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INVESTIGATING THE RELATIONSHIP BETWEEN SOCIO-ECONOMIC CHARACTERISTICS AND DURATION OF DEPRESSION TREATMENT IN PATIENTS DIAGNOSED WITH DEPRESSION¹

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Abstract

The purpose of this study was to investigate the relationship between socio-economic characteristics and period of depression treatment in patients diagnosed with depression in Erzincan. Face-to-face questionnaire was performed to the patients diagnosed with depression in the Psychiatry Clinic of Erzincan Binali Yıldırım University Mengücek Gazi Training and Research Hospital. This questionnaire was performed to 311 patients diagnosed with depression. The analysis was performed using ordered probit model. For the questionnaire, 26.12.2019 dated and 12/18 protocol numbered "Human Research Ethics Committee" approval was obtained from Erzincan Binali Yıldırım University. The duration for the treatment was shorter in female patients treated for depression for more

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than 3 years rather than males. The duration of treatment for depression decreased as the level of education increased. The patients with higher monthly income had longer treatment periods rather than the ones with lower monthly income. The duration of treatment was shorter in patients with extended families. The duration of treatment was shorter in patients who had no assets. The period for depression treatment was longer in patients who worked for 21 years and more rather than the ones who had never been employed. These findings were totally opposite for the treatment period of 1 year and less. Socioeconomic factors were correlated with periods of depression. However, this relationship differed according to the duration of depression.

Keywords: Depression, Mental Health, Socio-Economic Characteristics.

Depresyon Tanılı Hastalarda Sosyo-Ekonomik Özellikler ile Depresyon Tedavi Süresi Arasındaki İlişkinin İncelenmesi

Öz

Bu çalışmanın amacı, Erzincan'daki depresyon tanılı hastalarda sosyo-ekonomik özellikler ile depresyon tedavi süresi arasındaki ilişkiyi değerlendirmektir. Erzincan Binali Yıldırım Üniversitesi Mengücek Gazi Eğitim ve Araştırma Hastanesi Psikiyatri Polikliniğinde depresyon tanısı konulan hastalara yüz yüze anket uygulanmıştır. Söz konusu anket çalışması 311 depresyon hastasıyla gerçekleştirilmiştir. Sıralı probit model ile analiz yapılmıştır. Anket uygulaması için Erzincan Binali Yıldırım Üniversitesi "İnsan Araştırmaları Etik Kurulu'ndan" 26.12.2019 tarih ve 12/18 protokol numarası ile izin alınmıştır. 3 yıldan fazla süren depresyon tedavisi gören hastalarda kadınların tedavi görme süreleri erkeklerden kısadır. Eğitim seviyesi arttıkça depresyon tedavi süresi kısalmaktadır. Aylık geliri yüksek olan hastaların düşük olan hastalara göre tedavi süreleri daha uzundur. Geniş ailelere sahip hastalarda tedavi süresi kısalmaktadır. Malvarlığı olmayan hastalarda tedavi süresi daha kısadır. 21 yıl ve daha fazla çalışan hastalarda depresyon tedavi süreleri hiç çalışmamış hastalara göre daha uzundur. Bu bulgular tedavi süresi 1 yıl ve daha kısa olan sürelerde tam tersidir. Sosyoekonomik faktörler depresyon süreleri ile ilişkilidir. Ancak bu ilişki depresyon sürelerine göre farklılık gösterir.

Anahtar Kelimeler: Depresyon, Ruh Sağlığı, Sosyo-Ekonomik Özellikler.

INTRODUCTION

Depression is a remarkable public health problem beyond societies and countries. It is the leading cause of disability all around the world, and the global burden of depression has been increasing (Freeman et al., 2006, p.1-2). According to the Global Burden of Disease 2010 research, 400 million people worldwide

have been estimated to be suffered from depression (including dysthymia) (Allen et al., 2014, p.92-393). It is estimated that 26% of adults (approximately 58 million) have suffered from diagnosable mental disorder at any given year and approximately 15 million adults have major depressive disorder in the USA. Total societal cost of such mental health disorders is at a remarkable level with estimates up to \$200 billion per year for the USA (Frijters et al., 2014, p.1058).

The effects of depression can be long-lasting or recurrent and are possible to significantly affect individuals' ability of functioning and maintaining a rewarding life (WHO, 2021). Depressive disorders are very common in the society, and the impact on the mood or emotions of the affected individuals, the severity (mild to severe) and duration of symptoms can vary from months to years (WHO, 2017, p.5).

After providing adjustments for initial severity of symptoms using ECA dataset for the permanence of depression, no significant relationship has been found in terms of socio-economic status score, low level of education, or permanence. The data obtained from the Stirling County study in Canada have revealed a tendency for lower socio-economic status associated with both the onset and permanence of depression or anxiety. A meta-analysis of longitudinal studies has indicated a significant relationship between socio-economic indicators and both onset and permanence, but the effect of permanence is higher (Skapinakis et al., 2006, p.114-115).

Socioeconomic status is a well-known determinant for health status. In developed countries, the lower individuals' socioeconomic status, the worse their health. Even in the most affluent countries, the individuals in lower socio-economic status groups have significantly shorter life expectancies and higher morbidity rather than the ones from higher socio-economic status groups. Low socio-economic status is associated with a higher risk of coronary heart disease, hypertension, diabetes and other non-infectious diseases in developed countries such as the UK. Various factors contribute upon this, but misbehaviors related to health and psycho-social difficulties among the most prominent factors are the leading factors (Lazzarino et al., 2014, s.1). It has been increasingly known that social and economic conditions of individuals affect their health. These social determinants include the conditions in which people are born, live, work and age (Allen et al., 2014, p.392-393).

Previous cross-sectional studies have revealed that individuals in lower socio-economic groups have increased prevalence of common mental disorders. Psychiatric disorders often have a chronic course, and patients in lower socioeconomic groups are more likely to have a worse prognosis rather than an

increase at the risk of a new disorder attack. Furthermore, other studies have suggested that low socioeconomic status is possible to be a risk factor for the development of a new episode (Skapinakis et al., 2006, p.109).

The SES element beset by increasing national and international inequalities in income, education and wealth and socio-economic status (SES) has become the focus point as a major determinant of depression. Accordingly, the role of SES in depression is an important theme. (Freeman et al., 2006, p.1-2). A recent meta-analysis has revealed that the effect of low socio-economic status upon depression is higher rather than the onset for the permanence of episode (Lorant et al., 2007, p.293). Socio-economic status generally has a higher effect upon the permanence of depression rather than onset (Butterworth et al., 2009, p.229-230).

MATERIAL AND METHOD

The dependent variable of this study was determined to be depression treatment period. The variable of depression treatment period was grouped under three categories as “1 year and less”, “between 1–3 years” and “more than 3 years.” As could be seen, multiple preference models were used in the analysis of the study because the categories of this variable had more than two statuses. In addition, due to its structure, the dependent variable was measured with an ordinal scale. Ordinal preference models have been used as the analysis method in such cases where the dependent variable was measured with an ordinal scale.

Data Set

In this study, the relationship between depression and the economy was tried to be investigated. For this purpose, a face-to-face questionnaire was performed to the patients diagnosed with depression using the Structured Clinical Interview Scale for DSM-IV (SCID-I) (Çorapçıoğlu et al., 1999) by an experienced psychiatrist in Psychiatry Clinic of Binali Yıldırım University Mengücek Gazi Training and Research Hospital. This questionnaire was administered to 311 depression patients (Yamane, 2010, s.49) in 2019-2020. While creating the variables in this study, "Race, Unemployment, and Mental Health in the USA: What Can We Infer About the Psychological Cost of the Great Recession Across Racial Groups?" carried out by Diette et al. in 2018 and "Inequality and the association between involuntary job loss and depressive symptoms" carried out Berchick et al. in 2012 were benefited.

In the study, the analyses were performed with Stata package software using the data set obtained from the questionnaires. Because logit and probit models were more useful in practice (Gujarati, 2004, p.582-583), the ordered

probit model (Diette et al., 2018) was preferred due to its being easy in mathematical operations as the analysis method because the studies with similar subjects (Levecque et al., 2009; Doherty et al., 2008) offered differences due to frequently analyzing with logit model (Greene, 2002, p.667).

Variables

The variable of "depression treatment period" was used as the dependent variable in the econometric model created to determine the relationship between depression treatment period and economy. The variable of depression treatment period was grouped under three categories as "1 year and less" (0), "between more than 1 year – 3 years" (1) and "more than 3 years" (2).

On the other hand, the variables of gender, marital status, level of education, family type, assets, monthly income, period of employment, period of unemployment and expenditures out of disposable income that were considered to affect depression treatment period created the independent variables of the model:

Table 1
Independent Variables in the Model

Independent Variables		
Name	Category	Reference Category
Gender	Male	Male
	Female	
Marital status	Married	Single
	Single	
	Other	
Educational status	Illiterate	Illiterate
	Elementary school	
	Secondary/high school	
	Vocational school and higher	
Family type	Nuclear family	Nuclear family
	Extended family	
Assets	Yes	Yes
	No	
Monthly income	2000 TL and below	2000 TL and below
	Between 2001-3000 TL	
	Between 3001-4000 TL	
	Between 4001-5000 TL	
	Between 5001-6000 TL	
	6001 TL and above	
Period of employment	Never employed	Never employed
	6 years and less	
	Between more than 6 years -13 years	
	Between more than 13 years -20 years	
	21 years and more	
	Retired	
Period of unemployment	Not unemployed	Not unemployed
	1 year and less	
	2 years and more	
Expenditures out of disposable income	Yes	No
	No	
	Partly	

FINDINGS OF THE STUDY

Descriptive Statistics

According to Table 2, among the 311 participants who answered to the questionnaire, , 60% were female, 65% were married, 41% were secondary school/high school graduates, and 93% had a nuclear family type. Whereas 51% of the participants did not have any assets, 40% had monthly income between 2001-3000 TL. Whereas 37% of the participants were employed for 6 years and less, 86% were not unemployed and 47% had expenditures out of disposable income.

Table 2
Descriptive Statistics

Variables	Categories	Frequency	Percentage
Gender	Male	137	44.05
	Female	174	55.95
Marital Status	Married	202	64.95
	Single	89	28.62
	Other	20	6.43
Educational Status	Illiterate	11	3.54
	Elementary school	101	32.48
	Secondary/high school	128	41.16
	Vocational school and higher	71	22.83
Family Type	Nuclear family	288	92.60
	Extended family	23	7.40
Assets	Yes	151	48.55
	No	160	51.45
	2000 TL and below	93	29.90
	2001-3000 TL	114	36.65
Monthly Income	3001-4000 TL	45	14.47
	4001-5000 TL	33	10.61
	5001-6000 TL	7	2.26
	6001 TL and above	19	6.11
	Never employed	93	30.10
Period of Employment	6 years and less	114	36.89
	Between more than 6 years -13 years	45	14.56
	Between more than 13 years -20 years	32	10.36
	21 years and more	6	1.94
	Retired	19	6.15
Period of unemployment	Not unemployed	268	86.18
	1 year and less	16	5.14
	2 years and more	27	8.68
Expenditures out of disposable income	Yes	85	27.33
	No	146	46.95
	Partly	80	25.72

Testing Parallel Lines Assumption

This model was based on the cumulative probabilities of the dependent variable categories and assumes that the regression functions were parallel for different dependent variable categories (Emeç, 2002, s.15). For this reason, this assumption must primarily be real in order to analyze with ordered probit model. The parallel lines assumption obtained from the prediction of ordered probit model was presented in Table 3.

Table 3
Testing Parallel Lines Assumption

	Chi-square value	Degree of freedom	Prob value
Wolfe Gould	25.87	22	0.257
Brant	-12.54	22	1.000
Score	29.55	22	0.130
Likelihood ratio	38.18	22	0.017
Wald	24.02	22	0.346

Prediction Results of the Model

The results assuming that the regression functions were parallel for different dependent variable categories and obtained from the ordered probit model based on the realization of this assumption were presented in table 4.

According to the prediction results of ordered probit model, the variables of gender, educational status, family type, assets, monthly income and employment period had a statistically significant effect upon the period of depression treatment. In contrast, the variables of marital status, period of unemployment and expenditures out of disposable income were statistically insignificant upon period of depression treatment. Gender had a significant effect. In terms of educational status, it was especially significant for the participants graduated from secondary/high school and higher. It was also significant for the participants with a monthly income of 5001-6000 TL. It had a significant effect upon the participants employed for 21 years and more.

Table 4
Ordered Probit Model

Variable	Coefficient	Std. Deviation	Z Value	Prob Value	%95 Confidence Limits	
Gender	-0.396	0.169	-2.34	0.019	-0.728	-0.064
Marital status (Reference category: Single)						
Married	0.190	0.212	0.90	0.370	-0.225	0.604
Other	0.559	0.349	1.60	0.109	-0.125	1.242
Educational status (Reference category: Illiterate)						
Elementary school	-0.511	0.397	-1.29	0.198	-1.290	0.267
Secondary school / high school	-0.878	0.401	-2.19	0.029	-1.663	-0.092
Vocational school and higher	-1.387	0.446	-3.11	0.002	-2.262	-0.513
Family type	-0.721	0.300	-2.40	0.016	-1.308	-0.133
Assets	-0.400	0.157	-2.54	0.011	-0.709	-0.092
Monthly income (Reference category: 2000 TL and below)						
2001-3000 TL	0.028	0.181	0.16	0.877	0.328	0.384
3001-4000 TL	-0.179	0.243	-0.74	0.462	-0.655	0.297
4001-5000 TL	0.147	0.287	0.51	0.610	-0.417	0.710
5001-6000 TL	1.121	0.566	1.98	0.048	0.011	2.231
6001 TL and above	-0.027	0.391	-0.07	0.944	-0.794	0.739
Period of employment (Reference category: Never employed)						
6 years and less	-0.101	0.254	-0.40	0.691	-0.599	0.397
Between more than 6 years -13 years	0.007	0.369	0.02	0.985	-0.717	0.730
Between more than 13 years -20 years	-0.203	0.286	-0.71	0.477	-0.764	0.357
21 years and more	0.626	0.313	2.00	0.046	0.012	1.240
Retired	0.307	0.522	0.59	0.557	0.716	1.330
Period of unemployment (Reference category: Not unemployed)						
1 year and less	-0.241	0.349	-0.69	0.490	0.925	0.443
2 years and more	0.345	0.279	1.24	0.215	0.201	0.892
Expenditures out of disposable income (Reference category: No)						
Yes	-0.229	0.199	-1.15	0.250	0.620	0.161
Partly	-0.187	0.181	-1.03	0.302	0.542	0.168

Summary information indicating the marginal effects were presented in table 5.

Table 5
Marginal Effects

Variable	1 year and less		Between more than 1 year - 3 years		More than 3 years	
	dy/dx	Std. Deviation	dy/dx	Std. Deviation	dy/dx	Std. Deviation
Gender	0.136**	0.057	-0.032**	0.014	-0.103**	0.045
Marital status (Reference category: Single)						
Married	-0.065	0.073	0.018	0.023	0.047	0.051
Other	-0.191	0.119	0.037***	0.022	0.154	0.104
Educational status (Reference category: Illiterate)						
Elementary school	0.166	0.116	0.009	0.028	-0.175	0.140
Secondary school / high school	0.296*	0.117	-0.018	0.030	-0.278**	0.140
Vocational school and higher	0.467*	0.130	-0.086**	0.042	-0.381*	0.142
Family type	0.230*	0.085	-0.084**	0.042	-0.146*	0.045
Assets	0.138*	0.054	-0.035**	0.015	-0.103*	0.040
Monthly income (Reference category: 2000 TL and below)						
2001-3000 TL	-0.009	0.061	0.002	0.015	0.007	0.046
3001-4000 TL	0.059	0.080	-0.017	0.024	-0.042	0.056
4001-5000 TL	-0.049	0.096	0.011	0.019	0.039	0.077
5001-6000 TL	-0.339**	0.134	-0.011	0.054	0.350***	0.182
6001 TL and above	0.009	0.131	-0.002	0.034	-0.007	0.097
Period of employment (Reference category: Never employed)						
6 years and less	0.034	0.086	-0.009	0.025	-0.025	0.061
Between more than 6 years -13 years	-0.002	0.126	0.000	0.032	0.002	0.095
Between more than 13 years - 20 years	0.069	0.095	-0.020	0.031	-0.048	0.064
21 years and more	-0.208**	0.098	0.020***	0.011	0.188***	0.102
Retired	-0.104	0.175	0.019	0.019	0.086	0.157
Period of unemployment (Reference category: Not unemployed)						
1 year and less	0.081	0.115	-0.024	0.040	-0.056	0.075
2 years and more	-0.117	0.093	0.019***	0.010	0.097	0.084
Expenditures out of disposable income (Reference category: No)						
Yes	0.077	0.067	-0.019	0.018	-0.058	0.049
Partly	0.063	0.061	-0.015	0.015	-0.048	0.046

*P<.01; **P<.05; *** P<.10

Depression treatment period for 1 year and less

The females had depression treatment period of 1 year and less for 13.6% more than males. In other words, males had treatment for a longer period. And females responded to treatment in a shorter period. The participants with secondary/high school and higher graduation were 30% and 47% more likely to have a depression treatment period for 1 year and less rather than illiterate individuals. The period of treatment for depression decreased as the level of education increased. The illiterate individuals had a longer period of treatment for depression. People with extended family type were 23% more possible to have depression treatment period of 1 year and less rather than the individuals with a nuclear family. The participants with extended family type had longer depression treatment period. The participants with a nuclear family type had shorter treatment period for depression.

The participants with no assets were 14% more likely to have a depression treatment period of 1 year and less rather than the ones with assets. The individuals without assets had longer depression treatment period. The participants with a monthly income of 5001-6000 TL were 34% less likely to have a depression treatment period of 1 year and less rather than the ones with a monthly income of 2000 TL and less. The individuals with a higher monthly income had shorter treatment period for depression. And the participants with lower monthly income had depression treatment for a longer period. The participants employed for 21 years and more were 21% less likely to have a treatment period of 1 year and less for depression rather than the ones who were never employed. The participants who had never been employed had longer treatment period for depression. And the participants who were employed for 21 years and more had depression treatment for a shorter period.

Depression treatment period for 1-3 years

1-3-year treatment period for depression was 3% less for females rather than males. In other words, the males had treatment for a longer period. And females had treatment for a shorter period. The participants with a marital status different from single and married (divorced) were 4% more likely to have depression treatment period of 1 to 3 years rather than the ones with marital status of single. Treatment period of single and divorced participants for depression was longer. The participants with a vocational school and higher education level were 9% less likely to have a depression treatment period of 1 to 3 years rather than illiterate people. The period of treatment for depression decreased as the level of education increased. The illiterate people had longer period of treatment for depression.

The participants with extended family were 8% less likely to have depression treatment period of 1 to 3 years when compared to the ones with a nuclear family. The participants with an extended family had shorter treatment period for depression. The individuals with a nuclear family type had longer depression treatment period. The participants with no assets were 3% less likely to have a depression treatment period of 1 to 3 years rather than the ones with assets. Depression treatment period was shorter for the participants who did not have any assets. The participants who were employed for 21 years and more were 20% more likely to have a depression treatment period of 1 to 3 years rather than the ones who had never been employed. The participants who were employed for 21 years and more had depression treatment for a longer period. The individuals who were never employed had shorter treatment period for depression.

According to the table, the participants who were unemployed for 2 years and more were 2% more likely to have a depression treatment period of 1 to 3 years rather than the ones who were employed. Unemployed participants had longer period of depression treatment.

Depression treatment period for more than 3 years

More than 3-year treatment period for depression was 10% less for females rather than the males. The females had shorter treatment period for depression. In other words, males had depression treatment for a longer period. The participants with educational status of secondary/high school and higher graduation were 28% and 38% less likely to have a depression treatment period of more than 3 years when compared to illiterate ones. The period of treatment for depression decreased as the level of education increased. The illiterate participants had longer period of treatment for depression.

According to the table, the participants with extended family type were 15% less likely to have depression treatment for more than 3 years rather than the ones with nuclear family. The participants with extended family type had shorter treatment period for depression. The ones with a nuclear family type had longer depression treatment period. The participants with no assets were 10% less likely to have a depression treatment period of more than 3 years rather than the ones with assets. Depression treatment period of the participants without any assets was shorter. The participants with a monthly income of 5001-6000 TL were 35% more likely to have a depression treatment period of more than 3 years rather than the ones with a monthly income of 2000 TL and less. The individuals with a higher monthly income had depression treatment for longer periods. The participants with lower monthly income had shorter depression treatment period.

The participants who were employed for 21 years and more were 18% more likely to have a depression treatment period of more than 3 years rather than the ones who had never been employed. The participants who were employed for 21 years and more had longer depression treatment period. The ones who had never been employed had shorter treatment period for depression.

DISCUSSION

Depression is one of the most remarkable mental disorders individuals have experienced in recent years. The influence and period of depression affect human life negatively. Depression is affected by social and economic conditions of individuals. Socio-economic factors are highly efficient in etiology of mental health deterioration (Kosidou et al., 2011, p.160).

The presence of a strong relationship between individual socio-economic status and mental disorder has especially been observed. Although recent studies have been carried out on income inequality and mental health, no consistency has been noticed in their findings. It has been found that high income inequality creates an increased risk of depressive symptomatology on new mothers, and this relationship is highest among low-income people; however, inequality has been reported to be correlated with poor mental health among wealthy people (Gresenz et al., 2001, p.197-198).

Socio-economic status plays an important role for later psychological distress, but this relationship varies according to the extent or depth of socio-economic status. Profession and education as the two most widely studied indicators appear to be weaker predictors of common mental disorders. Economic difficulties, unemployment and source of income have been accepted to be stronger predictors of common mental disorders. Cash margin interacts significantly with gender and is a determinant of psychological distress for females but not for males. In this sense, it is possible to be emphasized that regarding gender as well as measuring socio-economic status in various ways in public health research is important (Linander et al., 2014, p.235).

In terms of depression treatment period of 1 year and less; Depression treatment period is 13.6% longer for females than males. In other words, females have treatment for a longer period. The males responds to treatment in a shorter period. Gender differences in patterns associating mental health with health behaviors have also been documented in Europe. For example, females have tendency towards internalizing their emotions, and psychosomatic symptoms or mental health problems often appear dependently (Lazzarino et al., 2014, p.6).

Various studies have revealed the existence of social inequalities in mental health and psychological distress. It has been observed that more symptoms appear in less educated, unemployed, low-income groups and, less consistently, in lower occupational status groups. Furthermore, males and females are different in terms of the relationships between socio-demographic factors and psychological distress (Talala et al., 2007, p.24).

The period of depression treatment is 30% and 47% longer, respectively, for individuals with secondary/high school and higher graduation rather than the period for illiterate people. The higher the education level, the longer the depression treatment period. Depression treatment period of illiterate people is short. The individuals with a monthly income of 5001-6000 TL have 34% less treatment period for depression rather than the ones with a monthly income of 2000 TL and less. Individuals with a high monthly income have shorter treatment period for depression, and individuals with a low monthly income have longer treatment period for depression. The individuals with no assets have 14% more depression treatment period rather than the ones with assets. The individuals without assets have longer depression treatment period.

A study carried out in Wales has revealed that the individuals living in low-income areas tend to have worse mental health status rather than the ones living in higher-income areas. Another study carried out in Denmark has reported that lower-income (lower third) participants have 3.5 times higher rates of minor depression and 8.5 times higher rates of major depression than those with higher incomes (Sugiyama et al., 2016, s.16). Socio-economic status and low income contribute upon negative outcomes restricting financial sources and higher-paying employment opportunities. Moreover, low socio-economic status and income are associated with mental health disorders such as depression due to the stress of living with less money than needed. There is clear evidence related to the fact that low socio-economic status and income are associated with weaker psychological and physical health outcomes, and more health problems are experienced with each step down the socio-economic status ladder. Indeed, the socio-economic status health gradient is the strongest for stress-sensitive diseases such as heart disease, diabetes, metabolic disorders and psychological disorders (Santiago et al., 2011, p.218-219).

Poor families' experiencing stressful life events in disproportionate numbers when compared to their middle-class counterparts makes stress an important proximate process that reveals the harmful effects of poverty. Such type of stress is associated with symptoms of depression, anxiety, hostility, and aggression among poor children and adolescents. Poverty is a cycle in which

chronic stress factors continue be kept inside with little or no relief causing psychopathology. Moreover, psychopathology contributes upon this ongoing cycle making to manage stress factors more difficult or stressful (Santiago et al., 2011, p.219-220).

It has been argued that low socio-economic status is possible to be considered as an example of a chronic stress factor that increases exposure to acute stress factors and limits psycho-social resources to cope. It has also been suggested that low socio-economic status is possible to be considered as the 'root cause' of the disease beyond its effect on mediator mechanisms. What this and other studies have contributed is that the effects of objective measures of socio-economic status such as income or professional social class upon mental health can be overestimated. If efficient ways to prevent and treat these disorders are to be designed, further researches are needed to be carried out for more subjective measurements of socio-economic status to improve understandability of the mechanisms that socio-economic conditions cause depression and anxiety (Skapinakis et al., 2006, p.116).

Therefore, in this study, measurements such as gender, marital status, education, employment period, unemployment period, expenditures out of disposable income, family type, and assets were analyzed besides socio-economic measurements such as income and profession. The individuals with extended family type had 23% longer depression treatment period rather than the ones with nuclear family structure. The individuals employed for 21 years and more had 21% shorter treatment period for depression rather than the ones who were never employed. People were employed for 21 years and more had depression treatment for a shorter period. Depression treatment period of the never employed individuals was longer.

In terms of depression treatment period between 1-3 years; Depression treatment period of females was 3% shorter rather than males. In other words, males had longer treatment. Females responded to treatment in a shorter period. The individuals with marital status different from single and married (divorced) had 4% longer treatment period for depression when compared to single individuals. Divorced people had longer depression treatment. The period of depression treatment was 9% shorter for individuals graduated from vocational school or higher rather than illiterate people. The period of treatment for depression decreased as the level of education increased. Illiterate individuals had long treatment period for depression. The individuals with extended family type had 8% shorter treatment period for depression rather than the ones with nuclear family structure. The individuals with extended family type had shorter treatment

period for depression. Depression treatment period of the individuals with a nuclear family type was longer.

The individuals with no assets had 3% shorter treatment period for depression rather than the ones with assets. Depression treatment period was shorter for individuals who did not have any assets. The individuals who were employed for 21 years and more had 20% longer treatment period for depression rather than the ones who were never employed. The individuals who were never employed had shorter treatment period for depression. The participants who were employed for 21 years and more had longer depression treatment period. The individuals who were unemployed for 2 years and more were 2% more likely to have 1 to 3 years of depression treatment rather than those who were unemployed. Unemployed individuals had longer period of depression treatment. In terms of economic factors, the population-based studies (related to the unemployed) revealed that the individuals with relatively low income and/or low living standards were at higher risk of depression. The communities benefiting from advantageous social conditions were more possible to be relatively protected from negative mental health outcomes (Phongsavan et al., 2006, s.2546-2547).

Low socio-economic status was associated with a higher prevalence of depression. There was a clear relationship between worsening socio-economic conditions and depression (Lorant et al., 2007, s.293). There was substantial evidence related to a social gradient in the prevalence of common mental disorders including depression: Low socioeconomic status was associated with increased risk (Butterworth et al., 2009, s.229-230).

In terms of depression treatment period for more than 3 years; The females had 10% shorter depression treatment period rather than males. In other words, the males had treatment for longer. Depression treatment period for females was shorter.

The period of depression treatment was 28% and 38% shorter, respectively, for individuals graduated from secondary/high school and higher when compared to illiterate individuals. The period of treatment for depression decreased as the level of education increased. Illiterate individuals had longer treatment period for depression. The individuals with no assets had 10% shorter treatment period for depression rather than the ones with assets. Depression treatment period was shorter for individuals who did not have any assets.

The individuals with a monthly income of 5001-6000 TL had a 35% longer depression treatment period rather than the ones with a monthly income of 2000 TL and less. The participants with low monthly income had shorter treatment

period for depression. Those with a higher monthly income had longer depression treatment period.

A meta-analysis including more than 50 studies revealed that depression was inversely correlated with socioeconomic status defined with income or education level. It was concluded that individuals with lower social status were approximately 1.81 times more likely to report depression (Steptoe et al., 2007, s.97-98). Majority of previous studies indicated that people with lower socioeconomic status, as measured by parameters such as education and income level, had higher prevalence of psychological distress, and similar relationships were determined with the studies carried out on Japanese population. However, these findings also suggested that the relationship between socioeconomic status and psychological distress was possible to be complex. For example, males of high socioeconomic status were more vulnerable to interpersonal conflicts at work rather than males of low socioeconomic status. (Fukuda et al., 2011, s.11). This study revealed the negative effects upon the treatment period of people with high socio-economic status. People with extended family type had 15% shorter treatment time for depression than people with nuclear family structure. The people with extended family type had shorter treatment period for depression. And the ones with a nuclear family type had longer depression treatment period.

The individuals who were employed for 21 years and more had 18% longer treatment period for depression rather than the ones who were never employed. And the people who were never employed had shorter treatment period for depression. The individuals who were employed for 21 years and more had longer treatment period for depression.

CONCLUSION

The relationship between period of depression and socio-economic factors was explained in this study. The study was administered to the patients who were treated for depression for 1 year and less, 1 to 3 years, and more than 3 years. When considering the relationship between depression treatment period and socio-economic factors, inconsistencies were observed in period of treatment. When the depression treatment period was 1 year and less, depression treatment period of females took longer than males'. The period of treatment for depression increased as the level of education increased. Depression treatment period of illiterate individuals was shorter. The people with high monthly income had shorter treatment period for depression, and the ones with low monthly income had longer depression treatment period. Moreover, the individuals without assets

had longer depression treatment period. The people with extended family type had longer depression treatment period rather than the ones with nuclear family. The individuals who were employed for 21 years and more had depression treatment for a shorter period. Depression treatment period of the people who were never employed was longer.

The results were the same in patients treated for depression for 1 to 3 years and for more than 3 years. The period of treatment for females was shorter than males in permanent depression that lasted for years. The period of treatment for depression was shorter as the level of education increased. The patients with high monthly income had longer treatment periods rather than the ones with low monthly income. The period of treatment was shorter in patients with extended families. The period of treatment was shorter in patients who did not have any assets (house, land, car, vineyard, garden, field, etc.). Depression treatment period was longer in patients who were employed for 21 years and more rather than in patients who were never employed.

In summary, the variables of age, gender, educational status, marital status, family type, assets, monthly income, employment period, etc. in the findings obtained in the study were in parallel with the literature. On the other hand, if the field research could be carried out in a province similar to Erzincan in the east in terms of population and geographical characteristics, it would be highly likely to reveal different findings and the study would be more meaningful. However, the pandemic process did not allow such a study to be conducted. Therefore, two different regions could not be compared.

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EXTENDED ABSTRACT

Purpose: The purpose of this study was to investigate the relationship between socio-economic characteristics and period of depression treatment in patients diagnosed with depression in Erzincan.

Method: Face-to-face questionnaire was performed to the patients diagnosed with depression in the Psychiatry Clinic of Erzincan Binali Yıldırım University Mengücek Gazi Training and Research Hospital. This questionnaire was performed to 311 patients diagnosed with depression. The analysis was performed using ordered probit model. For the questionnaire, 26.12.2019 dated and 12/18 protocol numbered "Human Research Ethics Committee" approval was obtained from Erzincan Binali Yıldırım University.

Findings: The duration for the treatment was shorter in female patients treated for depression for more than 3 years rather than males. The duration of treatment for depression decreased as the level of education increased. The patients with higher monthly income had longer treatment periods rather than the ones with lower monthly income. The duration of treatment was shorter in patients with extended families. The duration of treatment was shorter in patients who had no assets. The period for depression treatment was longer in patients who worked for 21 years and more rather than the ones who had never been employed. These findings were totally opposite for the treatment period of 1 year and less.

Conclusion: The relationship between period of depression and socio-economic factors was explained in this study. The study was administered to the patients who were treated for depression for 1 year and less, 1 to 3 years, and more than 3 years. When considering the relationship between depression treatment period and socio-economic factors, inconsistencies were observed in period of treatment.

When the depression treatment period was 1 year and less, depression treatment period of females took longer than males'. The period of treatment for depression increased as the level of education increased. Depression treatment period of illiterate individuals was shorter. The people with high monthly income had shorter treatment period for depression, and the ones with low monthly

income had longer depression treatment period. Moreover, the individuals without assets had longer depression treatment period.

The people with extended family type had longer depression treatment period rather than the ones with nuclear family. The individuals who were employed for 21 years and more had depression treatment for a shorter period. Depression treatment period of the people were never employed was longer.

The results were the same in patients treated for depression for 1 to 3 years and for more than 3 years. The period of treatment for females was shorter than males in permanent depression that lasted for years. The period of treatment for depression was shorter as the level of education increased. The patients with high monthly income had longer treatment periods rather than the ones with low monthly income. The period of treatment was shorter in patients with extended families. The period of treatment was shorter in patients who did not have any assets (house, land, car, vineyard, garden, field, etc.). Depression treatment period was longer in patients who were employed for 21 years and more rather than in patients who were never employed.

In summary, the variables of age, gender, educational status, marital status, family type, assets, monthly income, employment period, etc. in the findings obtained in the study were in parallel with the literature. On the other hand, if the field research could be carried out in a province similar to Erzincan in the east in terms of population and geographical characteristics, it would be highly likely to reveal different findings and the study would be more meaningful. However, the pandemic process did not allow such a study to be conducted. Therefore, two different regions could not be compared.