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EVALUATION OF SEASONAL AGRICULTURAL WORKERS' PERCEPTION OF COVID-19 AND ATTITUDES TOWARD COVID-19 VACCINATION: A CROSS-SECTIONAL STUDY IN MALATYA

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Abstract

Objective: The COVID-19 pandemic has heightened the demand for agricultural products due to measures like flexible working, online education, and lockdowns, which increased the workload for agricultural workers. This study examined seasonal agricultural workers in a village in Akçadağ, Malatya, focusing on their perception of COVID-19 and their attitudes toward vaccination.

Methods: Conducted between July 1st-31st, 2022, and recruited seasonal agricultural workers. Participants completed the "COVID-19 Perception Scale" (with subscales for perceived danger and contagiousness) and the "Attitude Toward COVID-19 Vaccination Scale" (with subscales for positive and negative attitudes). Descriptive statistics were used to analyze the data.

Results: A total of 247 subjects participated. The mean perceived danger subscale score was 3.38±1.17, indicating high concern about COVID-19 risks. The perceived contagiousness subscale averaged 4.09±0.89, reflecting significant worry about the spread of COVID-19. Their attitudes towards vaccination were scored as 2.75±1.37 and 2.94±0.88 for positive and negative feelings, respectively. Despite positive attitudes, only 14.3% of participants were vaccinated, revealing a gap between attitude and action.

Conclusion: Seasonal agricultural workers in Malatya showed high concern about the danger and contagiousness of COVID-19 and had a generally positive attitude toward vaccination. However, low vaccination rates indicate the need for targeted interventions to overcome barriers and promote vaccination among this group.

Keywords*: COVID-19 pandemic, seasonal agricultural worker, occupational health, epidemic disease.*

Introduction

In 2019, practices such as flexible working, distance learning, and curfews were introduced due to the COVID-19 pandemic's increased food consumption, subsequently raising the workload of agricultural workers.[1-2] While many sectors suspended operations, seasonal agricultural workers generally continued to work under challenging conditions, often without social security, for low wages, seven days a week, and at least 12 hours a day.[3,4,5] The International Labor Organization (ILO) identified agricultural workers as the community at greatest risk during the COVID-19 pandemic.[6] Chen et al. (2021) reported that the agriculture and food sector experienced the highest number of deaths due to COVID-19 among jobs that could not be performed from home.[7-8] Similarly, Lusk and Chandra noted higher COVID-19 incidence and mortality rates in cities with more agricultural workers.[2,9] In Turkey, a circular issued at the time encouraged the active work of seasonal agricultural workers to maintain food production during the pandemic (Ministry of Interior, number: 89780865-153. E.6202).[10]

Seasonal agricultural workers typically travel with their families, provisions, and tools to locations where job opportunities are available.[11] Their working conditions are dictated by the destination and the landowner, with no standardized access to drinking water, housing, and hygiene facilities[12]. This group is especially vulnerable due to its low socio-economic status, low education levels, and young and unskilled population. During the pandemic, issues such as working without masks, poor nutrition, non-compliance with hygiene rules, insufficient rest, and lack of access to vaccines were particularly concerning for this group.[11,13]

Recognizing these challenges, the Centers for Disease Control and Prevention (CDC) issued a checklist in 2020, recommending improvements in the working conditions of these laborers.[14] Occupational health and safety organizations, such as Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety and Health (NIOSH), and the World Health Organization (WHO) have emphasized the critical importance of mask usage, adherence to hygiene practices, and vaccination to prevent the spread of the pandemic.[14-16]

These workers, who frequently migrate from province to province based on agricultural production cycles, rarely remain in one location for more than 2-3 months and typically live in rural areas. Furthermore, since their accommodation is typically in rural areas (fields, villages, hamlets) and they do not have weekends off, they are unable to travel to the city to access health services unless there is an occupational accident or emergency illness.[9,17] This situation hampers the monitoring of their health and vaccination status.[18,19]

This study investigated the attitudes of seasonal agricultural workers engaged in apricot picking during the COVID-19 pandemic toward the COVID-19 vaccine, as well as their concerns about the disease. The aim was to raise awareness about the vulnerability of seasonal agricultural workers to epidemics.

Methods

Population and Sample

This cross-sectional study was conducted with 247 participants working in an apricot harvest in a village in the Akçadağ district of Malatya from July 1st to July 31st, 2022. All participants were seasonal agricultural workers living in tents set up in the orchards, using only cell phones and the internet for communication, planning to move to another province for work after this current harvest, and working for wages. The workers came from Urfa, Diyarbakır, Şırnak, Cizre (Şırnak), Adıyaman, and Erzin (Hatay). They were generally family members, relatives, or acquaintances, and their tents were arranged accordingly. For instance, those from Şırnak lived in the same tent or tents close to each other (Figure 1).

Figure 1. Workers'tents and kitchens

Their daily tasks include shaking trees and picking fruits, drying or sulfurizing fruits, removing the kernels of dried apricots, and crating them (Figure 2.).

Figure 2. Workers' occupational environment

One worker from each group, responsible for meal preparation, finished their work an hour earlier than the others and returned to their tent to prepare lunch. The rest of the workers labor for about 11 hours, from 07:00 am to 07:00 pm, without any weekend holidays.

Scales, Questionnaires and Methods

Prior to conducting face-to-face interviews with the workers, meetings were held with both the employer and worker representatives. The purpose of the study was explained, and the consent form, survey, and scale questions were reviewed. It was made clear that if the employer or worker representative did not approve of the study, the forms would not be administered to the workers.

After receiving approval, an appointment was scheduled with the worker representative. Field visits were planned during hours when workers were most likely to be together. Workers were informed about the study's purpose, and the consent form was read aloud. Any questions they had were addressed. Workers who chose not to participate were not asked for their reasons.

Between July 1 and July 31, 2022, all workers who came to a village for apricot harvesting, including child workers working for wages, were included in the study, regardless of gender. The questions were answered through face-to-face

interviews with the workers. It was ensured that no personal information (such as ID number, name, or surname) was collected. The research team wore appropriate personal protective equipment (PPE) before and after each participant and sanitized their hands. Additionally, permission was obtained from those staying in the tents before taking any photographs.

Participants were administered the "COVID-19 Perception Scale" and the "Attitude Toward COVID-19 Vaccination Scale," developed by Geniş et al.[20] Permissions were obtained from the authors for using these scales. In addition, a "Questionnaire Form," based on the "Agricultural Employer Checklist for Creating a COVID-19 Assessment and Control Plan" booklet published by the CDC in 2020,[11] was used to collect demographic data of the participants.

The Attitude Toward COVID-19 Vaccination Scale: The scale consists of two sub-dimensions, "positive attitude" and "negative attitude," each with 5-point Likert-type propositions. The score for each sub-dimension is calculated by dividing the total score of the items by the number of items in that sub-dimension, yielding a value between 1 and 5. High scores indicate a "positive view."

The COVID-19 Perception Scale: This scale also uses 5-point Likert-type items and is divided into two subscales: perceived danger and perceived contagiousness. The score for each subscale is calculated similarly, by dividing the total score of the items by the number of items in that subscale, resulting in a value between 1 and 5. High scores on this scale indicate a higher level of concern regarding the perceived danger and contagiousness of COVID-19.

Statistical Analysis

The data obtained were analyzed using SPSS 20.0 software. Kolmogorov-Smirnov tests were used to test the normality of data distribution. Continuous variables were expressed as mean±standard deviation, median (25^{th}-75^{th} percentiles), and categorical variables were expressed as counts (percentages). Comparisons of normally distributed continuous variables between the groups were performed using the Student's t test, One Way Analysis of Variance, and Tukey Post Hoc Test. Comparisons of nonnormally distributed continuous variables between the groups were performed using the Mann Whitney U Test and Kruskal Wallis One Way Analysis of Variance and Dunn's Post Hoc test. Comparisons of categorical variables between the groups were performed using the Fisher's Exact ChiSquare test, Yates' ChiSquare test and Monte Carlo ChiSquare test. The relationship between numerical variables was evaluated by Spearman or Pearson Correlation Analysis. A two-sided *P* value <0.05 was considered statistically significant.

Results

Among the 247 participants in the study, 59.9% were female, and 21.1% were children under the age of 16 years. The general age range was 10-65 years, with a mean age of 24.2±12.4 years. In addition, 66.8% of the participants had an education level of secondary school or above. Of those over 16 years of age, 8.7% had received the COVID-19 vaccine (Table 1). Only 34 participants (13.8%) had social security coverage.

Table 1. Demographic characteristics

		n (%)	Median (Min-max)	Mean±SD
Gender	Female	148 (59.9%)		
	Male	99 (40.1%)		
Age, years		247	18 (10-65)	24.2±12.4
Marital status	Married	62 (25.1%)		
	Single	185 (74.9%)		
Education level	Illiterate	38 (15.4%)		
	Literate (not a graduate of any school)	6 (2.4%)		
	Primary school	38 (15.4%)		
	Secondary school	117 (47.4%)		
	High school	40 (16.2%)		
	University	8 (3.2%)		
Social security	Yes	34 (13.8%)		
	No	213 (86.2%)		
Work experience (years)		247	4 (1-50)	7.44±8.5
Daily wage (TL/day)		247	95 (30-95)	93.46±8.2
COVID-19 vaccination status (over 16 years of age)	Yes	17 (8.7%)		
	No	**178 (91.3%)**		

Regarding the working environment conditions, it was found that all participants stayed in tents in groups of 2-24 people, located in the orchards where they worked. Among them, 77.3% had access to a toilet, 68% had access to a bathroom, and only 8.1% had access to a kitchen (Table 2).

As for COVID-19 measures, none of the participants adhered to the personal distance rule (approximately 1.8m), and there was no use of masks. The prevalence of hand sanitizer use was 29.1%. Furthermore, 97.2% of participants shared cups, and 90.3% shared hand and face towels. Meals were eaten within tent groups of 2-24 people. The most common complaints about working conditions were long working hours (100%), hot weather conditions (95.6%), and lack of access to cold, potable water (47%) (Table 2).

The Attitude Toward COVID-19 Vaccine Scale scores administered to the participants were calculated as follows: mean positive attitude scores for the COVID-19 vaccine were 2.75±1.37, but ranged widely from 1-5; mean negative attitude scores were 2.94±0.88 and also ranged widely with the same spread (1-5). The COVID-19 Perception Scale scores were calculated for the "perceived danger" dimension, with a mean of 3.38±1.17 (range 1-5) and for the "perceived contagiousness" sub-dimension, the mean was 4.09±0.89 (range 1-5) (Table 3).

Table 2. Working environment conditions

	Status	n (%)	Min-max	Mean±SD
Number of people staying in tents		247(100%)	2-24	9.8±5.8
Number of people eating together		247(100%)	2-24	9.8±5.8
Sharing a cup	Yes	240 (97.2%)		
	No	7		
Sharing a towel	Yes	223 (90.3%)		
	No	24 (9.7%)		
Use of mask	Yes	0		
	No	247 (100%)		
Adhering to personal distance	Yes	0		
	No	247 (100%)		
Access to bathroom	Yes	168 (68%)		
	No	79 (32%)		
Access to the toilet	Yes	191 (77.3%)		
	No	56 (22.7%)		
Access to kitchen	Yes	20 (8.1%)		
	No	227 (91.9%)		
Access to potable water	Yes	131 (53%)		
	No	146 (47%)		
Use of hand sanitizer	Yes	72 (29.1%)		
	No	175 (70.9)		
The most important risk factors complained about in the work environment (heat, dust, long working hours, etc.)	Hot working environment	236 (95.6)		
	Long working hours	247 (100%)		
	Lack of access to cold. potable water	146 (47%)		

Table 3. Scale scores

	Median (Min-max)	Mean±SD
Positive attitude toward vaccination (PATV)	2.5 (1-5)	2.75±1.37
Negative attitude toward vaccination (NATV)	3.0 (1-5)	2.94±0.88
Perceived Danger	3.33 (1-5)	3.38±1.17
Perceived Contagiousness	4.5 (1.75-5)	4.09±0.89

The mean scores of the "positive attitude" sub-dimension of the Attitude Toward COVID-19 Vaccine Scale varied between "those who did not find the opportunity to get the COVID-19 vaccine" and "those who were not vaccinated for other reasons." Participants who "did not find the opportunity to get the COVID-19 vaccine" had higher positive attitude scores for vaccination. A similar pattern was observed in the "negative attitude" sub-dimension, with higher negative attitude scores among participants who "did not have the opportunity to get the COVID-19 vaccine." Additionally, participants who had access to a toilet and bathroom had higher scores in both the positive and negative attitude sub-dimensions compared to those without such access (Table 4). A negative correlation was found between the number of people staying in a tent and the "positive attitude toward vaccination" scores. Participants in larger groups staying in tents had lower positive attitude scores for vaccination (r=-0.203; p=0.012). A similar relationship was observed for the negative attitude toward vaccination scores (r=-0.170; p=0.013).

The COVID-19 Perception Scale scores were evaluated with other variables, and it was found that having COVID-19 or having someone with COVID-19 in the family significantly impacted participants' "perceived danger" scores. Those who experienced these situations were more concerned about the dangers of COVID-19. Conversely, as the number of people staying together in a tent increased, concerns about the dangers of COVID-19 decreased (r=-0.167; p=0.013) (Table 4).

The "perceived contagiousness" sub-dimension scores of the COVID-19 Perception Scale were notably associated with educational status. Participants with higher levels of education exhibited greater concern about contagiousness. Moreover, individuals with access to both a toilet and a kitchen exhibited greater levels of concern regarding contagion. Interestingly, as the number of participants dining together rose, worries about contagion diminished (r= -0.191; p=0.012).

Interestingly, gender, vaccination status, and the use of shared towels or cups were not significantly linked to either positive or negative attitudes toward vaccination or concerns regarding COVID-19.

Finally, a positive relationship was identified between scores for positive attitudes toward vaccination and scores for negative attitudes toward vaccination, as well as between higher scores for positive attitudes toward vaccination and the subjective perception of COVID-19 danger; and between a positive attitude toward vaccination and contagiousness (Table 5). A similar relationship was observed between negative attitude toward vaccination and perceived danger and between negative attitude toward vaccination and contagiousness. As the score for perceived contagiousness increased, the score for perceived danger also increased (Table 5).

Table 4. Correlation coefficient of factors affecting scale scores

	Positive attitude toward vaccination	Negative attitude toward vaccination	Perceived Danger	Perceived Contagiousness
Gender				
Female-Male	0.471	0.572	0.513	0.551
Education level				
University-literate				p<0.001
University-primary school				p<0.001
University-secondary school				p=0.042
High school-literate				p=0.033
Literate-illiterate				p=0.032
Vaccination status				
Vaccinated or not vaccinated	0.222	0.431	0.932	0.663
Reasons for not being vaccinated				
Those who could not be vaccinated were vaccinated for other reasons	p<0.013	p<0.011	0.031	0.021
COVID-19 in the family. Including him/her				
Having COVID-19/not having COVID-19	0.973	0.198	0.037	p<0.001
Working environment conditions				
Toilet available-not available	0.011	0.032	0.214	0.012
Bathroom available-not available	0.011	0.023	0.932	0.824
Kitchen available-not available	0.012	0.134	0.031	p<0.001
Sharing glasses- not sharing glasses	0.551	0.072	0.933	0.832
Sharing towels, not sharing towels	0.964	0.171	0.932	0.352
Number of people staying in tents	r=-0.203 p=0.012	r=-0.170 p=0.013	r=-0.167 p=0.013	
Number of people eating together				r=-0.191 p=0.012

Table 5. Relationship between scales

	Negative attitude toward vaccination	Perceived danger	Perceived contagiousness
Positive attitude toward vaccination (PATV)	r=0.644 p<0.001	r=0.186 p=0.012	r=0.206 p<0.001
Negative attitude toward vaccination (NATV)	1	r=0.240 p<0.001	r=0.144 p=0.021
Perceived danger		1	r=0.442 p<0.001

Discussion

The situation for seasonal agricultural workers deteriorated further due to pandemic conditions, compounding their already "poor living conditions," including poverty, precariousness, and inhumane, isolated conditions lacking many basic needs.[13,21]

In the present study, the vaccination attitude score was 2.84±1.02, while the mean disease perception score was 3.74±0.87. Kartal et al. conducted a similar study on hospital outpatient clinic attendees in Urfa, using the same scales, and found higher scores: 3.5±0.82 for vaccination attitudes and 3.86±0.72 for disease perception.[22] A study by Akgül and Ergün, also using the same scale, reported vaccination attitude scores of 3.20±0.92, markedly higher than our results.[23] Elmaoğlu et al. reported a score of 2.82±0.73 in their online study conducted in Kilis, closely aligning with our findings.[24] The differences in scores may be influenced by the year the studies were conducted and the specific groups involved.

Regarding the sub-dimensions of the vaccine attitude scale, the Positive Attitude Toward Vaccination (PATV) score was calculated as 2.75±1.37. In comparison, Başkaya and Kaya (2022) calculated the PATV as 3.79±1.12 in their study,[25] which collected data online using the same scale. For the Negative Attitude Toward Vaccination Scale (NATV), the mean was 2.94±0.88 in the current study, while Başkaya and Kaya reported[25] a higher NATV of 3.57±1.23.

In this study, the factors affecting the PATV score were examined, and no significant effect was found for gender, marital status, age, educational status, or having COVID-19 survivors in the family and the PATV. Kartal et al. found that being married and increasing age positively influenced the PATV[22], while education level did not have a significant effect in their study conducted in Urfa using the same scales. Similarly, Gürkan and Özdelikara observed that COVID-19 vaccination scores (both positive and negative) increased with age in their study with nurses using the same scale[26]. Although the low mean age in our study group did not directly and statistically affect the positive-negative attitude,

it aligns with findings that a positive attitude toward the COVID-19 vaccine may be higher in educated individuals with an average age above 25 years.[27] Elmaoğlu et al., in a similar study conducted in Kilis, found that the PATV was higher among those who were literate and those with a university or higher education level.[24] Gültekin et al. observed an increase in PATV with higher educational levels in their study of healthcare workers.[28] In contrast, Başkaya et al. and Gürkan et al. found no relationship between educational level and positive or negative attitude scores toward vaccination.[25-26] Although it is generally believed that higher education levels support positive behaviors, this generalization may not always apply to attitudes toward vaccination. Additionally, considering that these studies were conducted after the initial phases of the pandemic, it can also be concluded that the public health message about the benefits of vaccination reached everyone, regardless of education level.

In our study, participants with access to toilets, bathrooms, and kitchens had significantly higher PATV than those without these facilities. Furthermore, a negative correlation was found between the total number of people staying in a tent and the NATV. In other words, the NATV decreased as the number of people sharing a tent increased. This suggests that as the negative attitude toward vaccination decreases, indicating a higher desire to be vaccinated, people prefer to limit their use of shared spaces like toilets, bathrooms, kitchens, and tents to protect themselves from COVID-19. They also prefer to work with employers who provide these facilities.

Regarding the NATV scores, it was found that those who did not have the opportunity to be vaccinated had higher scores than those who did not want to be vaccinated. A similar relationship was observed with the PATV. Using the same scales as in the present study, Gürkan et al., Başkaya and Kaya, and Mete and Tanrıöver all found that both PATV and NATV were higher among those who were vaccinated against COVID-19 or willing to be vaccinated compared to those who were not vaccinated or unwilling.[25,26,29] Six months before this study, in January 2022, it was reported that the COVID-19 vaccination rate in the province of Malatya had reached 75% [30]. The low vaccination rate in our cohort may be explained by the lack of access to the vaccine, as indicated in the WHO's 3 C's concept (Confidence, Complacency, Convenience-geographical accessibility, affordability)[31-32]. Our study also showed that participants were willing to be vaccinated but lacked the opportunity, highlighting an area that requires further investigation.

The COVID-19 Perception Scale score was found to be 3.74±0.87 in the current study, with mean scores of 3.38±1.17 for the perceived danger sub-dimension and 4.09±0.89 for the contagiousness sub-dimension. During the early days of the COVID-19 pandemic, when vaccines and effective treatment methods were not known, Aydın Avcı and Hendekçi conducted a study with agricultural workers involved in hazelnut harvesting and indicated that 11.8% of the workers experienced severe anxiety, noting higher anxiety levels among those who felt that the measures taken were inadequate.[33] Regarding the factors influencing perceptions of dangerousness, our study revealed that age, gender, and educational status did not yield significant effects. This contrasts with previous research suggesting that women generally exhibit higher fear levels than men concerning danger. [33-35] This discrepancy may stem from various factors, such as restricted internet access among female employees, resulting in incomplete knowledge of the subject, cultural influences, and interpretations drawn from prior experiences. The perceived danger score was higher among participants who did not have access to vaccination, those who had contracted COVID-19, and those who had a kitchen. As reported earlier, as the number of people staying in the tent increased, the perceived danger decreased.

Factors affecting the perceived contagiousness scores were examined, and educational status was found to have an impact, with university graduates scoring higher than others. Participants who did not have the opportunity to be vaccinated, those who had contracted COVID-19, and those who had a toilet and kitchen also had higher scores than others. In a separate study with agricultural workers, Aydın Avcı and Hendekçi (2021) found that anxiety and COVID-19 fears were higher among those who had a family member with COVID-19.[33] This could be linked to increased anxiety as perceived risk rises.[36] The contagiousness score increased as the number of people eating together decreased. Elmacıoğlu et al. found a similar result, identifying that individual in extended families had lower positive attitudes toward vaccination.[24] In contrast, Aydın Avcı and Hendekçi stated that agricultural workers with larger families had higher anxiety and fear of COVID-19.[33]. These differences may stem from the tendency of behaviors to adapt to the norms of the community, as well as the influence of individual differences. Those who lack vaccination opportunities are more concerned about the danger and transmission of COVID-19. Those who have had COVID-19 exhibit higher perceived danger and contagiousness. They tend to work with employers providing toilet and kitchen facilities and share their meals with fewer people, primarily due to concern about contagiousness.

Workers' concerns about contagiousness increased with their educational level. The significant differences observed between primary school graduates and university graduates (p<0.001), high school graduates and literates (p=0.033), and secondary school graduates and university graduates (p=0.042) can be attributed to the influence of cultural and social environments.[20] This relationship was not found when investigating group differences for perceived danger. However, Kartal et al. identified a link between educational level and perceived danger in their study in Urfa, noting that participants with undergraduate and higher education had the highest perceived danger.[1]The fundamental reason for this difference may be the lack of increased awareness typically associated with higher education levels in the group we studied. Additionally, it can be concluded that perceived risk may be independent of education, with past experiences, social environment, and culture having a greater impact on perceptions and attitudes.[25]

As for the relationship between the scales applied to the participants, positive correlations were found between vaccine positive attitude scores and vaccine negative attitude scores (r=0.64; p<0.001), between vaccine positive attitude scores and perceived danger scores (r=0.19; p=0.012), and between vaccine positive attitude scores and perception of contagiousness scores (r=0.21; p<0.001). Similarly, correlations were noted between negative attitudes toward vaccines and perceived danger scores (r=0.24; $p<0.001$) and between negative attitudes toward vaccines and perceived contagiousness scores (r=0.14; p=0.021). Akgül and Ergün did not find the positive relationship between negative attitude toward vaccination and positive attitude that we identified in our study.[23] In addition, we found a positive relationship between the perceived danger and the perceived

contagiousness (r=0.44; p<0.001). Kartal et al. and Geniş et al. also found a positive relationship between positive and negative attitude scores toward vaccination, infection, and danger scores in their studies.[20,22] Our findings align with the results of these earlier studies.

Evaluating the working conditions of the participants in the context of the COVID-19 pandemic revealed that living together in tents set up in orchards without infrastructure, moving to new working areas after harvest,[21] long working hours, and lack of access to masks increase the perceived risks of epidemics and hence participant anxiety.

Conclusion

This group of workers, who work without masks, social distancing, adequate access to health services, and under unsupervised conditions, also face deprivations such as lack of drinking water, a safe and hygienic environment, quality nutrition, and rest. Consequently, seasonal agricultural workers' knowledge of the transmission routes of epidemic diseases, such as COVID-19, and the typical working conditions of this group were insufficient for them to protect themselves from the disease. Identifying the barriers to increasing vaccination prevalence among this group and investigating possible solutions will help reduce the negative impact of the COVID-19 or any future pandemic on this vulnerable population.

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Conflict of Interest
The authors have no conflicts of interest to disclose.

Compliance with Ethical Statement
Approval for this study was obtained from the Kocaeli University (KOU) Non-Interventional Studies Ethics Committee (16.05.2022) (2022/09.20). Additionally, the necessary permissions were obtained from the Ministry of Health (Serap Arsal Yıldırım-2022-03-07T15_04_11).

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Author Contributions
S.A.Y.: Study idea/Hypothesis; B.P.: Design; S.A.Y.: Data Collection; B.P., C.B.: Analysis; S.A.Y.: Literature review; S.A.Y.: Writing; C.B.: Critical review

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