Anxiety and Depression among Family Caregivers of Older Adults with Cancer

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Abstract
Anxiety and depression are the most common problems experienced by family caregivers. Aim: to assess anxiety and depression among family caregivers of older adults with cancer. Method: descriptive research design was used in this study. The study carried out on 157 family caregivers of the older adults diagnosed with cancer attending Mansoura Oncology Center within a period of three months. Data was collected using four tools, Socio demographic and clinical data structured interview schedule, Barthel Index Scale, Lawton and Brody Scale and Hospital Anxiety and Depression Scale. Results: the mean scores of anxiety were 11.31±3.37 in which the prevalence of anxiety among caregivers was 85.3%. The mean scores of depression were 10.64±3.22 in which the prevalence of depression was 81.5%. Conclusion: Family caregivers of older adults with cancer experienced high levels of anxiety and depression.
Keywords: Older adults, Cancer, Anxiety, Depression, Family caregivers

1. Introduction

The number of older adults with cancer is on the rise and these older adults have significant caregiving needs. In fact, 63% of home care of older adults with cancer is provided by family caregivers (Jayani & Hurria, 2012). In Egypt, older adults population aged 65 years or more increased from 3.4% in 1996 to 3.7% in 2006 ,to 4.2% in 2011 (The Egyptian Central Agency for Public Mobilization and Statistics, 2012) and to 4.8% in 2014 ((The Central Intelligence Agency, 2014). Age-standardized incidence rates (ASRs) per 100,000 were 166.6 (both sexes), 175.9 (males), and 157.0 (females) (Ibrahim et al, 2014). Despite the rapidly growing demands for home services, short term respite programs are extremely limited in rural Egypt. Family members, therefore, take upon themselves the considerable responsibilities, stress associated with providing adequate care and supervision for their older relatives (Salama & Abou El-Soud, 2012). Cancer caregiving is generally viewed as one of the most stress-inducing caregiving challenges faced by family members (Kim & Given, 2008).

Family caregivers play an essential role, usually unpaid, in caring for elderly patients with cancer. Older patients with cancer are mostly cared for by a family member, who may not be prepared for the challenges of caregiving and the needs of older patients are diverse. This can resulted in negative effects on caregivers' psychological health (Haley, 2003).If the caregiver's psychological well-being negatively influenced by a burdensome caregiving experience, the caregiver would have increased anxiety, distress and depressive symptomatology (Mazanec, 2009). Anxiety and depression are the most common problems experienced by family caregivers (Stenberg et al., 2010), and may be more common and severe in family caregivers than in patients with cancer (Edwards & Clarke, 2004). Moreover, anxiety and depression in patients and caregivers are correlated so if the caregiver is depressed, the identified patient becomes depressed and more impaired (Lichtenberg, 2010). Despite the significant psychological impact of caring, caregivers might not seek required treatment (Vanderwerker et al ., 2005). Nurses need to assess family caregivers for emotional distress and intervene to reduce distress by fostering patient-caregiver teamwork, communication, and self-care; providing information; and referring to resources as needed (Northouse et al., 2012).

2. Materials & Method

Study design:
A descriptive research design was used in this study.

Sample and setting:
The study subjects included 157 family caregivers of older adults diagnosed with cancer attending in the oncology inpatient and outpatients clinics at the Oncology Center in Mansoura city within a period of three months (the 1st of January till the 1st of April, 2014) and fulfilling the following criteria: Aged 18 years or more, both sexes, responsible for providing care for older adults included in the study, able to communicate, available at the time of data collection, and willing to participate in the study.

Tools:
Four tools were used to collect the necessary data.

Tool I: Socio demographic and clinical data structured interview schedule: It was developed by the researcher after literature reviewing and included items related to socio-demographic characteristics and health history of the older adults and their family caregivers.

Tool II: Barthel Index Scale: developed by Malhoney (1965) to measure activities of daily living of the elders. This scale was translated into Arabic by Hallaj (2007).This Arabic version was used in the present study. The reliability of this tool was tested using test retest reliability Spearman's correlation coefficient r=0.971. The total score of this scale is (20) and classified as: 0-7= dependent, 8-12= independent with assistance and 13-20= independent.

Tool III: Lawton and Brody Scale (1969) was used to assess instrumental activities of daily living (IADLs). This scale was translated into Arabic and tested for its validity and reliability by Hallaj 2007. The maximum score was 16 for females and 10 for males. Six points from the maximum score were subtracted for males for gender-specific questions. The score achieved by the elder was calculated as a percentage. The degree of the elder's performance of IADL was categorized as follows:-Totally dependent (0-<25%), partially dependent (25-<75%), and independent (≥75%)**.**

Tool IV: Hospital Anxiety and Depression Scale (HADS): It was developed by Zigmond & Snaith (1983). HADS is a self-report questionnaire commonly used to assess levels of anxiety and depression. This scale was translated into Arabic and tested for its validity and reliability by Abdel Elhameed SH, 2010. The reliability of this tool was tested using test retest reliability Spearman's correlation coefficient r=0.861. The HADS comprises statements which the patient rates based on their experience over the past week. The 14 statements are relevant to generalized anxiety (7 statements) or 'depression' (7 statements). Each question has 4 possible responses. Responses are scored on a scale from 3 to 0. The two subscales, anxiety (HADS-A) and depression (HADS-D), have been found to be independent measures. In its current form the HADS is now divided into four ranges: normal (0–7), mild (8–10), moderate (11–15), and severe (16–21).

Method

1. An official letter was issued from the Faculty of Nursing, Mansoura University to the director of Mansoura Oncology Center to obtain his approval to carry out the study.
2. The director of the Oncology Center was informed about the purpose of the study, the date and the time of starting data collection in order to obtain his approval to interview the older adult patients and their family caregivers.
3. Necessary approval was obtained from ethical committee of the Faculty of Nursing- Mansoura University.
4. Study tools were test for content validity by 7 experts in the related fields. The Arabic versions of the study tools were used.
5. Verbal consent of the subjects was obtained after explanation of the purpose of the study. Privacy of the subjects was assured and confidentiality of the collected data was maintained.
6. Each family caregiver was interviewed individually by the researcher after the researcher introducing herself and explaining the purpose of the study. Then the necessary data were collected using the study tools.
7. A pilot study was carried out on Fifteenth family caregivers from outpatient clinics at Mansoura Oncology Center before starting the data collection to test the feasibility of the tools and to identify the approximate time needed for the interview.

Statistical analysis

Data were analyzed with SPSS version 16. The normality of data was first tested with one-sample Kolmogorov-Smirnov test. Qualitative data were described using number and percent. Association between categorical variables was tested using Chi-square test. Continuous variables were presented as mean ± SD (standard deviation). The two groups were compared with Student t test. Analysis Of Variance (ANOVA test) used for comparison of means of more than two groups. Pearson correlation used for correlation between continuous data. The threshold of significance is fixed at 5% level (p-value). The P value of < 0.05 indicate a significant result while, P value of > 0.05 indicate a non significant result.

3. Results

Table (1) shows characteristics of older adults' patients with cancer and their family caregivers. The age of the studied older adults ranged from 60 to 85 years. Females were more prevalent(83.4%) in the studied older adults, more than half (58.6%) were married. Illiteracy was prevailing among of the studied subjects. More than two third of the studied older adults (72%) were housewives, the majority (81.5%) were residing in rural areas, 66.2% reported that their income was not enough, more than half (58%) not suffering from comorbidity and hypertension was the most common comorbidity (26.1%). For caregivers, the mean age of the studied caregivers was 40.14±11.14 (range 18-65). Female subjects constituted the majority (71.3), the majority (80.9%) were married, about half (55.4%) had secondary education, 45.2% were housewives, about two third 61.1% reported

that their income is enough and 86% didn't suffer from any disease. Table (2) shows cancer history of older adults. Breast cancer was more prevailing (29.9%). The majority (80.9%) of the older patients reported suffering from cancer for less than 3 years and 80.3% received chemotherapy as a treatment for cancer. Table (3) describes caregiving properties of family caregivers. More than half (51%) of the caregivers were son or daughter, more than two third (64.3%) were living with older adults in the same house, and the majority (78.3%) of them had secondary caregivers. 42% were caring since 1 to less than 3 years. About half 50.3% of the studied caregivers spend from 2 to less than 4 hours daily.

Table (4) illustrates functional status of the older adults. More than two third (75.8%) were independent in activity of daily livings (ADLs) and more than two third 68.6% of older adults needed assistant in instrumental activity of daily livings (IADLs).Table (5) shows caregivers' anxiety and depression level. The prevalence of anxiety was85.3% with12.7% had severe anxiety level (Mean ± SD11.31±3.37) and depression was81.5% with 8.9% had severe depression level (Mean ± SD10.64±3.22). Table (6) shows relation between characteristics of older adults and their caregivers and anxiety &depression. It was found that the total anxiety and depression score of the caregivers not significantly correlate with older adults' age, sex, marital status, residence, educational level, and duration of cancer (P>0.05) while, significantly correlate to older adults' income, and comorbidities. For the caregivers, the table also show that there is no statistical significant difference was found regarding different age groups, marital status and health status and the mean score of total anxiety and depression (P>0.05). Sex was significantly related to anxiety (P=0.028*) not depression (P=0.163). While educational level and income were significantly affect depression (P=0.039*, P=0.03* respectively) not anxiety (P=0.147, P=0.129 respectively).

Table (7) shows relation between older adult's functional status and anxiety & depression of their caregivers. The table show that there is statistical significant relation between dependency in ADL and mean score of total anxiety and depression (P=0.000) and dependency in IADL and mean score of total anxiety and depression (P=0.001*, P=0.005*respectively).Table (8) shows relation between caregiving properties and anxiety and depression level. The table revealed that caregiver relation to older adult and numbers of daily hours of care were significantly correlated to mean score of total anxiety and depression (P=0.000*). Although there is increase in the mean score of total anxiety and depression in caregivers who did not live with older adult than those who live and who had secondary caregiver or not yet the difference are not statistically significant (P>0.05) . Period of caregiving was significantly related to mean score of total anxiety (P=0.02*) not depression (P=0.129). Figure (1) illustrates correlation between anxiety and depression. There is strong positive correlation between anxiety and depression.

4. Discussion

Public support for older adults is limited in Egypt, and families are the main, if not only, source of old-age support. (Sinunu et al., 2009). This study indicates high prevalence of anxiety and depression among caregivers of older adults with cancer. High level of anxiety and depression could be related to concerns about the future, coping with the situation, fear of loss and being alone, sole responsibility, or unfamiliar tasks at home. These situational factors may be seen as stressors influencing the caring situation, as indicated by Haley (2003). In a study done in Italy by Cormio et al (2014) the caregivers' mean and standard deviation for anxiety was 9.17 ±5.074and depression was 7.48 ±4.288. In a study done in Korea by Park et al (2013) the prevalence of anxiety was 38.1 % and of depression was 82.2%. The mean age of caregivers in the present study was 40.14±11.14. In Evci et al (2012) study, the mean age of the caregivers was 39.45±10.65. This finding points toward the fact that middle age groups are assigned the role of caregivers more often. According to the results of some studies, approximately 60-77% of caregivers were female, while this rate was 71.3% in this study (Christofoletti et al., 2011). This result may be attributed to woman in developing countries, like Egypt, undertake the task of providing care. Sons and daughters were the most common caregivers' rankings in this study. This result may be due to the presence of aged wife with chronic illness who can't provide care for the spouse and by tradition, the other family members especially daughters and daughters-in-law take responsibility for caring for older adults. The same finding was reported by another study carried out by Evci et al (2012).

The present revealed that there is increase in caregivers' anxiety and depression when caring older adults with comorbid diseases than caring those suffering from cancer only with statistical significant relation. This may be due to an older person with many health problems is likely to demand more physical and psychological effort, time and money from the family system. Consistent with the study of Papastavrou et al (2009) in Cyprus. Unexpectedly, the result of the present study showed that there was no statistical significant relation between duration of cancer and caregivers' anxiety and depression. This may be due to psychological stress is determined by the presence and severity of cancer and the activities of caregiving mediated by physical and psychological aspects and the resources of the environment. This result in accordance with the study of Oechsle et al (2013) in Germany. The present study also showed that caregivers who perceived care recipients as more dependent in ADL and IADL were more likely to experience high anxiety and depression with statistical

significant difference. One possible explanation for this is that dependant older adults require more time and care from caregivers which restrict the caregiver's ability to socialize and participate in valued activities. This result is consistent with; a study done in Korea by Rhee et al (2008).

The current study showed that the caregivers' anxiety and depression level were lower in young age than middle and old age caregivers. This result may be justified by the fact that the young age has less responsibilities and more time to spend in caring older adults. Despite this, the results showed that there is no significant difference between caregivers' age and mean score of anxiety and depression. This result in line with the study done by Manjeet et al (2014). Also, the present study revealed that females had higher level of anxiety and depression than male. This may be due to women positioned themselves as natural caregivers and they did not find caregiving as rewarding as male caregivers. The present study showed that there is statistical significant relation between sex and mean score of anxiety but no relation with the mean score of depression. The same result was reported by a study in India by Manjeet et al (2014). Additionally, being married, divorced/ separated/widow showed more anxiety and depression than caregiver with single marital status. This may be due to persons who are never married have more times and less responsibilities to informally take care for the patients than the others. The result of the present study showed that there was no significant relation between marital status and mean score of anxiety and depression. The same results were reported by the study of Price et al (2010).

Contrary to reported association between low level of education and emotional stress, the present study found that caregiver with high level of education (post graduate education) suffered from high anxiety and depression. This result may be due to family caregivers with a higher education level may be engaged in employment that could be more demanding, resulting in a higher level of stress in combination with caregiving responsibilities. The present study showed that there was no statistical relation between educational level and mean score of anxiety while, there is a statistical relation was observed between educational level and mean score of depression. The same result reported by the study of Price (2010) in Australia revealed that there is no association between education level and anxiety and the study of Papastavrou et al (2009) in Cyprus showed that level of education was significant to depression. Regarding income, not have enough income had higher mean score of anxiety and depression than those who had enough and the differences were significant with depression not anxiety. This result may be due to the majority of the older adults had not enough income and live in rural areas, therefore caregivers were more likely to feel the expenses of treatment, transportation, follow up in physicians' special clinics and so on. Also low income can impact to some degree caregivers' social function such as leisure activities resulting in more caregiver burden psychological stress. This result in line with a study done in Korea by Park et al (2013). Caregivers who suffer from disease had slightly higher mean score of anxiety and depression with no statistical difference. This may due to the thought of filial piety and commitment to the family according to the Egyptian culture in which caring for the patients is an obligation for family members even if caregiver would suffer from physical illness so suffering from disease not associated with psychological stress. This result in contrast, the study done in by Park et al (2013). Furthermore, there was a statistical significant relation between relationship to older adult and mean score of anxiety and depression with a higher mean score for son/daughter. This result may be due to son/daughter was the main responsible for proving care. This is consistent with the findings of the study of Zyada et al (2013) in Egypt and in contrast to the study Cormio et al (2014) in Italy. The result of the present study showed that, there was no statistical significant difference between caregivers living with older adults and those who not living in the same house regarding mean score of anxiety and depression. This result in contrast with a study done in Egypt by Zyada et al (2013).

The result of the present study showed that caregivers who were primary caregivers had higher mean score for anxiety and depression than those who had had secondary caregivers helping in the care of the patient. This is may be due to the fact that being the main caregiver means taking the main responsibility for caregiving, which is a very distressful job. On the other hand, a study done in Egypt by Zyada et al (2013) found that having more than one additional caregiver to help is a predictor of caregiver anxiety and depression. The present study revealed that duration of caregiving was not statistically significant with caregiver depression while, significant to anxiety. This result in agreement with the study done in Korea by Park et al (2013). Additionally caregivers who spend more hours daily in caring older adults had higher mean score of anxiety and depression than those how spend less hours daily and the difference between them was statistically significant. This result may be justified by the fact that spending more time means spending more physical and psychological effort and the caregivers would not had more time for themselves which may affect their work, personal life and also makes it difficult to find spare time away from their caregiving to relax or attend social activities and relieve themselves .Consistent with Zyada et al (2013) while, Park et al (2013) study found that time spent in caregiving per day has a significant effect on anxiety but not depression. In the present study there was strong positive correlation between anxiety and depression. a. Consistent with previous studied, In Germany, the study of Oechsle et al (2013) reported that caregivers' anxiety and depression were significantly correlated (p< 0.001*).

5. Conclusion

The prevalence of anxiety and depression was high in family caregivers. Older adults who had not enough income, with comorbidities, require increased functional assistance and caregivers' relation to older adult and who spend more hours daily in care have an impact on the level of anxiety and depression experienced by the caregiver's. This finding indicates that more attention must be given to detecting changes in the psychological state of vulnerable family caregivers of cancer older adults' patients.

6. Recommendation

- Educational program for caregivers not only about the disease processes but also about how to manage symptoms and experiences and locate resources that may decrease the caregiving burden and provide the family caregivers with clear educational materials about cancer (including books, pamphlets, videos, Internet sites).
- Develop standardized care for caregivers of patients with cancer in acute care and primary care settings
- Develop psychological services at the local hospital and clinics for older adults' cancer patients and for their caregivers who accompany them for treatment

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Table (1): Characteristics of older adults' patients with cancer and their caregivers

Older adults patients	No	%	Family caregivers	No	%
Age			**Age**	**Mean ± SD** 40.14±11.14	
60<75	141	89.8	18<30yaers	32	20.4
75<85	13	8.3	30<45years	83	52.9
85 and more	3	1.9	45and more	42	26.8
Sex					
Male	41	26.1	Male	45	28.7
Female	116	73.9	Female	112	71.3
Marital status					
Single	1	.6	Single	21	13.4
Married	92	58.6	Married	127	80.9
Widow	59	37.6	Widow	5	3.2
Divorced	5	3.2	Divorced	4	2.5
Education level					
Illiterate	131	83.4	Illiterate	30	19.1
Read and write	8	5.1	Read and write	10	6.4
Secondary	14	8.9	Secondary	87	55.4
University	4	2.5	University	29	18.5
			Post graduate	1	0.6
Occupation before retirement			**Occupation**		
Employee	10	6.4	Working	63	40.1
Farmer	15	9.6	Housewife	85	54.2
Housewife	113	72.0	Not working	9	5.7
Worker craftsman	15	9.6	-	-	-
Driver	4	2.5	-	-	-
Residence					
Rural	128	81.5	Rural	128	81.5
Urban	29	18.5	Urban	29	18.5
Income					
Enough	52	33.1	Enough	96	61.1
Not enough	104	66.2	Not enough	61	38.9
Enough and saves	1	0.6	-	-	-
Comorbidities #			**Suffering from disease #**		
No	91	58	No	135	86.0
Heart disease	9	5.7	Hypertension	13	8.3
Hypertension	41	26.1	Diabetes Mellitus	10	6.4
Renal disease	4	2.5	Orthopedic problem	3	1.9
Diabetes mellitus	39	24.8	Psychiatric disorder	2	1.3
Liver disease	6	3.8	Physical disability	1	0.6

Table (2): History of cancer

History of Cancer	No	%
Site of cancer #		
Lymphatic	17	10.8
Breast cancer	47	29.9
Blood cancer	22	14.0
Colon cancer	15	9.6
Stomach cancer	5	3.2
Uterine cancer	4	2.5
Lung cancer	9	5.7
Pancreatic cancer	5	3.2
Ovarian cancer	18	11.5
Rectal cancer	1	0.6
Brain tumor	2	1.3
liver cancer	15	9.6
Gall bladder cancer	5	3.2
Spleen cancer	5	3.2
Prostate cancer	7	4.5
Tongue cancer	1	0.6
Duration of cancer		
Less than 3years	127	80.9
3<5years	17	10.8
5<10years	7	4.5
10years and more	6	3.8
Type of treatment #		
Chemotherapy	126	80.3
Radiotherapy	5	3.2
Hormonal	10	6.4
Surgery	76	48.8

Table (3): Caregiving properties

Caregiving properties	No	%
Caregiver relation to older adult		
Son / daughter	80	51.0
Husband /wife	22	14.0
Son's wife	18	11.5
Brother /sister	25	15.9
Daughter of sister/brother	10	6.4
A relative	2	1.3
Living with older adult		
Yes	101	64.3
No	56	35.7
Availability of secondary caregiver		
No	34	21.7
Yes	123	78.3
Period of caregiving		
3<6month	35	22.3
6<12month	37	23.6
1<3years	66	42.0
3 and more	19	12.1
Number of daily hours of caring		
2<4hours	79	50.3
4<6hours	62	39.5
6hours and more	16	10.2

More than one answer was given

Table (4): Caregivers' Anxiety and Depression

Items	No	%
Anxiety		
Normal(0-7)	23	14.6
Mild(8-10)	44	28.0
Moderate(11-15)	70	44.6
Severe(16-21)	20	12.7
Mean ± SD	11.31±3.37	
Depression		
Normal(0-7)	29	18.5
Mild(8-10)	55	35.0
Moderate(11-15)	59	37.6
Severe(16-21)	14	8.9
Mean ± SD	10.64±3.22	

Table (5): Older adults' Functional Status

Item	No	%
Barthel index scale for ADL		
Dependent	7	4.5
Independent with	31	19.7
Independent	119	75.8
Mean ± SD	15.15±4.11	
Lawten scale for IADL		
Independent with	107	68.2
Independent	50	31.8
Mean ± SD	69.06±12.63	

Table (6): Relation between characteristics of older adults and their caregivers and anxiety & depression level

| Characteristics of older adults	Total anxiety Mean ± SD	Total depression Mean ± SD	Characteristics of caregivers	Total anxiety Mean ± SD	Total depression Mean ± SD
Age					
60<75	11.14±3.38	10.56±3.29	18<30yrs	10.68±3.44	10.00±3.32
75<85	12.15±3.10	11.46±2.47	30<45yrs	11. 63±3.27	11.02±3.03
85 and more	15.00±1.73	10.66±3.21	45yrs and more	11.11±3.50	10.38±3.47
60<75	11.14±3.38	10.56±3.29			
Significance test	F=2.405 P=0.094	F=0.455 P =0.636	*Significance test*	F=1.006 P=0.368	F=1.361 P=0.260
Gender					
Male	11.31±3.25	10.95±3.13	Male	10.35±2.70	10.06±2.62
Female	11.30±3.42	10.35±3.26	Female	11. 66±3.55	10.86±3.43
Significance test	T=0.025 P=0.980	T=0.71 P= 0.479	*Significance test*	T= 2.224 P=0.028*	T= 1.401 P=0.163
Marital status					
Single	16.00	7.00	Single	11.475±3.34	10.85±3.46
Married	11.17±3.41	10.76±3.28	Married	11.15±3.34	10.46±3.12
Widow	11.33±3.40	10.47±3.22	Widow	12.60±2.70	13.00±3.47
Divorced	12.40±1.94	11.20±2.28	Divorced	13.50±4.12	12.25±4.03
Significance test	F=0.867 P=0.460	F=0.565 P= 0.639	*Significance test*	F=0.907 P=0.439	F=1.393 P=0.247
Educational level					
Illiterate	11.38±3.38	10.70±3.15	Illiterate	11.83±3.51	11.20±3.14
Read and write	11.62±3.15	10.37±3.70	Read& write	12.40±2.59	12.50±3.53
Diplom	11.85±3.43	10.85±3.99	Secondary	10.81±3.30	10.02±3.15
University	8.00±1.41	8.50±1.00	University	11.65±3.47	11.13±3.05
			Post graduate	17.00	15.00
Significance test	F=1.557 P=0.202	F=0.638 P= 0.592	*Significance test*	F=1.726 P=0.147	F=2.585 P=0.039*
Income					
Enough	10.28±3.12	9.73±3.19	Enough	10.97±3.46	10.18±3.33
Not enough	11.79±3.40	11.08±3.17	Not enough	11. 81±3.18	11.36±2.93
Enough and saves	13.00	12.00			
Significance test	F=3.742 P=0.026*	F=3.244 P =0.042*	*Significance test*	T= 1.528 P=0.129	T= 2.251 P=0.03*
Presence of comorbidities			**Suffering from disease**		
No	10.68±3.21	10.17±3.30	No	11.23±3.30	10.55±3.11
Yes	12.16±3.42	11.28±3.01	Yes	11.84±3.87	11.31±3.94
Significance test	T=2.781 P=0.006*	T=2.185 P=0.032*	*Significance test*	T= 0.738 P=0.462	T= 0.969 P=0.334
Duration of cancer					
1<3years	11.40±3.31	10.76±3.25	-	-	-
3<5years	11.52±3.69	10.88±3.33	-	-	-
5<10years	10.71±3.14	9.57±3.20	-	-	-
10 yrs and more	9.16±4.07	8.66±1.36	-	-	-
Significance test	F=0.940 P=0.423	F=1.102 P=0.350	-	-	-

*Significant ≤0.05

Table (7): Relation between older adults' functional status and anxiety & depression level

Items	Total anxiety Mean ± SD	Total depression Mean ± SD
Barthel index (ADL)		
Dependent	17.00±2.44	16.14±3.33
Independent with assistance	12.87±3.54	11.87±2.86
Independent	10.56±2.90	10.00±2.91
Test of significance	F=20.174 P=0.000*	F=18.026 P=0.000*
Lawton scale (IADL)		
Independent with assistance	11.89±3.38	11.13±3.21
Independent	10.04±3.00	9.60±3.01
Test of significance	T=3.315 P=0.001*	T=2.833 P=0.005*

Table (8): Relation between caregiving properties and anxiety & depression level

Items	Total anxiety Mean ±SD	Total depression Mean ± SD
Caregiver relation to older adult		
Son / daughter	12.325±3.15	11.47±2.86
Husband / wife	11.04±3.48	10.95±3.40
Son's wife	8.61±2.50	8.22±2.11
Brother/ sister	11.12±3.58	10.64±3.93
Daughter of sister/brother	9.30±2.54	8.30±2.00
A relative	10.00±1.41	7.5±0.70
Test of significance	F=5.177	F=5.184
Living with older adult		
Yes	11.07±3.51	10.52±3.18
No	11.71±3.08	10.85±3.31
Test of significance	T= 1.131	T= 0.617
Another person to help in caring		
Yes	11.04±3.11	10.48±3.14
No	12.26±4.09	11.20±3.47
Test of significance	T= 1.888	T= 1.151
Period of caregiving		
3<6 months	10.44±3.08	9.71±2.62
6<12 months	11.37±3.28	11.10±3.41
1<3 years	11.13±3.13	10.56±3.27
3 years and more	13.30±4.11	11.65±3.42
Test of significance	F=3.337	F=1.919
Numbers of daily hours of caring		
2<4hours	9.93±2.52	9.35±2.56
4<6hours	12.33±3.53	11.62±3.19
6hours and more	14.06±3.47	13.18±3.58
Test of significance	F=17.963	F=17.120

Figure (1): Correlation between anxiety and depression
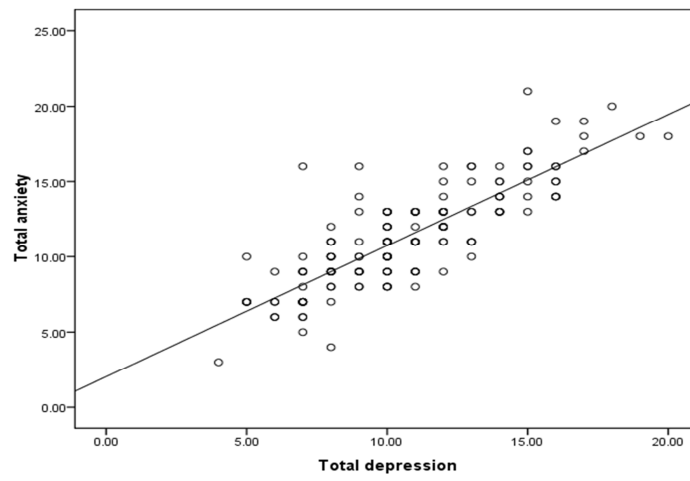
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