Original Article

Examining the level of codependency in caregivers of individuals with chronic mental illnesses

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Abstract

Objectives: Anyone who has a relationship with patients with emotional/mental or chronic diseases can develop codependency. This study aims to determine the level of codependency and some related factors in the caregivers of individuals with chronic mental illnesses.

Methods: This descriptive and correlational study was carried out with the relatives of 379 patients with various mental illnesses. The data were obtained using the Information Form and the Codependency Assessment Tool (CODAT).

Results: The total mean score of the CODAT was found to be 58.42±12.71. Age, gender, educational status, perception of income status, marital status, state of closeness to the patient, status of having a chronic illness, exposure to violence, perception of commitment to the individual cared for and the personality characteristics of being lively/active, sensitive/emotional, self-confident, and anxious, and codependency mean scores were found statistically significant (p<0.05).

Conclusion: It was found that the level of codependency was mild in the caregivers of individuals with chronic mental illnesses and codependency is associated with some characteristics of the caregiver. In addition to the health services provided to individuals with chronic mental illnesses, it is recommended to evaluate the caregivers, to determine the existing risk situations, and to provide early professional help. All these may allow the caregivers to protect their mental health and to support the independence of the individual with mental illness in the recovery process.

Keywords: Caregiver; chronic mental illness; codependency; dependency; primary caregiver.

Family has an important role for most of the chronic psychiatric patients who live with their families and need care as it affects the patient's compliance with treatment and it is influenced by the patient's non-compliance with treatment. [1] The mental and physical health of family members may be affected by this role.[2] One of these effects is codependency.

The National Council on Codependence defines codependency as "dependence on a learned behavior, object and/or people." Codependency manifests itself with underestimation of one's own self-worth, indifference to one's own needs, self-neglect, compulsive habits, addictions, and disorders that feed the feeling of shame and increase person's alienation from his true identity.[3,4] Codependency was first identified in the family members of individuals with alcohol addiction in the 1950s. It has been found that codependency often intensifies although the addicted individual is treated.[3] It is stated that today anyone who has a relationship with patients with emotional/mental or chronic diseases can develop codependency.[5,6]

It is reported that one of the most important causes of codependency is growing up in a dysfunctional family in which members experience fear, rage, pain, or shame.[7,8] A stressful environment may lead to the development of codependency by preventing the development of a healthy personality.[5] It is stated that these family members suppress their emotions, try to please others in order to cope with feelings of anxiety, shame and inadequacy, and become "caregivers".[9] When

there is a patient or a dependent individual in the family, they may assume the full responsibility of care, may neglect their own needs, desires, health, and safety, and may lose their awareness of the sense of self.[10,11]

Since caregiving family members are close to and understand the patients best, they can provide significant assistance in effective treatment and care processes by collaborating with health-care professionals.[12] For individuals with chronic mental health conditions, skills such as future planning, managing financial status, communicating with others, using transportation, and shopping gain importance in their independence and functionality.[13,14] However, if the caregiver has co-dependency issues, taking responsibility for meeting the patients' needs instead of collaborating in developing these skills can mutually increase dependency.[15] Therefore, co-dependency cannot be overlooked among caregivers.

Codependency may cause many behavioral disorders and psychiatric diseases such as stress, anxiety, and depression. It is also considered as a community mental health problem because it is learned and transferred in the family.[16–21] Since individuals with a chronic mental illness need long-term family support, it is important to evaluate caregivers in terms of codependency. It is considered to be a situation that psychiatric nurses should address in preventive and therapeutic services. This study aimed to determine the codependency levels of caregivers of individuals with chronic mental illnesses and some related factors.

Materials and Method

Ethical Considerations

Before the study, ethics committee approval was obtained from the Faculty of Medicine of a University (dated October 05, 2018, and numbered 2018/1505). In addition, official permission was obtained from the institution where the research was conducted, and verbal consent was obtained from the clinic where the data were collected. The study was conducted in accordance with the according to the relevant guidelines and regulations of the Declaration of Helsinki.

Design and Sampling

This descriptive correlational study was conducted in a Training and Research Hospital. The sample of the study was calculated using the formula n=N×σ2×Z2/(N-1)×d2, where σ is the standard deviation of the Co-dependency Determination Scale found in the study conducted by Aktaş Özakgül et al.[22] (σ=9.93). The formula was applied assuming a 95% confidence level and a standard deviation of d=1.[23] The result was n=(12366×(9.93)2×(1.9616)2/12365×12)=379.

The research sample consisted of 379 individuals over the age of 18 who assumed the primary care responsibility of patients treated for at least 6 months with a diagnosis of

What is presently known on this subject?
• It is stated that anyone who has a relationship with patients with emotional/mental or chronic diseases can develop codependency.
What does this article add to the existing knowledge?
• The level of codependency was found to be mild in the caregivers of individuals with chronic mental illnesses. It was revealed that codependency is associated with some characteristics of the caregivers.
What are the implications for practice?
• Evaluating the caregivers of individuals with chronic mental illness, determining the existing risk situations, and providing early professional help may enable the protection of the mental health of caregivers and support the independence of individuals with mental illness during their recovery process.
Research Questions
• What is the codependency level of those who care for individuals with chronic mental illnesses?
• What are the factors associated with codependency in the caregivers of individuals with chronic mental illnesses?

chronic mental illness (schizophrenia, schizoaffective disorder, mood disorder, organic psychosis, and non-organic psychosis) in psychiatry clinics and outpatient clinics. The data were collected by the researcher through the face-to-face interview method between 2018 and 2019.

Instruments

Introductory Characteristics Form

The questionnaire used in the research was developed by the researcher in line with the literature[3,5,10,16,24–26] and consisted of 13 questions aimed at gathering information about participants' demographic characteristics such as age and gender, as well as their personality traits, experiences of violence, and perception of family relationships related to codependency.

Codependency Assessment Tool (CODAT)

The tool was developed by Hughes-Hammer et al.[3] The Turkish validity and reliability study of the tool was conducted by Ançel and Kabakçı[16] It is a 5-point Likert type tool consisting of 25 items, and Item 20 is reverse coded. The tool includes five factors: other focus/self-neglect, self-worth, hiding self, medical problems, and family of origin issues. The lowest and highest scores that can be obtained from the scale are 25 and 125, respectively. Higher scores indicate higher levels of codependency.[3,9] Scale score ranges are as follows: low-minimum codependency (25–50), mild codependency (51–75), moderate codependency (76–100), and severe codependency (101–125).[4,22,27] The Cronbach's alpha of the original tool is 0.75. The Cronbach's alpha was calculated as 0.79 in our study.

Research Variables

Independent Variables

CODAT, Age, gender, educational status, family structure, employment status, perception of income status, marital status, state of closeness to the patient, status of having a chronic

Table 1. Mean scores of the CODAT and its factors

Codependency assessment tool	Mean±SD	Min	Max
Sub scales			
Other focus/self neglect	15.10±5.01	5	25
Self-worth	11.25±3.78	6	26
Hiding self	13.29±4.03	5	25
Medical problem	6.84±2.97	4	18
Family of origin issues	11.95±5.28	5	25
CODAT total	58.42±12.71	28	100

SD: Standard deviation; Min: Minimum; Max: Maximum.

illness, personality characteristics, perception of family relationships, exposure to violence, perception of commitment to the individual cared for.

Statistical Analysis

The statistical analysis of the data was performed using the SPSS V.21 software program. For descriptive statistics, mean and standard deviation values were calculated for numerical variables, and number and percentage values were calculated for categorical variables. The Shapiro–Wilks test and graphic methods were used for the normality assumption, which is one of the parametric test assumptions. To examine the presence of differences between groups, a significance test of the difference between two means was used for comparing two groups. One-way analysis of variance was employed for comparing three or more groups. In cases where a difference was found among the groups, Tukey's test was performed for pairwise comparisons to identify the specific group(s) contributing to the difference. The correlation between two numerical variables was determined using the Pearson's correlation coefficient. Cronbach's alpha was used to assess the internal consistency among the items in the scale used. The level of significance was accepted as $p < 0.05$.

Results

The mean age of the caregivers was 47.93±15.04. About 60.9% of the caregivers are women, and 69.1% were married. About 71.8% had a nuclear family structure; 36.9% were primary school graduates; 71.5% did not work, and 54.6% had moderate income. About 27.2% of the caregivers stated that the patient was their mother. About 45.9% reported that they had a chronic disease and 56.2% perceived their family relationships as good. It has been determined that 38.3% of the individuals were exposed to violence. The mean score of the participants representing the perception of dependence on the individual being cared for was found to be 8.81±1.77. The caregivers were found to have the following personality characteristics: reactive (opposition) (16.6%), lively/active (39.6%), responsible (80.2%), sensitive/emotional (74.7%), self-confident (62.8%), calm (49.3%), and anxious (42.5%).

The total mean CODAT score was found to be 58.42±12.71. The mean scores of the factors were as follows: other focus/self-neglect 15.10±5.01, self-worth 11.25±3.78, hiding self 13.29±4.03, medical problems 6.84±2.97, and family of origin issues 11.95±5.28 (Table 1).

The data regarding the comparison between the sociodemographic characteristics of the caregivers and the mean CODAT and factor scores are presented in Table 2. The CODAT mean score and the mean score for the factor of medical problems were significantly higher in women than in men ($p = 0.001$), while the mean score for low self-worth was found to be significantly lower ($p < 0.001$). It was observed that the mean score for family of origin issues was the lowest in those with a nuclear family structure, and the highest in those with a broken family structure ($p = 0.027$). A significant difference was revealed between the perception of family relationships and the CODAT and the factors of other focus/self-neglect, the family of origin issues, low self-worth, and medical problems ($p < 0.05$). As the perception of family relationships goes from good to bad, the mean codependency scores increase. It was found that there was a significant difference between educational status and the CODAT and the factors of other focus/self-neglect, low self-worth, hiding self, and medical problems ($p < 0.05$). As the education level increases, the mean codependency scores decrease. In unemployed individuals, the mean CODAT score and the scores for the factors of low self-worth, medical problems and the family of origin issues were found to be significantly higher compared to the individuals who were employed ($p < 0.05$). A statistically significant difference was found between the perception of income status and the CODAT and the factors of low self-worth, medical problems, other focus/self-neglect, and the family of origin issues ($p < 0.05$). It was found that those with a low-income perception had a higher mean CODAT score. Furthermore, when the total mean scores of the CODAT and the factors of other focus/self-neglect, low self-worth, and medical problems were ex-

Table 2. Comparison between the descriptive characteristics of the caregivers and the mean scores of the CODAT and its factors (n=379)

Descriptive characteristics	n	%	Sub Scales					Total
			Other focus/ self neglect Mean±SD	Self-worth Mean±SD	Hiding self Mean±SD	Medical problem Mean±SD	Family of origin issues Mean±SD	Mean±SD
Gender								
Female	231	60.9	15.10±5.38	11.80±4.04	13.13±4.06	7.24±3.24	12.18±5.44	59.44±13.68
Male	148	39.1	15.09±4.39	12.19±4.47	13.53±3.98	6.22±2.39	11.59±5.00	56.82±10.88
Test and p value			t=0.010 p=0.992	**t=3.833 p<0.001**	t=-0.963 p=0.336	**t=3.505 p=0.001**	t=1.062 p=0.289	**t=2.068 p=0.039**
Family structure								
Nuclear	272	71.8	15.02±4.97	11.06±3.68	13.32±4.03	6.91±3.06	11.49±5.25[a]	57.80±12.83
Extended	65	17.2	15.32±5.28	11.78±3.73	13.23±4.08	6.82±2.83	12.94±5.23[a,b]	60.09±11.97
Broken	42	11.1	15.26±4.99	11.62±4.44	13.17±4.04	6.43±2.64	13.33±5.18[b]	59.81±13.04
Test and p value			F=0.122 p=0.885	F=1.200 p=0.302	F=0.032 p=0.968	F=0.482 p=0.618	**F=3.640 p=0.027(a<b)**	F=1.136 p=0.322
Perception of family relationships								
Good	213	56.2	14.97±5.11[a]	10.05±3.09[a]	13.02±3.98	6.08±2.26[a]	10.74±4.98[a]	54.85±11.61[a]
Middle	136	35.9	14.51±4.76[a]	12.37±3.72[b]	13.49±3.89	7.55±3.23[b]	13.09±5.13[b]	61.0±11.41[b]
Bad	40	7.9	18.67±4.06[b]	14.67±4.74[c]	14.23±4.83	9.07±4.17[c]	15.33±5.50[b]	71.97±14.11[c]
Test and p value			**F=8.974, p<0.001 (b>a)**	**F=89.093 p<0.001(c>b>a)**	F=1.483 p=0.228	**F=21.456 p<0.001(c>b>a)**	**F=16.110 p<0.001 (b>a)**	**F=33.007 p<0.001(c>b>a)**
Educational status								
Literate	27	7.1	18.07±4.54[a]	13.44±3.76[a]	15.48±5.65[a]	7.67±2.65[a,b]	14.11±6.17	68.78±12.51[a]
Primary school	140	36.9	16.63±5.11[a]	11.81±3.65[b]	13.09±3.95[b]	7.47±3.42[a]	12.41±5.73	61.41±13.03[b]
Middle school	59	15.6	13.69±4.56[b]	11.25±4.18[a,b]	13.79±3.62[a,b]	6.68±2.71[a,b]	11.79±5.21	57.22±11.67[b,c]
High school	98	25.9	13.92±4.55[b]	10.58±3.66[b]	13.45±3.95[a,b]	6.28±2.50[b]	11.46±4.69	55.69±11.24[c]
University and higher	55	14.5	13.35±4.59[b]	9.89±3.18[b]	11.85±3.32[b]	6±2.56[b]	10.75±4.32	51.84±10.45[c]
Test and p value			**F=10.858 p<0.001 (a>b)**	**F=5.893 p<0.001 (a>b)**	**F=4.244 p=0.002 (a>b)**	**F=4.235 p=0.002 (a>b)**	F=2.370 p=0.052	**F=12.786 p<0.001 (a>b>c)**
Employment status								
Employed	108	28.5	14.69±4.81	10.38±3.44	12.94±3.87	6.27±2.77	10.84±4.17	55.12±11.25
Unemployed	271	71.5	15.26±5.09	11.59±3.86	13.42±4.08	7.07±3.02	12.39±5.60	59.73±13.04
Test and p value			t=-1.011 p=0.313	**t=-2.842 p=0.005**	t=-1.040 p=0.299	**t=2.384 p=0.018**	**t=-2.935 p=0.004**	**t=-3.226 p=0.001**
Perception of income status								
Low	166	43.8	15.93±4.94	12.03±3.94	13.37±3.83	7.45±3.21	12.84±5.39	61.61±12.76
Medium+high	213	56.2	14.45±4.99	10.63±3.54	13.22±4.18	6.37±2.69	11.25±5.09	55.92±12.13
Test and p value			**t=2.763 p=0.006**	**t=3.574 p<0.001**	t=0.343 p=0.731	**t=3.306 p=0.001**	**t=3.038 p=0.003**	**t=4.350 p<0.001**

Table 2. Cont.

Descriptive characteristics	n	%	Sub Scales					Total
			Other focus/ self neglect Mean±SD	Self-worth Mean±SD	Hiding self Mean±SD	Medical problem Mean±SD	Family of origin issues Mean±SD	Mean±SD
Marital status								
Married	262	43.8	15.38±4.93[a]	11.27±3.61[a]	13.26±3.92	6.86±3.00[a]	11.85±5.31	58.63±11.96[a]
Single	58	54.6	13.28±4.63[b]	9.91±3.49[b]	13.31±4.38	5.48±1.90[b]	11.05±4.39	53.03±11.46[b]
Divorced/ widow	59	1.6	15.63±5.44[b]	12.44±4.36[b]	13.36±4.22	8.08±3.17[c]	13.25±5.72	62.76±15.25[b]
Test and p value			**F=4.667** **p=0.010 (a>b)**	**F=6.760** **p=0.001 (a>b)**	F=0.014 p=0.986	**F=11.870** **p<0.001 (c>a>b)**	F=2.713 p=0.068	**F=9.052** **p<0.001 (b>a)**
State of closeness to the patient								
Mother	103	27.2	16.23±5.16[a]	12.39±3.93[a]	13.78±4.27	8.02±3.39[a]	12.70±5.79	63.12±13.18[a]
Father	50	13.2	15.62±4.49[a,b]	10.4±3.05[b]	13.6±3.97	6.34±2.08[b,c]	11.68±5.83	57.64±11.42[a,b]
Brother	79	20.8	14.33±4.56[a,b]	10.89±3.70[a,b]	13.35±4.11	6.57±2.77[b,c]	12.48±5.11	57.62±12.84[b]
Spouse	71	18.7	15.13±5.33[a,b]	11.27±3.92[a,b]	12.73±3.78	7.06±3.23[c]	11.17±4.77	57.35±12.37[b]
Child	52	13.7	13.62±5.10[b]	10.3±3.44[b]	12.81±4.15	5.44±2.26[b]	11.25±4.85	53.42±12.14[b]
Other	24	6.3	14.79±4.89[a,b]	11.25±4.10[a,b]	12.96±3.21	6.12±1.94[b,c]	11.33±4.44	56.46±9.5[a,b]
Test and p value			**F=2.513** **p=0.030 (a>b)**	**F=3.265** **p=0.007 (a>b)**	F=0.816 p=0.538	**F=6.791** **p<0.001 (a>c>b)**	F=1.164 p=0.327	**F=4.982** **p<0.001 (a>b)**
Status of having a chronic illness								
Yes	174	45.9	15.86±5.11	12.34±3.96	13.79±4.24	8.09±3.42	12.67±5.65	62.75±13.49
No	205	54.1	14.45±4.85	10.31±3.35	12.85±3.79	5.78±2.0	11.34±4.87	54.74±10.74
Test and p value			**t=2.737** **p=0.006**	**t=5.338** **p<0.001**	**t=2.302** **p=0.022**	**t=7.809** **p<0.001**	**t=2.432** **p=0.016**	**t=6.319** **p<0.001**
Exposure to violence								
Yes	145	38.3	15.30±4.76	12.41±4.02	13.12±3.84	7.64±2.99	13.12±5.40	61.6±13.05
No	234	61.7	14.97±5.17	10.53±3.44	13.38±4.14	6.35±2.86	11.22±5.07	56.44±12.11
Test and p value			t=0.629, p=0.530	t=4.849 p<0.001	t=-0.612 p=0.541	t=4.213 p<0.001	t=3.468 p=0.001	t=3.909 p<0.001

t: Independent t test; F: One-way ANOVA, Tukey test. SD: Standard deviation.

Table 3. Correlations between the descriptive characteristics of the caregivers and the scores for the CODAT and its factors (n=379)

Descriptive characteristics			Sub Scales					Total
			Other focus/ self neglect	Self-worth	Hiding self	Medical problem	Family of origin issues	
	Mean±SD	Min-max	Test and p	Test and p	Test and p	Test and p	Test and p	
Age	47.93±15.04	18–85	r=0.119 p=0.020	r=0.083 p=0.106	r=0.074 p=0.150	r=0.209 p=0.000	r=0.112 p=0.029	r=0.191 p<0.001
Perception of commitment to the individual cared for	8.81±1.77	1–10	r=0.088 p=0.085	r=-0.079 p=0.124	r=0.023 p=0.657	r=-0.014 p=0.788	r=-0.80 p=0.121	r=-0.018 p=0.732

r: Pearson's correlation coefficient. SD: Standard deviation.

amined according to marital status, a statistically significant difference was revealed (p<0.05). The mean CODAT score of the single participants was found to be the lowest. Considering the state of closeness to the patient, it was revealed that when the patient was the mother of the caregiver, the mean scores of the CODAT and the factors of medical problems, other focus/self-neglect and low self-worth were high (p<0.05). In those with a chronic disease, the mean scores of the CODAT and all the factors were found to be higher than those without a chronic disease (p<0.05). The mean scores of the CODAT and the factors of low self-worth, medical problems, and the family of origin issues were found to be higher in those who were exposed to violence (p<0.05).

A statistically significant but weak correlation was found between age and the CODAT and the factors of other focus/self-neglect, medical problems, and the family of origin issues (p<0.05). Although the perception of dependence on the person being cared for was high, no statistically significant difference was found between the mean scores of the CODAT and its factors (p>0.05) (Table 3).

As far as personality traits are concerned, those who are lively and active were found to have lower CODAT mean score and other focus/self-neglect, low self-worth, the family of origin issues, and medical problems mean scores. Those who are anxious were found to have higher CODAT mean score and other focus/self-neglect, low self-worth, the family of origin issues, and medical problems mean scores (p<0.05). It was found that responsible individuals had lower mean scores for the factors of low self-worth and medical problems (p<0.05). The CODAT mean score and other focus/self-neglect, medical problems, and the family of origin issues mean scores were high in those who are sensitive/emotional (p<0.05). It was revealed that self-confident individuals had lower mean scores for the CODAT and the factors of low self-worth and medical problems (p<0.05). No statistically significant difference was found between the personality traits of being calm and being reactive (opposition) and the mean scores of the CODAT and its factors (p>0.05) (Table 4).

Discussion

Chronic mental diseases affect the health of patients' relatives as well and increase the need for help.[28,29] Ntsayagae et al.[30] stated that experiences of caring for people with mental illness include four interrelated themes, which are the perception of care-giving responsibility, experiences of emotional impact, experiences of support needs and experiences of changing perspectives and these themes are interrelated. It is thought that the influences of these themes point to codependency. Our study revealed mild codependency in caregivers of chronic mental patients (Table 1). Cullen and Carr[24] stated that having a family member with a mental illness leads to high levels of codependency. Özdemir and Buzlu[31] found no difference between the codependency levels of nurses who had an individual in their family with a physical and mental health problem and nurses who did not. Evgin and Sümen,[6] on the other hand, reported that there was no significant difference in the codependency scores of those with and without a family history of mental illness.

The factor with the highest mean score is other focus/self-neglect (Table 1). People with mental illnesses may have more needs than others. Codependent individuals may fail to set limits and prioritize their own needs due to low self-esteem, poor emotional control, and self-blame.[32] The coping and adaptation capacities of caregivers are affected by these conditions, and they often compromise their health and well-being without any support.[33] Bortolon et al.[32] conducted a study with the families of drug addicts and found that family members with high levels of addiction were 3 times more likely to neglect themselves than those with low levels of addiction. Ançel et al.[9] stated that the factor of other focus/self-neglect ranks third after the factors of hiding self and the family of origin issues.

The CODAT mean score and the medical problems mean score were higher in women than in men, while the mean score of women was found to be low in the factor of low self-worth (Table 2). Altınova and Altuntaş[34] revealed that Turkish wom-

Table 4. Comparison of the mean scores of the CODAT and its factors according to the personality characteristics of the caregivers (n=379)

Personality characteristics	n	%	Sub Scales					Total
			Other focus/ self neglect Mean±SD	Self-worth Mean±SD	Hiding self Mean±SD	Medical problem Mean±SD	Family of origin issues Mean±SD	Mean±SD
Reactive (opposition)								
Yes	63	16.6	15.11±4.99	11.08±3.28	12.59±3.42	6.76±2.56	12.08±5.54	57.62±12.92
No	316	83.4	15.09±5.02	11.28±3.87	13.42±4.13	6.86±3.05	11.92±5.23	58.58±12.69
Test and p value			$t=0.023$ $p=0.981$	$t=-0.382$ $p=0.703$	$t=-1.509$ $p=0.132$	$t=-0.233$ $p=0.816$	$t=0.217$ $p=0.828$	$t=-0.545$ $p=0.586$
Lively/active								
Yes	150	39.6	14.42±5.39	10.53±3.30	13.33±3.98	6.2±2.32	11.16±5.09	55.64±12.32
No	229	60.4	15.54±4.71	11.72±3.99	13.25±4.06	7.26±3.27	12.46±5.34	60.23±12.67
Test and p value			**$t=-2.081$ $p=0.038$**	**$t=-3.151$ $p=0.002$**	$t=0.189$ $p=0.850$	**$t=-3.694$ $p<0.001$**	**$t=-2.365$ $p=0.019$**	**$t=-3.492$ $p=0.001$**
Responsible								
Yes	304	80.2	15.24±5.02	10.97±3.72	13.17±3.92	6.67±2.84	11.99±5.47	58.04±13.09
No	75	19.8	14.52±4.97	12.36±3.84	13.76±4.43	7.56±3.39	11.75±4.41	59.95±11.01
Test and p value			$t=1.114$ $p=0.266$	**$t=0.454$ $p=0.004$**	$t=-1.141$ $p=0.254$	**$t=-2.114$ $p=0.037$**	$t=0.418$ $p=0.677$	$t=-1.164$ $p=0.245$
Sensitive/emotional								
Yes	283	74.7	15.54±5.04	11.44±3.73	13.32±4.04	7.11±3.07	12.37±5.46	59.78±12.79
No	96	25.3	13.79±4.73	10.68±3.89	13.19±3.99	6.05±2.52	10.69±4.49	54.39±11.63
Test and p value			**$t=2.984$ $p=0.003$**	$t=1.710$ $p=0.088$	$t=0.274$ $p=0.784$	**$t=3.351$ $p=0.001$**	**$t=3.005$ $p=0.003$**	**$t=3.644$ $p<0.001$**
Self-confident								
Yes	238	62.8	14.79±5.13	10.56±3.32	13.5±4.12	6.58±2.72	11.87±5.41	57.31±12.39
No	141	37.2	15.60±4.79	12.40±4.21	12.92±3.86	7.28±3.33	12.08±5.05	60.29±13.07
Test and p value			$t=-1.513$ $p=0.131$	**$t=-4.724$ $p<0.001$**	$t=1.352$ $p=0.177$	**$t=-2.093$ $p=0.037$**	$t=-0.391$ $p=0.696$	**$t=-2.220$ $p=0.027$**
Calm								
Yes	187	49.3	15.06±5.16	10.88±3.69	13.16±4.08	6.74±2.93	11.52±5.35	57.36±13.08
No	192	50.7	15.14±5.88	11.59±3.83	13.41±3.98	6.94±3.02	12.36±5.19	59.44±12.29
Test and p value			$t=-0.149$ $p=0.882$	$t=-1.852$ $p=0.065$	$t=-0.594$ $p=0.553$	$t=-0.670$ $p=0.503$	$t=-1.544$ $p=0.123$	$t=-1.595$ $p=0.112$
Anxious								
Yes	161	42.5	17.14±4.64	12.86±3.76	13.04±3.92	7.60±3.24	12.65±5.62	63.29±12.15
No	218	57.5	13.59±4.75	10.05±3.33	13.47±4.10	6.28±2.63	11.43±4.96	54.82±11.92
Test and p value			**$t=7.254$ $p<0.001$**	**$t=7.696$ $p<0.001$**	$t=-1.029$ $p=0.304$	**$t=4.384$ $p<0.001$**	**$t=2.206$ $p=0.028$**	**$t=6.787$ $p<0.001$**

t: Independent t test. SD: Standard deviation.

en have moderate and high level of codependency, and they mostly lack self-esteem and self-confidence. The same study revealed that in Türkiye, women are expected to provide care, take care of the elderly, and rear children. It is also stated that codependency includes feminine gender roles (e.g., being helpful and sensitive, and showing care) and that women are culturally and socially encouraged to perform these roles. [35,36] Studies which examined the relationship between codependency and gender reached similar results.[5,35,37] However, there are also studies that did not find a significant relationship between gender and codependency levels.[6,22,24,31,38] and in which men had higher codependency scores.[4,36]

This study revealed that the mean family of origin issues score is the lowest in those with a nuclear family structure, and the highest in those with a broken family structure (Table 2). Vederhus et al.[39] reported that those with codependency characteristics have more disturbances in family functions. It has been reported that there is a relationship between conflict between parents in childhood and codependency.[10] It was found that separation, fighting, and triangulation are the important predictors of the factor of other focus, while separation, complex hierarchies, and avoidance of conflict are the important predictors of the factor of hiding self.[8] Personality development of children who grow up in a stressful environment can be affected, which can contribute to the development of codependency.[5] Altınova and Altuntaş[34] found that the lowest level of codependency is observed in individuals with a nuclear family structure.

As the perception of family relationships goes from good to worse, codependency mean scores increase (Table 2). Aktaş Özakgül et al.[22] reported that students who reported having poor family relationships demanded emotional support from others as an indicator of dependent behavior. Ölçüm and Duman[7] revealed that having a healthy relationship with the family of origin reduces the level of codependency. The perception of conflict between parents in childhood, which has a role in the formation of the perception of family relations, was also found to be related to codependency.[40]

It was found that as the level of education increases, codependency mean scores decrease (Table 2). There are studies with similar results in the literature.[22,27,31] It is believed that as education level increases, problems are better perceived and solved; thus, the level of codependency may decrease. However, in their study examining the level of codependency in women and the factors affecting it, Altınova and Altuntaş[34] found that there was no significant relationship between education and codependency.

The mean codependency score of working individuals was found to be lower than that of the non-working individuals (Table 2). This difference may be attributed to the fact that in-

dividuals who do not work live with their family for many years and adopt the traditional rules of the society and the family. In addition, it is likely that the educational status and economic freedom of working individuals are higher than those who do not work. These factors are thought to protect individuals from codependency. Similarly, Altınova and Altuntaş[34] reported that the codependency scores of working women are lower than those who do not work. In their study conducted with the families of drug addicts, Bortolon et al.[32] found that that 70% of those with low levels of codependency work, while 30% do not. The mean scores of the CODAT and the factors of low self--worth, medical problems, other focus/self-neglect, and the family of origin issues were found to be high in those with low income (Table 2). Altınova and Altuntaş[34] attributed the decrease in the income level of women and the increase in codependency to economic dependence. Bortolon et al.[32] stated that unemployed mothers and spouses of drug addicts who have <8 years of education are likely to show a high level of codependency. It is believed that economic dependence plays a major role in codependency not only in women but in all individuals. On the other hand, Evgin and Sümen[6] found that there is no significant relationship between codependency and income level in university students.

The level of codependency was found to be the highest in divorced/widowed individuals and the lowest in single ones (Table 2). The fact that those with a fragmented family structure have higher levels of codependency compared to those with other family structures supports this finding. In addition to similar results in the literature,[32,34] there are studies showing that there is no relationship between codependency and marital status.[24,34]

While mothers had the highest score among caregivers, children as caregivers received the lowest score (Table 2). Bortolon et al.[32] reported that 26% of the mothers or spouses of drug addicts showed high levels of codependency, while 17% of other relatives showed high levels of codependency. More than half of the schizophrenics are single and 54.8% of the caregivers are women.[41] In Türkiye, women generally assume the responsibility for care due to their compassionate nature, which suggests the person who is affected by the caring role in the family is inevitably the mother.

The level of codependency was found to be high in those with a chronic disease (Table 2). Evgin and Sümen[6] reported that there was a significant difference between the codependency scores of university students with both physical and mental health problems compared to those without any illnesses. Martsolf et al.[42] found that codependency and perceived health are associated with functional ability and depression, and that the factors of low self-worth, hiding self, and medical problems have a significant effect on depression. Caring for people with

chronic mental illnesses can threaten the caregiver's physical and mental health when the care is given compulsively by the codependents.[31] When the literature is examined, several diseases and symptoms have been associated with codependency. It has been reported that there is a relationship between codependency and depression,[18,38,43,44] anxiety,[18,24,27,35,45] stress level,[18,24,45] rage,[27] eating disorders,[46] and neurotic symptoms.[47] As a limitation of this study, the mental state of the individuals was evaluated through their self-reports, and the official records were not examined. Therefore, there is no mention of a relationship with a specific mental illness.

The codependency scores of those who stated that they were exposed to violence were found to be higher (Table 2). Ölçüm and Duman[7] reported a significant difference between physical violence in the family and codependency. Evgin and Sümen[6] revealed a moderate positive relationship between the codependency scores of university students and the Childhood Trauma Questionnaire total score and between the codependency scores of university students and the physical abuse sub-dimension score. They found that physical, emotional and sexual abuse experienced in childhood affects codependency.[48] Contrary to the relationship generally established in the literature, Cullen and Carr[24] stated that people with a high level of codependency were not exposed to physical and sexual abuse in their childhood. They argued that codependency stems from a large-generation family system rather than this relationship. Although it is still debated what kind of family dysfunction causes codependency, it is thought that violence indirectly impairs family functionality and increases susceptibility to codependency.

A weak relationship was found between age and codependency (Table 3). Bortolon et al.[32] found that 48% of individuals aged 45 and over were severely codependent, while 42% were found to have low levels of codependency. About 52% of the individuals under 45 were found to have high levels of codependency, and 58% were found to have low levels of codependency. Evgin and Sümen[6] reported that university students aged 20 and under have higher codependency scores than university students aged 21 and over. Ançel et al.[9] revealed a negative relationship. However, there are also studies in the literature showing that there is no relationship between age and codependency.[5,10,27,34,36]

Another remarkable finding of the study is that although the perception of dependence on the individual being cared for is high, the codependency scores are low (Table 3). Denial, which is one of the pathological personality traits, is a determinant of codependency. This result may be attributed to the fact that individuals deny the perceptions of their own situation, hide themselves, or lack awareness of dysfunctional behaviors that are considered to be normal in the family environment. In addition, strong personal coping strategies and social support may have led to this result.

Another important finding of the study is that the level of codependency is low in lively/active and self-confident individuals and high in sensitive/emotional and anxious individuals (Table 4). Panaghi et al.[47] reported that highly neurotic and less adaptable women living with a drug-addicted partner were more vulnerable to stress and dependency. The same study revealed that extroversion is negatively related to codependency. Ulusoy and Durmuş[49] reported that one of the dependent personal characteristics in Turkish culture is the lack of self-confidence and the inability to act alone. There are studies which found a significant relationship between codependency and low self-esteem.[6,36,50]

Limitations of the Research

The study was conducted only in one training and research hospital in Ankara province. The results of the study cannot be generalized to the whole society.

Conclusion

The level of codependency was found to be mild in the caregivers of individuals with chronic mental illnesses. It was revealed that codependency is associated with some characteristics of the caregivers. Our findings support processes such as solution proposals and the formulation of public policies for research. Since it concerns dysfunctional families, and most importantly, it is learned and transferred in the family, codependency should be considered as a community mental health problem and should be addressed in preventive and therapeutic services. All these may allow the caregivers to protect their mental health and to support the independence of the individual with mental illness in the recovery process.

References

1. Mulud ZA, McCarthy G. Caregiver burden among caregivers of ındividuals with severe mental ıllness: Testing the moderation and mediation models of resilience. Arch Psychiatr Nurs 2017;31:24–30.

2. Rodríguez-González AM, Rodríguez-Míguez E. A meta-analysis of the association between caregiver burden and the dependent's illness. J Women Aging 2020;32:220–35.

3. Hughes-Hammer C, Martsolf DS, Zeller RA. Development and testing of the codependency assessment tool. Arch Psychiatr Nurs 1998;12:264–72.

4. Martsolf DS, Hughes-Hammer C, Estok P, Zeller RA. Codependency in male and female helping professionals. Arch Psychiatr Nurs 1999;13:97–103.

5. Fuller JA, Warner RM. Family stressors as predictors of codependency. Genet Soc Gen Psychol Monogr 2000;126:5–22.

6. Evgin D, Sümen A. Childhood abuse, neglect, codependency, and affecting factors in nursing and child development students. Perspect Psychiatr Care 2022;58:1357–71.

7. Ölçüm Hİ, Duman BN. Family of origin relations and codependency in nurses. G.O.P. Taksim E.A.H. JAREN [Article in Turkish] 2017;3:60–5.

8. Anaya Acosta A, Fajardo Escoffié EC, Calleja N, Aldrete Rivera E. Family dysfunction as a predictor of codependency among Mexican adolescents. Nova Scientia 2018;10:465–80.

9. Ançel G, Yuva E, Öztuna DG. The relationship between co-dependency and mobbying/bullying. Anadolu Psikiyatri Derg [Article in Turkish] 2012;13:104–9.

10. Knudson TM, Terrell HK. Codependency, perceived interparental conflict, and substance abuse in the family of origin. Am J Fam Ther 2012;40:245–57.

11. Yılmaz S. Nursing care in the codependency. Türkiye Klinikleri J Psychiatr Nurs-Special Topics [Article in Turkish] 2015;1:36–47.

12. Shi Y, Shao Y, Li H, Wang S, Ying J, Zhang M, et al. Correlates of affiliate stigma among family caregivers of people with mental illness: A systematic review and meta-analysis. J Psychiatr Ment Health Nurs 2019;26:49–61.

13. Mausbach BT, Harvey PD, Goldman SR, Jeste DV, Patterson TL. Development of a brief scale of everyday functioning in persons with serious mental illness. Schizophr Bull 2007;33:1364–72.

14. Patterson TL, Goldman S, McKibbin CL, Hughs T, Jeste DV. UCSD Performance-Based Skills Assessment: Development of a new measure of everyday functioning for severely mentally ill adults. Schizophr Bull 2001;27:235–45.

15. Cermak TL. Diagnostic criteria for codependency. J Psychoactive Drugs 1986;18:15–20.

16. Ançel G, Kabakçi E. Psychometric properties of the Turkish form of Codependency Assessment Tool. Arch Psychiatr Nurs 2009;23:441–53.

17. Marks AD, Blore RL, Hine DW, Dear GE. Development and validation of a revised measure of codependency. Aust J Psychol 2012;64:119–27.

18. Ehsan H, Suneel I. Mental health functioning of co-dependence and gender as predictor among parents of intellectually disabled children. Rawal Med J 2020;45:867–70.

19. da Costa CMRF, de Oliveira-Monteiro NR. Codependency, psychological problems and time of exposure to parents with a history of psychoactive substance dependence: appointments. Contextos Clín 2020;13:724–39.

20. Vlaicu C. Co-Dependency In intimate relationship-a learned behaviour. Int J Theol Philos Sci 2020;4:82–9.

21. Mousumi J, Binapani D, Purnima K. Depression and codependency among wives of alcoholics in rural community. TNNMC J Ment Health Nurs 2021;9:4–7.

22. Aktaş Özakgül A, Yılmaz S, Koç M, Buzlu S, Atabek Aştı T. Comparison of nursing and mechanical engineering students' codependency levels. Addicta: Turk J Addict 2017;4:63–74.

23. Karasar N. Bilimsel araştırma yöntemi. Ankara: Nobel Yayın Dağıtım, 2005. [in Turkish]

24. Cullen J, Carr A. Codependency: An empirical study from a systemic perspective. Contemp Fam Ther 1999;21:505–26.

25. Noriega G, Ramos L, Medina-Mora ME, Villa AR. Prevalence of codependence in young women seeking primary health care and associated risk factors. Am J Orthopsychiatry 2008;78:199–210.

26. Özdemir N, Buzlu S. Hemşirelerde karşılıklı bağımlılık ve ilişkili faktörler. Doktora Tezi. İstanbul: Haliç Üniversitesi Sağlık Bilimleri Enstitüsü. 2015.

27. Bynum D, Boss BJ, Schoenhofer S, Martsolf D. The development and testing of the codependency-overeating model in undergraduate social science students in a Mississippi College. SAGE Open 2012;2:2158244012465763.

28. Del-Pino-Casado R, Espinosa-Medina A, López-Martínez C, Orgeta V. Sense of coherence, burden and mental health in caregiving: A systematic review and meta-analysis. J Affect Disord 2019;242:14–21.

29. Spencer L, Potterton R, Allen K, Musiat P, Schmidt U. Internet-based interventions for carers of individuals with psychiatric disorders, neurological disorders, or brain injuries: Systematic review. J Med Internet Res 2019;21:e10876.

30. Ntsayagae EI, Poggenpoel M, Myburgh C. Experiences of family caregivers of persons living with mental illness: A meta-synthesis. Curationis 2019;42:e1–9.

31. Özdemir N, Buzlu S. Codependency in nurses and related factors. Ann Med Res 2019;26:1145–51.

32. Bortolon CB, Signor L, Moreira Tde C, Figueiró LR, Benchaya MC, Machado CA, et al. Family functioning and health issues associated with codependency in families of drug users. Cien Saude Colet 2016;21:101–7.

33. Jack-Ide IO, Uys LR, Middleton LE. Caregiving experiences of families of persons with serious mental health problems in the Niger Delta region of Nigeria. Int J Ment Health Nurs 2013;22:170–9.

34. Altınova HH, Altuntaş O. Kadınların karşılıklı bağımlılığı ve buna etki eden faktörlerin incelenmesi. Turk Stud [Article in Turkish] 2015;10:81–98.

35. Dear GE, Roberts CM. The relationships between codependency and femininity and masculinity. Sex Roles 2002;46:159–65.

36. Chang SH. Testing a model of codependency for college students in Taiwan based on Bowen's concept of differentiation. Int J Psychol 2018;53:107–16.

37. Lampis J, Cataudella S, Busonera A, Skowron EA. The role of differentiation of self and dyadic adjustment in predicting codependency. Contemp Fam Ther 2017;39:62–72.

38. Karaşar B. Codependency: An evaluation in terms of depression, need for social approval and self-love/self-efficacy. Kastamonu Educ J 2021;29:117–26.

39. Vederhus JK, Kristensen Ø, Timko C. How do psychological characteristics of family members affected by substance use influence quality of life?. Qual Life Res 2019;28:2161–70.

40. Bacon I, McKay E, Reynolds F, McIntyre A. The lived experience of codependency: An interpretative phenomenological analysis. Int J Ment Health Addict 2020;18:754–71.

41. Karaağaç H, Var EÇ. Investigation of the effect between care burden and quality of life in caregivers of schizophrenia patient. Klin Psikiyatr Derg [Article in Turkish] 2019;22:16–26.

42. Martsolf DS, Sedlak CA, Doheny MO. Codependency and related health variables. Arch Psychiatr Nurs 2000;14:150–8.

43. Kaur S. A descriptive study to assess depression and codependency among wives of alcoholics in a selected rural community of Gurdaspur, Punjab. Asian J Nurs Educ Res 2016;6:183–7.

44. Yaghoubnezhad S, Karimi M, Modirkhazeni SM. Relationship between codependency, perceived social support, and depression in mothers of children with ıntellectual disability. Int J Psychol Behav Sci 2017;10:222–6.

45. Hands M, Dear G. Co-dependency: A critical review. Drug Alcohol Rev 1994;13:437–45.

46. Meyer DF, Russell RK. Caretaking, separation from parents, and the development of eating disorders. J Couns Dev 1998;76:166–73.

47. Panaghi L, Ahmadabadi Z, Khosravi N, Sadeghi MS, Madanipour A. Living with addicted men and codependency: The moderating effect of personality traits. Addict Health 2016;8:98–106.

48. Aafjes-van Doorn K, Kamsteeg C, Silberschatz G. Cognitive mediators of the relationship between adverse childhood experiences and adult psychopathology: A systematic review. Dev Psychopathol 2020;32:1017–29.

49. Ulusoy Y, Durmuş E. The prototype of interpersonal dependency in Turkish culture. Int J Psychol Couns 2013;5:114–21.

50. Lindley NR, Giordano PJ, Hammer ED. Codependency: Predictors and psychometric issues. J Clin Psychol 1999;55:59–64.