Research Article

Levels of Stress, Depression and Social Support of People Care Alzheimer Patients

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Abstract

Alzheimer's is a challenging disease that harms patients' relatives psychosocially. Individuals who have been maintaining the patient's care function from the beginning of Alzheimer's disease and living under the same roof with the patient have severe psychological problems and have difficulties in dealing with them.

It is not easy to tolerate that the individual you live with does not remember you, cannot perform daily functions, break with work life, cannot find the way to the house where he lives, and eventually becomes dependent on the bed. It is necessary to understand the process of the relatives of the patients correctly and to develop services in this direction.

Keywords: Alzheimer; Caregivers; Stress; Depression; Social Support

Introduction

Alzheimer disease is a very challenging disease for patients and, more importantly, patient relatives with their insidious and progressive structure. For this reason, Alzheimer's points to an important disease that needs to be addressed with its medical aspects as well as its psychosocial dimension.

The patient's relative does not know how to adapt to existing conditions after this disease, which leads to a serious change of life, and how to deal with the problems that arise.

The patient's relative sees that existing coping mechanisms do not work, seek new exit paths, or stop coping and move to a depressed position. However, the fact that caregivers are in economic deprivation is a situation that should be emphasized in particular. While struggling with the course and problems of the disease, dealing with economic problems make the process of coping much more difficult [1-3].

Research's problem

Alzheimer is a disease that occurs with behavioural and cognitive changes of the person, requiring treatment and care in the future. It is an important process that needs to be addressed in the psychosocial aspect for caregivers [4].

There are lots of researches on Alzheimer, but there is no study examining the levels of stress, depression and social support of those who care for patients with Alzheimer.

Research's aims

General goal of this research is to examine stress, depression and social support levels of caregivers who nurse patients with Alzheimer. Within the framework of this general objective, functional subgoals have been determined and they have been expressed with question sentences.

1. Is there a relationship between the age of caregiver's patients with Alzheimer and their stress levels?

2. Is there a relationship between the gender of caregiver's patients with Alzheimer and their depression levels?

3. Is there a relationship between caregiver's patients with Alzheimer and their marital status?

4. Is there a relationship between caregiver's patients with Alzheimer and their social support level?

5. Is there a relationship between caregiver's patients with Alzheimer and their educational level?

6. Is there a relationship between caregiver's patients with Alzheimer and the place in which they resided in for the longest period?

7. Is there a relationship between caregiver's patients with Alzheimer and their family type?

8. Is there a relationship between caregiver's patients with Alzheimer and their monthly income?

9. Is there a relationship between caregivers' patients with Alzheimer and their periods of caregiving?

10. Is there a relationship between caregiver's patients with Alzheimer and their status of receiving psychological support?

Methods

Research's model

This research was carried out by quantitative research method. The general scanning technique of quantitative research has been used.

Setting up research variables is a scan study because no replacement has been made.

Screening model research, which is based on question asking, is widely used in social service research. The survey used in this context systematically collects data from the participants, thus getting the participants' ideas about the subject of research.

Research's sample

Full counting sampling was used in the study. Research was made with the people, who accepted to participate into the research and nursed patients with Alzheimer in Istanbul Lotus Caring Home. 314 caregivers have been reached in this study [5].

Research's data collection tool

Socio-demographic information form, Perceived Stress and Social Support Scale have been used as data collection tools.

Perceived Stress Scale (PSS)

It has been developed by Cohen, Kamarck and Mermelstein. The PSS, consisting of a total of 14 substances, is designed to measure how stressful certain situations are perceived in a person's life. Each item has been evaluated according 5-type Likert scale, which ranges from "Never (0)" to "Very frequent (4)".

In addition to the long form with fourteen items, the PSS has two other forms with 10 and 4 articles respectively. In this study, the reliability and validity of all three forms are tested. PSS items were given in Annex-1 (items reversely scored and items in forms with 10 or 4 items were marked). While PSS-14's scores range from 0 to 56, PSS-10's scores range from 0 to 40 and PSS-4's scores range from 0 to 16. High score points to the excess of one's stress perception [6].

The multidimensional perceived social support scale

It is an easy to use, short scale that evaluates the adequacy of social support from three different sources as subjective. It is a scale of 12 items. It contains three groups of support, each of which consists of four items. The factor structure reliability and structure passivity of MSPSS's Turkish form has been generally found to be satisfactory in terms of its use in our country [7].

Beck Depression Inventory (BDE)

To measure symptoms of depression, a 21 point Beck Depression Inventory (BDI) developed by Beck, Rush, Shaw and Emery was used. Each substance shows a sign of depression. BDI, a self-notification tool, is the most widely used depression measurement tool in the whole world. BDI was translated into Turkish by Hisli and his psychometric properties were investigated and found to have sufficient credibility and validity. The responder evaluates 21 signs of depression on a 4-scale scale ranging from 0 to 3. Therefore, the total scores range from 0 to 63, and high points indicate the excess of depression severity. In this study, BDI's internal cohesion coefficient was calculated as 0.84 [8].

Data collection process

A survey form was first established in the data collection process for patients with Alzheimer patients. Then a preliminary trial was done. Incomprehensible questions and incorrect sentences are corrected to finalize the form.

Then an application was made to Hacettepe non-interventional ethics committee.

Non-interventional ethics committee and the ethics committee permit were received.

Interviews with caregivers for Alzheimer patients were conducted face to face. This process has been more difficult contrary to what was thought, the patient's relatives have not been very eager to interview [9].

Anaysis of data

Analysis of data was done with the SPSS 22 program and was studied with a 95% confidence level.

The skewness and kurtosis values of scale scores are between -3 and +3, so it is determined that it is suitable for the normal distribution. The availability of scale scores varying by demographic variables was analyzed with t and ANOVA tests from the parametric test techniques. The relationship between scale scores was analyzed by the Pearson correlation test [10].

Results

The proportion of women is 56.1%; The proportion of those between the ages of 51-60 is 28.8%; The proportion of high school or equivalent school graduates is 29.9%; 49.8% of married people; 70.2% of those with children; the proportion of those living in the city for the longest period is 80.4%; the proportion of core family people is 57.6%; 54.4% of those who are balanced with income expense; the proportion of those between 1-5 years of maintenance is 59.5%; the proportion of those receiving psychological support during the process of maintenance is 9.3% (Table 1).

Table 1: Personal Findings

ng		n	%
Gender	Female	176	56,1
	Male	138	43,9

	40 and below	40	13,9
	Age of 41-50	46	16,0
Age	Age of 51-60	83	28,8
	Age of 61-70	54	18,8
	71 and above	65	22,6
	Illiterate	21	9.12
	Primary school graduate	38	12,1
	Secondary school graduate	53	16,9
Educational Status	Graduate of high school or their equivalents	94	29,9
	Bachelor	85	27,1
	Postgraduate-doctorate	23	7,3
	Single	33	10,5
Marital Status	Married	156	49,8
	Widow	80	25,6
	Divorced	44	14,1
Do you have a child?	Yes	217	70,2
	No	92	29,8
Place in which you lived for the longest term	Countryside	61	19,6
	City	251	80,4
Family type	Extended family	132	42,4
	Nuclear Family	179	57,6
	My income is less than my expense	74	23,9
Monthly Income	My income is equal to my expense	168	54,4
	My income is more than my expense	67	21,7
	1 year and less	59	20,4
Caring period	1-5 years	172	59,5
	5 years and more	58	20,1
Did you get a psychological support during caring period	Yes	29	9,3
	No	282	90,7

Results of Pearson Correlation Test made to examine the correlation between scale points were given below.

According to the findings, there is positive and weak correlation between Insufficient Perception of Self-Efficacy and Beck Depression Scale (r=,149); negative and weak correlation between Friends and Insufficient Perception of (r=-,140); negative and weak correlation between Special Person and Insufficient Perception of (r=-,162); negative and weak correlation between Social Support Scale Perceived in Multidimensional Way and Insufficient Perception of (r=-,136) (Table 2).

Table 2: Depression Level

		n	%
	Minimal depression	55	17,5
Depression Level	Mild Depression	58	18,5
	Bland Depression	65	20,7
	Acute Depression	136	43,3

There is negative and weak correlation between Beck Depression Scale and Family (r=-,273); negative and weak correlation between Beck Depression Scale and Friends (r=-,275); negative and weak correlation between Beck Depression Scale and Special Person (r=-,162); negative and weak correlation between Beck Depression Scale and Social Support Perceived in Multidimensional Way (r=-,274).

Social Support Level Perceived in Multidimensional Way affects Perceived Stress Scale on a statistically significant level. When the effect coefficient is examined, it is observed that said effect is negative and significant (b=-0,117; p<0,05).

When these results are examined, it is observed that in the model in which Beck Depression Scale is dependent variable, the effect coefficient of Social Support Level Perceived in Multidimensional Way is 0,290, on the other hand, when the Perceived Stress Scala as a mediating variable is added to model, the effect coefficient decreased to 0,248 (Table 3).

Table 3: Examination of Scale Points in terms of Educational Status

Educational Status		n	Average	ss	F	p
	Non-school graduates	21	14,90	4,48		
	Primary school graduate	38	16,61	4,23		
Stress/Perception of Disturbance	Secondary school graduate	53	15,17	4,22	4,908	,000*
	High school or equivalent school graduate	94	14,94	3,66		
	Bachelor	85	13,24	3,98		
	Postgraduate –doctorate graduate	23	12,96	4,70		
	Non-school graduates	21	30,52	7,08		
	Primary school graduate	38	32,21	6,28		
Perceived Stress Scale	Secondary school graduate	53	28,91	6,08	3,314	,006*
	High school or equivalent school graduate	94	29,50	6,39		
	Bachelor	85	28,66	6,81		
	Postgraduate-doctorate graduate	23	25,78	5,42		

Beck Depression Scale	Non-school graduates	21	35,81	12,17	20,042	,000*
	Primary school graduate	38	28,68	13,57		
	Secondary school graduate	53	33,60	11,17		
	High school or equivalent school graduate	94	27,81	15,24		
	Bachelor	85	18,08	12,08		
	Postgraduate-doctorate graduate	23	10,17	7,18		
Family	Non-school graduates	21	18,38	4,94	5,532	,000*
	Primary school graduate	38	18,42	4,32		
	Secondary school graduate	53	19,06	4,16		
	High school or equivalent school graduate	94	18,10	5,29		
	Bachelor	85	20,81	5,62		
	Postgraduate-doctorate graduate	23	23,09	4,90		
Friends	Non-school graduates	21	17,62	5,71	4,987	,000*
	Primary school graduate	38	17,74	5,02		
	Secondary school graduate	53	19,11	4,14		
	High school or equivalent school graduate	94	17,98	5,20		
	Bachelor	85	20,34	5,99		
	Postgraduate-doctorate graduate	23	22,74	3,53		
Social Support Scale Percieved in Multidimensional Way	Non-school graduates	21	52,90	14,51	5,248	,000*
	Primary school graduate	38	53,66	12,56		
	Secondary school graduate	53	56,81	9,36		
	High school or equivalent school graduate	94	53,94	14,20		
	Bachelor	85	60,39	14,92		
	Postgraduate-doctorate graduate	23	66,61	13,17		

When the indirect effect of independent variable on dependent variable was analysed in process analysis it was determined that Perceived Stress Scale's confidence interval did not include 0 (zero) (-0,0822; -0,0119). According to this result, mediation effect of Perceive Stress Scale is significant.

There is a statistically significant difference in stress/discomfort perception among groups of different ages ($p<0.05$).

Here are the Results of the ANOVA test for the Study of Scale Scores in Terms of Education Status. There is a statistically significant difference in stress/perception of disturbance among groups with different educational status ($p<0,05$).

There is a statistically significant difference in terms of Perceived Stress Scale among groups with different educational status ($p<0,05$). There is a statistically significant difference in family terms ($p<0,05$) among groups with different educational status.

Here are the Results of the ANOVA test for Reviewing Scale Points in Terms of Marital Status. There is a statistically significant difference between groups with different marital status in terms of Insufficient Perception of Self-Efficacy ($p<0.05$). Accordingly, the average point of perception of insufficient self-efficacy of single ones is the highest, average point of those who are divorced is the smallest (Table 4).

Table 4: Examination of Scale Points in terms of Marital Status

Marital Status		n	Average	ss	F	p
Insufficent Perception of Self-efficacy	Single	33	16,79	5,02	2,701	,046*
	Married	156	14,67	4,83		
	Widow	80	14,46	4,55		
	Divorced	44	13,84	4,40		
Perceived Stress Scale	Single	33	32,24	6,72	3,522	,015*
	Married	156	29,01	6,80		
	Widow	80	29,68	6,09		
	Divorced	44	27,57	5,66		
Beck Depression Scale	Single	33	22,55	14,59	19,322	,000*
	Married	156	20,65	12,90		
	Widow	80	34,13	12,54		
	Divorced	44	29,68	16,62		

There is a statistically significant difference in terms of Perceived Stress Scale among groups with different marital status ($p<0.05$).

Here are the Results of the ANOVA test for reviewing Scale Points in Terms of Monthly Income. There is a statistically significant difference among groups with different month-

ly income in terms of Stress/Perception of Disturbance (p<0.05). Accordingly, the average point of Stress/Perception of Disturbance for those whose income is more than expense is the highest, while the average point of those whose income is equal to expense is the smallest (Table 5).

Table 5: Examination of Scale Points in terms of Monthly Income

Monthly Income		n	Average	ss	F	p
Stress/ Perception of Disturbance	My income is less than my expense	74	15,20	4,07	3,955	,020*
	My income is equal to my expense	168	13,96	4,06		
	My income is more than my expense	67	15,39	4,54		
Perceived Stress Scale	My income is less than my expense	74	29,51	6,97	4,443	,013*
	My income is equal to my expense	168	28,40	5,87		
	My income is more than my expense	67	31,18	7,44		
Beck Depression Scale	My income is less than my expense	74	33,23	10,77	14,300	,000*
	My income is equal to my expense	168	22,79	15,22		
	My income is more than my expense	67	24,64	14,46		
Friends	My income is less than my expense	74	18,51	3,86	3,131	,045*
	My income is equal to my expense	168	19,83	5,44		
	My income is more than my expense	67	18,15	6,12		

There is a statistically significant difference among groups with different monthly income in terms of Perceived Stress Scale (p<0.05). There is a statistically significant difference among groups with different monthly income in terms of Beck Depression Scale (p<0.05). There is a statistically significant difference among groups with different monthly income in terms of Friends (p<0.05).

Here are the Results of the ANOVA test for reviewing Scale Points in Terms of Caregiving Duration (Table 6).

Table 6: Examination of Scale Points in terms of Caregiving Duration

Caregiving duration		N	Average	ss	F	p
Beck Depression Scale	1 year and less	59	30,39	14,72	3,316	,038*
	1-5 years	172	26,17	14,29		
	5 years and more	58	23,74	13,77		

There is statistically significant difference between groups with different caregiving durations in terms of the Beck Depression Scale (p<0.05).

Discussion

The proportion of women is 56.1%; The proportion of those between the ages of 51-60 is 28.8%; The proportion of high school or equivalent school graduates is 29.9%; 49.8% of married people; 70.2% of those with children; the proportion of those living in the city for the longest period is 80.4%; the proportion of core family people is 57.6%; 54.4% of those who are balanced with income expense; the proportion of those between 1-5 years of maintenance is 59.5%; the proportion of those receiving psychological support during the process of maintenance is 9.3%.

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Conclusion

When these results are examined, it is observed that in the model in which Beck Depression Scale is dependent variable, the effect coefficient of Social Support Level Perceived in Multidimensional Way is 0,290, on the other hand, when the Perceived Stress Scala as a mediating variable is added to model, the effect coefficient decreased to 0,248. According to the conclusion drawn from these findings, Perceived Stress Scale played a mediatory role.

When the indirect effect of independent variable on dependent variable was analysed in process analysis it was determined that Perceived Stress Scale's confidence interval did not include 0 (zero) (-0,0822; -0,0119). There is a statistically significant difference between groups of differ-

ent ages in terms of Insufficient Perception of Self-Efficacy (p<0.05). There is a statistically significant difference in stress/discomfort perception among groups of different ages (p<0.05).

Acknowledgment

None

Conflicts of Interest

No conflict of interest was declared.

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