Evaluation of Variables Affecting Depression Symptoms in Seasonal Agricultural Workers

Mevsimlik Tarım İşçilerinde Depresyon Belirtilerine Etki Eden Değişkenlerin Değerlendirilmesi

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ABSTRACT

Aim: In this study, it was aimed to examine the depression and related factors of seasonal agricultural work (SAW) patients diagnosed with major depressive disorder (MDD) in the light of sociodemographic data.

Material and Method: The patients' functionality levels were measured with the Global Assessment Scale (GAS) and their depression levels with the Beck Depression Inventory (BDI).

Results: Data of 47 patients, including 28 females and 19 males, were analysed. While the genders were similar in terms of mean age (p=0.809), the duration of education was higher in males (p=0.027). The presence of additional psychiatric disorders other than MDD was higher in females (p=0.027). History of alcohol and substance abuse was more common in males (p<0.001). The characteristics of MDD in males and females were similar (p>0.05). Correlation analysis revealed a significant negative correlation between GAS and BDI (r=-0.864; p<0.001). Significant correlations were determined between GAS, BDI, duration of education, and SAW characteristics (p<0.05).

Conclusion: SAW patients have various social and economic problems. However, the relationship between diagnosed MDD and SAW has not been adequately studied. This is the first study investigating depression-related characteristics of SAW patients diagnosed with MDD.

Key Words: Major depressive disorder, Depression, Agriculture

ÖZ

Amaç: Bu çalışmada, majör depresif bozukluk (MDB) tanısı olan mevsimlik tarım işçisi (MTİ) hastalarında depresyon ve ilişkili faktörlerin sosyodemografik veriler ışığında incelenmesi amaçlandı.

Gereç ve Yöntem: Hastaların işlevsellik düzeyleri Global Değerlendirme Ölçeği (GDÖ) ile, depresyon düzeyleri ise Beck Depresyon Envanteri (BDE) ile ölçüldü.

Bulgular: Çalışmada 28 kadın 19 erkek olmak üzere 47 hastanın verileri incelendi. Ortalama yaş açısından cinsiyetler benzerken (p=0.809), eğitim süresi erkeklerde daha yüksekti (p=0.027). Kadınlarda MDB dışında ek psikiyatrik bozukluk varlığı daha yüksekti (p=0.027). Erkeklerde alkol ve madde kullanım öyküsü daha yüksekti (p<0.001). Kadın ve erkeklerin MTİ karakteristikleri benzerdi (p>0.05). Korelasyon analizinde, GAS ve BDE arasında anlamlı bir negatif korelasyon olduğu (r=-0,864; p<0,001) görülmüştür. GAS, BDE, eğitim süresi ve MTI karakteristikleri arasında anlamlı korelasyonlar saptandı (p<0.05).

Sonuç: MTİ yapan hastaların çeşitli sosyal ve ekonomik sorunları bulunmaktadır. Ancak MDB tanısı ile MTİ arasındaki ilişki yeterince araştırılmamıştır. Bu, MDB tanısı alan MTİ hastalarının depresyonla ilişkili özelliklerini araştıran ilk çalışmadır.

Anahtar Kelimeler: Majör depresif bozukluk, Depresyon, Tarım

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Introduction

Farmers in rural areas work for wages in their own regions or in different regions in order to earn their living due to different reasons. The majority of these people who are generally engaged in agriculture are unskilled seasonal agricultural workers (SAWers) who work in simple jobs (1). There have been numerous studies on SAWers in the social science fields. The majority of these studies consist of field studies conducted in the environments where SAWers go for work to determine their social and economic situations (2). Seasonal agricultural work (SAW) include women, men and children who have reached working age. SAWers are divided into two groups: "local" and "mobile". SAWers who spend part of the year as rovers do not have a specific place of residence. For this reason, since they do not have a job that will provide permanent income, these people can usually only survive with what they earn and live this way until the end of their lives (3). The majority of SAWers are people of South-Eastern Anatolian origin. As a matter of fact, according to a research conducted throughout Turkey, it was determined that 53.1% of SAWers were located in the South-Eastern Anatolia Region (4). Adıyaman is a province located in the South-Eastern Anatolia region and Kahta district is the largest district of Adıyaman with a population of over 128 thousand (5). Although it has decreased in recent years, Adıyaman has been one of the first provinces that come to mind when SAW is mentioned for many years in the past (6).

SAWers in Adıyaman have various problems, just like workers in other regions (6). Social and economic problems are often together with individual problems and interact with each other. Sometimes individual problems cause people to lose their workforce and cause socioeconomic problems, while sometimes socioeconomic problems cause people to experience individual, physical and psychological problems (2). Studies conducted by social sciences in this field focus mostly on quality of life (7). Female gender and being of school age were associated with lower quality of life (8,9). These studies were conducted on healthy people. Disease refers to situations that require external medical help (10). Decrease in quality of life may be accompanied by psychiatric symptoms such as depressive symptoms and sleep problems (11). No study has been found in the literature addressing the depression symptoms of SAWers with psychiatric disorder.

Depression is actually a word that describes a mood. However, since it is also used to describe a psychiatric disorder, it has gradually become the name of a disease. When a person is said to be depressed, it is understood that he or she is in a state of mental depression. In daily life, everyone may feel down, sad, unhappy or even pessimistic from time to time. The difference between depression and normal daily demoralization is that, in addition to hopelessness, the people perceive themselves as inadequate and worthless, withdraws into themselves, and physically loses their sleep and appetite (12). DSM-5 named depression as major depressive disorder (MDD) (13). The lifetime prevalence of MDD ranged from 2 to 21%. Women experience it more often than men do. (14). Patients diagnosed with MDD cannot continue their daily activities and their work, family and social lives are negatively affected. Depression is currently among the diseases that cause the most disability in the world. In developed countries, it always ranks first in terms of disability. At the same time, poorly treated depression paves the way for alcohol and substance use problems and other mental illnesses. Prolonged and poorly treated depression also paves the way for physical diseases, worsens the course of physical diseases such as diabetes and heart diseases, and even increases the risk of death (15, 16).

Some of the most common psychiatric symptoms encountered in psychiatry outpatient clinics are depressive symptoms and they must be treated effectively (17, 18). This study aimed to examine the depression-related factors of SAWers who were diagnosed with MDD and admitted to the psychiatry outpatient clinic of our hospital, in the light of sociodemographic and clinical characteristics.

Material and Method

Model of Study

In this study, depression-related characteristics of male and female SAWers were evaluated. Therefore, the model of the research is the relational screening model and this is a hospital-based descriptive and comparative study. Relational screening model is a research model designed to determine two or more variables and the relationships between these variables (19).

Place and Time of Study

It was carried out between 22/12/2020-22/06/2021 with patients who admitted to the Kahta State Hospital psychiatry outpatient clinic.

Population and Sample of the Study

The diagnosis of MDD was made by a psychiatry specialist according to DSM-5. The study comprised MDD-diagnosed patients who gave their consent and agreed to take part. Mentally retarded patients and controls were excluded from the study. Patients who were illiterate, under the age of eighteen, or who did not agree to participate in the study were excluded from the study.

Data Collection Tools

Sociodemographic Data Form

The psychiatrist completed a form that asked for sociodemographic and medical data. Age, gender, educational attainment, and marital status were employed as survey factors in accordance with the literature.

Global Assessment Scale (GAS)

GAS is a rating scale that is administered over a short period of time and covers all aspects of changes in psychopathology (psychological, social and occupational functioning). It was developed by Endicott et al. (20) and is scored between 0-100. Evaluation is performed by the clinician. Values between 0 and 100 are divided into 11 separate categories (such as 0, 1-10, 11-20, 21-30). There is a short text describing each category. For example, 71-80 is defined as "even if symptoms are present, they are transient and are expected responses to psychosocial stressors (e.g., difficulty concentrating after a family argument); nothing more than mild impairment in social, occupational, or academic functioning (e.g., temporary falling behind in school)." The clinician selects just one of these categories and specifically writes a value in that range. For example, the patient's GAS score may be determined as 74.

Beck Depression Inventory (BDI)

BDI was developed by Beck in 1961 to measure the behavioural findings of depression in adolescents and adults (21). In 1978, the entire scale was revised, duplications defining severity were removed, and patients were asked to mark their situation in the last week, including today (22). Zero-9 points are interpreted as "minimal", 10-16 points as "mild", 17-29 points as "moderate", and 30-63 points as "severe". A Turkish validity and reliability study of the scale was conducted (23).

Data Collection Procedure

The study data were filled in by the psychiatrist on the specified date via face-to-face interview, taking an average of 20 minutes. Before the survey form was given to the participants,

the content of the study and the necessary explanations were presented by the psychiatrist in a mutual conversation and their questions were answered.

Ethical Committee

Ethical approval was obtained from Adıyaman University Non-Interventional Clinical Research Ethics Committee (Ethical Approval Number 2020/9-25). After ethics committee approval was obtained, informed consent was obtained from the participants by the researchers.

Statistical Analysis

SPSS 26.0 program was used for statistical analysis. The gender was accepted as the independent variable, sociodemographic and clinical parameters as the dependent variable. Chi-square test was used to analyse the categorical data. Normal distribution suitability was assessed using the Kolmogorov-Smirnov test. Since the age variable reveals a normal distribution, it was compared using independent samples t-test. Since other numerical variables did not reveal normal distribution, they were compared using the Mann-Whitney Test. Spearman's correlation analysis was used to reveal the relationship between numerical variables. A value of less than 0.05 (p value) was considered statistically significant.

Results

In the study, data of 47 patients, 28 women and 19 men, were examined. While the mean age in females was 37.25 ± 12.04 years, the mean age in males was 36.36 ± 12.48 years. While the mean duration of education was 6.50 ± 3.67 years for females, it was 9.15 ± 4.23 years for males. While the genders were similar in terms of mean age (p=0.809), the duration of education was higher in males (p=0.027) (Table 1).

All patients were mobile SAWers. SAW characteristics of the patients were shown (Table 2). A significant negative association between GAS and BDI was observed during the correlation study (r=-0.864; p<0.001). Other data on the relationships between GAS, BDI, duration of education and SAW characteristics were shown (Table 3).

Discussion

This study is the first to examine depression-related variables in SAWers diagnosed with MDD in a clinical setting. According to our findings, as the severity of depression increases, functionality decreases. A significant relationship was determined between the time spent doing seasonal agricultural work in a year and the severity of depression and level of functionality. No relationship was observed between the time since last SAW, SAW income and depression severity, functionality level. Depression severity was higher in those with higher education levels.

When the sociodemographic data of our study was evaluated in the light of the data in the literature, it was revealed that they had similar and different characteristics. In the study conducted by Kaya and Özgülnar (24) on mobile SAWers, the median age was determined as 35.5 years for females and 38.0 years for males. In a study conducted with a Şanlıurfa sample, the mean age of patients between the ages of 20 and 65, including those who performed mobile SAW, was 34.73 years (25). In our study, the mean age of females was 37.20 years and the mean age of males was 36.36 years. It seems that our findings are similar to studies in the literature. When the studies in the literature are examined in terms of education level, the data are presented by classification (primary school, secondary school, etc.) in the majority of studies (24). In our study, the entire sample was selected from literate people, and the mean education level of females (6.50 years) was lower than the education level of males (9.15 years). In the study of Kutlu (25), it was determined that the majority of people who

practice SAW are married. Kaya and Özgülnar (24) also stated that married people were the majority in their study. Similar to these studies in the literature, the majority of the patient group in our study was married.

Table 1. Sociodemographic and clinical data of the patients.

Variable		Female n (%) & mean±SD & mean rank (minimum, maximum)	Male n (%) & mean±SD & mean rank (minimum, maximum)	p
Age (years)		37.25±12.04	36.36±12.48	0,809
Education Level (years)		20,36 (1, 16)	29,37 (1, 16)	0,026*
Family Structure	Nuclear	15 (53.57%)	15 (78.94%)	0.076
	Extended	13 (46.43%)	4 (21.06%)	
Marital Status	Married	19 (67.85%)	10 (52.63%)	0,323
	Single	6 (21.42%)	8 (42.10%)	
	Divorced	1 (3.57%)	1 (5.27%)	
	Widowed	2 (7.14%)	0 (0.00%)	
Having a Child	Yes	20 (71.42%)	9 (47.37%)	0.096
	No	8 (28.58%)	10 (52.63%)	
Currently a Student?	Yes	2 (7.15%)	4 (21.06%)	0.161
	No	26 (92.85%)	15 (78.94%)	
Residency	District Centre	16 (57.14%)	10 (52.63%)	0.760
	Village	12 (42.86%)	9 (47.37%)	
Additional Psychiatric Disorder	Yes	9 (32.15%)	1 (5.27%)	0.027*
	No	19 (67.85%)	18 (94.73%)	
Psychiatric Admission History	Yes	18 (64.28%)	11 (57.89%)	0.658
	No	10 (35.72%)	8 (42.11%)	
Psychiatric Hospitalization History	Yes	7 (25.00%)	5 (26.31%)	0.919
	No	21 (75.00%)	14 (73.69%)	
Alcohol Use History	Yes	0 (0.00%)	11 (57.89%)	<0.001*
	No	28 (100.00%)	8 (42.11%)	
Substance Use History	Yes	0 (0.00%)	8 (42.11%)	<0.001*
	No	28 (100.00%)	11 (57.89%)	
Psychotropic Medication Use History	Yes	18 (64.28%)	11 (57.89%)	0.658
	No	10 (35.72%)	8 (42.11%)	
Current Psychotropic Medication Use	Yes	7 (25.00%)	9 (47.37%)	0.112
	No	21 (75.00%)	10 (52.63%)	
Additional Medical Disease	Yes	8 (28.58%)	3 (15.78%)	0.310
	No	20 (71.42%)	16 (84.22%)	
Additional Medication Use	Yes	8 (28.58%)	2 (10.52%)	0.138
	No	20 (71.42%)	17 (89.48%)	
Family History of MDD	Yes	12 (42.86%)	7 (36.84%)	0.680
	No	16 (57.14%)	12 (63.16%)	
Family History of Psychiatric Disorders	Yes	16 (57.14%)	9 (47.37%)	0.510
	No	12 (42.86%)	10 (52.63%)	

*p<0.05; Chi-square test, Mann-Whitney test, and Independent-samples t-test were used; MDD: Major Depressive Disorder, SD: Standard Deviation.

Table 2. Seasonal agricultural work characteristics of the patients.

Variables	Female (n=28) mean rank	Male (n=19) mean rank	p
At what age was the first diagnosis of MDD made?	24,27	23,61	0.870
SAW Duration (years)	24,61	23,11	0.712
Distance Travelled for SAW per Year (km)	21,30	27,97	0.101
Time Spent as SAW per Year (months)	25,46	21,84	0.362
Time since last SAW (months)	21,80	27,24	0,174
Annual Individual SAW Income (Turkish Lira)	21,93	27,05	0.207
Monthly Income per Person in the Household (Turkish Lira)	26,13	20,87	0.195
GAS	24,02	23,97	0.991
BDI	21,61	27,53	0.145

*$p<0.05$; Mann-Whitney test was used; MDD: Major Depressive Disorder, GAS: Global Assessment Scale; BDI: Beck Depression Inventory, SAW: Seasonal Agricultural Worker

	BDI (r; p)	GAS (r; p)	SAW Duration (r; p)	Time Spent as SAW per Year (r; p)	Time since last SAW (r; p)	Annual Individual SAW Income (r; p)	Education Level (r; p)
1	1	-0.864; <0.001**	-0.616; <0.001**	-0.174; 0.242	0.047; 0.755	-0.229; 0.122	0.367; 0.011*
2		1	0.521; <0.001**	0.162; 0.276	-0.075; 0.619	0.280; 0.057	-0.214; 0.148
3			1	0.514; <0.001**	0.437; 0.002*	0.625; <0.001**	-0.750; <0.001**
4				1	0.722; <0.001**	0.829; <0.001**	-0.569; <0.001**
5					1	-0.642; <0.001**	0.509; <0.001**
6						1	-0.490; <0.001**
7							1

One of the most important points to focus on in SAW is the situation of the students who participated in this migration. Children in this situation cannot complete their education properly because they are taken from school early and started late. Children who experience various problems in their educational life, starting from primary school, continue to have these problems in their university life (26). In our study, data from university students were also considered. It was observed that the education level was higher in males. In addition, in our study, it was observed that the severity of depression was higher in those with higher education levels. However, no relationship was determined between education level and functionality level. It is thought that those with higher education levels are more conscious and more responsive to the current poor conditions regarding SAW. Educated people who compare their own conditions with the conditions of other people of similar ages are likely to be disappointed (27).

A history of alcohol and substance use occurs in male SAW. In the general population, alcohol and substance abuse is higher in males. On the other hand, additional psychiatric disorders are more common in females. Any psychiatric pathology reduces people's functionality. Multiple psychiatric disorders further reduce functionality. Female SAWers need to be examined in depth in terms of psychiatric disorders and existing pathologies need to be treated. However, due to the nature of SAW, there are various problems in accessing and applying medical treatment. When patients work in rural areas, it becomes difficult for them to access their medications. In addition, SAWers, who have to work from early morning until late at night, meet their basic needs such as eating, drinking and cleaning in their limited free time. These working conditions cause a vicious circle in SAWers diagnosed with psychiatric disorders, who have limited time for themselves. The functionality of SAWers who do not use their medications regularly or at all may gradually deteriorate and the patient's insight may decrease as this deteriorates. In a situation where SAW conditions are not changed, psychiatric treatment alone is not sufficient.

It is normal that poor or inadequate SAW conditions affect people's psychiatric symptoms (28). Although the living conditions of the people during the SAW process were not questioned in our study, a significant correlation was determined between the duration of SAW and the patients' depression and functionality symptoms. However, in order to determine which other variables affect this relationship, the effects of different variables need to be investigated. On the other hand, it was thought that the relationship between SAW duration and depression levels may be related to SAW conditions.

The most important limitations of the research are that it was conducted in a single center and was cross-sectional. The fact that SAW conditions were not determined makes the interpretation of the findings difficult. However, in our study, data were collected through face-to-face interviews, which is the strength of the study.

Conclusion

MDD, which presents with psychiatric symptoms such as loss of interest and pleasure, feeling tired, slowness of speech, feeling worthless and guilty, loss of concentration, appetite and sleep problems, prevents the normal course of daily living activities. Social and economic problems may cause symptoms of depression to appear or increase existing symptoms. It is frequently stated in studies in the literature that SAWers have various social and economic problems. However, the relationship between diagnosed psychiatric disorders and SAW has not been adequately investigated in these studies. This study is the first to examine depression-related characteristics of SAWers diagnosed with MDD. In this study, a relationship was observed between the total duration of SAW throughout the lives of mobile SAWers diagnosed with MDD and their depression severity and functionality levels. Improving SAW conditions in our country will reduce depression levels in patients diagnosed with MDD.

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REFERENCES

1. Peng J, Chen J, Chen L, Zhao Z. Heterogeneity and threshold in the effect of agricultural machinery on farmers' relative poverty. Environ Sci Pollut Res Int. 2023;30(35):83792-83809.

2. Akbıyık N. Malatya'da çalışan mevsimlik tarım işçilerinin sosyal ve ekonomik sorunlarının incelenmesi. Elektronik Sosyal Bilimler Dergisi. 2011;10(36):132-154.

3. Yiğit B, Çiçek Ö, Öztürk M. Gezici mevsimlik tarım işçileri ile yerli mevsimlik tarım işçilerinin karşılaştırmalı analizi: Isparta ili örneği. Ünye İktisadi ve İdari Bilimler Fakültesi Dergisi. 2017;1(2):1-25.

4. Gülçubuk B, Karabıyık E, Tanır F. Baseline survey on worst forms of child labour in the agricultural sector: Children in cotton harvesting in Karatas, Adana. Ankara. 2003. http://www.ilo.org/ipecinfo/product/viewProduct.do?productId=5224. Erişim Tarihi: 31.06.2011.

5. Türkiye nüfusu il ilçe mahalle köy nüfusları. https://www.nufusune.com/kahta-ilce-nufusu-adiyaman#:~:text=ADIYAMAN%20ili%20KAHTA%20il%C3%A7esinin%202022%20il%C3%A7e%20toplam%20n%C3%BCfusu%20128961. Erişim Tarihi: 17/09/2023.

6. Tabcu G. Mevsimlik tarım işçilerinin ortaokul çağındaki çocuklarının eğitim sorunlarının sosyolojik olarak incelenmesi, Yüksek Lisans Tezi. Adıyaman: Adıyaman Üniversitesi, 2015.

7. Yaman S, Kilic M. Seasonal agricultural workers' personal well-being and preventive behaviors about Covid- 19 in Turkey. BMC Public Health. 2023;23(1):102.

8. Önsüz MF, Demirtas Z, Aygar H, et al. A Comparison quality of life of children of seasonal agricultural workers and local residents in Turkey. Journal of Agromedicine. 2023;1-9.

9. Havlioğlu S, Koruk İ. Göçebe mevsimlik tarım işçisi ergenlerde yaşam kalitesi düzeyi ve sorun davranışları. Türkiye Halk Sağlığı Dergisi. 2013;11(1):11-22.

10. Nordenfelt L. The concepts of health and illness revisited. Med Health Care Philos. 2007;10(1):5-10.

11. Hu W, Chu J, Chen X, et al. The role of depression and physical activity in the association of between sleep quality, and duration with and health-related quality of life among the elderly: a UK Biobank cross-sectional study. BMC Geriatrics. 2022;22(1):338.

12. Uher R, Payne JL, Pavlova B, Perlis RH. Major depressive disorder in DSM-5: implications for clinical practice and research of changes from DSM-IV. Depression Anxiety. 2014;31(6):459-471.

13. American Psychiatric Association (APA). (2013). Diagnostic and statistical manual of mental disorders, 5th ed. Washington, DC: Author.

14. Gutiérrez-Rojas L, Porras-Segovia A, Dunne H, Andrade-González N, Cervilla JA. Prevalence and correlates of major depressive disorder: a systematic review. Braz J Psychiatry. 2020;42(6):657-672.

15. Torres ER. Disability and comorbidity among major depressive disorder and double depression in African-American adults. J Affect Disord. 2013;150(3):1230-1233.

16. Wang J, Wu X, Lai W, et al. Prevalence of depression and depressive symptoms among outpatients: a systematic review and meta-analysis. BMJ Open. 2017;7(8):e017173.

17. Lemma A, Mulat H, Nigussie K, Getinet W. Prevalence of unrecognized depression and associated factors among medical outpatient department attendees; a cross sectional study. PLoS One. 2021;16(12):e0261064.

18. Luo X, Ke X, Li H, Dai Q, Zhang C, Zheng W, Fang Z, Wu F, Ning Y. Prevalence and risk factors for depression in outpatient departments of three general hospitals in China: a cross-sectional study. Int J Psychiatry Clin Pract. 2020;24(1):88-95.

19. Büyüköztürk Ş, Kılıç-Çakmak E, Akgün ÖE, Karadeniz Ş, Demirel, F (Edited by). Bilimsel Araştırma Yöntemleri. 34. Baskı, Ankara: Pegem A Yayıncılık. Şubat 2023.

20. Endicott J, Spitzer RL, Fleiss JL, Cohen J. The global assessment scale. A procedure for measuring overall severity of psychiatric disturbance. Arch Gen Psychiatry. 1976;33(6):766-771.

21. Beck AT. An inventory for measuring depression. Arch Gen Psychiatry. 1961;4(6):561-571.

22. Guy W. Clinical Global Impressions: ECDEU Assessment Manual for Pharmacology, revised edition (DHEW Publ. No. ADM 76-338). National Institute of Mental Health, Dept. of Health, Education and Welfare Publication. 1976;218-222.

23. Hisli N. Beck depresyon envanteri'nin üniversite öğrencileri için geçerliği, güvenirliği. Psikoloji Dergisi. 1989;6(23):3-13.

24. Kaya M, Özgülnar N. Mevsimlik (Gezici/Geçici) tarım işçilerinin iki yerleşim birimindeki yaşam koşulları ve sağlık durumlarına niteliksel bakış. Turk J Public Health. 2015;13(2):115-126.

25. Kutlu S. Erişkin göçebe mevsimlik tarım işçilerinin yaşam kalitesi düzeyi ve etkileyen faktörler, Yüksek Lisans Tezi. Şanlıurfa: Harran Üniversitesi, 2011.

26. Benek S, Ökten Ş. Mevsimlik tarım işçilerinin yaşam koşullarına ilişkin bir araştırma: Hilvan ilçesi (Şanlıurfa) örneği. Gaziantep Üniversitesi Sosyal Bilimler Dergisi. 2011;10(2):653-676.

27. Alkal A, Korkmaz O, Akça MŞ. Üniversite öğrencilerinin öz saygı, öz bilinç ve sosyal yetkinliğinin psikolojik yardım alma tutumu üzerindeki yordayıcılığının incelenmesi. Researcher: Social Science Studies. 2018;6(3):1-19.

28. Urrego-Parra HN, Rodriguez-Guerrero LA, Pastells-Peiró R, et al. The health of migrant agricultural workers in Europe: A scoping review. J Immigr Minor Health. 2022;24(6):1580-1589.