

Evaluation of Seasonal Hazelnut Workers' Emergency Department Applications in Ordu Province: A Retrospective Study

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Abstract

Objective: In Turkey, agricultural worker migration occurs in order to maintain different regulations and management in different seasons. Seasonal agricultural workers (SAWs) may also cause problems such as not knowing the conditions of the region they go to, experiencing health problems due to seasonal conditions, and increased workload in local institutions brought about by population growth due to humidity. This study aimed to evaluate the emergency service applications of seasonal hazelnut workers during the hazelnut harvesting season and to find solutions to possible health problems.

Method: It was a single-center, retrospective study and the applications of seasonal hazelnut workers who applied to the local tertiary emergency department between 01 August 2022 and 30 September 2022 were evaluated. The socio-demographic characteristics of non-pregnant patients aged 18 and over, their reasons for admission to the emergency department, and the treatments they received were recorded.

Results: 400 patients with no missing data were included in the study. 60.2% of the patients included in the study were female and 19% were SAWs who were not registered in the population of Ordu province. It was determined that the most common causes of SAWs in emergency department admissions were allergic reactions with at 37.3% and trauma with at 26%.

Conclusion: It is observed that SAWs increase the rates of emergency service admissions during the hazelnut harvesting season. We think that in this period, the employment of healthcare personnel should be increased, SAWs should be trained in terms of diseases that may occur due to environmental factors and working conditions, and the necessary health plans should be determined in advance.

Key Words: Agricultural worker, Emergency service, Hazelnut, Seasonal

Ordu İlindeki Mevsimlik Fındık İşçilerinin Acil Servis Başvurularının Değerlendirilmesi: Retrospektif bir Çalışma

Özet

Amaç: Türkiye'de farklı bölgelerde ve farklı mevsimlerde tarımsal faaliyetlerin sürdürülmesi için tarımsal işçi göçü meydana gelmektedir. Mevsimlik tarım işçilerinin (MTİ) gittikleri bölgenin şartlarını bilmemeleri, mevsim şartlarına bağlı sağlık problemlerinin yaşanması ve göç nedeniyle nüfus artışının getirmiş olduğu yerel kurumlardaki iş yoğunluğunda artma gibi sorunları da beraberinde getirebilmektedir. Bu çalışma, mevsimlik fındık işçilerinin fındık hasat dönemindeki acil servis başvurularını değerlendirmeyi ve olası sağlık problemlerine çözüm üretmeyi amaçlamıştır.

Yöntem: Tek merkezli, retrospektif bir çalışma olup yerel üçüncü basamak acil servise 01 Ağustos 2022 ile 30 Eylül 2022 tarihleri arasında başvuran mevsimsel fındık işçilerinin başvuruları değerlendirilmiştir. 18 yaş ve üzeri gebe olmayan hastaların acil servis başvurusundaki sosyo-demografik özellikleri, başvuru nedenleri ve almış oldukları tedaviler kaydedilmiştir.

Bulgular: Verilerinde eksiklik olmayan 400 hasta çalışmaya dahil edildi. Çalışmaya dahil edilen hastaların %60.2'sinin cinsiyeti kadın ve %19'u Ordu ili nüfusuna kayıtlı olmayan MTİ'lerini oluşturmaktadır. MTİ'lerinin acil servis başvurularındaki en sık neden % 37.3 ile alerjik reaksiyonlar ve %26 ile travma olduğu tespit edildi.

Sonuç: MTİ'lerinin fındık hasat döneminde acil servis başvuru oranlarını arttırdığı görülmektedir. Bu dönemde sağlık personel istihdamının artırılması ve MTİ'lerinin çevresel faktörler ve çalışma koşulları nedeniyle oluşabilecek hastalıklar açısından eğitilmesi ve gerekli sağlık planlamaların önceden belirlenmesi gerektiğini düşünmekteyiz.

Anahtar kelimeler: Acil servis, Fındık, Mevsimsel, Tarım işçisi

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INTRODUCTION

Individuals who migrate from their provinces to work during planting and harvesting seasons in regions with intensive agricultural activities and return to their original provinces at the end of the season, are defined as seasonal agricultural workers (SAWs). In Türkiye, a significant portion of the employment in agriculture is constituted by SAWs, aimed at sustaining agricultural activities. The need for seasonal workers labor arises due to the necessity of completing the harvest in a short period, the majority of the rural population doing engaging in the same agricultural production, and the decline in rural population due to urban migration (2). Although the number of SAWs working informally in Türkiye is around 300,000 according to the Ministry of Labor and Social Security, it is estimated that the number of individuals affected by seasonal agricultural labor encompasses at least one million people (3).

In Türkiye's hazelnut agriculture, an important sector, as of 2018, 74% of hazelnut planting areas are located in the Eastern Black Sea Region, with 31% in Ordu, 16% in Giresun, 15% in Samsun, 9% in Trabzon, and 9% in Düzce provinces (4). The hazelnut harvest occurs during a short period covering August and September. Due to the inability to shift extensively to mechanized agriculture and the local labor force being insufficient, a large number of SAWs migrate to the region during this period. According to data obtained from local institutional records by the Development Workshop Cooperative for the International Labour Organization (ILO) Office in October 2019, approximately 40-50 thousand seasonal migrant agricultural workers migrate to Ordu, Sakarya, and Düzce provinces to participate in the hazelnut harvest (5).

Various studies have established that seasonal agricultural workers (SAWs) and their families face numerous barriers in to accessing healthcare services. These challenges include transportation difficulties, inadequate sick leave, fear of wage loss or job termination, language barriers with healthcare providers, lack of social security, organizational deficiencies, and limited operational hours of hospital services. SAWs and their families experience health problems similar

to the general population, but they also face unique challenges due to hazardous working conditions, poverty, low living standards, high fertility rates, informality, geographic isolation, nomadic lifestyle, and language and cultural barriers (6,7). These issues lead SAWs and their families to delay seeking health services, particularly those that are monitoring-based and/or require long-term treatment, due to concerns over the inability to continue work and loss of daily wages, until they return to their permanent residences (1,8). Consequently, SAWs and their families often prefer emergency services over other healthcare facilities, believing these will entail less waiting time (9). In this study, we aim to analyze the emergency department applications of SAWs during the hazelnut harvesting season.

METHODS

Study Design and Population

This is a single-center, retrospective study conducted at the emergency department of a tertiary state hospital between August 1, 2022, and September 30, 2022, following approval from the Ordu University ethics committee. The study included all non-pregnant patients over the age of 18 and the trauma patients under 18 years of age who presented to the Emergency Department during the 2022 hazelnut harvest season.

Data Collection

Hospital records of patients presenting to the Ordu University Emergency Department between August 1, 2022, and September 30, 2022, were retrospectively reviewed. The data collection form recorded patients' age, gender, chronic diseases (Diabetes Mellitus, Hypertension, Coronary Artery Disease, Asthma/COPD, Neurological Disease, Cardiac Disease, Other), and sociodemographic information (residence), presenting complaints, diagnoses, treatments received (including hospital admissions), total daily emergency department visits, total visits by seasonal agricultural workers (SAWs), and the ratio of SAW visits to total emergency department visits.

Statistical Analysis

All statistical analyses were performed using the IBM Statistical Package for the Social Sciences Statistics for Windows, Version 23.0 (IBM, Armonk, NY, USA). Demographic characteristics of the cases were presented as mean±standard deviation and n (%). Chronic disease data of the cases were also presented in n (%). Additionally, graphical representations were used to show the age distribution and presenting complaints of hazelnut workers.

RESULTS

Between 01 August and 30 September 2022, 22.200 patients who presented to the Emergency Department of Ordu University Training and Research Hospital Ministry of Health, Republic of Türkiye were retrospectively evaluated, and

the study was completed with 400 patients. During the hazelnut harvest period from August 1 to August 31, 2022, there were 11.850 patient admissions, while from September 1 to September 30, 2022, post-harvest, there were 10.350 admissions. Similarly, the total number of patients visiting the emergency department in October was 10.800.

It was found that 60.2% of the patients included in the study were female. 81% were registered residents of Ordu province. Patients' sociodemographic data are shown in Table 1, and age distribution is illustrated in Figure 1. The analysis of the reasons for SAWs' emergency

department visits revealed that allergic reactions (37.3%) and trauma (26%) were the top two reasons (Figure 2). When reviewing the medical history of SAWs visiting the emergency department, a majority (57.5%) had a history of chronic illness. Looking at specific chronic conditions, 13.5% had Asthma/COPD, 11.8% had hypertension (HT), and 8% had diabetes mellitus (DM) (Table 2). It was determined that 85.5% of the patients were discharged after outpatient treatment, while 12.7% were admitted for observation and treatment in the emergency department.

Table 1. Analysis of Socio-Demographic Data of Hazelnut Workers Admitted to the Emergency Department

Socio-Demographic Variables		n	%
Age (Mean ± Std.)	43.9±0.8		
Gender	Male	159	39.8
	Female	241	60.2
Residence	Ordu and Ordu Population Registered	324	81
	Out of the Ordu	76	19
Application Complaint	Infective diseases	47	11.7
	Tick/insect contact	20	5.0
	Trauma	104	26.0
	Allergic reaction	149	37.3
	Other (Headeche, stomache,fewer, et else)	80	20.0
Treatment	Outpatient Treatment/Discharge	342	85.5
	Treatment Follow-up in the ED	51	12.7
	Inpatient Treatment in Hospital	7	1.8
Hospitalization	Yes	7	1,8
	No	393	98.2
Chronic Disease	Present	230	57.5
	Absent	170	42.5

Std: Standard deviation, ED: Emergency Department

Table 2. Chronic Disease Data of Hazelnut Workers Admitted to the Emergency Department

	n	%
HT	47	11.8
DM	32	8
Asthma/COPD	54	13.5
Neurological Disorder	12	3
Cardiac Disorder	14	3.5
Other	56	14

HT: Hypertension, DM: Diabetes Mellitus, COPD: Chronic Obstructive Pulmonary Disease

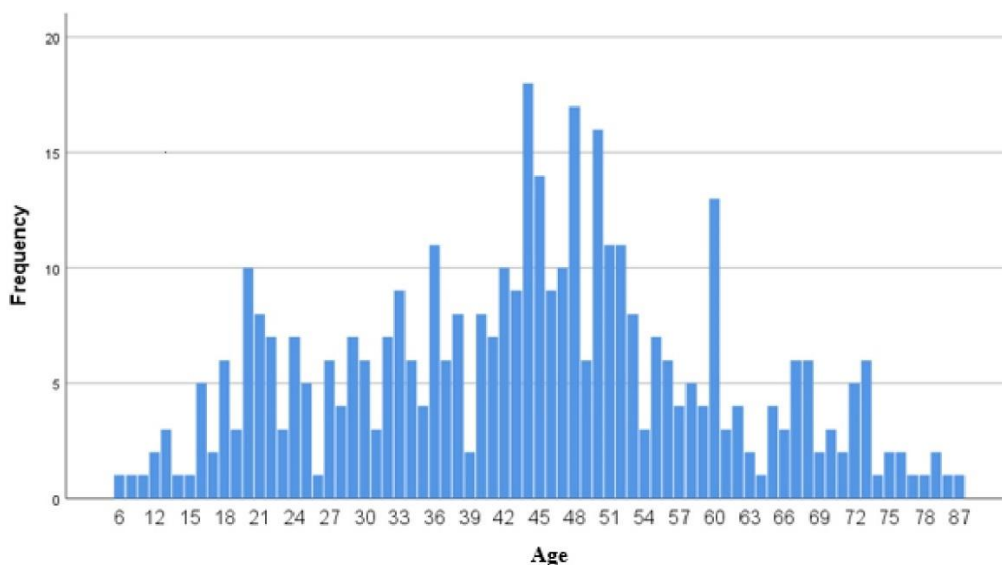


Figure 1. Distribution of hazelnut workers admitted to the emergency department according to age

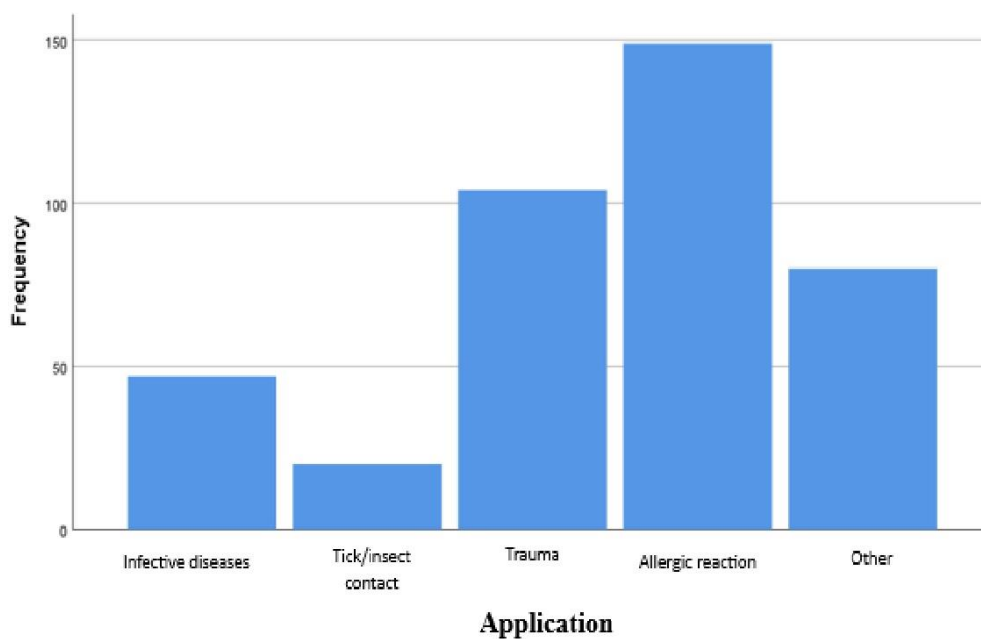


Figure 2. Distribution of hazelnut workers admitted to the emergency room according to complaints

DISCUSSION

With the migration of SAWs, there is an increase in the population, consequently leading to a rise in emergency department visits. During the hazelnut harvest period in Ordu, from August 1, 2023, to August 31, 2023, there were 11.850 patient admissions, and it was observed that the number of emergency department visits in August, the hazelnut harvest season, was higher compared to other months. Hazelnut farm workers are exposed to various allergens due to their working conditions. Agricultural chemicals, machinery oils, and biological agents like insect and animal bites are among the most common allergens they encounter (10,11). A study by Uzunoglu E. et al. showed that Paederus dermatitis is common among hazelnut workers, especially during the harvest season (12). Additionally, the sudden onset of allergic reactions often leads to swift healthcare facility visits. Therefore, we believe that allergic reactions were the most common reason for emergency department visits among hazelnut workers in our study. Due to the geographical structure of the Black Sea region, the geography of hazelnut cultivation consists of mountainous and rocky slopes (13). This increases the risk of trauma to people in these areas. Trauma patients typically present to the emergency department in the acute phase. In our study, trauma was the second most common reason for visits, which we believe is due to the geography of the region.

When examining the medical history of the patients included in the study, although Asthma/COPD and Hypertension (HT) were the most common, visits to the emergency department for respiratory and hypertensive emergencies were less frequent. This is thought to be due to the lack of sick leave for workers, financial concerns, fear of job loss, and lack of health insurance. In contrast, conditions like allergic reactions and trauma occur suddenly and necessitate immediate access to healthcare facilities. SAWs reside in designated camp areas in the regions they visit. Although these areas are equipped with sanitation and toilet facilities, the infrastructure may sometimes be inadequate. During events like floods and heavy rains, these areas may face outbreaks of infectious diseases like gastroenteritis. Additionally, the low socio-cultural level and poor self-care of SAWs also contribute to the prevalence of infectious diseases. Therefore, we believe that 11.7% of the emergency department visits by SAWs were due to infectious diseases.

SAWs face numerous challenges, including the fear of job loss, which leads them to focus solely on work during working hours and postpone other needs, including health. Additionally, transportation difficulties and low socio-cultural levels are other barriers to accessing primary health care services. Consequently, SAWs often bypass the tiered health system and directly visit emergency departments. This increases the

workload of emergency departments during harvest seasons. In our study, we found that 85.5% of the SAWs who visited the hospital received outpatient treatment and were discharged. We believe this percentage includes patients who did not seek primary healthcare services. We learned that 81% of the SAWs were registered residents of Ordu province. Accordingly, we found that the most majority of SAWs are actually from Ordu but reside outside of Ordu. This suggests that the majority of SAWs are actually people from Ordu living in other provinces who return to Ordu during the harvest season. This seasonal migration contributes to the increase in emergency department visits during these periods.

When we examined the age distribution graph of SAWs visiting the emergency department, we found that the majority of visits were made by individuals aged between 40-60 years. As mentioned in Bayram H.'s study According to Erik Erikson, psychosocial development continues throughout life, and the age range of 30-60 years is characterized by productivity versus stagnation, with individuals being productive during this stage (14). We believe that the majority of SAWs are in their productive years, hence the high number of emergency department visits in this age group.

CONCLUSION

In conclusion, although it covers a small part of the year, factors such as increased migration to

the region during the hazelnut harvest period, low socioeconomic status of SAWs and their families, adverse environmental factors, and difficult working conditions increase the number of emergency room admissions and thus the workload of emergency services. This periodic intensity in emergency services brings with it the need for personnel and equipment. We also see that this burden increases significantly when we consider the geographical conditions and endemic diseases that SAWs and their families are not used to. To manage this effectively and ensure uninterrupted health services, accurate personnel, and resource planning are essential. Additionally, planning for potential illnesses during these periods is also crucial.

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