SD=1.21$) reported significantly lower levels of hopelessness than those who did not know their relative's cancer stage ($M=4.03, SD=1.18, p=.020$), and family members of stage 4 cancer patients ($M=4.15, SD=.95, p=.001$). There were no significant differences in hopelessness for family members of cancer patients of other stages.

Participants also showed a significant difference in worry based on their relative's cancer progression [$F(4,329)=3.01, p=.018$]. Tukey post hoc tests showed that family members of stage 0 cancer patients ($M=3.35, SD=.94$) reported significantly ($p=.040$) higher levels of worry than family members of stage 1 cancer patients ($M=2.53, SD=1.16$). There were no significant differences in hopelessness for family members of cancer patients of other stages.

Fear levels differed significantly in participants based on their relatives' cancer progression [$F(4,329)=5.00, p=.001$]. Tukey post hoc tests showed that family members of stage 1 cancer patients ($M=3.13, SD=1.47$) reported significantly lower levels of fear than those who did not know their relative's cancer stage ($M=3.93, SD=1.64, p=.021$), and family members of stage 4 cancer patients ($M=4.16, SD=1.25, p=.000$). There were no significant differences in hopelessness for family members of cancer patients of other stages.

Participants experienced a significant difference in need for formal support based on their relative's stage of cancer [$F(4,329)=3.52, p=.008$]. Tukey post hoc tests showed that family members of stage 1 cancer patients ($M=3.20, SD=1.47$) reported significantly lower ($p=.044$) levels of need for formal support than those who did not know their relative's

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cancer stage (M=3.90, SD=1.45). There were no significant differences in hopelessness for family members of cancer patients of other stages.

Regression Results

Regression results are reported below, and shown in Tables 16 through 22 Correlation of anger and attachment level of participant to patient was found to be not statistically significant.

Table 16 Effect of Attachment Level on Sadness

Independent variable	B	SE B	β	F
Attachment level	.320***	.077	.224	17.464***

Note. Dependent variable: Sadness

*** $p < 0.001$; $R^2 = .050$

Table 17 Effect of Attachment Level on Hopelessness

Independent variable	B	SE B	β	F
Attachment level	.291**	.101	.157	8.350**

Note. Dependent variable: Hopelessness

** $p < 0.01$; $R^2 = .025$

Table 18 Effect of Attachment Level on Emotional Exhaustion

Independent variable	B	SE B	β	F
Attachment level	.537***	.118	.241	20.555***

Note. Dependent variable: Emotional exhaustion

*** $p < 0.001$; $R^2 = .058$

Table 19 Effect of Attachment Level on Worry

Independent variable	B	SE B	β	F
Attachment level	.236	.08	.14	7.230**

Note. Dependent variable: Worry

** $p < 0.01$; $R^2 = .021$

Table 20 Effect of Attachment Level on Fear

Independent variable	B	SE B	β	F
Attachment level	.448**	.132	.182	11.433**

Note. Dependent variable: Fear

** $p < 0.01$; $R^2 = .033$

Table 21 Effect of Attachment Level on Need for Informal Support

Independent variable	B	SE B	β	F
Attachment level	.286**	.107	.145	7.173**

Note. Dependent variable: Need for Informal Support

** $p < 0.01$; $R^2 = .021$

Table 22 Effect of Attachment Level on Need for Formal Support

Independent variable	B	SE B	β	F
Attachment level	.290	.128	.123	5.136*

Note. Dependent variable: Need for Formal Support

* $p < 0.05$; $R^2 = .015$

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Attachment level was found to explain less than 10% of the variance in each of the other dependent variables. However, results of regression were found to be statistically significant. The works of Neter and Wasserman show that low R square values are to be expected in social and behavioural sciences, where it is hard to specify complete models (Wasserman, 2004; Neter, 1987).

Attachment level was found to have a significant effect on Sadness (Table 16). The results of simple linear regression indicated that Attachment level explained 5.0% of the variation in Sadness [$R^2=.050$, $F(1,332)=17.464$, $p=.000$] and that Attachment level significantly predicted Sadness ($B=.320$, $p=.000$).

Attachment level was found to have a significant effect on Hopelessness (Table 17). The results of simple linear regression indicated that Attachment level explained 2.5% of the variation in Hopelessness [$R^2=.025$, $F(1,332)=8.350$, $p=.005$] and that Attachment level significantly predicted Hopelessness ($B=.320$, $p=.004$).

Attachment level was found to have a significant effect on Emotional exhaustion (Table 18). The results of simple linear regression indicated that Attachment level explained 5.8% of the variation in Emotional exhaustion [$R^2=.058$, $F(1,332)=20.555$, $p=.000$] and that Attachment level significantly predicted Emotional exhaustion ($B=.537$, $p=.000$).

Attachment level was found to have a significant effect on Worry (Table 19). The results of simple linear regression indicated that Attachment level explained 2.1% of the variation in Worry [$R^2=.021$, $F(1,332)=7.230$, $p=.008$] and that Attachment level significantly predicted Worry ($B=.236$, $p=.008$).

Attachment level was found to have a significant effect on Fear (Table 20). The results of simple linear regression indicated that Attachment level explained 3.3% of the variation in Fear [$R^2=.033$, $F(1,332)=11.433$, $p=.001$] and that Attachment level significantly predicted Fear ($B=.448$, $p=.001$).

Attachment level was found to have a significant effect on Need for Informal Support (Table 21). The results of simple linear regression indicated that Attachment level explained 2.1% of the variation in Need for Informal Support [$R^2=.021$, $F(1,332)=7.173$, $p=.008$] and that Attachment level significantly predicted Need for Informal Support ($B=.286$, $p=.008$).

Attachment level was found to have a significant effect on Need for Formal Support (Table 22). The results of simple linear regression indicated that Attachment level explained 1.5% of the variation in Need for Formal Support [$R^2=.015$, $F(1,332)=5.136$, $p=.024$] and that Attachment level significantly predicted Need for Formal Support ($B=.290$, $p=.024$).

DISCUSSION

The aim of the current research is to identify and study the psychological needs of the family members of cancer patients in India. The different domains studied were Dealing with Sadness, Dealing with Anger, Dealing with Emotional Exhaustion, Dealing with Worry, Dealing with Fear, Dealing with Hopelessness, Need for Informal Support and Need for Formal Support. The psycho-socio-demographic factors that were studied for their relationship with the domains were: ages of the participant (family member) and the cancer patient, gender and marital status of the family member, relationship of the participant with the patient, family structure (nuclear or joint), whether or not the participant was the primary

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caregiver, whether or not the participant lived with the patient, the participant's attachment to the patient, financial contribution and loans taken by the family member, health insurance taken by the patient, and whether or not the patient was currently suffering from cancer. A number of differences were found between the findings of the pilot study and the current study, which are not detailed below. Instead, the following section simply details the findings of the current study.

Psychological Needs Domains

Most of the participants reported experiencing high levels of all needs— Dealing with Sadness, Emotional Exhaustion, Worry, Fear, Hopelessness, and Need for Informal Support and Need for Formal Support. The domain 'Dealing with Anger' was an exception, which was low-level for most people. Previous studies also reported high levels of fear and anxiety, anger, hopelessness and helplessness in family members and family caregivers of cancer patients (Philips et al., 2019; Lim et al., 2013; Stenberg et al., 2010). In a previous study of caregivers of cancer patients, it was found that caregivers who reported higher levels of distress also reported needing more support (Jackson, D.B., 2015). This finding is supported by the current study, where high levels of distress reported by the participants, along with their reported need for formal and informal support.

Gender and Age

Males and females were equally represented in this study, and most of the participants were married. Interestingly, no differences in psychological needs were found based on gender. This was different from what was observed in other studies, where there were gender differences in strain and unmet needs (Kim et al., 2010; Butterworth et al., 2010). In both these studies, females suffered from higher distress. Similarly, no significant differences in psychological needs were found based on marital status. Concerning participant age, all age groups above 18 (with an interval of 10) were almost equally represented. No significant differences in psychological needs were found based on participant age either. This was also different from previous studies' findings (Kim et al., 2010; Butterworth et al., 2010).

Financial Factors

Financial factors were seen to make significant differences in the participants' psychological needs. About two-thirds of the participants were financially contributing to their relative's treatment. Sadness, Emotional Exhaustion, Worry and Need for Formal Support were all found to be higher for participants who were financially contributing to their relative's treatment. This is probably because they feel more invested in their relative's future. Need for Informal Support, however, was found to be lower for those family members who were financially supporting the cancer patient. A second aspect to financial contribution was loan withdrawal. Only 12% of the participants withdrew loans to help with their relative's treatment, but they experienced significantly higher levels of Sadness, Emotional Exhaustion, Hopelessness and Need for Formal Support. Thirdly, whether or not the patient had health insurance seemed to make a significant difference in the family members' psychological needs. Sadness, Emotional Exhaustion, Worry, Fear, Hopelessness and Need for Formal Support were all found to be lower if the patient had health insurance. Need for Informal Support was an anomaly here as well, however. It was found to be higher for those participants whose ill relatives had insurance. One other study identified financial factors as an important need for the family of a cancer patient, particularly how parents needed financial support to be able to stay home with their ill child (Mesmer, 2005). Other studies highlighted unmet financial needs in family members and caregivers of cancer patients (Kim et al., 2010).

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Proximity

Proximity of the participant to the patient and their involvement in the patient's life was also seen to make a difference in the participants' psychological needs. This was conceptualised by three different factors: (a) whether the participant was the primary caregiver to the patient, (b) whether they lived on the same premises as the patient, and (c) whether the participant's family was a nuclear family or a joint family. More than 80% of the participants were primary caregivers for their ill relative. This category of participants was found to have significantly higher levels of Sadness, Emotional Exhaustion, Worry, Hopelessness and Need for Formal Support. Approximately 75% of the participants were in joint families and lived on the same premises as their ill relative. The participants who lived on the same premises as the cancer patient reported higher levels of Sadness, Emotional Exhaustion, Worry, Hopelessness and Need for Formal Support. With the family structure, only two needs were found to be significantly higher: Fear and Need for Formal Support were significantly higher for participants who were in a joint family.

Current Patient

The differences in needs based on whether the patient was currently suffering from cancer (as opposed to being in relapse or having succumbed to the illness) were also studied. 85% of the participants had relatives suffering from cancer when they gave their responses. Participants reported higher Sadness, Emotional Exhaustion, Worry, Hopelessness and Need for Formal Support if their relative was currently suffering from cancer. Caregivers of cancer patients have reported improved psychosocial well-being following interventions targeted specifically at them (Northouse, Katapodi et al., 2010; Northouse, Williams et al., 2012).

Patient's Age

There were found to be differences in needs based on the sick relative's age. Sadness, Emotional Exhaustion and Worry were found to be higher for middle-aged patients (approximately 35-45 years) than an older age bracket. Need for Formal Support was found to be significantly higher for family members of cancer patients who were under 12 years old as compared to those of cancer patients above 60. Another study also found that family members of children who were diagnosed with cancer reported a high number of needs, an average of 13 (Mesmer, 2005).

Religion

There were interesting patterns found in differences in psychological needs based on religion of family members of the cancer patient. Nearly half the participants were Hindus, about 10% were Muslims and 40% were Christians. Sadness, Emotional Exhaustion, Worry, Hopelessness, Fear and Need for Formal Support were higher for Muslims than for Hindus. Similarly, Emotional Exhaustion, Worry, Hopelessness, Fear and Need for Formal Support were higher for Hindus than for Christians. Muslims and Hindus, therefore, might find themselves in more need of help during a crisis such as a family member being diagnosed with cancer than Christians. Another study also identified the role of spiritual/religious factors in the needs of family members of cancer patients, particularly prayer as a need (Mesmer, 2005). This need was dependent on a number of other factors, however, such as religion and culture.

Relationship with cancer patient

Psychological needs were higher for family members when closer relatives were diagnosed with cancer than extended family. Hopelessness was higher for participants whose siblings

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had cancer than for participants whose extended family did. Emotional Exhaustion was greater for participants whose children, parents, spouse or siblings has cancer as compared to when extended family members were diagnosed. Worry was greater for siblings with cancer than for extended family members who were cancer patients. Participants whose spouse or siblings had cancer reported higher Need for Formal Support than participants whose extended family members had cancer. The domain Fear showed a different pattern, however. Participants whose siblings had cancer reported higher levels of Fear than participants whose parents, spouses or extended family had been diagnosed with cancer.

Stage of Cancer

Differences in the needs domains were also tested by Stage of cancer progression. Most of the participants had relatives with Stage 2 or 3 cancer. Interestingly, participants who stated they did not know their sick family member's stage of cancer progression also reported higher levels of Sadness, Hopelessness, Fear and Need for Formal Support than family members of Stage 1 cancer patients. This might indicate that the participants' answers could have been adhering to social desirability norms, or that lack of information was causing them more distress. Family members of Stage 4 cancer patients reported higher levels of Sadness, Hopelessness and Fear than family members of Stage 1 cancer patients. Family members of Stage 2 and 3 cancer patients also reported higher levels of Sadness than family members of Stage 1 cancer patients. This might indicate to us the increasing necessity of support for families of cancer patients as the cancer progresses. This concurs with previous research (Jackson, D.B., 2015). This is particularly concerning in light of the fact that cancer care in India is characterised by late detection (EY, 2015). This means that a high percentage of diagnoses occur in later stages. A final note about the needs with respect to stage of cancer: there was found to be a different pattern with Worry, where family members of Stage 0 cancer patients reported higher levels of Worry than family members of Stage 1 cancer patients.

Attachment Level

The participants also reported their level of attachment to the cancer patient. 90% of the participants said they were very attached to their ill relative. This may indicate that social desirability was influencing the answers. It could also mean that the immediate possibility of losing the relative was influencing the emotional state and responses of the participants, or even that the family crisis had drawn the family close together. The participant's level of attachment to the cancer patient was seen to have a significant effect on Sadness, Hopelessness, Emotional Exhaustion, Worry, Fear, Need for Informal Support and Need for Formal Support. The psychological needs domains were seen to increase as the participants' level of attachment increases.

We can now consider the applications of the above findings. From this and previous studies, it is apparent that the families of cancer patients go through notable levels of psychological distress. It is also clear that there are not many programs in the country that deal with this issue. Psychologists and other health professionals in the field of oncology should intervene in the lives of the families of the cancer patients. The subject also needs greater focus in research. Formal support needs to focus on those family members who bear the financial burden of the cancer patient's treatment, especially if they have withdrawn loans in order to do so. Certain belief systems might cause greater distress to family members, and cause them to require extra support. Family members of cancer patients in later stages of cancer reported higher levels of psychological needs and would require more intensive support during this time. Members of joint families might also require more support. Primary

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caregivers as well as family members who live on the same premises as the patient would require more help as they undergo more stress. When children are diagnosed with cancer, family members could be in particular need of professional help. The same could be said for family members who are highly attached to the patient.

Some of the limitations of this study are as follows. Since there has been very little study done on this subject, particularly in the same cultural context, a qualitative approach would have given a better understanding of the emotional experiences of families of cancer patients. This may also have helped to take cultural aspects into account while interpreting results. For example, an overwhelming majority of participants answered that they were very attached to the patient, without any reference to the relationship between them. This may be a cultural manifestation of family loyalty and duty rather than actual attachment. It might also be a shift in attitudes due to the misfortune that has befallen the patient. Clearly, the subject requires further study.

The following are the strengths of this study. This study has a large sample that is representative of an Indian population and its particular features, such as diverse religion, languages and family structure. The gender distribution in the sample is also very even. This study sheds light on a topic that has not been widely researched in India, and its findings can help build better support systems for the family members of cancer patients. Cultural and family factors that have not been considered in previous studies, such as proximity to cancer patient, attachment level and family structure have been taken into account in this study.

To conclude, the families of cancer patients undergo a significant amount of silent suffering; and there is a great need as well as the potential to improve their quality of life. These families experience high levels of Sadness, Fear, Helplessness, Need for Formal Support, Need for Informal Support, Worry and Emotional Exhaustion. The unique characteristics of Indian culture and individual beliefs might also contribute to their suffering. While they are helped by leaning on each other and their friends, studies have shown that interventions can improve their situation to a much greater extent. This, in turn, would mean that cancer patients would get better care from their family members. Further research in this area could focus on more understanding of how the psychological needs relate to the psycho-socio-demographic variables. Qualitative studies might help to find further areas of needs that family members of cancer patients have.

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Conflict of Interest

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